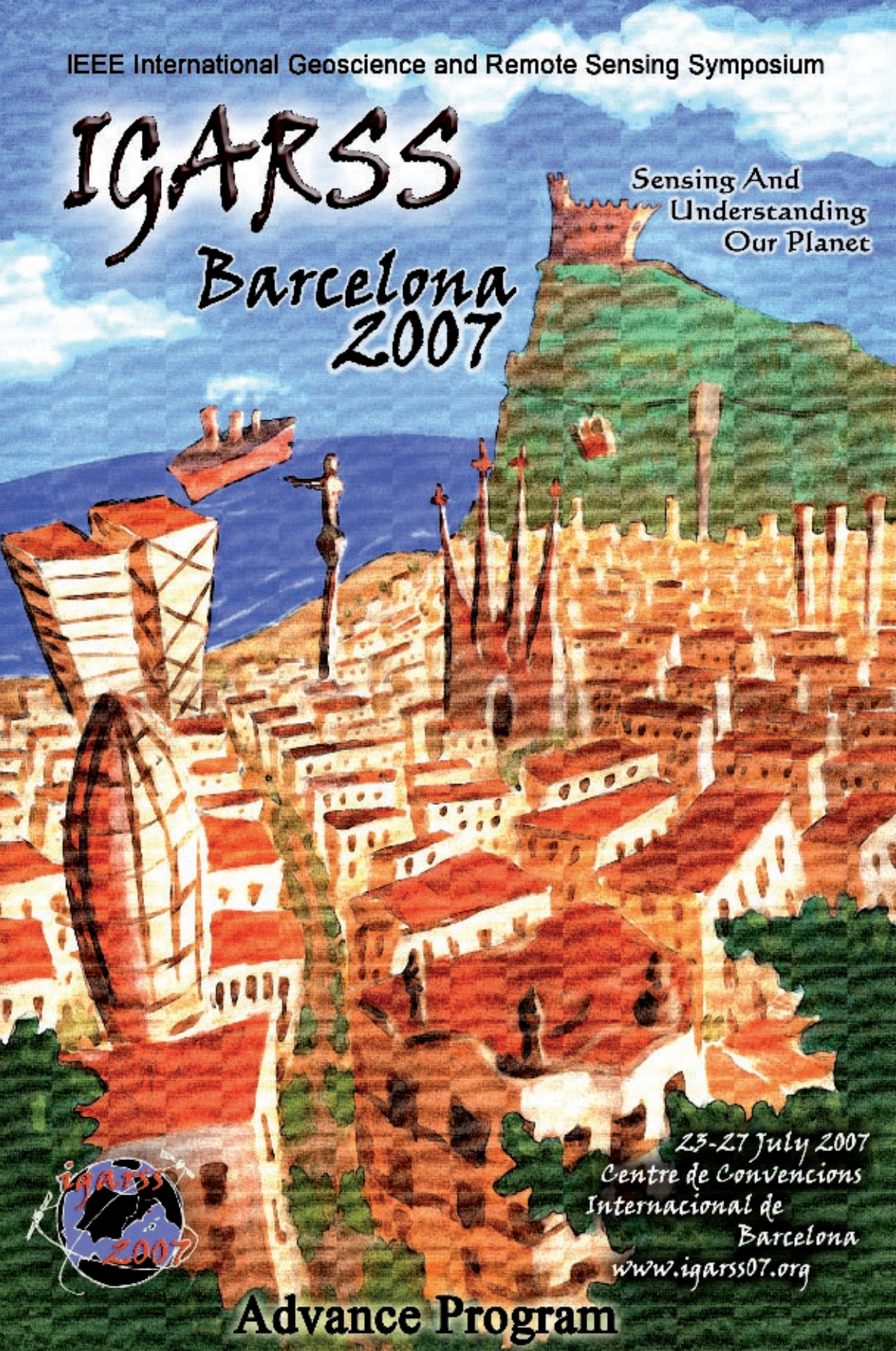
IEEE International Geoscience and Remote Sensing Symposium

IGARSS

Barcelona 2007

Sensing And Understanding Our Planet



23-27 July 2007
Centre de Convencions Internacional de Barcelona
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Advance Program

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IGARSS 2007
23 – 27 July

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Advance Program

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The Conference Organizing Committee would like to thank all the organizations that have sponsored this event. Many of them are long-time supporters of IGARSS, and we are pleased to welcome our new supporters as well.

Please take the time to visit at the exhibit area the many organizations that have helped make this conference a successful event

Greetings from the President of the IEEE Geoscience And Remote Sensing Society

I invite you all to attend **IGARSS 2007** which will be held in Barcelona, Spain from July 22 to July 27. The theme of IGARSS'07 is *"Understanding and Sensing Our Planet".* Understanding and sensing are two closely related topics. We need to understand the basics of earth processes such as climate, ecology and hydrology etc to identify geophysical parameters to be measured in remote sensing. Determination of the spatial distribution and temporal evolution of the geophysical parameters will enhance the understanding of earth processes and utilization of natural resources.

Thus understanding and sensing our planet need to engage both remote sensing scientists and engineers that work on technological advances and earth science researchers who investigate the earth science processes. It is the goal of IGARSS'07 to provide a forum for reporting such advances.

Professors Ignasi Corbella and Adriano Camps, together with the IGARSS '07 Organizing and Technical Committees, have done a superior job in the preparation of this Symposium. They have put together a comprehensive program that covers the forefront of remote sensing technology and applications. In recent years, IGARSS attendance has reached almost 1500 and we expect similar large attendance again this year. At the Technical Program Committee meeting in February 2007, the Technical Committee worked hard to make careful selection of the papers and organized them into 11 parallel oral sessions and many interactive sessions. Both oral papers and poster papers are of the highest quality. Poster papers will be displayed the whole day on Monday through Thursday. To facilitate interaction with poster paper authors, all presenters will be requested to be at their posters at designated times during the interactive sessions. We anticipate enlightening and fruitful discussions at the poster sessions. I encourage you also to attend the IEEE GEOSS workshop or one of several tutorials on Sunday July 22. At the plenary session on Monday, you will hear Dr. Lewis Terman, the IEEE President Elect, speaking on the topic of " the IEEE vision of making societal impact, outreach and earth observations and remote sensing". You will also hear Dr. José Achache, GEO Secretariat Director and Dr. Jay Pearlman, Chair of ICEO, talking about GEOSS and the IEEE impact in GEO, particularly in standards, system engineering, remote sensing, and education.

The IEEE-GRSS Society is well known for its transnational composition. At IGARSS, you will be able to meet scientists from all over the world and learn about the state of the art of remote sensing science and technology in many countries.

Barcelona, the capital of *Catalonia*, is the second largest city in *Spain*. It has 2000 years of history with a rich cultural heritage. The conference venue is at an attractive location near the sea front. Pablo Picasso spent his youth at Barcelona and you can have a chance to visit the Picasso Museum.

I look forward to seeing you at IGARSS'07. I am confident that you will enjoy the best of technical exchanges.

Sincerely,

Leung Tsang

President, IEEE Geoscience and Remote Sensing Society

Welcome to IGARSS 07 Barcelona.

Welcome to the IEEE International Geoscience and Remote Sensing Symposium IGARSS 2007!. Welcome to Barcelona, the second largest city of Spain and the economical, historical and administrative capital of Catalonia, a small country of six million inhabitants, more than a thousand years of history and a culture and language of its own. In Barcelona you will experience the flavor of the Mediterranean and enjoy a unique cultural and artistic ambience, including Modernism, Architecture and South-European culture and cuisine.

The local organizing committee has been working very hard to set up a high quality technical program as well as a number of interesting social activities. The technical program committee selected more than 2000 papers this year. They will be presented through the week in eleven parallel oral sessions scheduled both in the morning and in the afternoon, as well as interactive sessions almost every day. This configures a very dense program and surely it will be a very intense week for you. Nevertheless we hope that you will take also the opportunity to relax and to participate in the social activities that we have prepared for you. In particular, we hope to see you in the Ice Breaker reception, the Exhibition Opening reception and the Awards banquet. Also, a different tour of Barcelona and its surroundings has been scheduled each day of the conference. I hope you will be able to enjoy those that do not interfere with the technical sessions of your interest.

The selected conference venue, “Centre de Convencions Internacional de Barcelona” (CCIB) is located near the sea front. In just a few minutes, if you want, you will be able to be just walking by the beach, or even swimming in the warm waters of the Mediterranean Sea. If you are lodged in the host hotel you can simply walk to your hotel after the sessions and enjoy all the comfort and services provided in it. If your hotel is elsewhere in the city, you will experience the quality of the transportation in Barcelona and in a couple of minutes after the sessions you will be admiring the streets and nice buildings of the city. The schedule of the conference this year starts at 9h in the morning, so as to allow for enough time to arrive comfortably from any part of the city.

The theme of this year symposium -“Sensing and Understanding our Planet”- suggests what remote sensing scientific activity should ultimately achieve: Information gathered by all sensors and techniques must be wisely used mainly to *understand* our Earth. This will improve prediction of natural disasters or global climate change and provide tools to prevent their consequences. As experts on the leading-edge technologies of Earth observation, we should play a prominent role in achieving these goals. This is our contribution to the important task of assuring people of all around the world access to resources for their subsistence without endangering the fragile equilibrium of our planet.

I invite you to enjoy Barcelona. This week will be for you, simply unforgettable!!

Ignasi Corbella

General Chairman

July, 2007

Technical Program Overview



Organizing the Technical Program of IGARSS 2007 has been an exciting opportunity to better understand the wide variety of fields that Remote Sensing embraces. This year submission has been very high, reaching about 2400 abstracts received. In an attempt to ensure a high quality program, each abstract was assessed by at least two reviewers. We would like to thank the 560 reviewers for their generous support, the invited session organizers, and the theme coordinators/session organizers and for their help in setting up the program and to act as backup reviewers in the few cases needed. A dedicated Technical Program Committee processed and organized the nearly 2000 accepted presentations that compose the Program in a meeting kindly organized by Prof. Werner Wiesbeck in Karlsruhe, Germany, on February 23rd.

The Program presentations are arranged into 99 oral sessions and 62 interactive sessions, covering nearly all aspects of Remote Sensing: from the physics of the measurements to the most advanced data processing techniques, through the electromagnetic modeling and the technologies and techniques that allow to develop and build new and more powerful instruments. In addition to the general topics, this year we have tried to promote some such as lidar and radar altimetry in order to improve the IGARSS coverage of techniques and applications. We have also tried to emphasize present-day space missions (TerraSAR-X, Cosmo-Skymed, SMOS, etc.), emerging techniques (GNSS-R, sensor web, advanced sensor concepts, etc.), and other topics of special interest such as remote sensing activities in Africa, educational activities and disaster prevention and monitoring. Finally the Program also includes two sessions dedicated to Prof. Tanos Mikhaël Elfouhaily (Tuesday afternoon) and Prof. Mikio Takagi (Thursday afternoon) for their significant contributions to our field.

In an attempt to give more importance to the Interactive Sessions, posters will be posted during the one day, from 9 AM until 7:30 PM, after the oral sessions, and presenting authors are asked to stay by their posters at least after the afternoon sessions from 6 PM to 7:30 PM. The poster area has been closely located to the rooms to facilitate the interaction. We expect that poster sessions will play a central and sustained role in the technical discussions and participants interaction.

Chairs of oral sessions are encouraged to keep the schedule despite any no-show that may happen to allow people to move from one session to another one. Attendees to a session where there is a no-show are kindly invited to make a backup or an extended presentation. Please keep in mind that the chairs of both the oral and interactive sessions have been requested to keep track of the communications that are actually presented to include them in IEEE Xplore.

The program also includes eight tutorials given by experts in their fields and the IEEE GEOSS workshop. The program that you have in your hands has meant a lot of work for many people. In addition to the Technical Program Committee chairs and members, the invited session organizers, and the abstract reviewers, we would like to mention the incredible amount of work and patience put by the CIMNE staff (see picture on next page). We want to express our public recognition to these hidden faces for their commitment and hard work.

We wish you enjoy a high quality technical program and the warmth of the Mediterranean life style of the city of Barcelona. In addition to that, a number of social activities have been prepared so that your IGARSS 07 memories will be unforgettable. Enjoy!

A. Camps, A. Broquetas, A. Comerón
Technical Program Committee Chairs
Barcelona, July 2007

Local Organizing Committee

General Chairman: Ignasi Corbella

Finance: Francesc Torres

Technical Program:
Adriano Camps
Toni Broquetas
Adolfo Comerón

Exhibits: Jordi Mallorquí

Tutorials: Xavier Fàbregas

Sponsorship & Publicity: Nuria Duffo

Local Arrangements:
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Publications / Web: Sebastián Blanch

CIMNE Team: (from left to right): Mercé Linares (administration), Marta Prat (paper submission process, social tours), Mr. Angel Priegue (development of new abstract and paper submission and the technical program committee meeting softwares), Mr. Alexis Cid (web site contents), Begoña Carmona (graphics designer and web site), and Mrs. Cristina Forace, who has been politely answering your questions and emails, and running this team of dedicated people.

Technical Program Committee

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Symposium Information

Registration and Check in

All attendees are required to check in at the registration desks, located at the Lobby of the Conference Convention Center (Ground Floor – P0). They will get there their badges. The Symposium documentation will be handed over at Room 118 (First Floor – P1).

Service hours of operation are:

Sunday 22 July, 8 a.m. to 7 p.m.

Monday 23 July, 8 a.m. to 5:30 p.m.

Tuesday 24 July to Friday 27 July, 8:30 a.m. to 5:30 p.m.

Badge Distribution

Participants are reminded to wear name badges at all times while in the conference area or at conference-sponsored events. Access will be prohibited to the exhibit, coffee break and technical session areas if a name badge is not visible. A small fee and proof of registration must be provided to obtain a replacement badge.

Accompanying Person (AP) Pass

Accompanying persons are limited to family members and are not allowed to attend technical sessions. An *AP* Pass will be given to a registered accompanying person. The *AP* Pass includes entrance to the ice-breaker reception, exhibit opening reception and exhibit.

Technical Office

Room 118 (First Floor – P1)

The organizing committee will answer questions regarding technical program and the overall conference.

***Side-bar Wi-Fi Café: Room 134* (First Floor – P1)**

***Internet Access (desk-top computers): Room 119* (First Floor – P1)**

Internet access: personal computer network configuration:

- Wi-Fi network identification (SSID): IGARSS07 (no password needed)
- IP configuration: select DHCP for automatic configuration

***Presenter's room: Room 119* (First Floor – P1)**

Conference Proceedings

Only papers presented at IGARSS 2007 in Barcelona will be published in the final Conference Proceedings. These will be determined based upon the session chairs' report.

IGARSS 2007 Presentation Instructions

Oral Presentations

- ✓ All oral presenters must check in at the Presenter's Room.
- ✓ All oral presentations should be made using the English language.
- ✓ All oral presentations, including questions and answers, should be less than 20 minutes length (Exposition: 15 minutes exposition + Questions: 5 minutes).
- ✓ Presentation files may be created in Adobe Acrobat .pdf (recommended) or Power Point. Movies or animations in MPEG, Windows Media, Macromedia Flash, Apple Quick Time and Real Media (Real System) are preferred.
- ✓ Please provide your file on CD ROM, DVD or USB Flash Drive at the presenter's room up to one hour prior to the beginning of your oral technical session. If your presentation is scheduled for Monday afternoon, please provide your presentation on Sunday to avoid delays. Files not provided up to one hour prior to the beginning of the session will not be projected.

Oral Presenter check-in hours:

Sunday 22 to Friday 27: 8 a.m. to 5:30 p.m.

Poster Presentations

- ✓ All poster presentations should be created in English.
- ✓ Posters will be posted from 9 a.m. to 7.30 p.m.
- ✓ Presenting authors are requested to be at the poster session at least from 6 p.m. to 7.30 p.m.
- ✓ Posters must be removed by 7.30 p.m. each day at the end of the session
- ✓ Boards will be available along with the necessary mounting pins.
- ✓ The poster size should be not larger than 140 cm height and 110 cm width.

Social Events

Ice Breaker Reception
Sunday 22 July, 6:30 to 8:00 p.m.
Convention Center Hall

Chairpersons Breakfast
Monday 23 July, 8:30 a.m. to 9:30 a.m.
AC-Barcelona Hotel, Room: Sagrada Família

Exhibition Opening Reception
Tuesday 24 July 6:00 p.m to 7:30 p.m.
Rooms 111+112
Registration: Not required

Welcome Concert
Tuesday 24 July 9:00 p.m
Palau de la Música Catalana
Registration: Not required

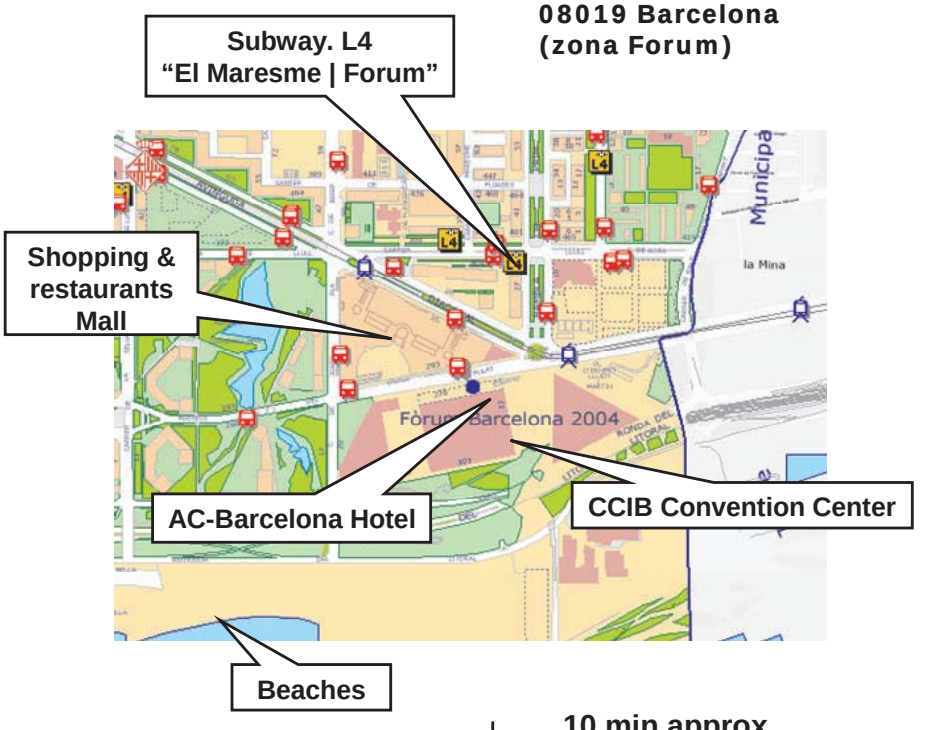
IGARSS07 Soccer match
Wednesday 25 July 6:30 p.m.
"Campo de fútbol Agapito Fernández"
Pre-registration: required (free)

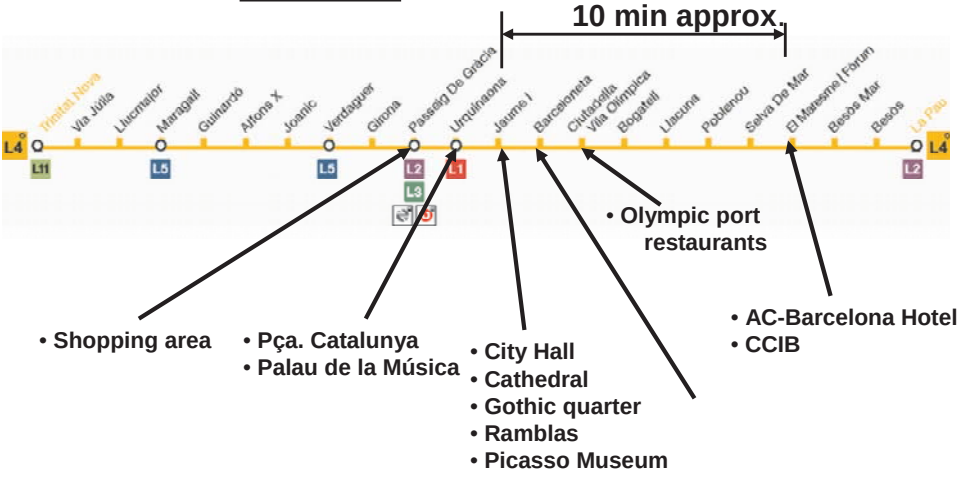
Technical Committee and Chapters Dinner
Wednesday 25 July 8:00 to 10:00 p.m.
AC-Barcelona Hotel. Room 22@
Registration: Required

Awards Dinner Banquet
Thursday 26 July 8:00 p.m
Reials Drassannes de Barcelona
Registration: Required.
Free visit to the Naval Museum for banquet attendees

Transportation to/from Convention center

ADRESS: **Passeig Taulat 278**
08019 Barcelona
(zona Forum)





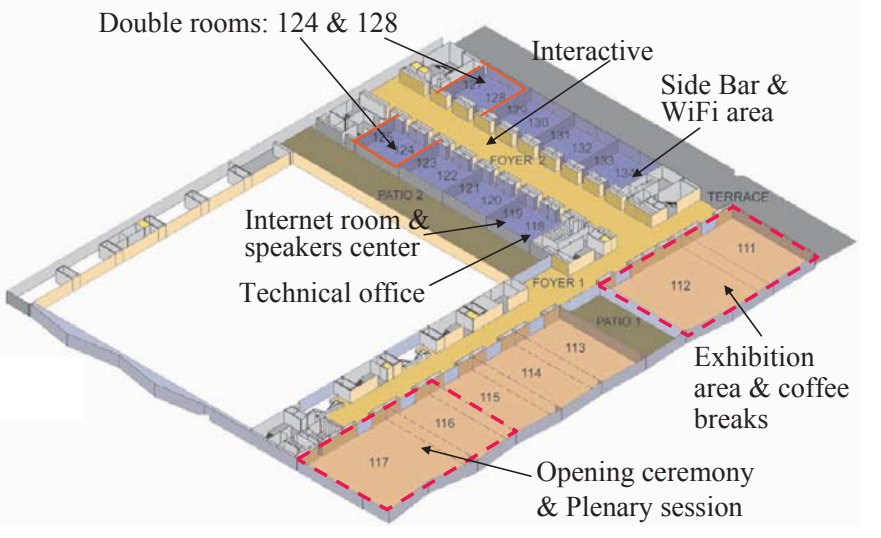
Convention Center Guide

Registration Desk: Lobby – Ground floor (level P0)

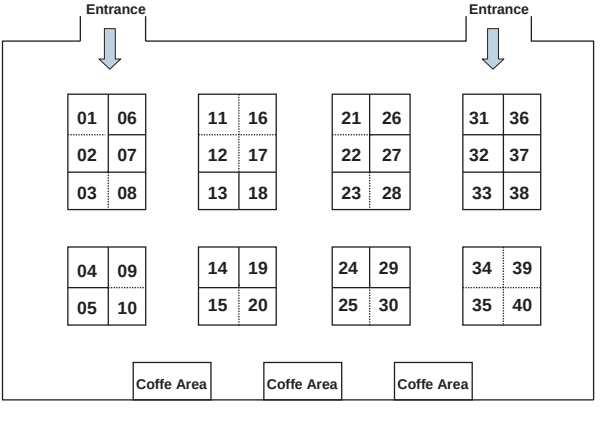
Conference Rooms – First Floor (level P1)

Oral Presenter Check-in & Preview Room: 119
Technical Office: Room 118
Opening ceremony and plenary session: Room 117
Exhibition area & Coffee Breaks: Rooms 111 & 112
Interactive Sessions: Foyer 2
Side Bar & Wi-fi area: Room 134
Internet connection (desk-top computers): Room 119
Technical Sessions: Rooms 120 to 133

Conference area layout. Level P1



Booth layout in exhibition area



EXHIBITORS LIST AND BOOTH LOCATION

Exhibition Hours: Tuesday, 24 July, 2007 to Thursday 26 July, 2007: 10 a.m. – 7:30 p.m.

Booths 15 & 20
Altamira Information S.L.
C/ Corsega 381-389, 2n 3a
08012 Barcelona - Spain
www.altamira-information.com

Booth 4
BAIE-Barcelona Aeronàutica i Espai
Jordi Girona 29, Edifici NEXUS II
08034 Barcelona Spain
www.bcnaerospace.org

Booth 32
Canadian Space Agency
9F015 - Financial Services Communications
6767 route de l´Aeroport
J3Y 8Y9 Saint-Hubert QC Canada
www.space.gc.ca

Booth 36
Earth Remote Sensing Data Analysis Center (ERSDAC)
Forefront Tower 14F
3-12-1 Kachidoki, Chuo-ku, Tokyo
104-0054 JAPAN
http://www.ersdac.or.jp/

Booths 34, 35, 39 & 40
European Space Agency (ESA)
Directorate of Earth Observation Programmes
8-10 rue Mario-Nikis
75738 Paris - France
http://www.esa.int

Booth 38
GMV Aerospace and Defence, S.A.
Isaac Newton, 11
P.T.M. Tres Cantos
E-28760 Madrid - Spain
www.gmv.com

Booth 24
IEEE Geoscience and Remote Sensing Society GRSS
www.grss-ieee.org

Booth 29
Igarss 2008
www.igarss08.org

Booth 5
INDRA Espacio S. A.
C/ Mar Egeo, 4- Pol.Ind. nº1
28830 San Fernando de Henares
Madrid – Spain. www.indra.es

Booths 21 & 22
Infoterra GmbH + German Aerospace Center
Claude-Dornier-Strasse,
88090 Immenstaad – Germany
www.infoterra.de

Booths 1 & 2
Institut Cartogràfic de Catalunya
Parc de Montjuïc s/n
08038 Barcelona Spain
www.icc.cat

Booths 11, 12, 16 & 17
ITT - Visual Information Solutions
4 Rue de Lyon 75012,
Paris, France www.ittvis.com

Booths 25 & 30
Japan Aerospace Exploration Agency (JAXA)
2-1-1 Sengen, Tsukuba,
Ibaraki (305-8505), Japan
www.jaxa.jp/index_e.html

Booth 13
Korea Aerospace Research Institute(KARI)
45 Eoeun-dong,
Yuseong-gu (305-333 Daejeon)
Republic of Korea
http://www.kari.re.kr/

Booth 27
Leica Geosystems Geospatial Imaging
Via E. L. Cerva 110
I-00143 Roma, Italy
gi.leica-geosystems.com

Booth 33
MDA
13800 Commerce Parkway
(VGU 2J3 Richmond. B.C.)
Canada
www.mdacorporation.com

Booth 19
MIRAMON-CREAF
Universitat Autònoma de Barcelona,
Facultat Ciències
(E-08193) Bellaterra, Spain
www.creaf.uab.cat

Booths 9 & 10
NASA Goddard Space Flight Center
20771 Greenbelt. United States
www.gsfc.nasa.gov

Booths 3 & 8
NPOESS National Polar-orbiting Operational Environmental Satellite System
Suite 1450, 8455 Colesville Road
20910 Silver Spring. United States
www.noaa.gov

Booth 31
PCI Geomatics
400-490 St. Joseph Blvd.
(J8Y 3Y7 Gatineau, QC) Canada
www.pcigeomatics.com

Booths 23 & 28
UPC-TSC Remote Sensing Laboratory
Campus Nord UPC
Jordi Girona 1,3
08034 Barcelona, Spain
www.tsc.upc.edu/eef/research_lines/mrs/

Booth 26
Skye Instruments Ltd
21, Ddole Enterprise Park, Llandrindod Wells
LD1 6DF UK Powys United Kingdom
www.skyeinstruments.com

Booth 18
Starlab
Camí de L'Observatori Fabra, s/n
08035 Barcelona Spain
www.starlab.es

Booth 37
Stereocarto
Paseo de La Habana, 200
28036 Madrid - Spain
www.stereocarto.com

Booth 14
Taylor & Francis - Informa UK Ltd.
2 Park Square, Milton Park
Abingdon, Oxon OX14 4RN,
United Kingdom
www.taylorandfrancisgroup.com

Booth 6
USGS Center for Earth Resources Observation and Sciences (EROS)
Mundt Federal Bldg.
Sioux Falls, SD 57198, United States
www.usgs.gov

Booth 7
VEXCEL, A Microsoft Company
1690 38th Street
80301 United States
www.vexcel.com

Exhibition Hours: Tuesday, 24 July, 2007 to Thursday 26 July, 2007: 10 a.m. – 7:30 p.m.

IEEE GRSS Membership

Why should you join us?

- Explore membership opportunities in the world's premier professional organization dedicated to the advancement of the theory, concepts, and techniques of science and engineering applied to remote sensing of the Earth, oceans, atmosphere, and space.
- Keep abreast of the latest developments in your area of expertise and receive on-line access to all issues of the Transactions on Geoscience and Remote Sensing and the Geoscience and Remote Sensing Letters as well as quarterly print and on-line editions of the GRSS Newsletter.
- Gain access to the latest on-line technical information using IEEE Xplore©, and network with colleagues at the annual IGARSS conference and other specialty symposia.
- The IEEE GRSS Society is the fastest growing society in IEEE. The Society strives to make an impact on remote sensing policy and research directions. By being a member, you can make a bigger impact on these issues.

Membership Options

Membership is open to professionals and students with varying levels of academic accomplishment and work experience. Member and Senior Member grades recognize those who have achieved professional proficiency, as demonstrated by degrees received and/or work experience. IEEE Fellow grade is reserved for those Senior Members with unusual distinction in the profession and is conferred only by invitation of the IEEE Board of Directors.

Full Membership is available to those professionals that have demonstrated competence in an IEEE field.

A **Student Member** must carry at least 50% of a normal, full-time academic program as a registered undergraduate or graduate student in a regular course of study in IEEE designated fields. Student Member fees are extremely low, and benefits are equal to those of Member grade.

For direct admission or transfer to **Senior Member** grade, a candidate must have ten years of professional practice. (Educational experience is credited toward the requirement, according to a sliding scale.) Senior Members receive a handsome plaque, a $25 certificate toward one new Society membership, eligibility for Fellow Grade nomination, and other benefits.

Affiliate Membership is available to those professionals who seek to affiliate themselves with GRSS but do not seek IEEE membership. Affiliates of GRSS enjoy full benefits of the Society, including monthly, on-line access to the Transactions on Geoscience and Remote Sensing, as well as the quarterly Newsletter and reduced conference fees.

Membership Fees

GRSS Memberships include electronic access to the Transactions on Geoscience and Remote Sensing Letters. If you would like to receive printed copies of the transactions and/or Letters, you must indicate that on your application form and pay the additional fee(s) of $45 and/or $24, respectively. These options are available only for Full Year memberships. The table below is a summary of **IEEE and Society Dues**.

- For regular, student and senior GRSS membership, you must pay to become an IEEE member and select GRSS as an additional society membership.
- To calculate total dues, you may elect to add the **optional** printed Transaction or Letters fee to appropriate IEEE member fee. (Affiliates select appropriate GRSS Affiliate fee only…no IEEE Member fees will be assessed.)
- Applications received between 16 August and 28 February will be processed as Full Year memberships. Services begin immediately.
- Applications received between 1 March and 15 August will be processed as Half Year memberships expiring 31 December of that calendar year.

Residence	IEEE GRSS Member	IEEE GRSS Member	IEEE GRSS Student	IEEE GRSS Student	Printed Transactions (Members)	Printed Letters (Members)	Printed Transactions (Students)	Printed Letters (Students)	GRSS Affiliate	GRSS Affiliate
	Full year	Half year	Full Year	Half year	Full Year only	Full Year only	Full Year only	Full Year only	Full Year	Half Year
United States	$183.00	$91.50	$41.00	$21.00	$45.00	$24.00	$23.00	$12.00	$84.00	$42.00
Canada (incl. GST)	$171.38	$85.69	$42.80	$21.90	$45.00	$24.00	$23.00	$12.00	$84.00	$42.00
Canada (incl. HST)	$181.22	$90.61	$44.20	$23.10	$45.00	$24.00	$23.00	$12.00	$84.00	$42.00
Africa, Europe, Middle East	$156.00	$78.00	$36.00	$18.50	$45.00	$24.00	$23.00	$12.00	$84.00	$42.00
Latin America	$149.00	$74.50	$36.00	$18.50	$45.00	$24.00	$23.00	$12.00	$84.00	$42.00
Asia, Pacific	$150.00	$75.00	$36.00	$18.50	$45.00	$24.00	$23.00	$12.00	$84.00	$42.00

IEEE GRSS Chapters and Contact Information

Chapter Location	Societies*Joint with	Chapter Chair	E-mail Address
Region 1: Northeastern USA			
Boston Section, MA	GRS	William Blackwell	wjb@ll.mit.edu
Springfield Section, MA	AP, MTT, ED, GRS, LEO	Paul Siqueira	siqueira@ecs.umass.edu
Western New York	GRS	John Kerekes	kerekes@cis.rit.edu
Region 2: Eastern USA			
Washington DC/ Northern VA area	GRS	James Tilton	j.tilton@ieee.org
Region 3: Southeastern USA			
Atlanta Section, GA	AES, GRS	Greg Showman	greg.showman@gtri.gatech.edu
Eastern North Carolina Section	GRS	Linda Hayden	haydenl@mindspring.com
Region 4: Central USA			
Southeastern Michigan Section	GRS	Mahta Moghaddam	mmoghadd@eecs.umich.edu
Region 5: Southwestern USA			
Denver Section, CO	AP, MTT, GRS	Michael Janezic	janezic@boulder.nist.gov
Houston Section, TX	AP, MTT, GRS, LEO	Christi Madsen	cmadsen@ee.tamu.edu
Region 7: Canada			
Quebec Section, Quebec	AES, OE, GRS	Xavier Maldague	maldagx@gel.ulaval.ca
Toronto Section, Ontario	SP, VT, AES, UFF, OE, GRS	Sri Krishnan	krishnan@ee.ryerson.ca
Vancouver Section, BC	AES, GRS	Rob Leitch	rleitch@mdacorporation.com
Ottawa Section	OE, GRS-S	Slawo Wesolkowski	s.wesolkowski@ieee.org
Region 8: Europe and Middle East			
Italy Section 1	GRS	Nazzareno Pierdicca	nazzareno.pierdicca@uniroma1.it
Italy Section 2	GRS	Maurizio Migliaccio	maurizio.migliaccio@uninav.it
Student Branch, Spain Section	GRS	Pablo Benedicto	pablo27@casal.upc.edu
Islamabad Section	GRS/AES	M. Umar Khattak	ukhattak@hotmail.com
France	GRS	M.Jocelyn Chanussot	jocelyn.chanussot@lis.inpg.fr
Germany Section	GRS	Alberto Moreira	Alberto.Moreira@dir.de
Russia Section	GRS	Anatolij Shutko	anatoli.shutko@email.aamu.edu ashutko@mail.ru
Spanish Chapter	GRS	Juan Manuel Lopez-Sanchez (U of Alicante)	juanma@disc.ua.es
Ukraine Section	AP, NPS, AES, ED, MTT, GRS	Anatoly Kirilenko	kirilenko@ire.kharkov.ua
UKRI Section	GRS, OE	Yong Xue	y.xue@londonmet.ac.uk
Region 9: Latin America			
Student Branch, Colombia Section	GRS	Leyini Parra Espitia	leyiniparra@ieee.org
Region 10: Asia and Pacific			
Beijing Section, China	GRS	Chao Wang	cwang@public.bta.net.cn
Seoul Section, Korea	GRS	Yisok Oh	yisokoh@hongik.ac.kr
Japan Council	GRS	Motoyuki Sato	sato@cneas.tohoku.ac.jp
Taipei	GRS	Kun-Shan Chen	dkschen@csrsr.ncu.edu.tw

Social Tours

Discover Barcelona landmarks and its surroudings!

Barcelona Architecture & Design Sunday 22th (Afternoon - Half day)

The 20th century was the era of design, a new way of understanding things around us, of giving functional objects originality and charm. Barcelona has been the cutting edge in industrial and architectural design and this is reflected in the city itself, making it a reference of design in Spain and indeed in Europe. Let an expert show you the buildings you really should not miss, some changed the concept of architecture.

Itinerary: Plaça Espanya > Les Arenes (disused bullring) > Palau Nacional (Gae Aulenti) > Casaramona Factory (Puig i Cadafalch) > German Pavilion (Ludwig Mies Van der Rohe) > Olympic Ring (Gregotti, Margarit, Milà, Buxadé) > Calatrava Tower > Norman Foster Tower > Palau St. Jordi (Arata Izosaki) > World Trade Center (Pey) > Head of Barcelona (R. Liechtenstein) > Fish (Frank O. Ghery) > Olympic Port > Hotel Arts (Merryl and Owen) > Centre de Meteorologia (Álvaro de Siza) > Abraham Centre (Benedetti) > Beaches, Forum (Herzog & De Meuron) > Hotel Princess (Oscar Tusquets) > Diagonal Mar (Miralles i Benedetta Tagliabue) > Plaça de les Glòries > AGBAR Tower (Jean Nouvel) > Teatre Nacional de Catalunya (Ricard Bofill) > Auditori de Barcelona (Rafael Moneo) > Parc de L'Estació del Nord (Beverly Pepper)> El Raval > CCCB (Helio Piñón, Albert Viaplana) > MACBA (Richard Meier)

Tour Price : 20,00 € per person.
Duration: 4 hours approximately.
Includes: Transfers from/to Conference Center/AC-Barcelona Hotel
Licensed Guide in english language
Entrance Fee to Ludwig Mies Van der Rohe Pavilion

Barcelona Gaudí Tour Monday 23th (Afternoon - Half Day)

The vision and genius of this world famous architect earned Barcelona, home to nearly all his buildings, a privileged place in the annals of the history of art.
No other architect in history has ever had such an absolute influence on a city as Antoni Gaudí (1852-1926) has had on Barcelona.
Be guided around his buildings and learn of the double-edged genius, aesthetic and technical, of his extraordinary imagination. Enter his world of fantasy and geometry.
The Sagrada **Familia in Barcelona** is Gaudi's masterpiece and a symbol of Barcelona.

Itinerary: Passeig de Gràcia > Façades of Casa Batlló and La Pedrera > Park Güell > Sagrada Familia

Tour Price : 25,00 € per person.
Duration: 4 hours approximately.
Includes: Transfers from/to Conference Center/AC-Barcelona Hotel
Licensed Guide in english language
Entrance Fee to Sagrada Familia and Park Güell

Barcelona Walking Tour + Bus Transfers Tuesday 24th (Morning - Half Day)

Come to the core of the city, to where it all started 2000 years ago, discover the elegant and inspiring Catalan Gothic architecture, enjoy its charming corners and squares hidden away down ancient narrow streets. From the Romans to the present day, the inhabitants have left their imprint on these stones, and the history is there for reading. You needn't waste time queuing at museums, your licensed guide will take you straight in. The Picasso Museum in Barcelona is a point of reference of the formative years of Pablo Ruiz Picasso and visit will outline the development of the young artist's genius. The museum, together with the Gothic Quarter and the Ribera district that surrounds it, reveal the close tie between the young artist and the city.

Itinerary: Plaça Catalunya > Rambla > Boqueria Market > Plaça Reial > c/ Ferran > Plaça del Pi > Carrer Petritxol > The Old Jewish Quarter > la Plaça Sant Jaume (City Hall and Catalan Government) > Plaça del Rei > Plaça Sant Felip Neri > Cathedral.

Tour Price : 30,00 € per person.
Duration: 5-6 hours approximately.
Includes: Transfers from/to Conference Center/AC-Barcelona Hotel
Licensed Guide in english language.
Entrance Fee to Cathedral.
Entrance Fee to the permanent Collection of the Picasso Museum.
Entrance Fee to the Barcelona's History Museum.

Tarragona (Tarraco Imperial) Tour Wednesday 25th (Full Day)

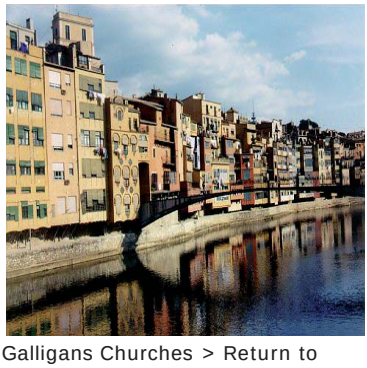
Tarragona is a city located 100km South of Barcelona.
One of the greatest cities in the Roman Empire, Tarragona preserves much of the splendour of that classical period and was declared World Heritage by UNESCO in 2000. If you are interested in the Roman world, come and discover the city, the romans called Tarraco.

Itinerary: Barcelona > Roman Aqueduct > Fishermen's Quarter > Archeological Walk: City Walls, Forum, Roman Circus, Amphitheater > Cathedral > Balcony over the Mediterranean > Barcelona.

Tour Price : 70,00 € per person.
Duration: 8 hours approximately.
Includes: Lunch
Transfers from/to Conference Center/AC-Barcelona Hotel
Licensed Guide in english language
Entrance Fee to Cathedral. City Walls and Roman Circus

Dalí Museum (Figueres) & Girona City Thursday 26th (Full Day)

No matter what you know already, this provocative surrealist painter and writer from Empordà (Catalonia) (1904-1989) will surprise you. Dalí's early years were dominated by Impressionism at drawing school but he soon joined avant-garde movements together with Luis Buñuel and Federico García Lorca to finally embrace Surrealism where he developed his own naturalistic style, both modern and polemic.



Girona is a jewel of culture and history acquired over 2000 years of existence. Many cultures have left their imprint on the streets of the city-Iberians, Greeks, Romans, Arabs, Jews, Christians... they have created unforgettable places such as the medieval quarter, the Arab baths, the best preserved medieval Jewish quarter in Europe, the houses on the Onyar river, the Cathedral, Saint Felix church and the walk around the city walls.

Itinerary: Motorway (140 Km) to Figueres > Visit Dalí Museum > Visit Girona: Cathedral, Arab Baths, Força Street, Old Jewish Quarter, Sant Fèlix and Sant Pere de Galligans Churches > Return to Barcelona on the Motorway.

Tour Price :	75,00 € per person.
Duration:	8 hours approximately
Includes:	Lunch
	Transfers from/to Conference Center/AC-Barcelona Hotel
	Licensed Guide in english language
	Entrance Fee to Dalí Museum + Entrance Fee in Girona Cathedral, Creation Tapestry, Cloister and Arab Baths

Montserrat, the Holy Mountain & Sitges Friday 27th (Full Day)

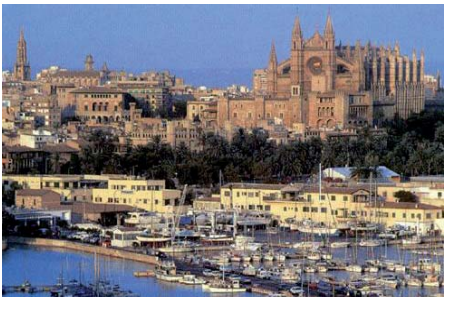
A well rounded excursion: mountain and beach in the same day.
Montserrat is a mountain, a unique Natural Park, a massive rock over 4000 feet high, visible for miles, with weird shapes and rounded peaks that jut into the sky; there are walks, paths, stairs, with caves and hermitages scattered over the mountain, and mysterious rocks and wonderful views.

Sitges is situated 20 miles away from south of Barcelona, Sitges' beautiful beaches and peaceful mountains proved irresistible to the Catalan wealthy who made it a fashionable resort at the turn of the 19th-20th century. At the same time, Modernista artist Santiago Rusinyol discovered its charms and attracted a colony of Modernista artists and intellectuals to his house there, now the Museum Cau Ferrat. Sitges has wisely preserved its Modernista past in the streets and buildings of the old quarter, and the charm of this lively seaside town remains intact.

Itinerary: Barcelona > Montserrat Natural Park > Sanctuary (Monastery, Basilica, Chapel of the Virgin) > Boys' Choir (depending on the time and day) and free time > Sitges, Waterfront Promenade > Old Quarter > Quiet Corner > Visit to Cau Ferrat Museum > Sant Sebastià Beach > Barcelona

Tour Price : 70,00 € per person.
Duration: 8 hours approximately
Includes: Lunch
Transfers from/to Conference Center/AC-Barcelona Hotel
Licensed Guide in english language
Entrace Fee to Cau Ferrat Museum (Sitges).

Palma de Mallorca 28jul - 01 aug



28JUL - BARCELONA - PALMA DE MALLORCA Depart special flight to Palma. Arrival and transfer to hotel Riu Festival or similar. **** starts Half board at the hotel.

29-30-31JUL PALMA DE MALLORCA Lodgement at the hotel. Half board. Options to visit the Island*

01-AUG PALMA DE MALLORCA - BARCELONA Breakfast at the hotel. Transfer to airport. Flight to Barcelona

Price : 635.00 € per person
Price includes
Flight Barcelona - Palma - Barcelona / Transfers airport - hotel - airport / Stay half board at the hotel. Insurance travel. Price no include tax *Price subject to change for a different hotel and increment fares or tax at moment to do the reservation.
Optional tours: Coves del Drac: price 41.00 euro per person
Tour Island price 65.00 euro per person
Dinner and show at tipical restaurant 65.00 eur per person

For reservations and questions, please contact with:
Viajes Transglobal
Elisenda Contell e.contell@viajestransglobal.com
Pedro Loré p.lore@viajestransglobal.com
Ph. 34 933342208
Fx. 34 933349561

Tutorials and workshops

Full day and half day tutorials are scheduled for Sunday 22th in parallel to the GEOSS workshop.

FULL-DAY TUTORIALS

FD-1: SAR Polarimetry: Basics, Processing Techniques and Applications

Room: 121

Schedule: 9:00 am to 1:00 p.m and 2:30 p.m to 6:30 p.m

Instructors:
Eric Pottier (University of Rennes 1, France)
Jong-Sen Lee (Chair Professor, Center for Space and Remote Sensing, National Central University, Chung-Li, Taiwan). (Retired from Naval Research Laboratory, Washington DC, USA)

FD-2: Information extraction and content analysis of high resolution EO images: Information Mining and Scene Understanding

Room: 122

Schedule: 9:00 am to 1:00 p.m and 2:30 p.m to 6:30 p.m

Instructors:
Mihai Datcu (German Aerospace Center, DLR Oberpfaffenhofen)
Klaus Seidel (Swiss Federal Institute of Technology, ETH Zurich)

HALF-DAY TUTORIALS

HD-1: Radio Regulation impact on sensor operations: a tutorial on the processes of the UN specialized agency International Telecommunications Union - Radio communications Sector (ITU-R) and ITU-R World Radio Conference (WRC)

Room: 131

Schedule: 2:30 p.m to 6:30 p.m

Instructor: **Tom vonDeak** (NASA HQ Spectrum Management Office)

HD-2: SAR and InSAR Remote Sensing and Data Analysis

Room: 132

Schedule: 2:30 p.m to 6:30 p.m

Instructor: **Richard Bamler** (German Aerospace Center, DLR Oberpfaffenhofen)

HD-3: Application of Computational Electromagnetics in Scattering and Propagation in Random Media

Room: 133

Schedule: 2:30 p.m to 6:30 p.m

Instructor: **Kamal Sarabandi** (The University of Michigan)

HD-4: Introduction to LIDAR (laser radar) remote sensing systems

Room: 131

Schedule: 9:00 am to 1:00 p.m

***Instructor*: Francesc Rocadenbosch** (Universitat Politècnica de Catalunya)

HD-5: What is Rapid Prototyping Capability for Earth Science?

Room: 132

Schedule: 9:00 am to 1:00 p.m

***Instructor*: Verne Kaupp** (ICREST-University of Missouri)

HD-6: Data Models and Information Estimation in Multichannel Radar Remote Sensing Imagery

Room: 133

Schedule: 9:00 am to 1:00 p.m

***Instructor:* Carlos López-Martínez** (Remote Sensing Lab, Universitat Politècnica de Catalunya)

GEOSS Workshop

The ***IEEE, ISPRS, OGC*** and other participating organization and members of GEO have sponsored a series of workshops entitled "The User and the GEOSS Architecture" beginning in July 2005.

IGARSS 2007 co-sponsors the "GEOSS Workshop Barcelona 2007"

DATE: Sunday July 22nd 2007

AGENDA: 9:00 TO 18:30 h

SITE: IGARSS 2007 Convention Center

FEES: Free. Pre-registration required.

ATTENDANCE: Restricted to 70 people strictly assigned by registration order.

LUNCH : Not hosted

For further details visit GEOSS Web Site
http://www.grss-ieee.org/menu.taf?menu=GEOSS&detail=geossworkshops

U.S. National Research Council Spectrum Study Committee's meeting

The U.S. National Research Council's Spectrum Study Committee will hold a public oral session, chaired by Dr. Albin J. Gasiewski (University of Colorado at Boulder, U.S.), at the 2007 International Geoscience and Remote Sensing Symposium (IGARSS) in Barcelona, Spain on Tuesday, July 24 at 18:00 – 20:00 local time. The meeting room will be announced soon.

http://www7.nationalacademies.org/bpa/Spectrum_Study_Home.html

Student Prize Paper Competition

Don't miss this special session, highlighting the best of the best student presentations this year! The ten finalists have been selected and will present their full papers on Tuesday morning. All finalists receive financial support to attend the conference, and the top three finalists will receive complimentary IEEE GRSS Awards Banquet tickets where the top three cash prizes will be announced.

Congratulations to all ten finalists!

Hurricane Wind Field Estimation from SeaWinds at Ultra High Resolution
Brent A. Williams, David G. Long

Partially-Supervised Updating of Land-Cover Maps: A P2S2VM Technique and a Circular Validation Strategy
Mattia Marconcini, Lorenzo Bruzzone

Variants of Principal Components Analysis
Wei-min Liu, Chein-I Chang

Validation of a Backscatter Model for a River Ice Covers Using Radarsat-1 Images
Imen Gherboudj, Monique Bernier, Robert Leconte

Application of Persistent Scatterer InSAR and GIS for Urban Subsidence Monitoring
Alex H. Ng, Linlin Ge

An Ultra-Lightweight L-band Digital Lobe-Differencing Correlation Radiometer for Airborne UAV SSS Mapping
Eric M. McIntyre, Al. J. Gasiewski

Multibaseline POL-InSAR Analysis of Urban Scenes for 3D Modeling and Physical Feature Retrieval at L-Band
Stefan Sauer, Laurent Ferro-Famil, Andreas Reigber, Eric Pottier

An Investigation of PN Sequences for Multistatic SAR/InSAR Applications
Karan Jumani, Kamal Sarabandi

Obtaining A Ship's Speed and Direction from Its Kelvin Wake Spectrum Using Stochastic Matched Filtering
Andreas Arnold-Bos, Arnaud Martin, Ali Khenchaf

Empirical Determination of the Soil Emissivity at L-band: Effects of Soil Moisture, Soil Roughness, Vine Canopy, and Topography
Alessandra Monerris, Adriano Camps, Mercè Vall-llossera

MONDAY July 23, 2007

OPENING CEREMONY (9:30 – 10:40 AM) Room 117

09:30 – 09:35 Welcome to IGARSS 07
Dr. Ignasi Corbella, General Chairman

09:35 – 09:45 Welcome from the "Universitat Politècnica de Catalunya"
Dr. Antoni Giró, Chancellor

09:45 – 09:50 Welcome to Catalunya
Mr. Ramón Moreno, Director General of Research.

09:50 – 10:00 Welcome from the IEEE-GRS Society
Dr. Leung Tsang, President

10:00 – 10:15 IEEE Vision for the Future: Increasing Global Outreach, Societal Benefits, and Contributions to Earth Observation
Dr. Lewis Terman, President-Elect of IEEE

10:15 – 10:45 IEEE Major Awards and Recognitions:
- 2007 IEEE Fellows Recognition
- 2007 IEEE Kiyo Tomiyasu Award
- 2007 IEEE GRS-S Distinguished Achievement Award
- 2007 IEEE GRS-S Outstanding Service Award
- 2007 IEEE GRS-S Education Award
- 2007 IEEE Dennis J. Picard Medal for Radar Technologies and Applications

Dr. Rich Cox, IEEE Division IX Director
Dr. Werner Wiesbeck, IEEE-GRSS Awards Chair

10:45 – 11:00 Break

PLENARY SESSION (11:00 – 12:40 AM) Room 117

11:00 – 11:25 Operational Observations of Weather and Climate with Meteosat and Metop
Dr. Johannes Schmetz. Head of Meteorological Division, EUMETSAT

11:25 – 11:50 Challenges and Prospects for the European Earth Observation Landscape
Dr. Volker Liebig, Director of ESA Earth Observation Programmes.

11:50 – 12:15 The CloudSat Mission
Dr. Graeme Stephens, Colorado State University

12:15 –12:40 Global Earth Observation System of Systems: Progress and Plans
Dr. José Achache, GEO Secretariat Director.

12:40 –12:45 IEEE Committee on Earth Observation and GEOSS Report
Dr. Jay Pearlman, Chair of ICEO

Technical Program and Conference Schedule

Sunday 22nd July: Tutorials

	Room 120	Room 121	Room 122	Room 131	Room 132	Room 133
9:00 13:00	GEOSS Workshop	SAR Polarimetry: Basics, Processing Techniques and Applications **Eric Pottier, Jong-Sen Lee**	Information extraction and content analysis of high resolution EO images... **Mihai Datcu, Klaus Seidel**	Introduction to LIDAR (laser radar) remote sensing systems **Francesc Rocadenbosch**	What is Rapid Prototyping Capability for Earth Science? **Verne Kaupp**	Data Models and Information Estimation in Multichannel Radar Remote Sensing Imagery **Carlos López-Martínez**
13:00 to 14:30 Lunch						
14:30 18:20	GEOSS Workshop	SAR Polarimetry: Basics, Processing Techniques and Applications **Eric Pottier, Jong-Sen Lee**	Information extraction and content analysis of high resolution EO images... **Mihai Datcu, Klaus Seidel**	Radio Regulation impact on sensor operations ... **Tom vonDeak**	SAR and InSAR Remote Sensing and Data Analysis **Richard Bamler**	Application of Computational Electromagnetics in Scattering & Propagation in Random Media **Kamal Sarabandi**
18:30 to 20:00 Ice Breaker Reception. Convention Center Hall						

Coffee breaks are served from 10:50 to 11:10 and from 16:20 to 16:40

Monday 23rd July

08:30 to 09:30 Chairpersons breakast. IGARSS 07 Host hotel: AC Barcelona. Room "Sagrada Família"

09:30 to 10:40 Opening Ceremony. Room 117

10:40 to 11:00 Coffe break

11:00 to 12:40 Plenary Session. Room 117

12:40 to 14:20 Lunch

	Room 120	Room 121	Room 122	Room 123	Room 124	Room 128	Room 129	Room 130	Room 131	Room 132	Room 133
14:20 16:00	Ocean Surface Processes-I	Electromagnetic Methods in Remote Sensing I	Bistatic and Multistatic Radar	SAR Data Processing	SAR Polarimetry: Theory and Applications	GEOSS Challenges and Opportunities	Space Agencies Missions and Technologies	Microwave Radiometer Technology	COSMO-SkyMed Mission and Applications	Feature Extraction and Reduction	Remote Sensing for Humanitarian Demining
16:00 to 16:20 Coffe break											
16:20 18:00	Ocean Surface Processes-I	Electromagnetic Methods in Remote Sensing I	Bistatic and Multistatic Radar	SAR Data Processing	SAR Polarimetry: Theory and Applications	GEOSS Architecture and Implementation	Space Agencies Missions and Technologies	Microwave Radiometer Technology	Data Fussion II: Pan-sharpening and Resolution Enhancement	Feature Extraction and Reduction	Image Information Mining
18:00 to 19:30 Interactive sessions. Foyer 2											

Tuesday 24th July

	Room 120	Room 121	Room 122	Room 123	Room 124	Room 128	Room 129	Room 130	Room 131	Room 132	Room 133
10:00 to 19:30 Exhibition. Room 111											
9:00 10:40	Atmospheric applications	**Student Prize Paper Competition Award Session**	CLOUDSAT & CALIPSO and the Potential of the A-Train Virtual Observatory	Land Cover Data Products	Pol-InSAR Techniques and Applications	ENVISAT ASAR Land Applications	Passive Microwave Remote Sensing of Soil Moisture I	Active and Passive Microwave Remote Sensing of Terrestrial Snow - I	Educational activities in Remote Sensing	Data Compression Techniques	Remote Sensing and GIS Research and Applications on the African Continent
10:40 to 11:00 Coffe break											
11:00 12:40	Atmospheric applications	**Student Prize Paper Competition Award Session**	CLOUDSAT & CALIPSO and the Potential of the A-Train Virtual Observatory	Multisource Land Cover Mapping	Pol-InSAR Techniques and Applications	ENVISAT ASAR Land Applications	Passive Microwave Remote Sensing of Soil Moisture I	Active and Passive Microwave Remote Sensing of Terrestrial Snow - I	Educational activities in Remote Sensing	Image Calibration, Correction and Registration	Remote Sensing and GIS Research and Applications on the African Continent
12:40 to 14:20 Lunch											
14:20 16:00	Ocean Surface Process-2	**Special Session:** Contributions to Remote Sensing of **Tanos M. Elfouhaily**	Remote Sensing of the Cryosphere Environment	Measurement-based Data Systems	RADARSAT	ERS SAR and ENVISAT ASAR Performance, Calibration, Validation and Optimisation	Microwave Monitoring of Vegetation at both Local and Global Scales	Active and Passive Microwave Remote Sensing of Terrestrial Snow - II	Image Processing	Image Classification - **Joint GRSS-ISPRS Session**	Hyperspectral Processing and Analysis
16:00 to 16:20 Coffe break											
16:20 18:00	Ocean Surface Process-2	**Special Session:** Contributions to Remote Sensing of **Tanos M. Elfouhaily**	User Applications in Remote Sensing Technical Committee Contributions	Measurement-based Data Systems	RADARSAT	ERS SAR and ENVISAT ASAR Performance, Calibration, Validation and Optimisation	Microwave Monitoring of Vegetation at both Local and Global Scales	Active and Passive Microwave Remote Sensing of Terrestrial Snow - II	Image Processing	Image Classification - **Joint GRSS-ISPRS Session**	Hyperspectral Processing and Analysis
18:00 to 19:30 Exhibit Opening Reception. Room 111						**18:00 to 19:30 Interactive sessions. Foyer 2**					
Starting at 21:00 IGARSS 07 Welcome concert. "Palau de la Música Catalana"											

Wednesday 25th July

10:00 to 19:30 Exhibition. Room 111

	Room 120	Room 121	Room 122	Room 123	Room 124	Room 128	Room 129	Room 130	Room 131	Room 132	Room 133
9:00 10:40	Clouds and precipitation	Forest Applications	Forest Mapping with SAR Measurements	Change Detection and Multitemporal Analysis	Radar Polarimetry	ENVISAT MERIS/AATSR Applications	Passive Microwave Remote Sensing of Soil Moisture II	Microwave Radiometer Calibration	Geohazards-1	Optical Calibration	Rapid Prototyping: A Concept for Moving Earth Science to Operations for Societal Benefit
10:40 to 11:00 Coffe break											
11:00 12:40	Clouds and precipitation	Forest Applications	Forest Mapping with SAR Measurements	Change Detection and Multitemporal Analysis	Pol-InSAR Applications and Methodology	ENVISAT MERIS/AATSR Applications	Wetlands	Microwave Radiometer Calibration	Geohazards-1	Surface Lidar Data Analysis	Rapid Prototyping: A Concept for Moving Earth Science to Operations for Societal Benefit
12:40 to 14:20 Lunch											
14:20 16:00	Ocean Winds 1	Electromagnetic Methods in Remote Sensing II	Atmospheric Lidar	Change Detection and Image Analysis	Repeat-Pass Differential Pol-SAR Interferometry	ESA´s Optical Data Portfolio and Application in the Land Domain	Mapping & Urban Remote Sensing Applications	Frequency Allocation for Remote Sensing and RFI Mitigation for Microwave Radiometry	Weather Radar Networks: Collaborative Adaptive Sensing of the Atmosphere	Forest Mapping with VNIR Measurements	Hyperspectral Programs & Applications
16:00 to 16:20 Coffe break											
16:20 18:00	Ocean Winds 1	Electromagnetic Methods in Remote Sensing II	Atmospheric Lidar	Change Detection and Image Analysis	Repeat-Pass Differential Pol-SAR Interferometry	ESA´s Optical Data Portfolio and Application in the Land Domain	Mapping & Urban Remote Sensing Applications	Frequency Allocation for Remote Sensing and RFI Mitigation for Microwave Radiometry	Weather Radar Networks: Collaborative Adaptive Sensing of the Atmosphere	Lidar Sensing of Forest Structure	Hyperspectral Programs & Applications
18:00 to 19:30 Interactive sessions. Foyer 2											

Starting at 18:30 IGARSS 07 Soccer match. "Campo de futbol Agapito Fernández"

Starting at 20:00 IEEE GRSS Technical Commitees and Chapters Dinner. IGARSS 07 Host Hotel: AC Barcelona. Room "22@"

Thursday 26th July

	Room 120	Room 121	Room 122	Room 123	Room 124	Room 128	Room 129	Room 130	Room 131	Room 132	Room 133
9:00 10:40	Ocean Winds 2	Current and Future Altimetry Missions and their Performance	GPM	Radar Data Processing	ALOS CALVAL Update 2007	SMOS (I): Instrument and Mission	Agroecosystems and Crop Monitoring	Active Microwave Remote Sensing in Hydrology	Geohazards-2	Vegetation Fluorescence	Hyperspectral Data Classification
10:40 to 11:00 Coffe break											
11:00 12:40	Ocean Winds 2	Current and Future Altimetry Missions and their Performance	GPM	Radar Data Processing	ALOS CALVAL Update 2007	SMOS (I): Instrument and Mission	Agroecosystems and Crop Monitoring	Active Microwave Remote Sensing in Hydrology	Geohazards-2	Vegetation Fluorescence	Hyperspectral Data Classification
12:40 to 14:20 Lunch											
14:20 16:00	HR SAR	Radar Altimetry: On-board and On-ground Processing Techniques	TRMM	Multitemporal Land Cover Mapping	TerraSAR-X: First Post-Launch Reports and Results	SMOS (II): Science Issues	Agricultural Applications of Remote Sensing	Remote Sensing of the Cryosphere	Data Search, Access, Distribution and Specialized Services	Optical Sensors	Hyperspectral Image Analysis
16:00 to 16:20 Coffe break											
16:20 18:00	HR SAR	**Special Session**: A Tribute to Professor **Mikio Takagi**	TRMM	Image Visualization	TerraSAR-X: First Post-Launch Reports and Results	SMOS (II): Science Issues	Agricultural Applications of Remote Sensing	Remote Sensing of the Cryosphere	Data Search, Access, Distribution and Specialized Services	Sensor Application to International Disaster Management	Hyperspectral Image Analysis

10:00 to 19:30 Exhibition. Room 111

18:00 19:30 Interactive sessions. Foyer 2

Starting at 20:00 Awards Banquet. "Reials Drassanes de Barcelona"

Friday 27th July

	Room 120	Room 121	Room 122	Room 123	Room 124	Room 128	Room 129	Room 130	Room 131	Room 132	Room 133
9:00 10:40	Inverse Problems and Parameters Estimation	Detection and Object Recognition	Data Fusion I	Data Mining, Web and Grid Services	Radar Interferometry (I)	AMSR-E	SAR and Radar Technology	Remote Sensing of Soil Properties	Geologic and Environmental Applications	Spaceborne Lidar	Hyperspectral Imaging Training
10:40 to 11:00 Coffe break											
11:00 12:40	Instruments and GPS/GNSS	Detection and Object Recognition	Data Fusion I	Information Systems and GIS	Radar Interferometry (I)	AMSR-E	SAR and Radar Technology	Hydrologic Applications	Geologic and Environmental Applications	Spaceborne Lidar	Multichannel Coherent SAR Data Combination - Airborne
12:40 to 14:20 Lunch											
14:20 16:00	GNSS-R Applications and Technologies	Altimetry Applications	Multisensor Analysis and Data Fusion	Applications of Joint Time-Frequency Analysis to SAR Image Processing	Radar Interferometry (II)	Radar and SAR Calibration	Land Use Change	Passive Microwave: Missions and Calibration	Carbon Fluxes and Kyoto Monitoring	Advances in Lidar Remote Sensing	Multichannel Coherent SAR Data Combination - Spaceborne
16:00 to 16:20 Coffe break											
16:20 18:00	GNSS-R Applications and Technologies	Altimetry Applications	Multisensor Analysis and Data Fusion	Applications of Joint Time-Frequency Analysis to SAR Image Processing	New Intruments in UAV	Radar and SAR Calibration	Detection and Monitoring of Land Conversion	Passive Microwave: Missions and Calibration	Water Monitoring and Hazards	Advances in Lidar Remote Sensing	Multichannel Coherent SAR Data Combination - Spaceborne

IGARSS 2007

TECHNICAL PROGRAM LISTINGS

SESSION INDEX

Monday Afternoon (14:20 - 16:00)

Room: 128 - Mo01AH1. GEOSS Challenges and Opportunities
Co-Chairs: *Helen Wood , Melba Crawford*

14:20 Observing System for Climate
Jean-Louis Fellous

14:40 Progress in Global Earth Observation System of Systems
Helen Wood, Melba Crawford

15:00 The Atmospheric Composition Constellation: A Proposed Example of an Integrated Earth Observing System for GEOSS
Ernest Hilsenrath, Joerg Langen

15:20 The Evolving World of Land Imaging Satellites: a GEOSS Opportunity
William E. Stoney

15:40 The CEOS/GEO Constellation Concept
Bryant Cramer, Stephen Ungar

Room: 131 - Mo02AH1. COSMO-SkyMed Mission and Applications
Co-Chairs: *Alessandro Coletta , Simona Zoffoli*

14:20 COSMO-SkyMed: An Advanced Dual System for Earth Observation
Francesco Caltagirone, G. Angino, F. Impagnatiello, A. Capuzi, S. Fagioli, R. Leonardi

14:40 Interopelability, Expandability and Multi Mission-Sensor COSMO-SkyMed Capabilities
Giuseppe Francesco De Luca, G. Marano, M. Piemontese, B. Versini, F. Caltagirone, G. Casonato, A. Coletta, M. De Carlo

15:00 High Resolution COSMO - SkyMed SAR Images for Oil Spills Automatic Detection
Paolo Trivero, Walter Biamino, Francesco Nirchio

15:20 High Resolution COSMO/SkyMed SAR Data Analysis for Civil Protection from Flooding Events
G. Boni, F. Castelli, L. Ferraris, N. Pierdicca, Sebastiano Serpico, F. Siccardi

15:40 The SBAS-InSAR Technique as a Tool for the Observation of Active Volcanic Areas: Results and Future Perspectives
P. Berardino, F. Casu, G. Fornaro, R. Lanari, Michele Manunta, M. Manzo, A. Pepe, S. Pepe, E. Sansosti, F. Serafino, G. Solaro, P. Tizzani, G. Zeni

Room: 133 - Mo03AH1. Remote Sensing for Humanitarian Demining
Co-Chairs: *Paul D. Gader , Joseph Wilson*

14:20 Possibilistic Multi-Sensor Fusion for Humanitarian Demining
Nada Milisavljevic, Isabelle Bloch

14:40 Hand Held Dual Sensor ALIS and Its Valuation Test in Cambodia
Jun Fujiwara, Motoyuki Sato, Kazunori Takahashi

15:00 Broadband Electromagnetic Induction Sensor for Detecting Buried Landmines
Waymond R. Scott, Jr.

15:20 Use of an Application-Specific Dictionary for Matching Pursuits Discrimination of Landmines and Clutter
Raaz Mazhar, Joseph N. Wilson, Paul D. Gader

15:40 Polarimetric Feature Fusion in GPR for Landmine Detection
Vsevolod O. Kovalenko, Alexander G. Yarovoy, Leo P. Ligthart

Monday Afternoon (14:20 - 18:00)
Room: 120
Mo04AF. Ocean Surface Processes-I
Co-Chairs: *David E. Weissman , Vladimir Irisov*

14:20 Concept Design of a Near-Space Radar for Tsunami Detection
Michele Galletti, Gerhard Krieger, Thomas Boerner, Nicolas Marquart, Johannes Schultz-Stellenfleth

14:40 Towards an Ocean Salinity Error Budget Estimation within the SMOS Mission
Roberto Sabia, Adriano Camps, Mercè Vall-llossera, Marco Talone, Jordi Font

15:00 Oil Spill Detection and Tracking by Means of SAR and VIS/NIR Imagery
Maria Adamo, Giacomo De Carolis, Vito De Pasquale, Guido Pasquariello

15:20 Comparison of Modeled and Observed Microwave Emissivities of Water Surfaces in the Presence of Breaking Waves and Foam
Sharmila Padmanabhan, Steven C. Reising, William E. Asher, Victor Raizer, Peter W. Gaiser

15:40 Measurements of the Effect of Rain-Induced Sea Surface Roughness on the Satellite Scatterometer Radar Cross Section
David E. Weissman, Mark A. Bourassa

16:00 COFFEE BREAK

16:20 NOAA Coral Reef Watch's Near-Real-Time Satellite Monitoring of the 2005 Record Breaking Coral Bleaching Event in the Caribbean
Gang Liu, C. Mark Eakin, Jessica Morgan, Tyler Christensen, Scott Heron, William Skirving, Alan E. Strong, Dwight Gledhill

16:40 Computing Coastal Ocean Surface Currents from Ocean Color Satellite Imagery
Roge Crocker, William Emery

17:00 A Global Survey of Intense Surface Plankton Blooms Using MERIS MCI
Jim Gower, Stephanie King, Pedro Goncalves

17:20 Seasonal and Interannual Patterns of Chlorophyll Bloom Timing in the Gulf of Cádiz
Gabriel Navarro, Laura Prieto, I. Emma Huertas, Javier Ruiz, Jesús Gomez-Enri

17:40 A Multi-Channel Atmospheric Correction Algorithm For Remote Sensing of Coastal Waters
Bo-Cai Gao, Marcos J. Montes, Rong-Rong Li

Monday Afternoon (14:20 - 18:00)
Room: 121
Mo05AF. Electromagnetic Methods in Remote Sensing I
Co-Chairs: *Kamal Sarabandi , Jose Luis Alvarez-Perez*

14:20 Bistatic Scattering from a 3D Target above Rough Surface
Ya-Qiu Jin, Hongxia Ye

14:40 Application of the Stochastic Second-Degree Iterative Method to EM Scattering from Randomly Rough Surfaces
Yang Du, J. A. Kong

15:00 Frequency and Polarimetric Dependence of Active and Passive Microwave Remote Sensing Signatures in Rough Surface Problems with Small to Moderate rms Heights
Peng Xu, Leung Tsang, Kuan Shan Chen

15:20 Moment Method / Monte Carlo Simulation of the Microwave Backscatter of Wet-Land Rice Fields
Yisok Oh, Jin-Young Hong

15:40 Extension of Advanced Integral Equation Model for Calculations of Fully Polarimetric Scattering Coefficient from Rough Surface
Hung-Wei Lee Lee, Kun-Shan Chen, Jeng Chuan Wang, Tzong-Dar Wu, Jong-Sen Lee, J.C. Shi

16:00 COFFEE BREAK

16:20 Bistatic Scattering from Bare Soils: Sensitivity to Soil Moisture and Surface Roughness
Marco Brogioni, Giovanni Macelloni, Simonetta Paloscia, Paolo Pampaloni, Simone Pettinato, Francesca Ticconi

16:40 Derivation of Validity Region of SPM Simulation of One-Dimensional Two-Layer Rough Surfaces Using a Fast Solver and Simulated Annealing Method
Alireza Tabatabaeenejad, Mahta Moghaddam, Eric Michielssen

17:00 Comparison of Different Separable Basis Functions for the Application of the Method of Moments on Rough Surface Scattering
Jose L. Alvarez-Perez, M. Vall-llossera, J.C. Nieto-Borge

17:20 Improvement of 3D Radar Backscatter Model By Matrix-Doubling Methods
Wenjian Ni, Zhifeng Guo, Guoqing Sun, Fang Wang

17:40 Effective Dielectric Constant for a Random Medium with Different Scattering Species after Renormalization of the Helmholtz Equation
Jose L. Alvarez-Perez

Monday Afternoon (14:20 - 18:00)
Room: 122
Mo06AF. Bistatic and Multistatic Radar
Co-Chairs: *Paco Lopez-Dekker , Francesc Junyent*

14:20 Feasibility of Spaceborne Bistatic Radar Missions for Land Applications
Giuliano Della Pietra, Fabrizio Capobianco, Stefano Falzini, Nazzareno Pierdicca, Ludovico De Titta

14:40 Phase and Temporal Synchronization in Bistatic SAR Systems Using Sources of Opportunity
Paco López-Dekker, Jordi J. Mallorquí, Pau Serra-Morales, Jesus Sanz-Marcos

15:00 Space-Based Moving Target Positioning Using Radar with a Switched Aperture Antenna
Joachim H.G. Ender, Christoph Gierull, Delphine Cerutti-Maori

15:20 Assessment of Interferometric Baseline Performances in a Multistatic Radar Formation Flight for High-Accurate DEM Generation
Andreas Kohlhase, Remc Kroes

15:40 Bistatic SAR Interferometry Using ENVISAT and a Ground Based Receiver: Experimental Results
Paco Lopez-Dekker, Juan C. Merlano, Sergio Duque, Jesus Sanz-Marcos, Albert Aguasca, Jordi J. Mallorquí

16:00 COFFEE BREAK

16:20 Constraints of the Bistatic SAR Processing
Koba Natroshvili, Otmar Loffeld, Holger Nies, Ulrich Gebhardt, Joachim Ender

16:40 Experimental Investigation of Digital Beamforming SAR Performance Using a Ground-Based Demonstrator
Jung-Hyo Kim, Alicja Ossowska, Werner Wiesbeck

17:00 Position and Orientation Estimation of Two Airborne Platforms Towards Each Other
Matthias Weiß, Giovanni Marino

17:20 Performance Results of the SHARAD Instrument
Franco Fois, Renato Croci, Roberto Seu, Giovanni Picardi, Enrico Flamini

17:40 Bistatic SAR Imaging: A Novel Approach Using a Stationary Receiver
Adib Nashashibi, Fawwaz Ulaby

Monday Afternoon (14:20 - 18:00)
Room: 123
Mo07AF. SAR Data Processing
Co-Chairs: *Jordi J Mallorqui , Pau Prats*

14:20 Improvement of Interferometric SAR Coherence Estimates by Slope-Adaptive Range Common-Band Filtering
Maurizio Santoro, Charles Werner, Urs Wegmüller, Oliver Cartus

14:40 Polarimetric Phase Gradient Autofocus
Marco Martorella, Mark Preiss, Brett Haywood, Bevan Bates

15:00 Delay/Doppler Altimeter Data Processing
Davide D'Aria, Pietro Guccione, Betlem Rosich, Robert Cullen

15:20 Merging of the Stereogrametry and Interferometry Techniques as Relative Bandwidth Grows. Illustration with VHF Carabas SAR Images
Hubert M.J. Cantalloube, Élise Colin-Koeniguer, P.O. Frölind, Lars M.H. Ulander

15:40 Evaluation of the Bistatic Range Migration Processor
Ingo Walterscheid, Andreas R. Brenner, Joachim H. G. Ender, Otmar Loffeld

16:00 COFFEE BREAK

16:20 A SAR Processing Algorithm for TOPS Imaging Mode Based on Extended Chirp Scaling
Pau Prats, Rolf Scheiber, Josef Mittermayer, Adriano Meta, Alberto Moreira, Jesus Sanz-Marcos

16:40 Investigations on the TOPSAR Acquisition Mode with TerraSAR-X
Adriano Meta, Josef Mittermayer, Ulrich Steinbrecher, Pau Prats

17:00 Tomographic Processing of Multi-Baseline P-Band SAR Data for Imaging of a Forested Area
Othmar Frey, Felix Morsdorf, Erich Meier

17:20 Accurate Phase-Preserving Processing of Spaceboene TOPS Mode Data
Ole Morten Olsen

17:40 Analysis of Non-Gaussian POLSAR Data
Anthony Doulgeris, Stian Anfinsen, Normann Anfinsen, Torbjorn Eltoft

Monday Afternoon (14:20 - 18:00)
Room: 124
Mo08AF. SAR Polarimetry: Theory and Applications
Co-Chairs: *Carlos López-Martínez , Eric Pottier*

14:20 Classification Comparisons Between Dual-Pol and Quad-Pol SAR Imagery
T. L. Ainsworth, J.-S. Lee, L.-W. Chang

14:40 Analysis of Fully Polarimetric SAR Data Based on the Cloude-Pottier Decomposition and the Complex Wishart Classifier
Fang Cao, Wen Hong, Yirong Wu, Eric Pottier

15:00 Evaluation and Bias Removal of Multi-Look Effect on Entropy / Alpha / Anisotropy
Jong-Sen Lee, Thomas Ainsworth, John Kelly, Carlos Lopez-Martinez

15:20 Multidimensional Speckle Noise Reduction in Synthetic Aperture Radar Images
Carlos López-Martínez, Xavier Fàbregas

15:40 Review of Existing Monographs and Books on Radar Polarimetry and Polarimetric SAR with the Aim of Justifying the Need of Updates
Wolfgang-Martin Boerner, Jong-Sen Lee

16:00 COFFEE BREAK

16:20 Monitoring Temperate Glaciers by High Resolution Pol-InSAR Data: First Analysis of Argentière E-SAR Acquisitions and In-Situ Measurements
Tania Landes, Michel Gay, Emmanuel Trouvé, Jean-Marie Nicolas, Lionel Bombrun, Gabriel Vasile, Irena Hajnsek

16:40 Sub-Band Interferometry on Polarimetric SAR Dataset
Jean-Francois Nouvel, Pascale Dubois-Fernandez, Sébastien Angelliaume, Mimoun David

17:00 Polarimetric Temporal Information for Urban Deformation Map Retrieval
Luca Pipia, Xavier Fàbregas, Albert Aguasca, Carlos Lopez-Martinez, Jordi J. Mallorquí, Antoni Broquetas, Oscar Moraline

17:20 Pol-DinSAR: Polarimetric SAR Differential Interferometry Using Coherent Scatterers
Rafael Zandona Schneider, Konstantinos Papathanassiou

17:40 Classification of Stricken Residential Houses by the Mid Niigata Prefecture Earthquake Based on POLSAR Image Analysis
Ryoichi Sato, Koji Soma, Yuki Yajima, Yoshio Yamaguchi, Hiroyoshi Yamada

Monday Afternoon (14:20 - 18:00)
Room: 129
Mo09AF. Space Agencies Missions and Technologies
Co-Chairs: *David Kunkee , Shabeer Ahmed*

14:20 The Restructured NPOESS and NPP Programs: Their Projected Ability to Help Fulfill the Global Meteorological & Climate Missionsand Their Potential Contributions to these GEOSS Societal Benefit Areas
Stephen A. Mango

14:40 Global Change Observation Missions
Haruhisa Shimoda

15:00 The Contribution of the European Space Agency to the ALOS PRISM / Commissioning Phase
Sébastien Saunier, Philippe Goryl, Marc Bouvet, Richard Santer, Armin Gruen, Kirsten Wolf, Francoise Viallefont

15:20 The National Polar-Orbiting Operational Environmental Satellite System (NPOESS) Sensor Suite
Hal Bloom

15:40 ESA Future Earth Observation Explorer Missions
Jean-Loup Bézy, Paolo Bensi, Chun-Chi Lin, Yannig Durand, F. Hélière, Amanda Regan, Paul Ingmann, Joerg Langen, Michael Berger, Malcolm Davidson, H. Rebhan

16:00 COFFEE BREAK

16:20 The C-SAR Instrument for the GMES Sentinel-1 Mission
Friedhelm Rostan, Sebastian Riegger, Wolfgang Pitz, Andrea Torre, Ramon Torres

16:40 SRAL SAR Radar Altimeter for Sentinel-3 Mission
Yves Le Roy, Marc Deschaux-beaume, Constantin Mavrocordatos, Miguel Aguirre, Florence Hélière

17:00 ENVISAT AP Mode Data and AIS Used for Ship Detection
Tonje Nanette Arnesen

17:20 The COSMO-SkyMed Satellites Development and Qualification
Claudio Galeazzi, Edmondo Scorzafava, Claudia Fiorentino, Mauro Protto, Mauro Petruccioli, Paolo Venditti, Andrea Torre, Pasquale Capece, Alessandro Bonfiglietti, Aniceto Panetti

17:40 COSMO-SkyMed: System End-to-End Verification
Enrico Zampolini Faustini, Anna Notarantonio, Graziano Marano, Venturino Gualtieri, Vittorio Magna, Gianni Casonato, Fabio Covello, Giuseppe Francesco De Luca, Claudia Fiorentino, Edmondo Scorzafava

Monday Afternoon (14:20 - 18:00)
Room: 130
Mo10AF. Microwave Radiometer Technology
Co-Chairs: *Steven C. Reising , Adriano Camps*

14:20 GAS: The Geostationary Atmospheric Sounder
Jacob Christensen, Anders Carlström, Hans Ekström, Anders Emrich, Johan Embertsen, Peter de Magt, Andreas Colliander

14:40 Assimilation of Simulated Geostationary Passive Microwave
Albin J Gasiewski, Bob L. Weber, Jian Wen Bao

15:00 A Dual-gain Antenna Option for GeoSTAR
Alan B. Tanner, Bjorn H. Lambrigsten, Todd C. Gaier

15:20 The Hurricane Imaging Radiometer - An Octave Bandwidth Synthetic Thinned Array Radiometer
Christopher Ruf, Ruba Amarin, M.C. Bailey, Boon Lim, Robbie Hood, Mark James, James Johnson, Linwood Jones, Vanessa Rohwedder, Karen Stephens

15:40 Radiometric Analysis of the Rotating Synthetic Aperture Radiometers Utilizing Grid-Based Measurement Approach
Hao Liu, Peter De Maagt, Jacob Christensen, Anders Emrich, Ji Wu

16:00 COFFEE BREAK

16:20 The Influence of Antenna Pattern on Faraday Rotation in Remote Sensing at L-band
D. M. Le Vine, S. D Jacob, S. Abraham, E. Dinnat, P. de Matthaeis

16:40 Radiometric Performance of Interferometric Synthetic Aperture Radiometer HUT-2D
Juha Kainulainen, Kimmo Rautiainen, Martti T. Hallikainen, Matias Takala

17:00 Synthetic Aperture PAU: A New Instrument to Test Potential Improvements for Future SMOSops
Isaac Ramos-Perez, Adriano Camps, Xavi Bosch-Lluis, J.F. Marchan-Hernandez, Nerea Rodriguez-Alvarez, Enric Valencia, Fabio Frascella, Paolo Campigotto, Marco Donadio

17:20 Estimation of 3-D Water Vapor Distribution Using a Network of Compact Microwave Radiometers
Sharmila Padmanabhan, Steven C. Reising, Flavio Iturbide-Sanchez, J. Vivekanandan

17:40 The Ground-Based Scanning Radiometer: A Tool for Arctic Atmospheric Research
Ed R. Westwater, Domenico Cimini, Albin J. Gasiewski, Marian Klein, Vladimir Leuski

Monday Afternoon (14:20 - 18:00)
Room: 132
Mo11AF. Feature Extraction and Reduction
Co-Chairs: *Gregoire M. Mercier , Gustavo Camps-Valls*

14:20 Feature Extraction from Remote Sensing Data using Kernel Orthonormalized PLS
Jerónimo Arenas-García, Gustavo Camps-Valls

14:40 Feature Extraction of Gabled-Roofed Buildings Based on Multi-Aspect High-Resolution InSAR Data
Antje Thiele, Erich Cadario, Karsten Schulz, Ulrich Thoennessen, Uwe Soergel

15:00 An Efficient Wavelet Dictionary for Texture Separation
Mohamed Anis Loghmari, Faten Katlane, Mohamed Saber Naceur

15:20 A New Nonlinear Dimensionality Reduction Method with Application to Hyperspectral Image Analysis
Shen-En Qian, Guangyi Chen

15:40 Extract Roads from High Spatial Resolution Remotely Sensed Imagery: A Semi-automatic Method
Min Wang

16:00 COFFEE BREAK

16:20 Quantitative Analysis of Texture Parameter Estimation in SAR Images
Olivier D'Hondt, Carlos López-Martínez, Laurent Ferro-Famil, Eric Pottier

16:40 High Resolution Urban Feature Extraction for Global Population Mapping Using High Performance Computing
Veeraraghavan Vijayaraj, Eddie A. Bright, Budhendra L. Bhaduri

17:00 Unsupervised Band Selection for Hyperspectral Image Analysis
Qian Du, He Yang

17:20 Texture Retrieval Using Grey-Level Co-Occurrence Matrix for Ikonos Panchromatic Images of Earthquake in Java 2006
Bingbing Liu, Soo Chin Liew

17:40 Identification of Generalized Self-Similar Principal Components of Single Image for Image Filtering and Pattern Decomposition
Qiuming Cheng

Monday Afternoon (16:20 - 18:00)
Room: 128
Mo12AH2. GEOSS Architecture and Implementation
Co-Chairs: *Granville Paules , Jay Pearlman*

16:20 GEOSS Architecture and Data Management: A global approach to Earth information
Jay Pearlman

16:40 The GEOSS Interoperability Process Pilot Project
Siri Jodha Khalsa, Stefano Nativi, Ryosuke Shibasaki, Tim Ahern, David Thomas

17:00 Experiments with User-Centric GEOSS Architectures
Daniel Mandl, Rob Sohlberg, Chris Justice, Stephen Ungar, Troy Ames, Stuart Frye, Steve Chien, Pat Cappelaere, Danny Tran

17:20 Automatic Co-Registration of GEOSS Imagery Products: Examples of Time-Series and Data Fusion Analysis
Nevin Bryant, Walt Bunch, Rich Fretz, Thom Logan, Albe Zobrist

17:40 Data Quality Guidelines for GEOSS Consideration - The CEOS Working Group on Calibration and Validation (WGCV)
Stephen Ungar, Petya Campbell, Michael Rast, Changyoung Cao

Monday Afternoon (16:20 - 18:00)
Room: 131
Mo13AH2. Data Fussion II: Pan-sharpening and Resolution Enhancement
Co-Chairs: *Jocelyn Chanussot , Paolo Gamba*

16:20 Pan-sharpening via the Contourlet Transform
Vijay P. Shah, Nicolas H. Younan, Roger L. King

16:40 Pan-Sharpening Using Induction
Muhammad Murtaza Khan, Jocelyn Chanussot, Annick Montanvert, Laurent Condat

17:00 Smoothing of Fused Spectral Consistent Satellite Images with TV-Based Edge Detection
Johannes R. Sveinsson, Henrik Aanaes, Jon Atli Benediktsson

17:20 Fusion of MeRIS and ETM Images for Coastal Water Monitoring
Audrey Minghelli-Roman, Laurent Polidori, Sandrine Mathieu-Blanc, François Cauneau

Monday Afternoon (16:20 - 18:00)
Room: 133
Mo14AH2. Image Information Mining
Co-Chairs: *Mihai Datcu , Roger King*

16:20 A Bayesian Multi-Class Image Content Retrieval
Ines Maria Gomez Muñoz, Mihai Datcu

16:40 User-Specific Semantics for Modeling Content-Based Information in Geospatial Knowledge
Adri Barb, Chi-Ren Shyu

17:00 Semantics-Enabled Metadata Generation, Tracking and Validation in the Geospatial Web Service Composition for Distributed Images
Peng Yue, Liping Di, Wenli Yang, Genong Yu, Peisheng Zhao, Jianya Gong

17:20 Application of the Contourlet Transform for Image Information Mining in Earth Observation Data Archives
Vijay Shah, Nicolas Younan, Surya Durbha, Roger King

17:40 Image Information Mining for Coastal Disaster Management
Surya Durbha, Roger King, Vijay Shah, Nicholas Younan

Monday Interactive Session (18:00 - 19:30)
Room: Foyer-2
Mo03EP. Electromagnetic Models
Co-Chairs: *Alex Yarovoy , Valery U Zavorotny*

Global Analysis of Pyramidal Horn Antennas Using EFIEE and Fresnel Integral
Ahcene Boualleg, Salah Redadaa, Malek Benslama

Impact of Topography on Microwave Emissivity Retrieval from Satellite Radiometers
Nazzareno Pierdicca, Luca Pulvirenti, Frank F. Marzano

Model Study of Forests at L-Band: Active, Passive and Bistatic Systems
Andrea DellaVecchia, Paolo Ferrazzoli, Leila Guerriero, Francesca Ticconi, Emanuele Santi

Extension of Advanced Integral Equation Model for Calcultations of Fully Polarimetric Coefficient from Rough Surface
Hong-Wei Lee, Kun-Shan Chen, Tzong-Dar Wu, Jong-Sen Lee, J. C. Shi, Jeng Chuan Wang

Localizing Metallic Small Spheres by a Linear Distributional Approach
Raffaele Solimene, Aniello Buonanno, Rocco Pierri, Leone Giovanni

Measurement and Analysis of Depolarisation Generated by Scattering over Constructive Obstacles at 5.8 GHz
Iñigo Cuiñas, Manuel García Sánchez, Ana Vázquez Alejos

Short-term rain attenuation prediction at EHF band using financial time series models
Louis de Montera, Cécile Mallet, Laurent Barthès

Microwave Spectroscopic Dielectric Model of Moist Soils using Physical and Hydrological Characteristics as Input Parameters
Pavel P. Bobrov, Valery L. Mironov, Olga A. Ivchenko, Valentina N. Krasnoukhova

Field Measurement of Gobi Surface Emissivity Using CE312 and Infragold Board at Dunhuang Calibration Site of China
Yong Zhang, Zhiguo Rong , Xiuqing Hu, Jinging Liu, Lijun Zhang, Yuan Li, Xingying Zhang

Novel Measurement of Backscatter Enhancement for Surface Scattering at EHF Band
Chin-Yuan Hsieh

How does multiple scattering affect the CloudSat measurements at ranges longer than the true surface range?
Alessandro Battaglia, Clemens Simmer

Wind Effect on the Scattering from Vegetation at Cellular Phone Frequencies
Iñigo Cuiñas, Ana Vázquez Alejos, Manuel García Sánchez, Paula Gómez, Rafael F.S. Caldeirinha

Monday Interactive Session (18:00 - 19:30)
Room: Foyer-2
Mo04EP. Image Calibration, Correction and Registration
Co-Chairs: *Javier Marcello , Francisco Eugenio*

Cloud-Contaminated Image Reconstruction with Contextual Spatio-Spectral Information
Souad Benabdelkader, Farid Melgani, Mohammed Boulemden

Combination of Feature-Based and Area-Based Image Registration Techniques for High Resolution Remote Sensing Image
Gang Hong, Yun Zhang

A Novel Approach to Automatic Registration of Point Clouds
Rui Liu, Darius Burschka, Gerd Hirzinger

A Novel Method for Multispectral Aerial Image Registration
Jianying Jia, Qiming Zeng

High Accurate Geometric Correction for NOAA AVHRR Data Considering Elevation Effect
An Ngoc Van, Yoshimitsu Aoki

Steerable Filter Based Multiscale Registration Method for JERS-1 SAR and ASTER Images
Qi Li, Isao Sato, Yutaka Murakami

Affine Registration of Multimodality Images by Optimization of Mutual Information Using a Stochastic Gradient Approximation Technique
Qi Li, Isao Sato, Yutaka Murakami

Fractal Characteristics of Very High Resolution Satellite Imagery
Yu Zeng, Jixian Zhang, Haitao Li

Monday Interactive Session (18:00 - 19:30)
Room: Foyer-2
Mo05EP. Feature Extraction and Reduction
Co-Chairs: *Francisco Eugenio , Javier Marcello*

A Feature Selection Algorithm for Class Discrimination Improvement
Claudio De Stefano, Francesco Fontanella, Cristina Marrocco, Gilda Schirinzi

GIFTS SM EDU Data Processing and Algorithms
Jialin Tian, David G. Johnson, Robert A. Reisse, Michael J. Gazarik

Classification of Landsat TM Image Based on Non-Negative Matrix Factorization
Jiamian Ren, Xianchuan Yu, Bixin Hao

Morphological Feature Extraction for Automatic Registration of Multispectral Images
Antonio Plaza, Jacqueline Le Moigne, Nathan S. Netanyahu

Texture Representation Through Fractal Singularity Spectrum
Daniele Giusto, Valeria Orani

Three-dimensional Tree with Spatial Features Modeling Based on Rules
Zhangang Wang, Dafang Zhuang

Knowledge Centred Earth Observation: Feature Extraction
Amaia de Miguel, Gottfried Schwarz, Mihai Datcu, Andrea Colapicchioni

Monday Interactive Session (18:00 - 19:30)
Room: Foyer-2
Mo06EP. Detection and Object Recognition
Co-Chairs: *Javier Marcello , Francisco Eugenio*

Target recognition in SAR images with Support Vector Machines (SVM)
Céline Tison, Nadine Pourthié, Jean-Claude Souyris

Object Recognition Algorithms for Weather Radar
Felix Yanovsky, Vita Marchuk, Yaro Ostrovsky

The Analysis on Spectral Information of Green Area Covered by the City Shadow
Jianhua Ren, Zhenyu Cai, Wei Wang

Cloud Detection with SVM Technique
Christophe Latry, Chantal Panem, Philippe Dejean

Particle Swarm Optimization as an Inversion Tool for a Nonlinear UXO Model
Jack Stalnaker, Eric Miller

Semi-Automatic Fast Recognition of Areas of Interest for SAR Image Interpretation
Gemma Pons Bernad, Léonard Denise, Philippe Réfrégier

Surface Roughness Estimation towards a Buried Target Characterization
Octavien Cmielewski, Herve Tortel, Amelie Litman, Marc Saillard

Uunsupervised Sealed Surface Detection in LANDSAT and SPOT-5 Imagery
Mattia Stasolla, Paolo Gamba, Andrea Baraldi

Self-Organized Maps-Based Spectral Prediction of Rotylenchulus Reniformis Numbers
Rushabh Doshi, Roger King, Gary Lawrence

Road Extraction from ETM Panchromatic Image Based on Dual-Edge Following
Haijian Ma, Qiming Qin, Shihong Du, Lin Wan, Chuan Jin

Target Separation in SAR Image with the MUSIC Algorithm
Philip Thompson, Matteo Nannini, Rolf Scheiber

Application of 3D-SAR Nearfield Imaging Algorithms to GPR Data
Uschkerat Udo

Automatic Counting of Fission Tracks Using Object-Based Image Analysis for Dating Applications
Judith Lippold, Prashanth R. Marpu, Richard Gloaguen, Raymond Jonckheere

Ship detection in ENVISAT ASAR Alternating Polarization images
Harm Greidanus, Francois-xavier Thoorens, Tony Bauna, Marte Indregard, Tonje-Nanette Arnesen

Automatic Extraction of Lineament Map from DEM
Reza Nekovei

A New Robust Affine Invariant Feature Detector
Cheng Liang, Han Peng, Gong Jianya, Yang Zhigao

Monday Interactive Session (18:00 - 19:30)
Room: Foyer-2
Mo07EP. Data Compression Techniques
Co-Chairs: *James Fowler , Adriano Meta*

Observation Sequences and Onboard Data Processing Unit of Japanese Venus Observation Program, Planet-C
Makoto Suzuki, Takeshi Imamura, Takahiro Yamada, Masato Nakamura, Hiroki Hihara, Masahiro Hamai, Jun Takada, Shuji Senda, Munetaka Ueno, Satoshi Ichikawa

An Automatic Approach to Lossy Compression of AVIRIS Images
Nikolay N. Ponomarenko, Vladimir V. Lukin, Mikhail S. Zriakhov, Arto Kaarna, Jaakko T. Astola

A Fast Progressive Lossless Image Compression Method for Space and Satellite Images
Jun Takada, Shuji Senda, Hiroki Hihara, Masahiro Hamai, Takeshi Oshima, Shinji Hagino, Makoto Suzuki, Satoshi Ichikawa

Monday Interactive Session (18:00 - 19:30)
Room: Foyer-2
Mo08EP. SAR Data Processing
Co-Chairs: *Antoni Broquetas, R. Keith Raney*

Range Migration Algorithm for Real Measured SAR Data
Junjie Wu, Xiaozhen none Xiong, Yuli Huang, Jian Yang

The Analysis and Compensation for the Unwrapped Phase Error Raised by the Dynamic Baseline of DSS-INSAR
Hui Liu, Yinqing Zhou, Huaping Xu, Chunsheng Li, Muha Sun, Guohui Liu

Spaceborne SAR Raw Signal Simulation of Ocean Scene
Zhihua He, Zhen Dong, Haifeng Huang, Anxi Yu

Speckle Denoising Based on Bivariate Shrinkage Functions and Dual-tree Complex Wavelet Transform
Xing Shuai, Xu Qing, Jin Guowang, He Yu, Sun Wei

Relationship between Antenna Pointing Stability and Spaceborne ScanSAR Scalloping Calibration
Jie Wei

CAESAR-XInSAR: a New Software for Interferometric SAR Processing
Yixian Tang, Hong Zhang, Chao Wang, Tao Wu

ISAR Imaging of Targets with Moving Parts using Micro-Doppler Detection on the Range Profile Image
Hwee Siang Tan, Chanzheng Ma, Tat Soon Yeo, Qun Zhang, Chun Sum Ng, Bin Zou

A Multiprocessng Framework for SAR Image Processing
Christian Andres, Torben Keil, Raik Hermann, Rolf Scheiber

Evaluation of the Single and Two Data Set STAP Detection Algorithms using Measured Data
Elias Aboutanios, Bernard Mulgrew

Combined Wavelet and Curvelet Denosing of SAR Images Using TV Segmentation
Johannes R. Sveinsson, Jon Atli Benediktsson

A New for Doppler Centroid Estimation for Spaceborne SAR Based on Chirp Scaling Algorithm
Yunhua Zhang, Wenshuai Zhai

Ortho-rectification of Radarsat Image in High Mountain Areas
Mingjun Liu, Zong Lin, Jixi Zhang, Qin Yan, Guom Huang

Clutter Analysis of High Resolution Millimeter-Wave SAR-Data in the Spatial and Wavelet Domain
Peter Wellig, Konrad Schmid, Helmut Essen, Anika Kurz, Hartmut Schimpf, Thorsten Brehm

Fine Micro-Doppler Analysis in ISAR Imaging
Antoine Ghaleb, Luc Vignaud, Jean-Marie Nicolas

Region Feature Extraction Based on Improved Regularization Method in SAR Image
Feng Xu, Chao Wang, Hong Zhang

Reconstruction of 3D Stereo Building Objects from Multi-Aspect Metric-Resolution SAR Images
Ya-Qiu Jin, Feng Xu, Erya Dai

The Extraction of Ocean Wind, Wave, and Current Parameters Using SAR Imagery
Moon-Kyung Kang, Hoonyol Lee, Moonjin Lee, Yong-Wook Park, Wang-Jung Yoon

Unsupervised Land Cover Classification of SAR Image by Contour Tracing
Vijaya V. Chamundeeswari, Dharmendra Singh, Kuldip Singh

Blending SAR Wind into Numerical Models
Will Perrie, Weiqing Zhang, Hui Shen, Mark Bourassa, Paris Vachon

Parallel Computation of SAR Raw Data
Marc Kalkuhl, Peter Droste, Wolfgang Wiechert, Holger Nies, Otmar Loffeld, Martin Lambers

A Velocity Vector Estimation Algorithm Tested on Simulated SAR RAW Data
Andrea Radius, Domenico Solimini

The Equivalence of Cameron's Unit Disc and Poincaré's Sphere for Symmetric Scattering Characterisation and Classification
Elisa Giusti, Marco Martorella, Fabrizio Berizzi, Carlo Petronio

Effects of Attitude Error on Spaceborne ScanSAR Mosaic
Jie Wei

Phase Distortion Modelling Due to Motion in Wave Scattering Mechanism Applied to SAR Images Analysis
Vincent Gras, Christophe Sintes, René Garello

Geological Lineament and Shoreline Detection in SAR Images
Tzong-Dar Wu, Min-Tzer Lee

A Distributed Approach to Efficient Time-Domain SAR Processing
Andreas Reigber, Marc Jäger, Andreas Dietzsch, Ronny Hänsch, Michael Weber, Heiko Przybyl, Pau Prats

Three Dimensional SAR Image Focusing from Non-Uniform Samples
Federica Meglio, Gaetano Panariello, Gilda Schirinzi

Design of GMTI Combining Networks
Florian Schulz, Olaf Saalmann

SAR Interferogram Filtering in the wavelet domain using a coherence map mask
Aymen BOUZID, Riadh Abdelfattah

Dyadic Resolution Multilook Image Generation by Wavelet Packet Transform Correlation of Complex SAR Signals
C. Bhattacharya

Spotlight-Mode SAR Data Focusing Using a Modified Wavenumber Domain Algorithm
Wang Yu, Otmar Loffeld, Stefan Knedlik

Speckle Reduction Of SAR Images in the Bandelet Domain
Johannes R. Sveinsson, Jon Atli Benediktsson

Contrast Optimization Autofocus Algorithm Based on Linear Optimization Methods
Deng Yun-kai, Wang Yu, Zhang Zhi-min, Guo Zhen-yong

Monday Interactive Session (18:00 - 19:30)
Room: Foyer-2
Mo09EP. Instrumentation and Techniques I (Active)
Co-Chairs: *Alberto Moreira , Antoni Broquetas*

A Combined Sensor System of Digital Camera with LiDAR
Wenling Xuan, Zhaoqiang Huang, Xiuwan Chen, Zongjian Lin

A Compact Passive Broadband Hexagonal Spiral Array Antenna for VHF Remote Sensing
Richard J. Barton, Peter J. Collins, Paul E. Crittenden, Michael J. Havrilla, Andrew J. Terzuoli

A High Resolution SAR Sensor for Space and Airborne Applications
Rudolf Zahn, Kosmas Weidmann, Joachim Boukamp

Advanced NASA Earth Science Mission Concept for Vegetation 3D Structure, Biomass and Disturbance
Jon Ranson, Diane Wickland, Bryan Blair, Sassan Saatchi, William Emanuel, Andrea Razzaghi

An Advanced Airborne Multisensor Imaging System for Fast Mapping and Change Detection Applications
Xiuhong Sun, Robert Fischer, James Eichholz, Peter Shu, William Chen

Applications of GPS-RTK Technique in a New Digital Photogrammetric Camera System
Hongyou Liang, Xingfa Gu, Tao Yu, Liuzhao Wang, Chaofei Qiao

Application of Spaceborne P-band SAR for Global Estimation of Above Ground Forest Biomass
Sassan Saatchi

Disaster Monitoring and Environmental Alert in Taiwan by Repeat-Pass Spaceborne SAR
Chih-Tien Wang, Kun-Shen Chen, Hong-Wei Lee, Jong-Sen Lee, Woflgam M. Boerner, Ruei-Yuan Wang, Hong-Sen Wan

Investigation of H.264 Intra Coding for SAR Image
Xingsong Hou, Yujie Dun, Rongjing Ji

Optimum Design of Antenna Pattern for Spaceborne SAR Performance Using Improved NSGA-II
Jiang Xiao, Yongqiang Chen, Xiaoqing Wang, Minhui Zhu, Xiao Liu

Safe Driving System Based on Wireless Sensor Technology
Jungsook Kim, Dohyun Kim, Kyungbok Sung, Byungtae Jang

Study on Shooting Control Algorithm of Remote Sensing Control System for UAV
Pengqi Gao, Lei Yan, Hongying Zhao, Shuqiang Lu

Surface Clutter Analysis and Ranging Sidelobe Level Requirements for Spaceborne Meteorological Radars
Xiaolong Dong, Honggang Yin, Di Zhu, Heguang Liu, Jingshan Jiang

Scientific Use of TerraSAR-X
Achim Roth, Ursu Marschalk

The Bistatic Aspect of the TanDEM-X Mission
Holger Nies, Otmar Loffeld, Koba Natroshvili, Marc Kalkuhl

The Device for 3D Measurement of Speed and Direction of Turbulent Air Movement
Igor B. Shirokov, Sergey N. Polivkin, Andrey Korobitsyn, Vladimir K. Dyurba

UAV Based Collision Avoidance Radar Sensor
Young K Kwag, Chul H. Jung

Policy-Based Dynamic Privacy Protection Framework for Mobile RFID Sensor Networks
Namje Park, Dongho Won

A UAV Avionics System to Facilitate VHF Depth Sounding and SAR
William A. Blake, Kai Siegele, Robert Burns

COSMO-SkyMed Operations Management Innovative Concepts
Giuseppe F. De Luca, Fabrizio Battazza, Alessandro Coletta, Fabio Covello, Mario Profili, Elvira Caliò, Francesca Spataro, Silvia Abete, Attilio Santellocco

A P-Band SAR Mission for Biomass Monitoring
Thuy Le Toan, Shaun Quegan

Monday Interactive Session (18:00 - 19:30)
Room: Foyer-2
Mo10EP. Mapping & Urban Remote Sensing Applications
Co-Chairs: *Guido Lemoine , Thomas Knudsen*

Retrieval and Analysis of Surface Albedo of Nanjing Area Based on ETM+ Remote Sensing Data
Wei Zheng, Chuang Liu, En Long

Study on Characteristics of Rural Settlements in the Northeast Loess Plateau of China by RS&GIS
Wenyong Feng, Nai-ang Wang, Cuiyun Wang, Gang Li, Chunhui Zhang

Urban Environmental Evaluation in Beijing's Residential Districts and Communities
Yin Weihong, Duan Meiyan, Zhang Xiaojun

Evaluation and Transformation Analysis of Ecological Environment in Beijing Based on Remote Sensing
Zhuowei Hu, Wenji Zhao, Xiaojuan Li, Ying Chen, Liying Zhu, Songmei Zhang, Fusheng Wang

Study on Urban Spatial Morphology with RS & Fractal: The Case of Wuwei in Arid Region of Northwest China from 1967 to 2004
Chunhui Zhang, Gang Li, Nai-ang Wang, Yong Huang, Cuiyun Wang

Monitoring and Modeling Urbanization across Chesapeake Bay Watershed (USA) and Assessing the Impacts on Resource Lands and Stream Biota
Scott Goetz, Patr Jantz, Greg Fiske, Clai Jantz

Analysis of Thermal Environment and Urban Heat Island Using Remotely Sensed Imagery over the Nord and South Slope of the Qinling Mountain,China
Dengzhong Zhao, Wanchang Zhang, Bing Yong

Calibration of the Sleuth Model Based on the Historic Growth of Houston
Hakan Oguz, Andr Klein, Ragh Srinivasan

An Estimate of the City Population in China Using DMSP Night-Time Satellite Imagery
Liyu Cheng, Yi Zhou, Litao Wang, Shixin Wang, Cong Du

Spatial Distribution Mapping of Vegetation Cover in Urban Environment Using TDVI for Quality of Life Monitoring
Abdou Bannari, Ayse Ozbakir, Andr Langlois

A Novel Approach Based on the Combination Image of Fraction Image and Normalized MNF Image to Urban Land Use/Cover Mapping
Li Su, Zhou Jianjun, Li Wenzheng, Zhuang Dafang, Wang Yong

Inspiration of Foreign Metropolis Development on Arable Land Protection of Beijing
Pan Gong, Zhongxin Chen, Huajun Tang

A Research on Temporal and Spatial Change of Urban Heat Field in Beijing by Remote Sensing and Ground Measurements
Qijiang Zhu, Jiacong Hu, Donghui Xie, Hua Wu

Multi-Objective Processing of ASTER Image for Urban Environmental Analysis
Peijun Du , Pei Liu , Huapeng Zhang , Hairong Zhang

Research on Dynamic Evolvement of Desertification in Beijing and its Neighboring Areas by Remote Sensing
Dan Meng, Zhiqiang Zhang, Tao Yang, Huili Gong, Wenji Zhao, Xiaojuan Li, Zhaoning Gong, Yanhui Wang, Zhuowei Hu, Yonghua Sun

A New Method For GPS-Based Urban Vehicle Tracking Using Pareto Frontier And Fuzzy Comprehensive Judgment
Yikai Chen, Yuncai Liu

Research on the Relationship between Vegetation and Urban Land Surface Heat Field in Beijing City
Shenghai Chen, Qijiang Zhu, Donghui Xie

Urban Land Use Change of Nanjing, China, Using Multitemporal Satellite Data
Chang-Qing Ke

Spatial and Spectral Comparison among IKONOS, CBERS, and ASTER Images to Identify and Detect Land Occupation Changes around Urban Railway in Säo Paulo - Brazil
Jose A. Quintanilha, Leonardo Ercolin Filho, Alessandra M. K. Beltrame

Application of very High-Resolution Satellite Imagery for Vulnerability Assessment in Mega Cities: A Case Study in Delhi / India
Niebergall Susan, Loew Alexander, Mauser Wolfram

The Role of Explicit Modeling for Inferring Traffic Activity from Remote Sensing Data
Stefan Hinz

Towards High Accuracy Road Maps Generation from Massive GPS Traces Data
Tao Guo, Kazuaki Iwamura, Masashi Koga

Monday Interactive Session (18:00 - 19:30)
Room: Foyer-2
Mo11EP. Electromagnetic scattering
Co-Chairs: *Jose Luis Alvarez-Perez, Kun Shan K.S. Chen*

Dielectric Spectroscopic Model for Tussock and Shrub Tundra Soils
Valery L. Mironov, S. V. Savin, Roger D. De Roo

An Enhanced Description of Multiple Scattering within the Flair Model Using the Photon Re-Collision Probability Approach
K. Omari, H.P. White, K. Staenz

A New Hybrid Series Expansion for 3D Forward Scattering Problems
Michele D'urso, Ilaria Catapano, Lorenzo Crocco, Tommaso Isernia

Diffraction by a Rough Knife Kedge: A First Step toward a Stochastic Theory of Diffraction
Giorgio Franceschetti, Antonio Iodice, Antonio Natale, Daniele Riccio

Dielectric Spectroscopy of Bound Water in the Bentonite Clay
Yurij I. Lukin, Sergey A. Komarov

Avalanche Beacon Magnetic Field Calculations for Rescue Techniques Improvement
Natalia Ayuso, José Antonio Cuchí, Francisco Lera, José Luis Villarroe

Cassini RADAR: Investigation of Titan's Surface Parameters by Means of Bayesian Inversion Technique and Gravity-Capillary Waves Modelling of Liquid Hydrocarbons Surfaces
Bartolomeo Ventura, Domenico Casarano, Notarnicola Claudia, Francesco Pos

Assessment of Different Topographic Correction Methods and Their Applications
Jianguang Wen, Qiuhuo Liu, Qing Xiao , Xiaowen Li, Guijun Yang, Jie Che

Closed Form Expressions for Scattering Matrix of Simple Targets in Multilayer Structures
Sidnei João Siqueira Sant'Anna, J. C. da S. Lacava, David Fernandes

Monday Interactive Session (18:00 - 19:30)
Room: Foyer-2
Mo12EP. Electromagnetic Problems
Co-Chairs: *Simonetta Paloscia , Santo V. Salinas*

The Semi-Analytic Mode Matching (SAMM) Algorithm for Efficient Computation of Nearfield Scattering in Lossy Ground from Borehole Sources
Ann Morgenthaler, He Zhan, Carey Rappaport

Parameterization of the Angular Distribution of Multiple Scattering Radiation Using Photon Re-Collision Probability
Khalid Omari, Richard Fernandes, Nadia Rochdi, Karl Staenz, H Peter White

Pulse Electromagnetic Sounding of the Petroleum-Containing Layered Medium
Sergey A. Komarov, Valery L. Mironov, Konstantin V. Muzalevsky

Validation of the Soil Dielectric Spectroscopic Models with Input Parameters Based on Soil Composition
Valery L. Mironov, Lyudmila G. Kosolapova, Sergey V. Fomin

Polarimetric Microwave Emission from Snow Surfaces: 4th Stokes Component Analysis
Parag S. Narvekar, Georg Heygster, Thomas J. Jackson, Rajat Bindlish

On the Possible Retrieval of Wind–Wave States from Optical and NearIR Remote Sensing Imagery of the Ocean
Santo V. Salinas

Remote Sensing Estimation of FPAR Using Monte Carlo Method
Zhou bin, Chen Liangfu, Gao yanhua

RAMI: A Practical Approach to RT Model Benchmarking
Jean-Luc Widlowski , Bernard Pinty, Malcolm Taberner, Monica Robustelli

Propagation and Distortion of a Gaussian Pulse in a Gyromagnetic Medium
Seungyup Rhee, Eunseok Park, Jay K. Lee

Simulation of Atmospheric Radiation Transfer for High-Resolution Thermal Infrared Imaging
Yang Gui-Jun, Liu Qin-Huo, Liu Qiang, Wen Jian-Guang, Cheng Jie, Gu Xing-Fa

Scattering from 2D-Dielectric Random Surfaces Effect of Roughness and Moisture of Seedbed Surfaces upon the Bistatic Scattering Coeffecient
Karim Aït , Richard Dusséaux, Odile Taconet, Edwige Vannier, Gérard Granet

Simulation of Terrain Propagation and Diffraction Using a 2D High-Order Accurate FMM-Accelerated Nystrom's Solver
DaHan Liao, Eric Michielssen, Kamal Sarabandi

Monday Interactive Session (18:00 - 19:30)
Room: Foyer-2
Mo13EP. Electromagnetics
Co-Chairs: *Yang Du , Jay K Lee*

Study of Millimeter-Wave Radar for Helicopter Assisted Landing System
Mustafa Rangwala, Feinian Wang, Kamal Sarabandi

Scattering from Rough Heterogeneous Surfaces, Test of a Splitting Rule for Three Dimensional Geometries
Pierre Mallet, Charles-Antoine Guérin, Patrick Chaumet, Anne Sentenac, Jean-Pierre Segaud

The Effect of Polarization Ratio on RADARSAT Wind Vector Retrievals
Yijun He, Biao Zhang, Hui Shen, William Perrie, Jie Guo

Simulation of Thermal Remote Sensing Systems Based on Common Land Model
Xue Feng, Bin Shen, Guangjian Yan, Sibo Duan, Wuming Zhang, Zhaoliang Li

A Simulator for SAR Sea Surface Waves Imaging
Ferdinando Nunziata, Attilio Gambardella, Maurizio Migliaccio

Studying on BRF and BINDVI from Heterogeneous Scenes Based on Radiosity-Graphic Combined Model
Donghui Xie, Qijiang Zhu, Jindi Wang

TAIC Algorithm for the Visibility of the Elliptical Orbits' Satellites
Rongfu Tang, Dongyun Yi, Jubo Zhu, Qiang Luo, Jing Yao

Monday Interactive Session (18:00 - 19:30)
Room: Foyer-2
Mo14EP. Agriculture
Co-Chairs: *Yann H. Kerr , Brian K. Hornbuckle*

Mapping Saline Soil Using Landsat Imagery in Arid Irrigated Lands
Yousef Aldakheel

The Expansion of Agriculture in Para State, Brazil
Adriano Venturieri, Andr Coelho, Marc Thales, Deni Bacelar

Study on the Agroecosystem Health Assessment in Western China
Bo Li, Hualin Xie, Jianzhai Wu, Rui Hong, Jie Chong, Chuangshen Wang

Detecting Date Palm Trees Health and Vegetation Greenness Change in the Eastern Coast of the United Arab Emirates Using SAVI
Mohamed Alhammadi, Edwa Glenn

Irrigation Requirement Estimation Using MODIS Vegetation Indices and Inverse Biophysical Modeling
Marc Imhoff, Laho Bounoua, Robe Harriss, Gord Wells, Vict Dukhovny, Leah Orlovsky

Estimating Maize Yield From MODIS NDVI and Spatial Rainfall Data
Celeste Frost, Joha Malherbe, Tali Germishuyse, Terr Newby, Harold Annegarn, Mala Kneen

Three Regionalised Analyses of a Time-series of Annual Pasture Production for Southwest Western Australia
Rebecca N. Handcock, Graham E. Donald, Stefano G. Gherardi

Monitoring the Growth of Large-Area Tobacco with MODIS Data
Wu Mengquan

Estimation of Winter Wheat Yield in Hebei Plain of China by Improved CASA Model
Xia Li, Xiao-bing Li, Hong Wang, Yong-qin Ge, Hui-ling Long, Cheng Zhang

The Analysis of Long - Term Time and Spatial Variations Of Vegetation Productivity Using of Remote Sensing Data
Lev Spivak, Irina Vitkovskaya, Madina Batyrbayeva

Digital Camera Based Measurement of Crop Cover for Wheat Yield Prediction
Gang Pan, Feng-min Li, Guo-jun Sun

Management Decision-Making Support System of Precision Agriculture Based on CNCS
Qingyuan Ma, Zhenghua Chen, Chao Zhang, Zhen Yang

Agriculture Remote Sensing
Xiaocheng Zhou, Xiao Wang, Tian Xiang

Regional Yield Prediction for Winter Wheat Based on Crop Biomass Estimation Using Multi-Source Data
Jianqiang Ren, Su Li, Zhongxin Chen, Qingbo Zhou, Huajun Tang

An Optimized Rule Based Approach for Acreage Estimations of Winter Crops: A Case Study in South-Western Rostov Region of Russia
Steffen Fritz

The Climate Change and Its Ecosystem in the Upper Yellow River
Jiangying Feng, Zhizong Yao, Ni Guo, Mingling Gu, Hui Guo

Plant Growth Monitoring and Within-Field Variability Assessment by Means of High Resolution E.O. Data
Katja Richter, Francesco Vuolo, Luigi Dini

A Global Crop Growth Monitoring System Based on Remote Sensing
Meng Jihua, Wu Bing-fang

Study on the Crop Condition Monitoring Methods with Remote Sensing
Meng Jihua, Wu Bing-fang

A New Winter Wheat Yield Estimation Model Using NOAA AVHRR Data
Xingang Xu, Bingfang Wu, Jihua Meng, Wenjing Cao

Regional Crop Yield Estimation Using a Simplified Crop Growing System and Remote Sensing Data
Jose L. Gomez-Dans, Alfredo Sotelo-Arcos, Juan P. Ruiz-Castellano, Carmen Navarro-Mezquita, Antonio J. Rodriguez-Perez

Assimilating MODIS Data into a Crop Growth Model in Andalusia (Spain)
Jose L. Gomez-Dans, Alfredo Sotelo-Arcos, Juan P. Ruiz-Castellano, Carmen Navarro-Mezquita, Antonio J. Rodriguez-Perez

Classification of Remotely Sensed Images for Agricultural Land Use Mapping
Helena M. R. Alves, Tiago Bernardes, Tatiana G. C. Vieira, Marilusa P. C. Lacerda

Estimation of Crop Evapotranspiration Using Spectral Vegetation Indices and Thermal Infrared Remote Sensing
Maria P. Gonzalez-Dugo, Christopher M. U. Neale, Luciano Mateos, William P. Kustas, Fuquin Li

Crop Classification in the U.S. Corn Belt Using MODIS Imagery
Paul Doraiswamy, Alan Stern, Bakhyt Akhmedov

Application of NASA Climate Models and Missions to Agriculture DSS.
Cynthia Rosenzweig, Radley Horton

Crop Backscattering Coefficient Simulation
Wang Fang

Monday Interactive Session (18:00 - 19:30)
Room: Foyer-2
Mo15EP. SAR Image Processing Techniques
Co-Chairs: *Alberto Moreira, Jordi J. Mallorqui*

Shape from Shading of SAR Imagery in Fourier Space
Shaheen Ghayourmanesh , Yun Zhang

High Resolution SAR Imaging along Circular Trajectories
Hubert M.J. Cantalloube, Élise Colin-Koeniguer, Hélène Oriot

Automobile-Based Bistatic SAR Processing and Experimental Results
Gong Zhenqiang, Tian Zhong, Zhang Xiaoling

Frequency Domain Imaging Algorithm for Spaceborne/Airborne Hybrid Bistatic SAR
Zhe Liu, Jianyu Yang, Xiaoling Zhang, Yiming Pi

A Quadtree Algorithm for High Squint SAR Imaging
Sanyuan Xu, Jianguo Wang

Comparison of Brightness Temperature Values over Rajasthan using OCEANSAT-1 MSMR
O.P.N.n Calla, Vikas Parihar, Naveen Dutt Joshi, Gitanjali Chakravorty, Usha Rathore

ISAR Imaging of Helicopter
Chang Zheng Ma, Tat Soon Yeo, Hwee Siang Tan, Zhoufeng Liu, Xiujie Dong, Bin Zou

Monday Interactive Session (18:00 - 19:30)
Room: Foyer-2
Mo16EP. Ocean Surface Process Interactive Session s
Co-Chairs: *William J. Emery , David E. Weissman*

Kuroshio-Induced Cold Eddy Streets in the Lee of Isolated Islands
Osamu Isoguchi, Masanobu Shimada, Futoki Sakaida, Hiroshi Kawamura

A Coupled Atmosphere-Ocean Radiation Transfer Model
Ying Xi, Keping Du, Yonggang Gao, Jindi Wang

Surface Signature of Ocean Convection in the Greenland Sea as Detected by SAR and Enhanced by Statistical Pattern Analysis
Flavio Parmiggiani, David Morales, Miguel Moctezuma

The Effects of Calibration Errors on Ocean Retrievals from Polarimetric Microwave Radiometers
Michael H. Bettenhausen, Peter W. Gaiser

Complex dielectric constant of sea foam for microwave remote sensing applications
Magdalena Anguelova, Peter Gaiser

Oil Spill Detection from Thermal Anomaly Using ASTER Data in Yinggehai of Hainan, China
Guoyin Cai, Jian WU, Yong Xue, Wei Wan, Xiaoxia Huang

Robust Model for Simulating Sea Surface Current from RADARSAT-1 SAR Data
Maged Marghany, Mohamed Maiys, Mazlan Hashim, Shattri Mansor

Morphometric Characterisation of Rocky Reef Using Multibeam Acoustic Bathymetric Data
Vanessa Lucieer

Analysis of ocean current features in spaceborne SAR images
Xiaofeng Li, William Pichel

Semi-Analytic Algorithm for Retrieving Pigment Concentrations In the Red Tides Areas of the East China Sea
Zhongfeng Qiu, Yijun He, Jun-wu Tang, Hongyan Xu

The calculation method of sea surface scene coherent time for SAR imaging
Qing Dong

Atmospheric Correction of Directional Polarized Ocean Color Sensors
Xiaofeng Yang, Xingfa Gu , Liangfu Chen, Haibo Zhang

Distributed Target Detection in SAR Images Using Improved Chaos-Based Method
Yafei Zhang, Minhui Zhu, Jinsong Chong

Exact Electromagnetic Modeling of the Scattering of Realistic Sea Surfaces for HFSWR Applications
Yaël Demarty, Vincent Gobin, Laetitia Thirion-Lefevre, Régis Guinvarc'h, Marc Lesturgie

Integration of wave curvature in calculating Reflectivity from one-dimensional rough surfaces by ray tracing technique including multiple reflections
Pier Schott

A Case Study on Swell Modulation Caused by Surface Winds Using Spaceborne Synthetic Aperture Radar
Jian Sun , Hiroshi Kawamura

Integrated Satellite Tracking of Pollution : A New Operational Program
Marie-France Gauthier, Laurie Weir, Ziqiang Ou, Matt Arkett, Roger De Abreu

Monitoring of oil pollution by Remote Rensing and GIS and assesment of hydrocarbons
Aicha Benmecheta, A. Lansari

A Robust Model for Extracting Sea Surface Current Patterns from SAR
Shattri Mansor, Mohamed Maiyas, Maged Marghany, Helm Mohd Shafri, Zailani Khuzimah

Microwave Emission Fluctuations Induced by Sea Foam and Spray
Victor Raizer

High Resolution Millimeterwave SAR for the Remote Sensing of Wave Patterns
Helmut Essen, Hans-Hellmuth Fuchs, Anke Pagels

An Angular-Dependent Split-Window Equation for SST Retrieval from Off-Nadir Observations
Raquel Niclòs, César Coll, Vicente Caselles, María Jose Estrela

A FEXP Model Short Range Dependence Analysis for Improving Oil Slicks and Low-wind Areas Discrimination in Sea SAR Imagery
Massimo Bertacca

The Contribution of ASTER, CBERS, R99/SIPAM e OrbiSAR-1 Data to Improve the Oceanic Monitoring – An Example of Oil and Frontal Eddy Detection
Cristina Maria Bentz, Alexandre Tadeu Politano, Patricia Genoves, João Antônio Lorenzzetti, Milton Kampel

Applications of SMOS data in Canadian waters.
Jim Gower, Elizabeth Simms, Brenda Topliss, Youyu Lu, Jim Helbig

Synthetic Aperture Radar for ocean Current feature Retrievals and surface velocity Estimates - SARCURE.
Johnny A. Johannessen, Vlad Kudryavtsev, Bertrand Chapron, Fabrice Collard, Knut Dagestad, Dmit Akimov

Microwave Radiometric Signatures of Ocean Internal Waves
Victor Raizer

Sunlight Reflectance And Polarization Components Simulation With BRDF Over Wind-Roughed Water Surface
Guanhua Zhou, Qinh Liu, Guol Tian, Zhig Liu

Sea Surface Temperature Retrieval Using IR-Radiometry and Atmospheric Modeling: Simulation and Experimental Results Using PAU-IR
Nereida Rodríguez-Álvarez, Adriano Camps, Xavi Bosch-Lluis, Isaac Ramos-Perez, Juan Marchan-Hernandez

Methodology for the Estimation of Ocean Surface Currents using Region Matching and Differential Algorithms
Javier Marcello, Francisco Eugenio, Ferran Marqués

Performance of Region-based Matching Techniques to Compute the Ocean Surface Motion
Javier Marcello, Francisco Eugenio, Ferran Marqués

Automatic Recognition of Coastal and Oceanic Environmental Events with Orbital Radars
Cristina Maria Bentz, Alexandre Tadeu Politano, Nelson Francisco F. Ebecken

Bistatic SAR Simulation for Ocean
Wang Xiaoqing, Yu Ying, Chen Yongqiang , Jiang Xiao, Zhu Minhui

Vertical Variability of Sea Surface Salinity and Influence on L-Band Brightness Temperature
Claire Henocq, Jacqueline Boutin, François Petitcolin, Sabine Arnault, Philippe Lattes

A Multi-Sensor Approach and Ranking Analysis Procedure for Oil Seeps Detection in Marine Environments
Enrico Campos Pedroso, Fernando Pellon de Miranda, Karen Bannerman, Carlos Henrique Beisl, Miguel Herrera Rodriguez, Ricardo Gomez Cáceres

Evaluation of Underwater Rainfall Measurements during the Ionian Sea Rainfall Experiment
Marios N Anagnostou, Jeff A Nystuen, Emmanouil N Anagnostou, Efthymios I. Nikolopoulos, Eyal Amitai

Using MODIS and ERS-2 SAR to Detect Oil Spill
Shi Lijian

Study of the Hyperspectral Remote Sensing of Shallow Waters Bathymetry with Artificial Neural Network Technology
Shi Yingni, Zhang Tinglu, Shi Lijian

Airborne Passive Microwave Measurements of Sea Surface Salinity, Temperature and Roughness, and Implications for Satellite Salinity Retrieval.
Derek M. Burrage, Joel C. Wesson, David W. Wang, Stephan D. Howden

Ocean Water Vapor and Cloud Burden Trends Derived from the Topex Microwave Radiometer
Shannon Brown, Shailen Desai, Stephen Keihm, Wenwen Lu, Christopher Ruf

Exstreme Wind Conditions in Tropical Cyclones Observed from Synthetic Aperture Radar Images
Antonio Reppucci, Susanne Lehner, Johannes Schulz-Stellenfleth, Helko Breit

Synchronous Atmospheric Correction and SST Retrieval by AATSR Data
Wenjie Fan, Zhaoliang Li, Xiru Xu

Determination of Environmental Parameters From Hyperspectral Imagery Using a Look-Up-Table Approach
Jeffrey Bowles, Ellen Bennert, David Gillis, Daniel Korwan, Gia Lamela, David Miller, Marcos Montes, Joseph Rhea, William Snyder

A derivative Spectrum Algorithm for Determination of Chlorophyll-a Concentration in the Pearl River Estuary
Chuqun Chen, Shilin Tang, Qianguo Xing, Jinkun Yang, Haigang Zhan, Heyin Shi

Remotely-Sensed Estimation of the Euphotic Depth in South China Sea
Shilin Tang, Chuqun Chen, Haigang Zhan, Dazhi Xu

Analysis Of The Disturbances In Interferometric Radar Measurements
Salah Redadaa, Fouzia Maamri, Malek Benslama

Textural Analysis of Sea SAR Images for Oil Spill Detection
Bahia Lounis, Aichouche Belhadj Aïssa

An Anisotropic Ocean Surface Emissivity Model based on a Two-scale Code Tuned to WindSat Polarimetric Brightness Observations
Dean F. Smith, Bob L. Weber, Albin J. Gasiewski

Determine the Location of a Thermal Front in the Iroise Sea by Using HF Radar Data and Tide Model Results
Iris Ehlert, Thomas Schlick, Klaus-Werner Gurgel, Benoit Seille

High Quality Sea Surface Temperatures from the WindSat Radiometer: Algorithm and Validation
Thomas Meissner, Frank Wentz

Development of an Ocean Surface Emissivity Model for Wide Swath Imaging of Wind Speed to Hurricane Force
Salem F. El-Nimri, James W. Johnson, W. Linwood Jones, Eric W. Uhlhorn

Atmospheric Correction of IKONOS with Cloud and Shadow Image Features
Chew Wai Chang, Santo V. Salinas, Soo Chin Liew, Z.P Lee

Simulation of SAR Image Cross Spectra from Mixed Ocean Waves
Jingsong Yang, He Wang, Qingmei Xiao, Weigen Huang

Multi-sensor sea surface observations in severe weather conditions
Yves Quilfen, Catherine Prigent, Bertrand Chapron, Alexis Mouche, Naima Houti

Internal Waves in South China Sea
Hui Shen, Yijun He

Analysis of the SMOS Ocean Salinity Inversion Algorithm
Carolina Gabarró, Marcos Portabella, Marco Talone, Jordi Font

Evaluation of ocean color algorithms in the Cape Bathurst polynya using MODIS and SeaWiFS spectral bands
Sélima Ben Mustapha, Pierre Larouche

Effect of Spectral Resolution in Hyperspectral Data Analysis
Elena Torrecilla, Ismael F. Aymerich, Sergi Pons, Jaume Piera

Study of Rain Events over the South China Sea by Synergistic Use of
Werner Alpers, Cho-ming Cheng

Wave Measurements under the Typhoon by 9.25MHz Ocean Radar
Shoichiro Kojima, Motohiko Kashima

Remote Sensing of Waved Sea Surface: Combined Passive and Active Microwave Measurements During the CAPMOS'05 Experiment
Emanuele Santi, Paolo Pampaloni, Michael N. Pospelov, Alexey V. Kuzmin , Stefano Zecchetto, Francesco De Biasio, Niels Skou, Sten Sobjaerg

Evolution of Internal Solitary Waves near a turning point in the South China Sea using SAR imagery and numerical models
Duk-jin Kim, David R. Lyzenga, Wooyoung Choi

Measurement of Extreme Wave Height by ERS-2/SAR and Numerical Wave Model (WAM)
Xiao-Ming Li, Thomas Koenig, Susanne Lehne, Johannes Schulz-Stellenfleth

Wavelet Polarimetric SAR Signature Analysis of Sea Oil Spills and Look-alike Features
Attilio Gambardella, Maurizio Migliaccio, Gianfranco De Grandi

Tuesday Morning (09:00 - 10:40)
Room: 123
Tu01MH1. Land Cover Data Products
Co-Chairs: *Fernando Camacho*

09:00 ECOCLIMAP-II: A Climatologic Global Data Base of Ecosystems and Land Surface Parameters at 1 km Based on the Analysis of Time Series of Vegetation Data
Stéphanie Faroux, Valéry Masson, Jean-Louis Roujean

09:20 Improving Access to MODIS Biophysical Science Products for NACP Investigators
Robert E. Wolfe, Feng Gao, Jeffrey T. Morrisette, Gregory A. Ederer, Jeffrey A. Pedelty

09:40 Prototyping Algorthm for Retrieving FAPAR Using MSG Data in the Context of the LSA SAF Project
Fernando Camacho de Coca, Javier García Haro, Joaquin Meliá, Jean Louis Roujean

10:00 Generating a Long-Term Land Data Record from the AVHRR and MODIS Instruments
Jeffrey Pedelty, Sadashiva Devadiga, Edward Masuoka, Molly Brown, Jorge Pinzon, Compton Tucker, Eric Vermote, Stephen Prince, Jyotheshwar Nagol, Christopher Justice, David Roy, Junchang Ju, Crystal Schaaf, Jicheng Liu, Jeffrey Privette, Ana Pinheiro

10:20 TerraLook: Providing Easy, No-Cost Access to Satellite Images for Busy People and the Technologically Disinclined
Gary N. Geller, Eugene A. Fosnight, Sujoy Chaudhuri

Tuesday Morning (09:00 - 10:40)
Room: 132
Tu02MH1. Data Compression Techniques
Co-Chairs: *James Fowler , Adriano Meta*

09:00 Sampling Quantization Analysis and Results for FMCW SAR
Adriano Meta, Peter Hoogeboom, Leo P. Ligthart

09:20 Hyperspectral Image Compression with the 3D Dual-Tree Wavelet Transform
Joseph B. Boettcher, Qian Du, James E. Fowler

09:40 Image Data Compression Scheme for a Future MARS Lander
Peter Rueffer, Jan-Pierre Jaspers

10:00 Spectral-Decorrelation Strategies for the Compression of Hyperspectral Imagery
Hrishikesh Tamhankar, James E. Fowler

10:20 Two New Tasseled Cap Vegetation Indices for Landsat and MODIS Data.
Warren Cohen, Zhiqiang Yang

Tuesday Morning (09:00 - 12:40)
Room: 120
Tu03MF. Atmospheric applications
Co-Chairs: *Peter Schluessel , Gail M Skofronick-Jackson*

09:00 Differential Absorption Microwave Radar Measurements for Remote Sensing of Atmospheric Pressure
Roland Lawrence, Dion Fralick, Steve Harrah, Bing Lin, Yongxiang Hu, Patrica Hunt

09:20 Advanced Processing Algorithms For GRAS Instrument Data
J. J. W. Wilson, J-P. Luntama

09:40 Detection of the May 2006 Saharan Dust Outbreak over Granada, Spain, by Combination of Active and Passive Remote Sensing
Lucas Ala, Juan Luis Guerrero Rascado, Hassan Lyamani, Jaime Elías Gil, Alberto Cazorla, Francisco José Olmo

10:00 The Vertical Distribution of Saharan Dust over the Western and Central Mediterranean through Dust Modelling and Lidar Observations
Maria Grazia Frontoso, Nicola Spinelli, Carlos Pérez, Michaël Sicard, Adolfo Comerón, José Maria Baldasano

10:20 Examination of Hygroscopic Properties of Aerosols Using a Combined Multiwavelength Elastic – Raman Lidar
Daniela Viviana Vladutescu, Yonghua Wu, Barry Gross, Leona Charles, Fred Moshary, Samir Ahmed

10:40 COFFEE BREAK

11:00 IASI on MetOp: Advanced Temperature and Humidity Sounding
Peter Schluessel, Thomas August, Xavier Calbet, Tim Hultberg, Olusoji Oduleye, Arlindo Arriaga

11:20 Ground-Based Integrated Profiling Stations Ground-Based Integrated Profiling Stations for Temperature, Humidity and Cloud
Tim J. Hewison, Catherine Gaffard, John Nash, Tim Oakley

11:40 Passive and Active Microwave Sensing of Cold Air Outbreaks over the Northwest Pacific Ocean
Leonid M. Mitnik, Maia L. Mitnik

12:00 End to End Simulation for Normalized Differential Spectral Attenuation (NDSA) Measurements between Two LEO Satellites: Performance Analysis in the Ku/K Bands
Fabrizio Cuccoli, Luca Facheris

12:20 Analysis of Historical AVHRR PATMOS Aerosol Data in Support of the Long-term Trend Study
Tom X. P. Zhao, Istvan Laszlo, Wei Guo, Andrew Heidinger, Changyong Cao, Aleksandar Jelenak, Dan Tarpley, Jerry Sullivan

Tuesday Morning (09:00 - 12:40)
Room: 121
Tu04MF. Student Prize Paper Competition Award Session
Co-Chairs: *Werner Wiesbeck , Tony A K Milne*

09:00 Hurricane Wind Field Estimation from SeaWinds at Ultra High Resolution
Brent A. Williams, David G. Long

09:20 Partially-Supervised Updating of Land-Cover Maps: A P2S2VM Technique and a Circular Validation Strategy
Mattia Marconcini, Lorenzo Bruzzone

09:40 Variants of Principal Components Analysis
Wei-Min Liu, Chein-I Chang

10:00 Validation of a Backscatter Model for a River Ice Covers Using Radarsat-1 Images
Imen Gherboudj, Monique Bernier, Robert Leconte

10:20 Application of Persistent Scatterer InSAR and GIS for Urban Subsidence Monitoring
Alex H. Ng, Linlin Ge

10:40 COFFEE BREAK

11:00 An Ultra-Lightweight L-band Digital Lobe-Differencing Correlation Radiometer for Airborne UAV SSS Mapping
Eric M. McIntyre, Al. J. Gasiewski

11:20 Multibaseline POL-InSAR Analysis of Urban Scenes for 3D Modeling and Physical Feature Retrieval at L-Band
Stefan Sauer, Laurent Ferro-Famil, Andreas Reigber, Eric Pottier

11:40 An Investigation of PN Sequences for Multistatic SAR/InSAR Applications
Karan Jumani, Kamal Sarabandi

12:00 Obtaining A Ship's Speed and Direction from Its Kelvin Wake Spectrum Using Stochastic Matched Filtering
Andreas Arnold-Bos, Arnaud Martin, Ali Khenchaf

12:20 Empirical Determination of the Soil Emissivity at L-band: Effects of Soil Moisture, Soil Roughness, Vine Canopy, and Topography
Alessandra Monerris, Adriano Camps, Mercè Vall-llossera

Tuesday Morning (09:00 - 12:40)
Room: 122
Tu05MF. CLOUDSAT & CALIPSO and the Potential of the A-Train Virtual Observatory
Co-Chairs: *Stephen Volz , Dave M Winker*

09:00 An Overview of CloudSat and the A-Train – A New Resource for the Study of Earths Clouds
Vane Debora, Graeme Stephens Stephens

09:20 Cloud Profiling Radar Performance
Eastwood Im, Simone Tanelli, Stephen Durden, Kyung Pak

09:40 The Vertical Distribution and Occurrence Statistics of Clouds as Derived From
Jay Mace, Qiuq Zhang, Roger T. Marchand, Char Trepte, Graeme Stephens, Dave M. Winker

10:00 CALIPSO Mission Overview
Dave M Winker

10:20 CALIPSO Lidar Performance
William Hunt

10:40 COFFEE BREAK

11:00 CALIOP Algorithm Development and Data Products
Mark Vaughan, Zhao Liu, Ralp Kuehn, Davi Winker, Stuart Ashleigh Young, Kath Powell, Ali Omar, Chri Hostetler, Kam- Lee, J. C Currey

11:20 Augmented and Improved Scene Classifications for the MODIS Swath Derived Using Data Fusion Techniques Applied to Collocated CALIPSO and MODIS Nadir Track Measurements
Sharon Rodier, Yongxiang Hu, Robe Holz, Mark Vaughan

11:40 A-Train Data Depot: Integrating and Exploring Data Along the A-Train Tracks
Gregory Leptoukh, Steven Kempler, Peter Smith, Andrey Savtchenko, Robert Kummerer, A. Galopan, J. Farley, Aijun Chen

12:00 Characterizing the Radiation Fields in the Atmosphere Using a Cloud-Aerosol-Radiation Product from Integrated CERES, MODIS, CALIPSO and CloudSat Data
Patrick Minnis, Bruce Wielicki, Charles A. Trepte, Sunny Sun-Mack, Yan Chen, Sharon Gibson, Seiji Kato, Graeme Stephens

12:20 Missouri Satellite Air Quality Project
Verne Kaupp, Tim Haithcoat, Robert Reed, Nichole Hilstrom, Connor Henley, Jacob Mueth, Jordan Parshall, Joe Engeln, Jeff Bennett, Leanne Tippett-Mosby

Tuesday Morning (09:00 - 12:40)
Room: 124
Tu06MF. Pol-InSAR Techniques and Applications
Co-Chairs: *Konstantinos Papathanassiou , Elise K. Colin*

09:00 X-band Extinction in Boreal Forest: Estimation by Using E-SAR POLInSAR and HUTSCAT
Jaan Praks, Martti Hallikainen, Florian Kugler, Konstantinos Papathanassiou

09:20 Potential of Forest Height Estimation Using X Band by Means of Two Different Inversion Scenarios
Florian Kugler, Konstantinos Papathanassiou, Irena Hajnsek, Angelo Coscia

09:40 Compact PolInSAR for Vegetation Characterisation
Sébastien Angelliaume, Pascale Dubois-Fernandez, Jean-Claude Souyris

10:00 POLINSAR for FOPEN Using Flashlight Mode Images Along Circular Trajectories
Hubert Cantalloube, Élise Colin-Koeniguer

10:20 Exploring Pol-InSAR in C-band for Agricultural Parameter Estimation
Irena Hajnsek, Chri Andres

10:40 COFFEE BREAK

11:00 Volume and Double-Bounce Decorrelation Effects in the OVoG Model for Single-Tx PolInSAR
Juan M. Lopez-Sanchez, J. David Ballester-Berman, Yolanda Marquez-Moreno

11:20 Vertical Profile Reconstruction with PolInSAR Data of a Subpolar Glacier
Jayanti J. Sharma, Irena Hajnsek, Konstantinos P. Papathanassiou

11:40 PolInSAR Signatures of Alpine Snow
Keith Morrison, Helmut Rott, Thomas Nagler, Irena Hajnsek, Kost Papathanassiou, Rolf Scheiber

12:00 A Polarimetric Interferometric Study of an Urban Area Using an X-band Ground-Based Sensor
Luca Pipia, Xavier Fabregas, Albert Aguasca, Carlos Lopez-Martinez, Jordi J. Mallorqui, Antoni Broquetas, Jord Marturià

12:20 Ship Detection with the Fuzzy C-Mean Clustering Algorithm Using Fully Polarimetric SAR
Haiyan Li, Yijun He, Hui Shen

Tuesday Morning (09:00 - 12:40)
Room: 128
Tu07MF. ENVISAT ASAR Land Applications
Co-Chairs: *Yves-Louis Desnos , Marcus E. Engdahl*

09:00 Large Plain Flood Mapping and Monitoring Based on EO data: Five Years of Improvement from ERS SAR to ENVISAT MERIS ASAR Synergy
Herve Yesou, Remi Andreoli, Kader Fellah, Nadinr Tholey, Stephen Clandillon, Stephanie Batiston, Bernard Allenbach, Colette Meyer, Claude Bestault, Paul de Fraipont

09:20 Sixteen Years of Land Cover Mapping with ESA's ERS-1/-2 and ASAR
Christiana Schmullius, Maurizio Santoro, Tanja Riedel, Oliver Cartus

09:40 Rice Monitoring Using SAR Data
Le Toan Thuy

10:00 Surface Deformation Analysis of the Campi Flegrei Caldera, Italy, by Exploiting the ENVISAT ASAR Data with the SBAS-DInSAR Technique
Paolo Berardino, Francesco Casu, Gianfranco Fornaro, Riccardo Lanari, Michele Manunta, Mariarosaria Manzo, Antonio Pepe, Susi Pepe, Eugenio Sansosti, Francesco Serafino, G. Solaro, P. Tizzani, G. Zeni

10:20 Optimizing Interferogram Generation, Pixel Selection and Data Processing for High Non-Linear Deformation Monitoring with Orbital DInSAR
Pablo Blanco-Sánchez, Sergio Duque, Jordi J. Mallorquí, Dani Monells

10:40 COFFEE BREAK

11:00 SPN Examples of Long and Short TERM ERS/ENVISAT Subsidence Monitoring and Validation
Alain Arnaud, Moni Sanchez, Nuno Miranda, Gera Cooksley, Javi Duro

11:20 ASAR Parallel-Track PS Analysis in Urban Sites
Daniele Perissin, Claudio Prati, Fabio Rocca

11:40 Uncertainty Analysis in Advanced Differential Interferometric SAR Processing
M. Crosetto, O. Monserrat, M. Agudo, B. Crippa, G. Rossi

12:00 Research on Land Use and Land Cover Change Pattern in Fuzhou Area Based on ERS SAR and ENVISAT ASAR Data
Henglin Chen, Xiaoqin Wang, Feilong Ling, Huiguo Li

12:20 Increased Export of Grounded Ice After the Collapse of Northern Larsen Ice Shelf, Antarctic Peninsula, Observed by Envisat ASAR
Helmut Rott, Thomas Nagler, Wolfgang Rack

Tuesday Morning (09:00 - 12:40)
Room: 129
Tu08MF. Passive Microwave Remote Sensing of Soil Moisture I
Co-Chairs: *Jasmeet Judge , Jean-Pierre Wigneron*

09:00 Development of A Soil Moisture Retrieval Algorithm for Spaceborne Passive Microwave Radiometers and Its Application to AMSR-E and SSM/I
Hui Lu, Toshio Koike, Tetsu Ohta, David Kuria, Tobias Graf, Hiroyuki Tsutsui, Hideyuki Fujii, Katsunori Tamagawa

09:20 Calibration of AMSR-E Soil Moisture Retrieval Algorithms Using MIRS and LDAS Simulations
Xiwu Zhan, Sid Boukabara, Thomas Jackson, Dan Tarpley, Fuzhong Weng

09:40 Validation of AMSR Soil Moisture Algorithms with Ground Based Networks
Thomas Jackson, Michael Cosh, Rajat Bindlish, Jinyang Du

10:00 NPOESS Soil Moisture Satellite Data Assimilation: Progress Using WindSat Data
Andrew Jones, Cynthia Combs, Tarendra Lakhankar, Scott Longmore, Thomas H. Vonder Haar, Gary McWilliams, Michael Mungiole, George Mason

10:20 WindSat Soil Moisture Algorithm and Validation
Li Li, Peter Gaiser, Tom Jackson, Rajat Bindlish, Jinyang Du

10:40 COFFEE BREAK

11:00 Algorithm for High-Resolution Soil Moisture Retrieval With Coincident Active and Passive L-Band Measurements
Dara Entekhabi, Eni G. Njoku

11:20 Surface Temperature Effect on Soil Moisture Retrieval from AMSR-E
Ying Guo, Jiancheng Shi, Kebiao Mao

11:40 In Situ Soil Moisture Observations for the CAL/VAL of SMOS: The SMOSMANIA Network
Jean-Christophe Calvet, Noureddine Fritz, Françis Froissard, David Suquia, Alain Petitpa, Bruno Piguet

12:00 Validating Observations of Soil Moisture: Some Theoretical Considerations
Cihan Erbas, Brian Hornbuckle

12:20 Estimates of Surface Soil Moisture in Prairies Using L-Band Passive Microwaves
Kauzar Saleh, Jean-Pierre Wigneron, Patricia de Rosnay, Maria Jose Escorihuela, Yann H. Kerr, Jean-Christophe Calvet, M. Schwank, Philippe Waldteufel

Tuesday Morning (09:00 - 12:40)
Room: 130
Tu09MF. Active and Passive Microwave Remote Sensing of Terrestrial Snow - I
Co-Chairs: *Jiancheng J.C. Shi , Leung Tsang*

09:00 Core-H2O – A Dual-Frequency SAR Mission for Hydrology and Climate Research
Helmut Rott, Don Cline, Thomas Nagler, Jouni T Pulliainen, Helge Rebhan, Simon H Yueh

09:20 The SARALPS-2007 Measurement Campaign on X- and Ku-Band Backscatter of Snow
Keith Morrison, Helmut Rott, Thomas Nagler, Helge Rebhan, Patrick Wursteisen

09:40 Overview of the Second Cold Land Processes Experiment (CLPX-II)
Don Cline, Kell Elder, Simon H Yueh, Jare Entin, Helmut Rott, Thomas Nagler

10:00 Airborne Ku-Band Radar Remote Sensing of Terrestrial Snow Cover
Simon Yueh, Dona Cline, Kelly Elder

10:20 Modeling Multilayer Effects in Microwave Remote Sensing of Dry Snow Using Dense Media Radiative Transfer Theory (DMRT) Based on Quasicrystalline Approximation
Ding Liang, Edward G. Josberger, Xiaolan Xu, Leung Tsang, Konstantinos M. Andreadis, Edward G. Josberger

10:40 COFFEE BREAK

11:00 A Multi-Scattering and Multi-Layer Snow Model and Its Validation
Jiny Du, Jiancheng Shi, Saibun Tjuatja, Kunshan Chen

11:20 Microwave Remote Sensing of Alpine Snow
Andreas Wiesmann, Tazio Strozzi, Charles Lincoln Werner, Urs Wegmüller, Maurizio Santoro

11:40 Use of QuikScat Ku-Band Scatterometer Data for Retrieval of Seasonal Snow Characteristics in Finland
Martti Hallikainen, Pauli Sievinen, Yuanzhi Zhang, Pekka Halme

12:00 Airborne Measurements of Snow Depths over Sea Ice Using an Ultra-Wideband FMCW Radar
Carl Leuschen, Prasad Gogineni, Thorsten Markus

12:20 Combined use of InSAR and ICESat / GLAS Data for High Accuracy DEM Generation on Antarctica
Tsutomu Yamanokuchi, Koichiro Doi, Kazuo Shibuya

Tuesday Morning (09:00 - 12:40)
Room: 131
Tu10MF. Educational activities in Remote Sensing
Co-Chairs: *Andrew J Blanchard , Nina Jackson*

09:00 Satellite Eye for the Galathea 3 Ship Expedition: Global Tour 2006-2007
Charlotte Hasager, Merete Christiansen, Peter Sørensen, Jürg Lichtenegger, Leif Pedersen, Ole Andersen, Jacob Høyer, Pete Jørgensen, Niels Højerslev, Rune Nielsen, Michael Rasmussen, Lote Nyborg

09:20 The Weather RATS: K-12 Educational Outreach of CASA
Missy Taft, Julie Conlonova

09:40 GeoBrain: Facilitating Remote Sensing Education With Innovative Technologies
Meixia Deng, Liping Di, Mark Abolins, Hongmian Gong, Guoqing Zhou, Robert E. Ford

10:00 Remotely Sensed Ocean Surface Winds - A Collaborative Educational Effort
Zorana Jelenak, Joan M. VonAhn, Michael Brennan, Joseph Sienkiewicz, Paul S. Chang

10:20 An Internet-Based Remote Sensing Educational Activity in China
Shengbo Chen, Zhiguo Meng, Xuqing Zhang, Xizhou Yan, Xiang Wang

10:40 COFFEE BREAK

11:00 Development of Educational Partnerships Dedicated to Remote Sensing of Ice Sheets Cyberinfrastructure
Linda B. Hayden, David Braaten

11:20 A Model for Frequency Management Method of Improving Remote Sensing Capabilities
Tuncay Ercan, Tohid Ahmed Rana

11:40 Global Earth Observation – Benefit Estimation: Now, Next and Emerging
Michael Obersteiner, Florian Kraxner, Steffen Fritz, Ian McCallum

12:00 PolarView@FIMR: WWW-based Delivery of Baltic Sea Ice Products to End-Users
Juha Karvonen, Jari Haapala, Jonni Lehtiranta, Ari Seinä

Tuesday Morning (09:00 - 12:40)
Room: 133
Tu11MF. Remote Sensing and GIS Research and Applications on the African Continent
Co-Chairs: *Mohamed A. Mohamed , Charles Luther*

09:00 An Environmental Information System for the Spatial Modelling of Land Use Dynamics in the North Region of Cameroon
Eric Fotsing , Maurice Tchuente, Wouter T. De Groot

09:20 Spatial and Temporal Analysis of Brushfire in the Provinces of Burkina Faso during the Fire Seasons from 2004 to 2006
Amani Massalabi, Louis Blanc Traoré

09:40 Comparative Analysis of Reflectance Spectroscopy and Laboratory Based Assessment of Asbestos Pollution in the Rehabilitated Mining Environment, South Africa
Brilliant M. Petja, Yaw A. Twumasi, George T. Tengbeh

10:00 Simulation of the Impact of Climate Change on Crop Productivity
Gamal Salah El Afandi

10:20 Assessment of Prosopis Juliflora Using Geoinformation Techniques
Hussein O. Farah, M.K. Muuo, J.M. Gathemya

10:40 COFFEE BREAK

11:00 Spectroscopy to Characterize Expansive Soils
Fekerte Arega, F. D. van der Meer, Harald van der Werff, Wolt Zigterman

11:20 Monotoring the Interaction of Human Activities and Hearth Surface Proceses in the Coastal Area Located between Gamasa Drain and El-Gharbeya Drain, North Nil Delta, Egypt, through the Last Two Decades
E. A. Hermas, H. M. Ahmed, S. B. El-Kafrawy, M. A. El-Demerdash, A. A. Khedr, W. E. Asi

11:40 The TIGER Initiative: Improving Water Governance in Africa Using Earth Observation
Diego Fernandez-Prieto, Francesco Palazzo

12:00 Remote Sensing Applications for Sustainable Aquaculture in Africa
Joseph E. Quansah , Gilbert L. Rochon, Kwamena K. Quagrainie, Steve Amisah, Mucai Muchiri, Charles Ngugi

12:20 Mapping Rural Savanna Woodlands in Malawi: a Comparison of Maximum Likelihood and Fuzzy Classifiers
Lobina Palamuleni, Harold Annegarn, Melaine Kneen, Tobias Landmann

Tuesday Morning (11:00 - 12:40)

Room: 123

Tu12MH2. Multisource Land Cover Mapping
Co-Chairs: *Melba Crawford , Hugo Carrão*

11:00 Extraction of Forest Parameters in a Mire Biotope Using High-Resolution Digital Surface Models and Airbone Imagery
Lars T. Waser, Ch. Ginzler, M. Kuechle, P. Thee, E. Baltsavias, H. Eisenbeiss

11:20 Retrieving Land Cover Information from MERIS and MODIS Data: A Comparative Study for Landscape Characterization in Portugal
Hugo Carrão, Pedro Sarmento, António Araújo, Mário Caetano

11:40 Comparison of Multisource Data Support Vector Machine Classification for Mapping of Forest Cover
Arief Wijaya, Richard Gloaguen

12:00 Mapping and Modelling the Snowmelt and Greenup Pattern in Southern Norway by Combining Microwave and Optical Remote Sensing Sensors
Stein Rune Karlsen, Eirik Malnes, Jörg Haarpaintner, Rune Solberg

12:20 Qualitative Approaches to Rapidly Identify Completely Submerged Rice Due to Tropical Cyclone Using Satellite Data
Abhijat Abhyankar, Anand Patwardhan, Arun Inamdar

Tuesday Morning (11:00 - 12:40)

Room: 132

Tu13MH2. Image Calibration, Correction and Registration
Co-Chairs: *Jordi Inglada , Adele Fusco*

11:00 The Role of Spatial Interactions for Prediction of the Spectral Structure of the Atmospheric Phase Screen
Giovanni Cuozzo, Maurizio di Bisceglie, Adele Fusco

11:20 Image Data Cleaning: Detection of Aliasing
Alexandre Mallet, Alain Giros, Mihai Datcu

11:40 How many bits? Radiometric Resolution as a Factor in Obtaining Forestry Information with Remotely Sensed Measurements
Shannon Franks, Jeffrey G. Masek

12:00 Automatic Monitoring of Autumn Colours Using MODIS Data
Yrjo Rauste, H. Astola, T. Häme, R. Berglund, L. Sirro, T. Veijonen, B. Veikkanen, E. Kubin, O. Aulamo

12:20 Investigation of Rigorous Sensor Models and Adjustment Parameters for Modeling Satellite Orbits
Taejung Kim

Tuesday Afternoon (14:20 - 18:00)

Room: 122

Tu01AH1. Remote Sensing of the Cryosphere Environment
Co-Chairs: *Ellsworth LeDrew , Pablo Clemente-Colón*

14:20 Process Process Linkages Between Vorticity Patterns in the Polar Sea Ice and the Upper Atmosphere
Ellsworth LeDrew

14:40 Monitoring Changes in Arctic Sea Ice, Radiation, and Wind Field
S. Nghiem, Pablo Clemente-Colón, Yi Chao, Donald K. Perovich, Ernesto Rodriguez, John W. Weatherly, Peggy Li, Gregory Newman

15:00 Arctic Sea Ice Melt: Synthesis of satellite, submarine and model data
Wieslaw Maslowski, Terry McNamara, Jay Zwally, Jaclyn Clement-Kinney, Jaromir Jakacki, Ron Kwok

Tuesday Afternoon (14:20 - 18:00)
Room: 120
Tu02AF. Ocean Surface Process-2
Co-Chairs: *Mark A. Bourassa , Werner Alpers*

14:20 X-Band Backscatter from the Ocean at Low-Grazing Angles
William J. Plant, William C. Keller, Kenneth Hayes

14:40 Recent Advances in the Use of Spaceborne Along-Track InSAR Data for River Runoff Monitoring
Roland Romeiser, Steffen Grünler, Detlef Stammer

15:00 Bora Events in the Adriatic Sea and Black Sea Studied by Multi-Sensor Satellite Imagery and In-Situ Measured Meteorological Data
Werner Alpers, Ivanov Andrei

15:20 SAR Simulation of Ocean Scenes Covered by Oil Slicks With Arbitrary Shapes
Alessandro Danisi, Gerardo Di Martino, Antonio Iodice, Daniele Riccio, Giuseppe Ruello, Marivì Tello, Jordi Mallorquí, Carlos Lopez-Martinez

15:40 Oil Spill Segmentation of SAR Images Via GRAPH Cuts
Sonia A. Pelizzari, José B. Dias

16:00 COFFEE BREAK

16:20 A Physically Consistent Stochastic Model to Observe Oil Spills and Strong Scatterers on SLC SAR Images
Maurizio Migliaccio, Giuseppe Ferrara, Attilio Gambardella, Ferdinando Nunziata, Antonio Sorrentino

16:40 Identification of Oil Spills Based on Ratio of Alternating Polarization Images from ENVISAT
Vladimir Malinovsky, Stein Sandven, Alexey Mironov, Aleksander Korinenko

17:00 Retrieved Sea Surface Salinity Spatial Variability Using High Resolution Data within the Soil Moisture and Ocean Salinity (SMOS) Mission
Roberto Sabia, Adriano Camps, Christine Gommenginger, Meric Srokosz

17:20 Sun Glint and Sea Surface Salinity Remote Sensing
Emmanuel P. Dinnat, Paolo De Matthaeis, David M. Le Vine

Tuesday Afternoon (14:20 - 18:00)
Room: 121
Tu03AF. Special Session Celebrating the Contributions to Remote Sensing Science of Tanos Mikhaël Elfouhaily
Co-Chairs: *Donald R Thompson , Joel T. Johnson*

Tanos "Tony" Elfouhaily, our friend and colleague, passed away on the evening of July 26, 2006 at Doctors' Hospital in Miami Florida. Tony was interested in a broad range of scientific topics and published widely in numerous journals. His many contributions to the field of ocean remote sensing during his brief career range from theoretical aspects of microwave scattering physics and surface wave hydrodynamics to the description of nonlinear statistical processes. Tony's contributions have already had a profound influence on the field.

Born in Kléa, Lebanon, on Oct. 20, 1968, Tony earned his Baccalauréat C from the Sacré-Coeur school (Lebanon) in physics and general sciences. He continued his education studying ocean remote sensing at IFREMER, Centre de Brest, and earned his PhD at the University of Paris VII. From 1997-2000, Tony was a NASA post-doctoral fellow and later a staff scientist in the Space Department at the Johns Hopkins University Applied Physics Laboratory. In 2000, he moved to CNRS in Marseille where he remained until 2004 when he joined the Rosenstiel School of Marine and Atmospheric Science at the University of Miami as an associate professor.

A sudden death like Tony's reminds us of the fragility of human life and makes us reflect more deeply on how precious each life is. When we lose such a special human being as Tony, we must honour his life and shining example by attempting to live our own lives more fully and generously. Because he gave so much of his mind to science and so much of his attention to his family and friends, Tony's life is an excellent example of what can be accomplished in a short span of time if one focuses on one's work with an eagerness to understand and a willingness to share and explore with others. It is clear that just as Tony's numerous scientific contributions will be influential for many years to come, his love for his family, his sincerity, good nature and permanent smile will guide not only the lives of his young daughters Lucie and Beatrice into adulthood, but will also the serve as a standard for all who knew him.

We'll miss you Tony!

D. Thompson.

14:20 Tonas M. Elfouhaily: Student Researcher at NASA Wallops Flight Facility.
Larry Bliven

14:40 A tribute to Tony Elfouhaily from NOC
Christine Gommenginger, Meric Srokosz, Peter Challenor, Graham Quartly

15:00 Retrieval of Wind Speed Using an L-Band Synthetic Aperture Radar
Frank M. Monaldo, Donald R. Thompson, Merete B. Christiansen

15:20 Computation of Doppler spectra in the microwave range: which model for sea surface ?
Gabriel Soriano, Marc Saillard, Mamirina Joelson

15:40 Application of an airborne laser scanner as in-situ verification data for bistatic GNSS measurements
James L. Garrison, Jill Parrin

16:00 COFFEE BREAK

16:20 Sea Surface Slopes' PDF from GNSS Reflected Signals
Estel Cardellach, Antonio Rius

16:40 Probability Density Function of Ocean Surface Slopes from Radar Observations
Daniele Hauser, Gérard Caudal, Sébastien Guimbard, Alexis Mouche

17:00 Comparison of Geometric Optics and Diffraction Effects in Radar Scattering From Steep and Breaking Waves
Valery U. Zavorotny, Alexander G. Voronovich

17:20 The Reduced Local Curvature Approximation for Rough Surface Scattering
Tanos Elfouhaily, Joel Johnson

17:40 The GO-SSA Two-scale Model for ocean surfaces
Soriano Gabriel, Guérin Charles-Antoine

Tuesday Afternoon (14:20 - 18:00)
Room: 123
Tu04AF. Measurement-based Data Systems
Co-Chairs: *Liping Di , Mathew Schwaller*

14:20 Vision for Earth Science Measurement-Based Data Systems
Martha Maiden, Fran Lindsay, Math Schwaller

14:40 The French National Framework for the Processing of Science Space Borne Data
Michel Duplaa, Paul Kopp

15:00 Distributed Data Integration Prototype System for Satellite, In-situ and Model Data
Satoko Miura, Kengo Aizawa

15:20 A General Model of Data Service in Spatial Information Grid
Dingsheng Liu, Yi Zeng, Guoqing Li, Fang Huang

15:40 A service-based reconfigurable measurement system for supporting sensor webs
Liping Di

16:00 COFFEE BREAK

16:20 Autonomous Objectively Optimized Observing Systems
David J. Lary

16:40 NASA's NPOESS Property Project Science Data Segment: A Framework for Measurement-Based Earth Sciences Data Systems
Mathew Schwaller, Robert Schweiss

17:00 Atmospheric Composition Processing System (ACPS): Evolution from Instrument-Based to Measurement-Based Processing
Curt A. Tilmes, Albert J. Fleig, Mike Linda

17:20 The Atmosphere Product and Evaluation and Test Element (PEATE) for the NPOESS Preparatory Project (NPP)
Liam Gumley, Hank Revercomb, Scot Mindock, Paol Antonelli, Richard Frey, Stev Dutcher, Bryan Baum, Robe Holz

17:40 A Measurement-based System for Producing Long-term Land Data Records
Robert Wolfe, Edwa Masuoka, Mich Teague, Jeff Pedelty, Eric Vermote, Sada Devadiga, Davi Roy, Chris Justice, Jeffrey Thomas Morisette

Tuesday Afternoon (14:20 - 18:00)
Room: 124
Tu05AF. RADARSAT
Co-Chairs: *Shabeer Ahmed , Paris Vachon*

14:20 RADARSAT 1: Mission Performance and Plans
Surendra Parashar, Dani Showalter, Ahme Mahmood, Satish Srivastava

14:40 RADARSAT-2 Program Update
Luc Brule, Hans Baeggli, Cath Casgrain, Tony Hillman, Jill Smyth, Phil Rolland

15:00 Image Quality Control Operations at CSA for RADARSAT Satellites
Satish Srivastava, Stephane Cote, Robert K Hawkins

15:20 The RADAR Constellation Payload Design
Ralph Girard, Patrick Plourde, Guy Séguin

15:40 RADARSAT-2 SOAR Program Update
Daniel De Lisle, Jill Smyth, Wendy Branson, Gordon Staples, Diane Thibault

16:00 COFFEE BREAK

16:20 Ship Signatures in Synthetic Aperture Radar Imagery: Validation Using Automatic Identification System Data
Paris W. Vachon, Ryan A. English, John Wolfe

16:40 Operational Ice and Pollution Surveillance in Canadian Coastal Waters with RADARSAT-2
Roger De Abreu, Dean Flett, Mari Gauthier

17:00 The Value of SAR Multi-Polarization Data in Delivering Annual Crop Inventories
Heather McNairn, Catherine Champagne, Jiali Shang

17:20 Potential Application of RADARSAT Constellation
Vern Singhroy, Francois Charboneau, Guy Seguin, Dirk Geudtner

17:40 RADARSAT-2 Commercialization Plan and Operational Applications
Gordon Staples

Tuesday Afternoon (14:20 - 18:00)
Room: 128
Tu06AF. ERS SAR and ENVISAT ASAR Performance, Calibration, Validation and Optimisation
Co-Chairs: *Betlem Rosich , Andrea Monti Guarnieri*

14:20 Ocean surface currents estimation using ASAR scansar Doppler grid
Fabrice Collard, Bertrand Chapron, Fabrice ARDHUIN, Celine DANILO, Johnny Johannessen, Vladimir Kudryavtsev, Dmitry Akimov, Knut-Frode Dagestad, Betlem Rosich

14:40 ASAR Instrument Performance and Product Quality Evolution
Betlem Rosich, Peter Meadows, Massimo Tranfaglia, Mirko Santuari, Andrea Monti-Guarnieri, D. D'Aria, I. Navas Traver

15:00 ERS-2 SAR performance, product evolution and interferometric exploitation of zero gyro mode data
Peter Meadows, Betlem Rosich, Alan Pilgrim, Massimo Tranfaglia

15:20 Antenna calibration technique exploiting Permanent Scatterers.
Davide D'Aria, ANDREA Monti Guarnieri, Betlem Rosich, Davi Giudici

15:40 Optimising EnviSat ASAR interferometry opportunities by orbit maintenance
Dirk Kuijper, Itziar Barat, Berthyl Duesmann

16:00 COFFEE BREAK

16:20 ASAR ScanSAR Interferometry: availability and results
Andrea Monti Guarnieri, Davide D'Aria, Paolo Pasquali, Betlem Rosich

16:40 SAR Ocean Wind and Waves projects: developments and validations results
Vincent Kerbaol, Fabrice Collard, Harald Johnsen, Jochen Horstmann

17:00 Envisat ASAR Wave Mode Upgrade, Reprocessing and Validation
Fabrice Collard, Harald Johnsen, Bertrand Chapron

17:20 Generation of ENVISAT ASAR Mosaics Accessible on-line
Christophe Caspar, Olivier Colin, Henri Laur, Betlem Rosich Tell, Emmanuel Mathot, Giuseppe Tandurella, Pedro Goncalves, Fabrice Brito

17:40 Error Analysis of Envisat ASAR Level 2 Algorithm Based on Simulation Technique
Jingsong Yang, He Wang, Weigen Huang, Qingmei Xiao

Tuesday Afternoon (14:20 - 18:00)
Room: 129
Tu07AF. Microwave Monitoring of Vegetation at both Local and Global Scales
Co-Chairs: *Simonetta Paloscia , Thomas Jackson*

14:20 Microwave Vegetation Indices Derived from Satellite Microwave Radiometers
Jiancheng Shi, Thomas Jackson, Jing Tao, Jingyang Du, Rajat Bindlish

14:40 Improved Treatment of Vegetation Scattering in the tau-omega Model
Brian Hornbuckle

15:00 Ground-Based Microwave Investigations of Forest Plots in Italy
Emanuele Santi, Simonetta Paloscia, Paolo Pampaloni, Simone Pettinato

15:20 ComRAD Active / Passive Microwave Measurements of Tree Canopies
Peggy O'Neill, Alicia Joseph, Ross Nelson, Roger H. Lang, Mehm Kurum, Michael Cosh, Thomas Jackson, Mark Spicknall

15:40 A Statistical and Theoretical Study About Radar Sensitivity to Crop Growth from S to X Band
Andrea Della Vecchia, Paolo Ferrazzoli, Leila Guerriero, Tazio Strozzi, Urs Wegmuller

16:00 COFFEE BREAK

16:20 Estimating Forest Parameters and Underlying Layers of Soil Moisture with Low-Frequency Radar.
Mahta Moghaddam, Yuri Goykhman, Alir Tabatabaenejad

16:40 Characterising and correcting ionospheric effects on P-band biomass measurements from space
Shaun Quegan

17:00 Estimation of Leaf Area Index of Qinghai Spruce (Picea Crassifolia) Forest using Remote Sensing in Qilian Mountains, Northwest China
Chuanyan Zhao, Yanhong Jia, Guodong Cheng, Shoubo Li

17:20 Microwave Signature and its Sensitivity to Soil Moisture Changes for Dynamic Vegetation
Jasmeet Judge, Kai-Jen C. Tien

17:40 Vegetation Water Content Retrieval Using MERIS and AATSR Data over the Loess Plateau
Rong Liu, Jun Wen, Tangtang Zhang, Yuanyong Liu, Zhengchao Li

Tuesday Afternoon (14:20 - 18:00)
Room: 130
Tu08AF. Active and Passive Microwave Remote Sensing of Terrestrial Snow - II
Co-Chairs: *Leung Tsang , Jiancheng J.C Shi*

14:20 Emissivities of Rough Surface over Layered Media in Microwave Remote Sensing of Snow
Peng Xu, Leung Tsang, Li Li, Kuan Chen

14:40 Programming-Faced Discrete Version of the QCA-DMRT Equation and Its Solutions for Passive and Active
Jin Pan, Leung Tsang

15:00 Validation of Microwave Emission Models by Simulating AMSR-E Brightness Temperature Data from Ground-Based Observations
Anna Kontu, Jouni Pulliainen, Pauli Heikkinen, Hanne Suokanerva, Matias Takala

15:20 Empirical SWE Retrieval Using Airborne Microwave and in Situ Snow Measurements
B. Boba Stankov, Donald Cline, Marco Tedesco

15:40 Monitoring Snow Cover in Alpine Regions with Multi-Frequency Microwave Sensors
Marco Brogioni, Giovanni Macelloni, Simo Paloscia, Paolo Pampaloni, Simo Pettinato , Em Santi, Stefano Zecchetto

16:00 COFFEE BREAK

16:20 Snow Microwave Modeling and Retrievals: Performance, Resolution, and Evolution
Edward Kim, Marco Tedesco

16:40 The Contribution of Multi-Scale Passive Microwave Data for Resolving Satellite Scale Snow Water Equivalent Retrieval Issues in a Canadian Open Tundra Environment
Andrew Rees, Chris Derksen, Michael English, Anne Walker

17:00 Modelling of Snow Hydrology of Siberia for Carbon Budget Calculations
Noel Robertson, Shaun Quegan

17:20 GB Microwave Interferometric Measuerements Over a Snow Covered Slope: An Experimental Data Collection in Tyrol (Austria)
Guido Luzi, Massimiliano Pieraccini, Linhsia Noferini, Daniele Mecatti, Giovanni Macaluso, Carlo Atzeni, Philipp Joerg, Rudolf Sailer

17:40 Operational Snow Map Production for whole Eurasia Using Microwave Radiometer and Ground-Based Observations
Juha-Petri Kärnä, Juha Lemmetyinen, Martti Hallikainen, Panu Lahtinen, Jouni Pulliainen, Matias Takala

Tuesday Afternoon (14:20 - 18:00)
Room: 131
Tu09AF. Image Processing
Co-Chairs: *John Richards , Yoshikazu Iikura*

14:20 Deconvolution Algorithms in Image Reconstruction for Aperture Synthesis Radiometers
María Piles, Adriano Camps, Mercè Vall-llossera, Alessandra Monerris, Marco Talone, José Luis Álvarez-Pérez

14:40 Improved IBP with Super Resolution for Remote Sensing Images
Feng Li, Dona Fraser, Xiuping Jia

15:00 Landcover Classification of Satellite Imagery with Tesselated Spatial Structure Model
Yoshikazu Iikura

15:20 Automated Detection of Objects Using Multiple Hierarchical Segmentations
H. Gokhan Akcay, Selim Aksoy

15:40 Identification Scales for Urban Vegetation Classification Using High Spatial Resolution Satellite Data
Zhang Youjing, Fan Hengtong

16:00 COFFEE BREAK

16:20 Shape Description via Amoebas for Very-High Resolution Satellite Images
Leyden Martinez-Fonte, Rik Bellens, Sidharta Gautama, Wilfried Philips

16:40 Speckle Noise Reduction in SAR Imaging Using Lattice Filters Based Subband Decomposition
Gokhan Karasakal, Isin Erer

17:00 Segmentation of High-resolution Multispectral Image Based on Extended Morphological Profiles
Peijun Li, Hongtao Hu, Jiancong Guo

17:20 Dynamical Post-Processing of Environmental Electronic Maps Extracted from Large Scale Remote Sensing Imagery
Ivan E. Villalon-Turrubiates, Yuriy Shkvarko

Tuesday Afternoon (14:20 - 18:00)
Room: 132
Tu10AF. Image Classification - Joint GRSS-ISPRS Session
Co-Chairs: *Roman Arbiol , John A. Richards*

14:20 A SVM Ensemble Approach for Spectral-Contextual Classification of Optical High Spatial Resolution Imagery
Maciel Zortea, Michaela De Martino, Sebastiano Serpico

14:40 Boundary-Adaptive MRF Classification of Optical Very High Resolution Images
Giovanna Trianni, Paolo Gamba

15:00 A Joint Spatial and Spectral SVM's Classification of Panchromatic Images
Fauvel Mathieu, Chanussoit Jocelyn, Benediksson Jon Atli

15:20 On the Complementarity of an Ontology and a Nearest Neighbour Classifier for Remotely Sensed Image Interpretation
Sébastien Derivaux, Nicolas Durand, Cédric Wemmert

15:40 Thematic Mapping with Sensor Formations
John Richards

16:00 COFFEE BREAK

16:20 Combination of One-Class Remote Sensing Image Classifiers
Jordi Munoz-Mari, Gustavo Camps-Valls, Luis Gómez-Chova, Javier Calpe-Maravilla

16:40 The Use of ASAR Data for Class Cover Identification from Small Swatches
Giorgos Christoulas, Vassilis Anastassopoulos, Maria Petrou

17:00 Evaluation of Asar and Optical Data Synergy for High Resolution Land Cover Mapping in Portugal
André Pinheiro, Hugo Carrão, Mário Caetano

17:20 Semi-Supervised Cloud Screening with Laplacian SVM
Luis Gómez-Chova, Gustavo Camps-Valls, Jordi Muñoz-Marí, Javier Calpe

17:40 A Parallel Positive Boolean Function Approach to Supervised Multispectral Image Classification
Yang-Lang Chang, Jyh-Perng Fang, Long-Shin Liang, Li-De Chen, Kun-Shan Chen

Tuesday Afternoon (14:20 - 18:00)
Room: 133
Tu11AF. Hyperspectral Processing and Analysis
Co-Chairs: *David Goodenough , Stephen Ungar*

14:20 Imaging Spectroscopy Measurement Requirements for Ecosystem Research and Status of a Recent NASA Spaceborne Imaging Spectrometer Mission Concept
Robert Green, Gregory P Asner, Step Ungar

14:40 EO-1 Mission: Transition from Technology Demonstration to Science Path Finder
Stephen Ungar, Daniel Mandl, Stuart Frye, Lawrence Ong, Joseph Young

15:00 Forest Information Products from Hyperspectral Data – Victoria and Hoquiam Test Sites
David Goodenough, Andrew Dyk, Geor Hobart, Hao Chen

15:20 Integration of First and Last Return LiDAR with Hyperspectral data to Characterize Forested Environments
K. Olaf Niemann, Gordon Frazer, Rafael Loos, Fabio Visintini, Roger Stephen

15:40 Local Intrinsic Dimensionality of Hyperspectral Imagery from Non-linear Manifold Coordinates
T. L. Ainsworth, C. M. Bachmann, R. A. Fusina

16:00 COFFEE BREAK

16:20 A CHRIS Triplet for Forest Attributes
Andrew Dyk, David Goodenough, K. O Niemann, Geordie Hobart, Hao Chen

16:40 Bathymetric Retrieval from Manifold Coordinate Representations of Hyperspectral Imagery
Charles M. Bachmann, Thomas L. Ainsworth, Robert A. Fusina, Marcos J. Montes, Jeffrey H. Bowles, Daniel R. Korwan

17:00 A Novel Non-Parametric Weighted Feature Extraction Method for Classification of Hyperspectral Image with Limited Training Samples
Jinn-Min Yang, Pao-Ta Yu, Bor-Chen Kuo, Hsiao-Yun Huang

17:20 Investigation of Nonlinearity in Hyperspectral Remotely Sensed Imagery: A Nonlinear Time Series Analysis Approach
Tian Han, David G. Goodenough

17:40 Hyperspectral Classification Using Markov Random Field and "Spatial Probability Density Function"
Ahmad Keshavarz, Hass Ghassemian

Tuesday Afternoon (16:20 - 18:00)
Room: 122
Tu12AH2. User Applications in Remote Sensing Technical Committee Contributions
Co-Chairs: *Ellsworth LeDrew , Lixin Wu*

16:20 Towards The Virtual Remote Sensing Laboratory: Simulation Software For Intelligent Post-Processing Of Large Scale Remote Sensing Imagery
Yuriy V. Shkvarko, Juan Gutierrez, Luis G. Guerrero

16:40 Wind energy: user applications in remote sensing
Charlotte Hasager, Mark Ahlstrom, Thierry Ranchin, Fran van Hulle

17:00 Informing Decision Making in the Energy Sector Using NASA Spaceborne Observations and Models
Richard Eckman, Paul Stackhouse

17:20 Study of Arctic and Antarctic Ice Dynamics and Wind Field by Using Formosat-2 Satellite Data
Yuei-An Liou, Jasson Lin, An-ming Wu, G.S. Chang

17:40 Ocean winds from SAR used in offshore wind energy planning
Merete B. Christiansen, Charlotte B. Hasager, Morten Nielsen, Lars B. Hansen, Frank M. Monaldo, Donald R. Thompson

Tuesday Interactive Session (18:00 - 19:30)
Room: Foyer-2
Tu01EP. Radar and SAR Calibration
Co-Chairs: *Rainer Lenz , Paco Lopez-Dekker*

Parameter Based SAR Simulator for Image Quality Evaluation
Chul H. Jung, Min. S Choi, Young K. Kwag

ALOS PALSAR Calibration and Validation Results from Sweden
Leif E. B. Eriksson, Gustaf Sandberg, Lars M. H. Ulander, Gary Smith-Jonforsen, Björn Hallberg, Klas Folkesson, Johan E. S. Fransson, Mattias Magnusson, Hakan Olson, Anders Gustavsson, Björn Flood

Transpolarizing Surfaces for Polarimetric SAR Systems Calibration
Pere J. Ferrer, Carlos López-Martínez, Xavier Fàbregas, Jose M. González-Arbesú, Jordi Romeu, Albert Aguasca, Christophe Craeye

New Polarimetric Calibration Proposal and Its Evaluation Using ALOS PALSAR Calibration Campaign Measurements
Hajime Fukuchi, Tomohiro Furuya, Hidekazu Noda, Makoto Satake

Polarimetric Calibration Experiment of ALOS PALSAR with Polarization-Selective Dihedrals
Makoto Satake, Takeshi Matsuoka, Toshihiko Umehara, Akitsugu Nadai, Seiho Uratsuka, Hajime Fukuchi

A Comparison of Internal Calibration Schemes for Spaceborne Single-pass InSAR Applications
Yu Wang, Xing-dong Liang, Yi-rong Wu

Analysis of Dual Channels Phase Imbalance for Single-Pass Spaceborne InSAR Applications
Yu Wang, Liang-jiang Zhou, Xing-dong Liang, Yi-rong Wu

COSMO-SkyMed Active Calibrator: A Sophisticated Tool for SAR Image Calibration
Stefano Falzini, Victor Speziale, Elena De Viti

Overview of The Active TerraSAR-X Calibrators and First Results
Rainer Lenz, Werner Wiesbeck

The Role of Performance Modelling in Active Phased Array SAR
Luigi Cereoli, Andrea Torre

Geometric Correction of ASAR and PALSAR Data With and Without Ground Control Points
Philip Cheng

Tuesday Interactive Session (18:00 - 19:30)
Room: Foyer-2
Tu02EP. Pol-InSAR Applications
Co-Chairs: *Jong-Sen Lee , Carlos López-Martinez*

Comparison of PolInSAR methods and strategies for trees height estimation
Paolo Pasquali, Andrea Monti Guarnieri, Davide D'Aria, Betlem Rosich

Ortho-Rectification and Terrain Correction of Polarimetric SAR Data Applied in the ALOS/Palsar Context
Yrjo Rauste, Anne Lönnqvist, Matthieu Molinier, Jean-Baptiste Henry, Tuomas Häme

A Sub-Canopy Soil Moisture Estimation Method Study Using PolinSAR
Xinwu Li, Zhen LI, Qing Dong

Robust Forest Height Extraction using Polarimetry SAR Interferometry
Xi Chen, Chao Wang, Hong Zhang

An Improved RVoG Scattering Model for Parameters Inversion using PolInSAR Images
Bin Zou, Hongjun Cai, Lamei Zhang, Junping Zhang

Study of Ground Surface Displacement Estimation Using ALOS/PALSAR D-InSAR Interferometry
Atsushi Iwashita, Marina Kudo, Hisatoshi Baba, Toshikazu Morohoshi, Masanao Hara, Yu-Feng Lin, Wen-Qing Jiang

SHARAD Design and Operation
Renato Croci, Franco Fois, Diego Calabrese, Enrico Zampolini, Roberto Seu, Giovanni Picardi, Enrico Flamini

Evaluation of the Interaction between L-BAND SAR Signal and Structural Parameters of Forest Cover
Igor S. Narvaes, Arnaldo Q. Silva, João Roberto dos Santos

Tuesday Interactive Session (18:00 - 19:30)
Room: Foyer-2
Tu03EP. Geological Applications
Co-Chairs: *Rainer Lenz , Oscar Mora*

Assessing Spatial-Temporal Variation of Heavy Metals Contamination of Sediments Using GIS 3D Spatial Analysis Methods in Dexing Mines, Jiangxi Province, China
Cuihua Chen, Shijun Ni, Chengjiang Zhang, Binbin He

Surface Approximation with Faults: Application to Geophysical Surfaces
Christian Gout, Mathieu Lefebvre, Lucia Romani

Regional probabilistic and statistical mineral potential mapping of copper deposits using GIS in the Southeast area, Mongolia
Saro Lee, Hyun-Joo Oh, Minjinsor Tsogtsaihkhan

Using ASTER TIR Radiance and Surface Emissivity Data to Map Lithology and Silica Abundance in a Metamorphic Terrain
Ashish Misra, Ravi P. Gupta, Amit K. Sen

Fracture analysis using extracted data from ASTER and IRS-Pan images, and DEM: a case study of the Kuh-e Asmari anticline in the Zagros fold-thrust belt, SW Iran
Mehran Azizzadeh , Sohrab Shahriari

Application of A Physical Model to Topographic and Atmosphic Correction In Jiangxi Rugged Area,China
Jianguang Wen, Qinhuo Liu, Qing Xiao , Xiaowen Li, Guijun Yang, Jie Chen

Digital image processing of multi-spectral ASTER data and SIG applied in geology and geomorphology for wine terroir identification in Rio Grande do Sul, Brazil: Encruzilhada do Sul and Pinheiro Machado
Rosemary Hoff, Jorge R. Ducati, Carlos M. F. Iglesias

Fusion of optical and radar remote sensing imagery to aid geological mapping: an example from mapping in Madagascar
Jeanine Engelbrecht, Paul H. Macey

Assessment of Surface Weathering Degree on Granite Bedrock Using Reflectance Spectroscopy
Chang-Uk Hyun, Hyeong-Dong Park

A Digital Geological Mapping System Based on Geographic Information System
Weifeng Ma, Xiao Wang, Chon Xue, Lin Li, Jian Cui , Hong Chang

Remote Sensing Potential for Oil Exploration. Example of the Zagros Mountains (Iran)
Richard Gloaguen, Ken McClay, Tim Dooley

Classification of Satellite Images Applied to Geological Mapping (Douro Region – Northeastern Portugal)
Ana M.P Vicente, T. Rabaça, Alcides J.S.C. Pereira

Assessing Environment Quality of Soils Using GIS Methods in Dexing Mines, Jiangxi Province, China
Cuihua Chen, Shijun Ni, Chengjiang Zhang, Binbin He

Assessing Potential Ecological Risk of Sediments Using GIS Methods in Dexing, Jiangxi Province, China
Cuihua Chen, Shijun Ni, Chengjiang Zhang, Binbin He

Remote Sensing Analysis of Recent Tectonics in the Eger Rift (Czech Republic)
Alexandra Käßner, Richard Gloaguen, Klaus-Peter Stanek

Uplift Rates from River Profiles: Methodology and Case Study, Oriente, Cuba
Florian Wobbe, Klaus P. Stanek, Richard Gloaguen

Statistical Modeling of a Fold System Southeast of ZAGROS (Iran)
Richard Gloaguen, Davod Poreh

Recognizing Salt-Structures on the Basis of Geophysical and Remote Sensing Data: The Case of Monte Real Salt-Structure (Onshore West-Central Portugal)
Fernando C. Lopes, Alcides J. S. C. Pereira, Ana M. P. Vicente

Structural Lineaments in a Volcanic Island Evaluated through Remote Sensing Techniques: The Case of Santiago Island (Cape Verde)
Alcides J. S. C. Pereira, Sónia Victória, Ana M. P. Vicente, Luis J. P. F. Neves

Application of Optical and Microwave Remote Sensing Data to the Tectonics and Lithostratigraphy of Metasedimentary Rocks: The Case of Douro Region (Northeastern Portugal)
António Sequeira, Ana M. P. Vicente, Alcides J. S. C. Pereira, Luís C. G. Pereira

Preliminary Studi on Monitoring of Land Surface Temperature at Coal Mine District by Thermal Remote Sensing
Peng Nan, Qiming Qin, Yun-jun Yao, Chuan Jin

Tuesday Interactive Session (18:00 - 19:30)
Room: Foyer-2
Tu04EP. Atmospheric applications
Co-Chairs: *Georg Heygster , Tim J. Hewison*

A Improvement for the Surface Solar Insolation Retrieval from Geostationary Sensor
Jong-Min Yeom, Kyung-Soo Han, Youn-Young Park, Chang-Suck Lee, Young-Seup Kim

Climate Characteristics Analysis
Hongyu Wu, Qian Wang

A Neural Network Algorithm to Retrieve Near-Surface Air Temperature from Landsat ETM+ Imagery over the Hanjiang River Basin, China
Dengzhong Zhao, Wanchang Zhang, Xu Shijin

Methodology of Cloud Height Estimation over Rugged Terrain Using Landsat TM Imagery
Yoshikazu Iikura

Mono-Window Algorithm for Retrieval of Land Surface Net Long-Wave Radiation in Mountainous Area
Wanchang Zhang, Yefei Zhu, Shijin Xu

Calibration and validation of IASI temperature and humidity soundings
Xavier Calbet, Peter Schluessel, Arlindo Arriaga, Tim Hultberg, Thomas August, Olusoji Oduleye

Estimating evapotranspiration of Haihe basin: An operational processing chain for MODIS 1B and meteorological data
Xiong Jun, Wu Bingfang , Yan Nana, Li Jing, Zeng Yuan

The Earth Surface Reflectance Retrieval by Exploiting the Synergy of TERRA and AQUA MODIS Data
Jiakui Tang, Aijun Zhang, Zhengmin He

Stratospheric Ozone Layer Observations over Tsukuba, Japan by NIES Ozone DIAL
Boyan I. Tatarov, Chan B. Park, Hideaki Nakane, Nobuo Sugimoto, Ichiro Matsui, Yasuhiro Sasano

The climate focused 5-year Terra-based monthly CERES radiative flux and cloud products.
David R. Doelling, Dennis F. Keyes, Fred G. Rose, Takmeng Wong

Dedicated Neural Networks Algorithms for Direct Estimation of Tropospheric Ozone from Satellite Measurements
Pasquale Sellitto, Alessandro Burini, Fabio Del Frate, Domenico Solimini, Stefano Casadio

Comparison of Total Water Vapor Columns Retrieved from Satellite Measurements: Microwave Radiances from AMSU-B and Visible Spectra from GOME/SCIAMACHY
Christian Melsheimer, Sebastian Mieruch, Stefan Noël, Georg Heygster

Neural Networks for Tropospheric Profiling from GPS-LEO Radio Occultation
Patrizia Basili, Stefania Bonafoni , Vinia Mattioli, Fabrizio Pelliccia, Piero Ciotti

Potential of CO2 retrieval from IASI
Pascal Prunet, Laure Chaumat, Olivier Lezeaux, Sandrine Bijac, Jerome Donnadille, Dorothée Coppens, Bernard Tournier

Return from Insects in the Clear-Air Convective Boudary Layer
Robert Contreras, Stephen Frasier

Retrieval of Atmospheric Water Vapor Column Content with CE318 Measurements Based on Differential Absorption Method
Zifeng Wang, Liangfu Chen, Zhongting Wang, Xingfa Gu

Atmospheric Vertical Profiles Obtained by Lidar over Évora During CAPEX Project
Juan Luis Guerrero-Rascado, Hassan Lyamani, Lucas Alados-Arboledas, Ana María Silvia, Frank Wagner, Sergio Pereira

Tuesday Interactive Session (18:00 - 19:30)
Room: Foyer-2
Tu05EP. Water Monitoring and Hazards
Co-Chairs: *C. Gout , Tim Malthus*

Integrating Dual Frequency Side Scan Sonar and High Spatial Resolution Satellite Imagery for Monitoring Coral Reef Benthic Communities
Evanthia Karpouzli, Tim J. Malthus

Calculation and Analysis of Sea Background Radiance in Infrared Band
Esra Erdem, Feza Arikan, Cemil B. Erol

Comparison of the waterline characteristics on the intertidal flats appeared on the image observed by satellite and ground camera.
Taerim Kim

Duckweed at Lake Maracaibo, Venezuela: a multisensor approach to monitor and understand the dynamics of a large aquatic plant invasion
Eduardo Klein, Carlos Castillo, Iliana Chollett, Federico Troncone, Frank E. Müller-Karger

Revision of the CREPAD Products. Description and Results of the New Algorithms
Alix Fernández-Renau, Cristina Robles González, Mª Angeles Domínguez Barroso

The Development of the St. Lawrence Observing System (SLOS)
Guy Aube, Yves Crevier

New Tide Gauge and GPS Technologies at l'Estartit for Monitoring Sea level
Marina Martinez-Garcia, Miquel Angel Ortiz-Castellon, Roman Leckzinsky, Elena Tel, Maria Jesus Garcia, Begoña Perez, Josep Pascual, Juan Jose Martinez-Benjamin

Change Detection of Hongze Lake Wetland Using Rule-Based Inferring
Renzong Ruan, Liliang Ren

Spatial Modeling and Analysis of the Wetland Dynamic Change in Minjiang River Estuary
Dongshui Zhang, Zhangren Lan, Xiaoqin Wang, Qinmin Wang

Seafloor Surfaces Approximation from Rapidly Varying Bathymetric Data Using Pre-Processing
Daniel Cervantes Cabrera, Pedro Gonzalez-Casanova, Christian Gout

Identification Mode of ChemicaL Oxygen Demand in Water Based on Remotely Sensing Technique and Its Application
Miaofen Huang, Xu-feng Xing, Xiao-ping Qi, Wu-yi Yu, Yi-mi Zhang

An Adaptative Technology Geoinformation Monitoring of the Environment
Ferdenant Mkrtchyan, Vlad Krapivin

Vulnerability Assessment of the Mountain-Basin System in the Northern Tianshan Mountains, China
Bo Li, Jianzhai Wu, Jie Chong, Rui Hong, Xinshi Zhang

Research on the Landscape Change of YeYaHu Wetland Based on Remote Sensing Fusion
Wenji Zhao, Zhaoning Gong, Huili Gong, Xiaojuan Li, Zhuowei Hu, Songmei Zhang, Fusheng Wang

Tuesday Interactive Session (18:00 - 19:30)
Room: Foyer-2
Tu06EP. Hyperspectral Data Classification
Co-Chairs: *Antonio J Plaza*

Vegetation Classification Using Hyperspectral and Multi-Angular Remote Sensing Data
Baoxin Hu, James Freemantle, John R. Miller, Anne Smith

Hierarchical Classification Systems for Hyperspectral Image Classification
Bor-Chen Kuo, Min-Hung Chi, Jinn-Min Yang, Chih-Wei Yang

Why is it good to be slightly naive? - A look at the effect of ignoring correlation when estimating covariance matrices for hyperspectral image classification
Asbjørn Berge, Are C. Jensen, Anne S. Solberg

A Binary Decision Tree Classifier Implementing Logistic Regression as a Feature Selection and Classification Method and Its Comparison with Maximum Likelihood
Helio Radke Bittencourt, Denis A. O. Moraes, Victor Haertel

Hyperspectral Image Classification by Recursive Spatial Boosting Based on the Bootstrap Method
Shuji Kawaguchi, Ryuei Nishii

Nonnegative Principal Components for Hyperspectral Imaging
Peter Bajorski

Hyperspectral Image Classification Using Wavelet Networks
Pai-Hui Hsu, Hsiu-Han Yang

Hyperspectral Classification Fusion for Classifying Different Military Targets
Ting Liu, George A. Lampropoulos

Hyperspectral Data Classification Using RVM with Pre-Segmentation and RANSAC
Begüm Demir, Sarp Ertürk

Applications of Components Analysis in Hyperspectral Image Classification
Xiaoli Jiao, Chein-I Chang

A New Scheme for Decomposition of Mixed Pixels Based on Nonnegative Matrix Factorization
Xuetao Tao, Bin Wang, Liming Zhang, Jian Qiu Zhang

Tuesday Interactive Session (18:00 - 19:30)
Room: Foyer-2
Tu07EP. Agricultural Applications of Remote Sensing
Co-Chairs: *Josée Lévesque , Abdou Bannari*

Relationship Between the Land Cover Change and the Thermal Environment in An Agricultural Region of Japan Using Multi-Temporal Airborne MSS
Akinobu Murakami, Akira Hoyano, Keehan Kim

Testing and Evaluation of Annualized Agricultural Nonpoint Source Pollution Model in Miyun Reservoir Watershed, China
Qinghui Lin, Xiaoyan Wang, Zhixian Li

Remote Sensing Native Vegetation Condition
S D Jones, K Sheffield, K J Reinke, N Miura, A Lechner

Desertification Process Monitoring Based on New Meteorological Parameter.
Yuriy Petrov, A'lo Abdullaev, Svetlana Nikolaeva

Assessing Value of Grassland Ecosystem Services in Gansu Province, Northwest of China
Zhenghua Chen, Qingyuan Ma, Jian Wang, Zhen Yang

LAI and fPAR spatial and temporal trends in the Brazilian savanna region
Laerte Ferreira, Fabio Lobo, Mercedes Bustamante, Greg Asner, Manuel Ferreira, Nilson Ferreira

Analysis of Climate Change from Dry to Wet Phase in NW China with An Aridity-Wetness Homogenized Index
Pengxiang Wang, Youfei Zheng , Jinhai He , Qiang Zhang, Baojian Wang

Land Use and Land Cover Changes Based on Remote Sensing and GIS in Heihe River Basin, China
Fu Kun, Chen Xingpeng, Liu Qingguang, Li Chunhua

Study on the variation of NDVI and the relationship between precipitation in Zulihe basin, Northwest China
Han Hui, Zhao Chuanyan, Ma SHiying

Assessing Vegetation Degradation in Loess Plateau by Using Potential Vegetation Index
Jianguo Sun , Tinghua Ai, Chuayan Zhao, Haowen Yan

The Research on Ecological Environment Change and Its Spatial Extension in Frontier Zone Based on RS and GIS
Gan Shu, He Daming, Chen Wenhua, Wang Dandan

Effects of Agro-Activities on the Soil Organic Carbon and Soil Properties in the Middle Reaches of Heihe River, Northwestern China
Zhongren Nan, Junhua Zhang, Guozhen Zhang, Chuanyan Zhao

Tuesday Interactive Session (18:00 - 19:30)
Room: Foyer-2
Tu08EP. Modeling
Co-Chairs: *Rui Liu , Buhe Aosier*

Real Time Landscape Modelling and Visualization
Rui Liu, Darius Burschka, Gerd Hirzinger

GPP seasonal dynamic and interannual variation in Poyang Lake Basin based on remote sensing and model simulation
Qian Zhang, Jiyuan Liu, Tianxiang Yue

Comparison of NDVI of Ground Measurement, Atmospheric Corrected ASTER L1B Data and ASTER Surface Reflectance Product (AST07) Data
Buhe Aosier, Takada Masayuki, Kaneko Masami

The Application of RS and GIS in Landscape Analysis of Frontier Zone
Yang Feiling, Zhang Peng, Gan Shu

Expert System for the Operative Environmental Diagnostics
Vlad Krapivin, Ferdenant Mkrtchyan

Research of the Coordinated Development on the Economy and Ecological Environment in Northwest China
Cuiyun Wang, Bo Shao, Wenyong Feng, Gang Li, Chunhui Zhang

The application and practice of region-ecological-economy theory in western China
Zhang Xiaojun, Xiao Bilin

The Evolutional Analysis of Coupling Relationship between Population and Resource-Environment in Gansu Province, China
Wenheng Wu, Shuwen Niu, Zhen Yang, Gang Li

Dinamica EGO software, a platform for environmental system modeling
Britaldo Soares-Filho, Herm Rodrigues, Will Lelles

Tuesday Interactive Session (18:00 - 19:30)
Room: Foyer-2
Tu09EP. Soil Moisture
Co-Chairs: *Jasmeet Judge , Peggy E. O'Neill*

Effective Single Scattering Albedo of Corn at C and X-Band
Zhongjun Zhang, Jiancheng Shi, Andrea Della Vecchia

Temporal and Spatial Dynamics of C-Band Brightness Temperature over the Brazilian Tropical Savanna
Angélica Giarolla, Edson E. Sano, Marcos Adami, Thomas J. Jackson

Ku-Band, Polarimetric, Combined, Short Pulse Scatterometer-Radiometer System for Stationary Fixed Platform, Vessel and Airborne Applications
Artashes Arakelyan, Arse Arakelyan, S. A. Darbinyan, Mela Grigiryan, Izab Hakobyan, Astg Hambaryan, Vani Karyan, Mush Manukyan, Gagi Hovhannisyan, Nuba poghosyan, Stev Clifford

Vegetation Water Inversion Using MODIS Satellite Data
Xiaoning Song , Qinhuo Liu, Shifeng Huang, Xiaotao Li

Estimation of Land Surface Temperature and Emissivity from AMSR-E Data
Yuan-Yuan Jia, Bohui Tang, Xiaoyu Zhang, Zhao-Liang Li

Two-Dimensional Synthetic Aperture Radiometry during Soil Moisture Experiment in 2003 (SMEX03)
Dongryeol Ryu, Thomas J. Jackson, Rajat Bindlish, David LeVine, Michael Haken

Using Microwave Satellite Data to Study the Spatial Soil Moisture Changes on the Tibetan Plateau
Tzu-Yin Chang, Yuei-An Liou

Study of Atmospheric Effects on AMSR-E Microwave Brightness Temperature over Tibetan Plateau
Yubao Qiu, Jiancheng Shi, Lingmei Jiang, Kebiao Mao

Assessing Pine Barrens Soil Moisture Regimes using Synthetic Aperture Radar (SAR) Techniques
Michael A. Edwards, Margaret Winslow, Reginald Blake

Aggregation and Disaggregation of Synthetic L-Band Soil Moisture Data over South-Western France in Preparation of SMOS
Christoph Rüdiger, Jean-Christophe Calvet, Aurore Brut, Jean-Pierre Wigneron, Beatrice Berthelot, Andre Chanzy, Sylvain Cros, Michael Berger

Measurement and Simulation of Diurnal Radiobrightness Variations for a Bare Unfrozen Soil
Valery L. Mironov, Sergey A. Komarov, Aleksey A. Bogdanov, Alexander S. Komarov, Vsevolod V. Scherbinin

Retrieval of corn field soil moisture during the growing cycle from ENVISAT-ASAR AP data
Wang Fang, Sun Guoqing

Short Vegetation Influence on Surface Parameter Estimations
Sandrine Daniel, Sophie Allain, Eric Pottier

A New Long-term Experimental Site for the Validation and Scaling of Soil Moisture Observations
Brian Hornbuckle, Witold Krajewski, Amy Kaleita, Anton Kruger, William Eichinger, Sally Logsdon, Tom Sauer

Surface Soil Moisture Status over the Mackenzie River Basin Using a Temperature/Vegetation Index
Naira Chaouch, Robert Leconte, Ramata Magagi, Marouane Temimi

The SMOS Mediterranean Ecosystem L-Band characterisation EXperiment (MELBEX) over Natural Shrubs
Aurelio Cano, Jean-Pierre Wigneron, C. Millán-Scheiding, Carmen Antolín, Jan E. Balling, Jennifer Grant, Alain Kruszewski, Kauzar Saleh, Sten Sobjaerg, Niels Skou, Ernesto Lopez-Baeza

Retrieving soil moisture of agricultural fields in Northern Italy from ENVISAT/A-SAR data
C. Bignami, N. Pierdicca, L. Pulvirenti, F. Ticconi

Modeling of Soil Roughness Using Terrestrial Laser Scanner for Soil Moisture Retrieval
Carlos Perez-Gutierrez, Jesus Alvarez-Mozos, Jose Martinez-Fernandez, Nilda Sanchez

The 2005 and 2006 Australian National Airborne Field Experiments:
Edward Kim, Jeff Walker, Rocco Panciera, Olivier Merlin, Jetse Kalma

A Method to Retrieve Soil Moisture Using ERS Scatterometer Data
Ruijing Sun, Jiancheng Shi, Lingmei Jiang

Tuesday Interactive Session (18:00 - 19:30)
Room: Foyer-2
Tu10EP. Image Processing
Co-Chairs: *Roman Arbiol , Francesca Bovolo*

Automated Underwater Image Restoration and Retrieval of Related Optical Properties
Weilin Hou, Deric J. Gray, Alan D. Weidemann, Georges R. Fournier, J. L. Forand

A Feasible Atmospheric Correction Method to Remote Sensing Image and It's Application to TM Image
Wei Zheng, Chuang Liu, En Long

High Spatial Resolution Remote Sensing Image Segmentation Using Temporal Independent Pulse-Coupled Neural Network
Li Liwei, Ma Jianwen, Chen Xue, Wen Qi, Xi Xiaoyan

Using P2DHMM to Detect Airplane Variations in Remote Sensing Image
Ma Jianwen, Xi Xiaoyan, Wen Qi, Li Liwei

Improved Polarimetric Whitening Speckle Filter Based on C-Mean Value Classification for SAR Imagery
Xiaojun Wang, Shusheng Yan, Hong Sun

A Cloudless Land Atmosphere Radiosounding Database for Generating Land Surface Temperature Retrieval Algorithms
Joan Miquel Galve, César Coll, Vicente Caselles, Raquel Niclòs, Enric Valor, Juan Manuel Sánchez, Maria Mira

A New Method to Reduce the Sun Angle Effects and Noise Contamination in Extracting the Vegetation Indices from Satellite Images
Mohammad Hassan Anvar, S.M.T. Almodarresi

A Hierarchical Segmentation Algorithm for Multiresolution Satellite Images
Raffaele Gaetano, Giuseppe Scarpa, Giovanni Poggi

A Fuzzy Logic Based Solution for Supervised Image Segmentation
Travis Maxwell, Yun Zhang

Optical/SAR Sensors Stereo Positioning
Xing Shuai, Xu Qing, Zhang Yan, He Yu, Jin Guowang

Obtaining and Monitoring of Global Oceanic Circulation Patterns by Multifractal Analysis of MicroWave Sea Surface Temperature Images
Antonio Turiel, Jordi Sole, Veronica Nieves, Emilio Garcia-Ladona

Identification of Individual Tree Crowns from Satellite Image and Image-to-Map Rectification
Mamoru Kubo, Shu Nishikawa, Eiji Yamamoto, Ken-ichiro Muramoto

A Method for Speckle noise reduction of remote sensing image based on SUSAN
Xiaobing Zang, Yijin Chen, Shuqing Wang

Unsupervised Image Segmentation by Identifying Natural Clusters
Prashanth R. Marpu, Irmgard Niemeyer, Richard Gloaguen

Resolution Enhancement of Multispectral Remote Sensing Imagery by Modified Super-Resolution Reconstruction and Blind Deconvolution
Chia-Wei Hsu, Pi-Fuei Hsieh, Ching-Weei Lin

Mapping Land Cover Change in the Taita Hills, Kenya, Utilising Multi-Scale Segmentation and Object Oriented Classification of SPOT Satellite Imagery
Barnaby Clark, Petri Pellikka

Tuesday Interactive Session (18:00 - 19:30)
Room: Foyer-2
Tu11EP. Change Detection and Multitemporal Analysis
Co-Chairs: *Roger King*

Multitemporal Change Detection by Spectral and Multivariate Texture Information
Peijun Li, Tao Cheng, Gabriele Moser, Sebastiano Serpico, Defeng Ma

Hybrid Change Detection for Watershed Impervious Surface Using Multi-Time Remotely Sensed Data
Zhang Youjing, Ma Xuemei, Chen Liang

Co-Registration of Optically Sensed Images and Correlation (COSI-Corr): An Operational Methodology for Ground Deformation Measurements
Sebastien Leprince, Francois Ayoub, Yann Klinger, Jean-Philippe Avouac

Land-Cover Change Detection Using Multi-Temporal MODIS NDVI Data
Ross Lunetta, Joseph F Knight, Jay Ediriwickrema, John Lyon, L. D Worthy

Inference on Time Series based on Change Points
Hong Wang, Jun Zhang, Hong Zhao

Change Detections from SAR Images for Damage Estimation Based on a Spatial Chaotic Model
Yu-Chang Tzeng, S. H Chiu, Dana Chen, Kun-Shan Chen

A kind of change detection method
Guozhuang Shen, Huad Guo, Jing Liao

Parallel algorithms for change detection based on Spatial/Spectral Multitemporal Endmember Extraction
P. Martínez, R. Pérez, J. Merino, D. Valencia, A. Plaza, J. Plaza

Application of Projection Pursuit Learning Network to Subpixel Classification
Bo Wu

Wavelets Transform and Linear Spectral Mixture Model Applied to MODIS Time Series for Land Cover Change Analysis
Ramon Freitas, Yosio Shimabukuro, Reinaldo Rosa

Self-Organizing Property of Nonlinear Mapping for Change Detection
Kuniaki Uto, Yukio Kosugi

Usage of Multitemporal Filtering of SAR Images for Change Detection
Rosana Romero, Jesus Sanz-Marcos, Daniel Carrasco, Victoriano Moreno, Juan Luis Valero, Marc Lafitte

Estimation of Bare Surface Soil Moisture Using Geostationary Satellite Data
Xiaoyu Zhang, Bohui Tang, Yuan-Yuan Jia, Zhao-Liang Li

Change Detection using Spatial Data: Problems and Challenges
Markus Törmä, Pekka Härmä, Elise Järvenpää

Glacier-Lake variations in the Tibetan Plateau
Yanhong WU, Liping ZHU, Qinghua YE

Spectral Change Detection
Osmar A. Carvalho Júnior, Renato F. Guimarães, Roberto A. T. Gomes, Nilton C. Silva

Time Series Interpolation
Osmar A. Carvalho Júnior, Renato F. Guimarães, Roberto A. T. Gomes, Nilton C. Silva

Computing Invariants for Structural Change Detection in Urban Areas
F.F. Tang, Veronique Prinet

Tuesday Interactive Session (18:00 - 19:30)
Room: Foyer-2
Tu12EP. Digital Elevation and Surface Models
Co-Chairs: *Masanobu Shimada*

Research on the macroscopically topographic factors based on 1:10000 Scaled DEMs ——A case study in the Loess Plateau of North Shaanxi Province
Hongchun Zhu, Guoan Tang, Lin sun, Yulin Cai

The Mega Capture of the Negro River, Central Amazônia, Brazil: A Novel Feature Revealed by SRTM Data
Raimundo Almeida Filho, Fernando Pellon Miranda, Carlos Beisl

Accuracy Comparison of Differential Interferometric Synthetic Aperture Radar Using LiDAR Digital Elevation Model
Junghum Yu, Linlin Ge, Sungheuk Jung, Jeakee Lee

High Resolution DSM Generation from ALOS PRISM
Junichi Takaku, Noriko Futamura, Tetsuji Iijima, Takeo Tadono, Masanobu Shimada

Extraction of Landform Information in Changbai Mountains Based on Srtm-DEM and TM Data
En Long, Wei-ming Cheng, Cheng-hu Zhou, Yong-hui Yao, Hai-jiang Liu

Assessment of Different Topographic Correction Effects for Forest Classification
Huabing Huang, Peng Gong

Tuesday Interactive Session (18:00 - 19:30)
Room: Foyer-2
Tu13EP. Urban Applications
Co-Chairs: *Paolo Gamba , Tom G Farr*

Land Cover Classification using IKONOS PAN and Pan-Sharpen Images
Mitsuharu Tokunaga

Expansion of Urban Area in the Yellow River Zone, Inner Mongolia Autonomous Region, China from DMSP OLS Nighttime Lights Data
Xiaoming Qi, Mark Chopping

Blended Remote Sensing Tools for House Management
Mu-Lin Wu, Yu-Ming Wang, Deng-Ching Wong, Ming-Hon Hwang, Ching-Mei Chu

Measuring and Modeling Urban Dynamics: Impact on Quality of Life and Hydrology. Objectives and Methodology
Frank Canters, Tim Van de Voorde, Okke Batelaan, Jef Dams, Yves Cornet, Marc Binard, Rudi Goossens, Dennis Devriendt, Frederik Tank, Guy Engelen, Carlo Lavalle, José Barredo

Urban Land Cover Classification: Potential of High and Very-High Resolution SAR Imagery
Fabio Pacifici, Fabio Del Frate, Domenico Solimini, Alessandro Burini

A strategy for Analyzing Urban Forest Using Landsat ETM+ Imagery
Chudong Huang, Yun Shao, Jinsong Chen, Jinghui Liu, Jieqiong Chen, Jing Li

Detecting Urban Vegetation Using a Object-oriented Method with QUICKBIRD Imagery
Chang-Qing Ke, Guo-Dong Tang, Xue Cao

Analysis of Spatial Expansion and Distribution of Industrial Land Based on RS and GIS
Xinbo Li, Jinmin Hao, Hongyong Sun, Minxin Men, Fuzhang Zhang

Using the Sleuth Urban Growth Model to Simulate the Impacts of Future Policy Scenarios on Urban Land Use in the Houston-Galveston-Brazoria CMSA
Hakan Oguz, Andr Klein, Ragh Srinivasan

Study on Village Pattern Evolution in the Middle Region of Huang-Huai-Hai Plain
Lingling Yuan, Yuanqing He, Wenheng Wu, Gang Li, Zhen Yang

Tuesday Interactive Session (18:00 - 19:30)
Room: Foyer-2
Tu14EP. Image Classification
Co-Chairs: *Roman Arbiol , Sara Vidal*

A New Artificial Immune System Algorithm for Pattern Recognition in Remote Sensing Image Analysis
Zuohua Miao, Hong Xu, Yaol Liu

Improvement estimation of abundances via spectral feature extraction and using total least square
Bo Wu

Urban textures from high resolution satellite images: a multiscale analysis of slums
Mauro N. M. Barros Filho

Optimal Cluster Numbers of Unsupervised Classification in Minkowski Spaces
Ming-Der Yang, Chan-Hsiang Hsu, Tung-Ching Su

Decomposition of Mixed Pixels Using Bayesian Self-Organizing Map (BSOM) Neural Networks
Lifan Liu, Bin Wang, Liming Zhang, Jian Qiu Zhang

A New Endmember Extraction Algorithm Based on Orthogonal Bases of Subspace Formed by Endmembers
Xuetao Tao, Bin Wang, Liming Zhang, Jian Qiu Zhang

Automatic Classification Algorithm for NOAA-AVHRR Data Using Mixels
Yoichi Kageyama, Ikuma Sato, Makoto Nishida

Public Health choroplethic mapping techniques based on spatial clusters.
Fei LI, Chenghu Zhou, Rongguo Chen

SAR Images Classification using Case-based Reasoning Method
Fulong Chen, Chao Wang, Hong Zhang, Bo Zhang, Fan Wu

Visualization and Analysis of Multispectral Patterns Using Growing Self-Organizing Maps
Soledad Delgado, Consuelo Gonzalo, Estibaliz Martinez, Agueda Arquero

Hierarchical Object-Oriented Classification for Images of High Spatial Resolution using Spatials and Spectrals Datas
Marlos Batista, Vito Haertel

Study on the Land Cover and Land Change Using Time-Series TM in Zulihe basin, Northwest China
Han Hui, Zhao Chuanyan, Ma SHiying

Extraction of Building Roofs from High Resolution Satellite Imagery Based on Colour Morphology and Mark Point Process
Yu Li, Jona Li, Mich Chapman, Yipe Yuan

Classification of Fully Polarimetric SAR Images Using MRF-Based Segmentation
Yong-hui Wu, Ke-feng Ji, Wen-xian Yu, Yi Su

Study of Support Vector Machine Learning Parameters
Anil Kumar, V. K Dadhwal, S. K Ghosh

A Possibilistic C Repulsive Medoids Clustering Approach to Mixed-Pixel Classification for Remotely Sensed Imagery
Dai Xiaoyan, Xu J Jianhua, Dong Shan, Wang Zhihai

A Wavelet Based Targets Detection Method for High Resolution Airborne SAR Data
Sirui Tian, Chao Wang, Hong Zhang, Bo Zhang, Fan Wu

Adaptive Filtering Approaches for Multispectral Image Classification
Lena Chang, Ching-Min Cheng, Fu-Chuan Ni

Application of Random Set-Based Clustering to Landmine Detection with Hyperspectral Imagery
Jeremy Bolton, Paul Gader

Clustering Method to Extract Buildings from Airborne Laser Data
Mitsuharu Tokunaga, Thuy T. Vu

A Two-Stage Subpixel Classification Method for Multispectral Remote Sensing Images
Hsuan Ren, Yang-Lang Chang

Multispectral Image Classification Using Rough Set Theory and the Comparison with Parallelepiped Classifier
Chih-Cheng Hung, Hendri Purnawan, Bor-Chen Kuo

Methodology for the definition and delimitation of validation areas for remote sensing algorithms and low-resolution products. Application to the Valencia and Alacant Anchor Stations
Sara Vidal, Cecilia Narbón, Aurelio Cano, Ernesto López-Baeza

Combining Modern Techniques for Urban 3D Modelling
Georgeta Pop (Manea), Alexander Bucksch

Visualization of Hyperplanes for SVM Classification
Arko Lucieer

Influence of Training Sampling Protocol and of Feature Space Optimization Methods on Supervised Classification Results
Sylvie Durrieu, Thierry Tormos, Pascal Kosuth, Catherine Golden

Hierarchical Classification of Land-Cover Types using RAG-Based Merging
Sang-Hoon Lee

Pol-SAR Image Classification Based on Wavelet SVM
Bin Zou, Caihong Pei, Lamei Zhang, Junping Zhang

Classification of Clouds in the Japan Sea Area Using NOAA AVHRR Satellite Images and Self-Organizing Map
Mamoru Kubo, Ken-ichiro Muramoto

Remote Sensing Image Classification Based on Dot Density Function Weighted FCM Clustering Algorithm
Xiaofana Liu, Xiaowen Li, Ying Zhang, Cunjian Yang, Wenbo Xu, Min Li, Huanmin Luo

Satellite Mapping of the Demolition of the Rocky Flats Nuclear Weapons Plant
Marco Chini, William J. Emery, Fabio Pacifici

On the Use of Ancillary Data by Applying the Concepts of the Theory of Evidence to Remote Sensing Digital Image Classification
Rodrigo Lersch, Victor Haertel, Yosio E. Shimabukuro

The Methodology of Detailed Vegetation Classification Based on Environmental Knowledge and Remote Sensing Images
Zhigang Xu, Dafang Zhuang

Performance of different learning algorithms for object-based mapping of urban land cover using high-resolution satellite imagery
Tim De Roeck, Frank Canters

Tuesday Interactive Session (18:00 - 19:30)
Room: Foyer-2
Tu15EP. Differential Interferometry
Co-Chairs: *Daniel Carrasco , Pau Prats*

Innovations in Corner Reflector Design for Permanent Scatterer and Geolocation Studies
Don Atwood, Wade Albright, Orion Sky Lawlor, Joe Lovick

Using Artificial Point Targets for Monitoring Landslides With Interferometric Processing
Adrian McCardle, Bernhard Rabus, Parw Ghuman, Lis Rabaco, Clau Amaral, Rena Rocha

Urban Subsidence Observed by InSAR in Tianjin Region
Shiyu Zhang, Tao Li, Jingnan Liu, Youwen Liu, Lianjun Shao, Ye Xia, Yanxiang Jiang, Xu Lu

Evaluation of Accuracy in PS-Based Radar Interferometry with Simulated Data
Qiang Chen, Xiaoli Ding, Guoxiang Liu, Yongshu Li

Glacier Displacement Field Estimation Using Airborne SAR Interferometry
Pau Prats, Christian Andres, Rolf Scheiber, Karlus A. C. de Macedo, Jens Fischer, Andreas Reigber

A Stability Analysis of the Lambda Estimator for Solving the Ambiguity Problem in Persistent Scatterer Interferometry
Stefan Gernhardt, Franz Meyer, Richard Bamler, Nico Adam

Point Target Interferometry for Natural and Artificial Scatterers
Valentin Poncos, Shilong Mei, Vernon Singhroy

Monitoring of Mining Induced Land Subsidence Using L- and C-Band SAR Interferometry
Tomonori Deguchi, Masatane Kato, Hakan Akcin, Hakan Kutoglu

A Novel Simulator of Random Interferogram Generation for InSAR Systems
Jing Yao, Peng-cheng Nie, Dong-yun Yi, Ju-bo Zhu

Deformation Monitoring over a Large Area Via the ESD Technique with Data Takes on Adjacent Tracks
G. Fornaro, F. Serafino, A. Pauciullo

Radar Interferometry for 3-D Mining Deformation Monitoring
Hsing-Chung Chang, Linlin Ge, Chris Rizos, Tony Milne

Six Years of Land Subsidence in Shanghai Revealed by JERS-1 SAR Data
Peter Damoah-Afari, Xiao-li Ding, Zhiwei Li, Zhong Lu, Makoto Omura

Correction of Tropospheric Water Vapour Effect on ASAR Interferogram Using Synchronous MERIS Data
Qiming Zeng, Ying Li, Xiaofan Li

A Modified Algorithm for Permanent Scatterers Candidates Selection
Yusen Dong, Zhi Zhang, Kui Zhang, Linlin Ge, Hsing-Chun Chang

A Terrestrial Real-Aperture Interferometer for Measurement of Surface Deformation.
Charles Werner, Andreas Wiesmann, Urs Wegmüller, Tazio Strozzi

Development of a Open Source Permanent Scatterer System
Joseph Lovick, Orion Lawlor, Don Atwood, Ken Dean

Persistent Scatterer Density Improvement Using Adaptive Deformation Models
Freek J. van Leijen, Ramon F. Hanssen

Research on Differential Interferometry for Spaceborne Bistatic SAR
Xilong Sun, Anxi Yu, Zhen Dong, Diannong Liang

Tuesday Interactive Session (18:00 - 19:30)
Room: Foyer-2
Tu16EP. Bistatic and Multistatic Radar
Co-Chairs: *Albert Aguasca , Francesc Junyent*

Elevation-Dependent Motion Compensation for Frequency-Domain Bistatic SAR Image Synthesis
Hubert M.J. Cantalloube, Gerhard Krieger

Performance Analysis of Bistatic SAR Configurations
Giovanni Nico, Manlio Tesauro

First Results from Flight Tests of the NASA/JPL UAVSAR Radar
Scott Hensley, Kevin Wheeler, Greg Sadowy, Scott Shaffer, Joanne Shimada, Cathleen Jones, Tim Miller, Ken Vines, David Robinson, Howard Zebker

Bistatic Forward-looking SAR Imaging Using ISFFT
Kefeng Yang, Feng He, Diannong Liang

A Bistatic SAR Interferometric Simulator for Fixed Receiver Configurations
Sergi Duque, Paco López-Dekker, Jordi J. Mallorquí, Carlos Lopez

Second-Order Motion Compensation in Bistatic Airborne SAR Based on a Geometrical Approach
Amaya Medrano Ortiz, Otmar Loffeld, Holger Nies, Stefan Knedlik

Influence of Mechanical Antenna Distortions on the Performance of the HRWS SAR System
Alicja Ossowska, Jung-Hyo Kim, Werner Wiesbeck

Synchronization Techniques for the Bistatic Spaceborn/Airborne SAR Experiment with TerraSAR-X and PAMIR
Thomas Espeter, Ingo Walterscheid, Jens Klare, Joachim H. G. Ender

Performance Analysis of a Hybrid Bistatic SAR System Operating in the Double Sliding Spotlight Mode
Ingo Walterscheid, Thomas Espeter, Joachim H. G. Ender

Translational Variant Bi-Static SAR Signal Space-Time Feature and Processing Method
Shi Jun, Zhang Xiaoling, Yang Jianyu

Vehicleborne Bistatic Synthetic Aperture Radar Imaging
Yulin Huang, Jianyu Yang, Li Xian, Haiguang Yang, Zhong Tian

Study on Clutter Cancellation for Space Borne Bistatic SAR
Giovanni Picardi, Marc Iorio, Artu Masdea

Comparison between MARSIS & SHARAD Results
Franco Fois, Riccardo Mecozzi, Marco Iorio, Diego Calabrese, Ornella Bombaci, Clau Catallo, A. Croce, R. Croci, M. Guelfi, Enri Zampolini, D. Ravasi, M. Molteni, P. Ruggeri, A. Ranieri, M. Ottavianelli, Enrico Flamini, Giovanni Picardi, Roberto Seu, D. Biccari, R. Orosei, M. Cartacci, A. Cicchetti, A. Masdea, E. Giacomoni, M. Cutigni, M. Provenziani, O. Fuga, G. Alberti, S. Mattei, C. Papa, P. Marras, B. Tattarletti, D. Vicari, F. Bonaventura, T. Paternò, A. Di Placido, A. Morlupi

Tuesday Interactive Session (18:00 - 19:30)
Room: Foyer-2
Tu17EP. Education and Policy --Remote Sensing applications
Co-Chairs: *Charles Luther , Laerte Guimaraes Ferreira*

A Low Cost Testbed for Synthetic Aperture Techniques
Paulo Marques, Inene Dias, Élio Fernandes

GLOBE Students in Sunland Park, New Mexico Study Satellite Images to Decipher August 2006 Flood Damage
Robin L. Hoffer, Albert Ortiz, Joel Gilbert

A Study on Population Distribution Characteristics and Pattern in Mountainous Region
Guozhu Li

Evaluation on the Eco-economic Benefits of Rural Energy Construction and Sloping Land Conversion to Forest Program
Guozhu Li, Shuwen Niu, Zhengguang Liu, Zhen Yang

Region Selection of Converting Slope Farmlands into Forestlands and Grasslands Based on Relationship Between Land Gradient and Soil Erosion Data: A Case Study of Yellow River Basin, China
Yang Zhen, Shuwen Niu, Guozhu Li

Study on Mechanism of Landuse Conversion in Metropolitan Area: A Case Study of Lanzhou Metropolitan Area, China
Yang Zhen, Shuwen Niu, Huimin Liu, Guozhu Li

Universal Map for Spatial Information Society by Using REAL TIME GIS, GPS and Remote Sensing
Sota Shimano, Mitoshi Moriya, Masaaki Shikada, Tatsuo Azuma

Map Renewal Technique by Using Collaboration of GPS, GIS and Remote Sensing
Mitoshi Moriya, Sota Shimano, Masaaki Shikada

Interactive Software Tools to Process ALOS Satellite Images
Makoto Ono

Handheld Microwave Radiometer (HMR) into Classroom Environment –An Introduction
Eric Chikando, Jeffrey R. Piepmeier, Jame Whitney, Carl White

Benchmarking: The End of the Process
Verne Kaupp, Tim Haithcoat, Vlad Likholetov, Charles Hutchinson, Sam Drake, Wim Van Leeuwen

MERIT Erasmus Mundus: An Opportunity for International Cooperation in Remote Sensing Education in Europe
Francesc Torres, Werner Wiesbeck, Claudio Beccari, Benoit Macq

Development of Web-Based SAR Processor for Education
Yosuke Ito, Yuuhei Teramoto, Kenji Abe

City Air Temperature Observations used as Educational Resources
Kazuya Takemata, Yoshiyuki Kawata, Tsugio Chiba

An Integrated Approach to Using NASA Earth Science Climate Data in Science Classrooms
Erica J. Alston, Lin H. Chambers, Susan W. Moore, Penny C. Oots, Dennis D. Diones, Carrie S. Phelps

Interagency Collaborations in the United States: USGEO Architecture and Data Management Working Group
Kathy Fontaine

Blended Tools for Remote Sensing Education
Mu-Lin Wu, Yu-Ming Wang, Deng-Ching Wong, Ming-Hon Hwang, Ching-Mei Chu

Remote Sensing of Ice Sheets for Underrepresented and Handicapped Middle School Students
Linda B. Hayden, Terrance Hughes, Darnell Johnson

Integrating Applied Remote Sensing Methodology in Secondary Education
Kerstin Voss, Roland Goetzke, Florian Thierfeldt, Gunter Menz

Lidar Education at Georgia Tech
Gary G. Gimmestad, Leanne L. West

Remote Sensing Information Visualization Using Volume Based Objects in World Wind
Tobias Spies, Robert Moorhead, Manfred Brill

Multi-waveform Radar for Ice Sheet Measurements and Classroom Demonstration
Cameron Lewis, Heather Owen, Deebu Abi, Jon Hecker, James Sulzen

A review and analysis of remote sensing capability for air quality measurements as a potential decision support tool conducted by the NASA DEVELOP Program
Elbe Cox

Effects of climate change and urbanization on energy demand.
William Crosson, Maur Estes, Maud Khan, Dale Quattrochi

Wednesday Morning (09:00 - 10:40)
Room: 124
We01MH1. Radar Polarimetry
Co-Chairs: *Wolfgang-Martin Boerner , Eric Pottier*

09:00 Application of Bootstrap Techniques for the Estimation of Target Decomposition Parameters in RADAR Polarimetry
Samuel Foucher, Grégory Farage, Goze B. Bénié

09:20 Comments on Hybrid-Polarity SAR Architecture
R. Keith Raney

09:40 Unsupervised Classification of Polarimetric SAR Data Using Graph Cut Optimization
Marc Jaeger, Andreas Reigber, Olaf Hellwich

10:00 The Use of Multidimensional Copulas to Describe Amplitude Distribution of Polarimetric SAR Data
Gregoire M. Mercier, Lynda Bouchemakh, Youcef Smara

10:20 Segmentation of Polarimetric SAR Data using Contour Information via Spectral Graph Partitioning
Kaan Ersahin, Ian G. Cumming, Rabab K. Ward

Wednesday Morning (09:00 - 10:40)
Room: 129
We02MH1. Passive Microwave Remote Sensing of Soil Moisture II
Co-Chairs: *Thomas Jackson , Brian K. Hornbuckle*

09:00 Topography Effects on the L-band Emissivity of Soils: TuRTLE 2006 Field Experiment
Alessandra Monerris, Pablo Benedicto, Mercè Vall-llossera, Adriano Camps, Maria Piles, Enric Santanach, Ricard Prehn

09:20 Calibration of L-MEB for Soil Moisture Retrieval over Forests
Jennifer Grant, Jean-Pierre Wigneron, Adriaan A. Van de Griend, Massimo Guglielmetti, Kauzar Saleh, Mike Schwank

09:40 Introducing CMEM, a community microwave emission model
Thomas R. H. Holmes, Matthias Drusch, Richard de Jeu

10:00 Impact of Surface Heterogeneity on Surface Soil Moisture Retrievals from Passive Microwave Data at the Regional Scale: The Upper Danube Case
Alexander Loew

10:20 First Results from the Finnish SMOS AO Project for Northern Areas (NORA)
Martti T. Hallikainen, Juha Lemmetyinen, Juha Kainulainen, Simo Tauriainen, Kimmo Rautiainen, Andreas Colliander, Jörgen Pihlflyckt, Tuomo Auer, Jouni Pulliainen, Bertel Vehviläinen

Wednesday Morning (09:00 - 10:40)
Room: 132
We03MH1. Optical Calibration
Co-Chairs: *Dennis Helder , Xiangqian Wu*

09:00 An Overview of Four Decades of Landsat Calibration
Ronald W. Hayes, Gyanesh Chander, Jon B. Christopherson

09:20 Radiometric Trending of Landsat TM Using Pseudo-Invariant Sites
Dennis Helder, Rimy Malla, Gyanesh Chander, Julia Barsi, Brian Markham

09:40 Sensor On-Orbit Calibration and Characterization Using Spacecraft Maneuvers
Xiaoxiong Xiong, Jim Butler, William Barnes, Bruce Guenther

10:00 Intercalibrating MetOP/AVHRR and Aqua/MODIS with Improved SNO Accuracy
Changyong Cao, Aisheng Wu, Xiaoxiong Xiong, Xiangqian Wu

10:20 Report on the First Meeting of Global Space-based Inter-Calibration System (GSICS) Research Working Group
Xiangqian Wu

Wednesday Morning (09:00 - 12:40)
Room: 120
We04MF. Clouds and precipitation
Co-Chairs: *Kultegin Aydin , Frank S. Marzano*

09:00 Dual-Polarization and Dual-Frequency Radar Scattering From Ice Crystals
Kultegin Aydin, Enrique Santiago

09:20 Modeling of multiple scattering effects for spaceborne W-band pulsed radar
Alessandro Battaglia, Satoru Kobayashi, Simone Tanelli, Clemens Simmer, Eastwood Im

09:40 Cloud Particle Size Measurements in Arctic Clouds Using Lidar and Radar Data
Edwin W. Eloranta, Taneil Uttal, Matthew Shupe

10:00 Preciptation Retrieval Over Land from SSMIS
Nai-Yu Wang, Ralph Ferraro

10:20 Processing Disdrometer Raindrop Spectra Time Series from Various Climatological Regions Using Estimation abd Autoregressive Methods
Mario Montopoli , Gianfranco Vulpiani , Marios N Anagnostou, Emmanouil N Anagnostou, Frank S Marzano

10:40 COFFEE BREAK

11:00 A Networked Radar Approach for Resolving Range Ambiguity
Nitin Bharadwaj, V. Chandrasekar

11:20 Neural Network Retrieval of Precipitation Using NPOESS Microwave Sensors
Frederick Chen, Laura Bickmeier, William Blackwell, Laura Jairan, Vince Leslie

11:40 Short-Wave Infrared Hyperspectral Determination and Mapping of Cloud Water Phase During the AIRS II Program
George E. Leblanc

12:00 A Neural Network Based Approach for Multi-Spectral Snowfall Detection and Estimation
Yajaira Mejia, Hosni Ghedira, Shayesteh Mahani, Reza Khanbilvardi

12:20 Preliminary Quantitative Analysis of S-Band FMCW Radar Data from Atmospheric Observation
Turker Ince

Wednesday Morning (09:00 - 12:40)
Room: 121
We05MF. Forest Applications
Co-Chairs: *Lars Waser*

09:00 Algorithm of Retrieving Needle Leaf Chlorophyll Content from Hyperspectral Remote Sensing
Yongqin Zhang, Jing M. Chen, John R. Miller, Thomas L. Noland

09:20 Modeling Fractional SHRUB/Tree Cover and Multitemporal Changes in Mire Ecosystems Using High-Resolution Digital Surface Models and CIR Aerial Images
Lars T. Waser, Christian Ginzler, Meinrad Kuechler, Emmanuel Baltsavias, Henri Eisenbeiss

09:40 Spatial Patterns of the Canopy Stress During 2005 Drought in Amazonia
Liana O. Anderson, Yadvinder Malhi, Luiz E.O.C. Aragao, Sassan Saatchi

10:00 Using Phenological Information Derived from MODIS-data to Aid Nutrient Modeling. First Experiences
Markus Törmä, Katri Rankinen, Pekka Härmä

10:20 The Evaluation of the Mangrove Ecosystem Services Value Change in Zhangjiang River Estuary Based on Remote Sensing
Dongshui Zhang, Zhangren Lan, Qinmin Wang, Xiaoqin Wang, Wei Zhang, Zheng Li

10:40 COFFEE BREAK

11:00 Using MODIS and GLAS Data to Develop Timber Volume Estimates in Central Siberia
Jon Ranson, Daniel Kimes, Guoqing Sun, Ross Nelson, Viatcheslav Kharuk, Paul Montesano

11:20 Aboveground biomass estimation in Alaska-Yukon Porcupine Caribou habitat area from coarse resolution satellite data
Junhua Li, Wenjun Chen

11:40 Deforestation Due to Population and Relief Energy through Spatially-Correlated Logit Models
Shojiro Tanaka, Ryuei Nishii

12:00 Vegetation Identification and Classification in the Domain Limits of Powerlines in Brazilian Amazon Forest
Alessandra M. K. Beltrame, Mauricio G. M. Jardini, Rogeiro M. Jacobsen, Jose A. Quintanilha

12:20 Near Real Time Detection of Hot Spots on Meteosat Second Generation Images: from Forest Fires to Volcanic Eruptions
Laurent Beaudoin, Antoine Gademer, Ahmed Amir, Loïca Avanthey, Vincent Germain, Alexandre Pocheau

Wednesday Morning (09:00 - 12:40)
Room: 122
We06MF. Forest Mapping with SAR Measurements
Co-Chairs: *Masanobu Shimada , Tazio Strozzi*

09:00 Estimation of Tropical Forest Structure and Aboveground Biomass from P-band SAR
Sassan Saatchi, Davi Clark, Robi Chazdon, Miri Marlier, Jero Chave, Thom Gillespie

09:20 Vegetation Modelling for Height Inversion Using InSAR/Pol-InSAR Data
Franck Garestier, Thuy Le Toan

09:40 Forest monitoring with JERS-1/SAR and ALOS/PALSAR
Manabu Watanabe, Masanobu Shimada, Kazuo Ouchi, Haipeng Wang, Masayuki Matsuoka, Motoyuki Sato

10:00 Detection of Forest Changes Using ALOS PALSAR Satellite Images
Johan E.S. Fransson, Mattias Magnusson, Håkan Olsson, Leif E.B. Eriksson, Gustaf Sandberg, Gary Smith-Jonforsen, Lars M.H. Ulander

10:20 Estimation of the Bidirectional Reflectance Distribution Function of Subarctic Boreal Forest Using C-Band SAR
Aku Riihelä, Terhikki Manninen

10:40 COFFEE BREAK

11:00 JERS-1 SAR Data in Forest Biomass Mapping in Northern Taiga Zone
Yrjo Rauste, Heikki Ahola, Terhikki Manninen, Heikki Smolander, Pekka Voipio

11:20 Analysis of Airbone SAR data (L-BAND) for Discrimination Land Use / Land Cover Types in the Brazilian Amazon Region
João Roberto dos Santos, Fábio G. Gonçalves, Luciano V. Dutra, José C. Mura, Waldir R. Paradella

11:40 Backscatter and Interferometry for Estimating Above-Ground Biomass inTropical Savanna Woodland
Karin M. Viergever, Iain H. Woodhouse, Neil Stuart

12:00 Mapping of Wind-Thrown Forests Using VHF/UHF SAR Images
Johan E.S. Fransson, Mattias Magnusson, Klas Folkesson, Björn Hallberg, Gustaf Sandberg, Gary Smith-Jonforsen, Anders Gustavsson, Lars M.H. Ulander

12:20 Bistatic Border Effect Modeling in Forest Scattering
Ludovic Villard, Pierre Borderies, Pascale Dubois-Fernandez, Jean-François Nouvel

Wednesday Morning (09:00 - 12:40)
Room: 123
We07MF. Change Detection and Multitemporal Analysis
Co-Chairs: *Lorenzo Bruzzone , Gregoire M. Mercier*

09:00 Comparison of Similarity Measures of Multi-Sensor Images for Change Detection Applications
Vito Alberga, Maha Idrissa, Vinc Lacroix, Jordi Inglada

09:20 A Probabilistic Generative Model for Unsupervised Invariant Change Detection in Remote Sensing Images
Fernando P. Nava, Alejandro P. Nava

09:40 Normalized Difference Reflectance: An Approach to Quantitative Change Detection
Paolo Villa, Giovanmaria Lechi

10:00 An Unsupervised Change-Detection Technique Based on Bayesian Initialization and Semi-Supervised SVM
Francesca Bovolo, Lorenzo Bruzzone, Mattia Marconcini

10:20 Change Detection Using the Object Features
Irmgard Niemeyer, Prashanth Reddy Marpu, Sven Nussbaum

10:40 COFFEE BREAK

11:00 A Robust Neural Network Design for Detecting Changes from Multispectral Satellite Imagery
Fabio Pacifici, Fabio Del Frate, Chiara Solimini, William J. Emery

11:20 Large Scale Change Detection Techniques Dedicated to Flood Monitoring Using ENVISAT Wide Swath Mode Data
Rémi Andreoli, Hervé Yésou

11:40 Comparison and Evaluation of Polarimetric Change Detection Techniques in Aerial SAR Data
Matthieu Molinier, Yrjö Rauste

12:00 Detecting Changes in Polarimetric SAR Data with Content-Based Image Retrieval
Matthieu Molinier, Jorma Laaksonen, Yrjö Rauste, Tuomas Häme

12:20 Conditional Copula for Change Detection on Heterogeneous SAR Data
Gregoire M. Mercier, Gabriele Moser, Sebastiano B. Serpico

Wednesday Morning (09:00 - 12:40)
Room: 128
We08MF. ENVISAT MERIS/AATSR Applications
Co-Chairs: *Peter Regner , Roland Doerffer*

09:00 Decadal Changes in Global Ocean Colour
David Antonie, Fabrizio D'Ortenzio, Annick Bricaud

09:20 GlobCOLOUR: Global Ocean Colour Time Series for Carbon Cycle Research
Odile Fanton d'Andon, Anto Mangin, Samantha Lavender, Andr Morel, Davi Antoine, Gilb Barrot, Juli Demaria, Yasw Pradhan, Domi Durand, Stép Maritoréna

09:40 Remote Sensing of Optical Properties of Coastal Waters: A Regional Modular Procedure for MERIS data
Roland Doerffer, Helmut Schiller, Carsten Brockmann, Marco Peters, Peter Regner

10:00 Application of AATSR's dual-view to measurements of precise sea surface temperature, atmospheric properties and climate change
David Llewellyn-Jones

10:20 AATSR data contributes through the Medspiration project to enhancement of global SST data quality.
Ian S. Robinson, Jean-Francois Piollé, Pierre Le Borgne, David J. S. Poulter, Craig J. Donlon, Olivier Arino

10:40 COFFEE BREAK

11:00 New Applications of AATSR Land Surface Temperature
Elizabeth Noyes, Gary Corlett, John Remedios, Xin Kong, David Llewellyn-Jones

11:20 Validation of the Operational MERIS FAPAR
Nadine Gobron, Bernard Pinty, Ophélie Aussedat, Thomas Lavergne, Frédéric Mélin, Monica Robustelli, Malcolm Taberner

11:40 ALBEDOMAP: MERIS Land Surface Albedo Retrieval using Data Fusion with MODIS BRDF and its Validation using Contemporaneous EO and In Situ Data Products
Jan-Peter Muller, Réné Preusker, Jürgen Fischer, Marco Zühlke, Carsten Brockmann, Peter Regner

12:00 The GLOBCARBON Initiative: Global Biophysical Products for Terrestrial Carbon Studies
Stephen Plummer, Olivier Arino, Franck Ranera, Kevin Tansey, Jing Chen, Gerard Dedieu, Hugh Eva, Isidoro Piccolini, Roland Leigh, Geert Borstlap, Bart Beusen, Walter Heyns, Riccardo Benedetti

12:20 GlobCover: ESA Service for Global Land Cover from MERIS
Olivier Arino, Dorit Gross, Franck Ranera, Marc Leroy, Patrice Bicheron, Carsten Brockman, Pierre Defourny, Christine Vantcuntsen, Frederic Achard, Laurent Durieux, Ludovic Bourg, John Lathan, Antonio Di Gregorio, Ron Witt, Martin Herold, Jacqueline Sambale, Stephen Plummer, Jean-Louis Weber

Wednesday Morning (09:00 - 12:40)
Room: 130
We09MF. Microwave Radiometer Calibration
Co-Chairs: *Christopher S Ruf , Niels Skou*

09:00 On-Orbit Calibration of WindSat Brightness Temperatures
Michael Bettenhausen, Elizabeth M Twarog, Peter Gaiser

09:20 Validating the Calibration of Satellite Microwave Radiometers on Decadal Time Scales
Frank Wentz, Kyle Hilburn, Lucr Ricciardulli

09:40 An approach for spaceborne aperture synthesis radiometer calibration
Markus Peichl, Volk Wittmann

10:00 Lessons Learned from the Aquarius Radiometer Engineering Model
Jeffrey Piepmeier, Fernando Pellerano, Mich Triesky, Josh Forgione, Jame Caldwell

10:20 Characterization of the Aquarius and Juno Radiometers Using a Programmable Digital Noise Source
Jinzheng Peng, Christopher S. Ruf, Shannon T. Brown, Jeffrey R. Piepmeier

10:40 COFFEE BREAK

11:00 Calibration and Performance Analysis of the PAU-RAD Instrument
Xavier Bosch-Lluis, Adriano Camps, Juan F. Marchan-Hernandez, Isaac Ramos-Perez, Nereida Rodríguez-Álvarez, Xavi Banqué, Miguel A. Guerrero

11:20 Calibration of a Ground Based Radiometer for a One-Year Experiment in Antarctica : A Contribution to SMOS Calibration
Giovanni Macelloni, Marco Brogioni, Sylvain Vey

11:40 Field Tests of the GeoSTAR Demonstrator Instrument
Alan B. Tanner, Shannon T. Brown, Todd C. Gaier, Bjorn H. Lambrigsten, Boon H. Lim, Christopher S. Ruf, Francisco Torres

12:00 Active Cold Noise Reference for Radiometer Calibration
Janne Lahtinen, Vill Kangas, Mikk Lapinoja, Vill Kilpiä, Petr Piironen

12:20 Performance Measurements on Active Cold Loads for Radiometer Calibration
Niels Skou, Sten Søbjærg, Jan Balling

Wednesday Morning (09:00 - 12:40)
Room: 131
We10MF. Geohazards-1
Co-Chairs: *Waldir Renato Paradella , Darka Mioc*

09:00 Flood Disaster Response and Decision-Making Support System Based On Remote Sensing and GIS
Zhuowei Hu, Xiaojuan Li, Yonghua Sun, Zhaoning Gong, Yanhui Wang, Liying Zhu

09:20 Decision Support for Flood Event Prediction and Monitoring
Darka Mioc, Francois Anton, Genseng Liang, Bradford Nickerson

09:40 Providing Satellite-based Early Warnings of Fires to Reduce Fire Flashovers on South Africa's Transmissions Lines
Philip Frost, Harold Annegarn

10:00 Assessing use of SAR imagery for end of season fire perimeter mapping in Alaska.
Richard M. Guritz, Parker Martyn, Laura Bourgeau-Chavez, Don Atwood

10:20 Quality Assessment of the Fire Hazard Forecast based on a Fire Potential Index for the Mediterranean Area by Using a MSG/SEVIRI Based Fire Detection System
Giovanni Laneve, Enrico G. Cadau

10:40 COFFEE BREAK

11:00 InSAR Monitoring of Landslides on Permafrost Terrain in Canada
Vern Singhroy, Pierre-Jean Alasset, Rejean Couture, Valentin Poncos

11:20 Generation and WebGIS Representation of Landslide Susceptibility Maps Using VHR Satellite Data
Klaus Granica, A. Almer, M. Hirschmugl, H. Proske, M. Wurm, Th. Schnable, L.W. Kenyi, M. Schardt

11:40 Application of Remote Sensing Data and GIS Tools for Regional Landslide Hazard Analysis at Cameron Highland, Malaysia by Using Logistic Regression Model
Biswajeet Pradhan, Shattri Mansor

12:00 Application of Neuro-Fuzzy System for Landslide Susceptibility Mapping using Remote Sensing and GIS
Saro Lee, Hyun-Joo Oh

Wednesday Morning (09:00 - 12:40)
Room: 133
We11MF. Rapid Prototyping: A Concept for Moving Earth Science to Operations for Societal Benefit
Co-Chairs: *Verne Kaupp , E. Lucien Cox*

09:00 Extending NASA Research Results to Benefit Operational Systems
E. Lucien Cox

09:20 Integration of NASA's Aura OMI-derived NO2 observations with EPA ground network data for improved air quality forecasting: An RPC validation experiment.
Margaret Pippin, Mary Kleb, Pete Parker, Ray Rhew, Dore Neil

09:40 A Rapid Synthesis of Measurements and Models to Assess Regional Influences on Local Air Quality During the 2006 TexAQS Campaign
R. B Pierce, Jassim Al-Saadi, Kevin Bowman, Wall McMillan, Chri Hostetler, Davi Winker, Brya Lambeth, Chie Kittaka, Todd Schaack, Arli da Silva

10:00 WaterNet: The NASA Water Cycle Solution Network
P. R. Houser, D. R. Belvedere, W. Pozzi, B. Imam, R. Schiffer, C. Welty, R. Lawford, C. A. Schlosser, H. V. Gupta, C. Vorosmarty, D. Matthews

10:20 Evolving a Solutions Network of Resource Conservation and Development Councils, Watershed Management Teams, and NASA Research Institutions Across the Nation
Mr. Howard V. "Mike" Doherty, Mr. Jeffrey Ward, Dr. Mark Wigmosta, Dr. David Garen, Ms. Roberta Jeanquart, Ms. Cathy Lear, Mr. Gerald Sehlke, Dr. Jerry Freilich, Dr. William Eaton

10:40 COFFEE BREAK

11:00 Evaluation of Integrating the Invasive Species Forecasting System to Support National Park Service Decisions on Fire Management Activities and Invasive Plant Species Control
Peter Ma, Jeffrey T. Morisette, Ann Rodman, Craig McClure, Jeff Pedelty, Nate Benson, Kara Paintner, Neal Most, Asad Ullah, Weijie Cai, Moni Rocca, Joel Silverman, John Schnase

11:20 The Model Web: A Concept for Ecological Forecasting
Gary Geller, Woody Turner

11:40 Enhancing the EPA's Pest Infestation Risk Management Program in Transgenic Corn Using NASA's EO-1 Hyperion Instrument
Ashutosh Limaye, John Glaser, Charles Laymon, Jose Casas

12:00 Use of remote sensing and dust modelling to evaluate ecosystem phenology and pollen dispersal
jeffrey Luvall, Bill Sprigg, Caro Watts, Patr Shaw

12:20 Implementing an Applied Science Program
Doug Rickman, Joan Presson

Wednesday Morning (11:00 - 12:40)
Room: 124
We12MH2. Pol-InSAR Applications and Methodology
Co-Chairs: *R. Keith Raney , Giorgio Franceschetti*

11:00 Analysis of the Temporal Behavior of Coherent Scatterers (CSs) in ALOS PalSAR Data
Luca Marotti, Rafael Zandona Schneider, Konstantinos Papathanassiou

11:20 DTM Extraction Beneath Tropical Canopy Using X-, L-, and P-Band Polarimetric InSAR Data from the INDREX-II Campaign in Indonesia
Bryan Mercer, Qiaoping Zhang, Parivash Lumsdon

11:40 Inversion Algorithms Comparison Using L-Band Simulated Polarimetric Interferometric Data for Forest Parameters Estimation
Emanuele Angiuli, Fabio Del Frate, Andrea Della Vecchia, Marco Lavalle, Domenico Solimini, Giorgio Licciardi

12:00 Multi-Track PS-InSAR Datum Connection
Gini Ketelaar, Freek van Leijen, Petar Marinkovic, Ramon Hanssen

12:20 The Comparison of the V-Fold and the Monte-Carlo Cross Validation to Estimate the Number of Clusters for the Fully Polarimetric SAR Data Segmentation
Fang Cao, Wen Hong, Yirong Wu, Eric Pottier

Wednesday Morning (11:00 - 12:40)
Room: 129
We13MH2. Wetlands
Co-Chairs: *Pere Serra*

11:00 Wetlands Map of Alaska Using L-Band Radar Satellite Imagery
Jane Whitcomb, Mahta Moghaddam, Kyle McDonald, Erika Podest, Josef Kellndorfer

11:20 Two-Dimensional Surface River Flow Patterns Measured With Paired RiverSondes
Calvin C. Teague, Donald E. Barrick, Peter M. Lilleboe, Ralph T. Cheng

11:40 Monitoring Winter Flooding of Rice Fields on the Coastal Wetland of Ebre Delta with Multitemporal Remote Sensing Images
Pere Serra, Gerard Moré, Xavier Pons

Wednesday Morning (11:00 - 12:40)
Room: 132
We14MH2. Surface Lidar Data Analysis
Co-Chairs: *John P. Kerekes , Clint Slatton*

11:00 Exploiting Full-Waveform Lidar Data and Multiresolution Wavelet Analysis for Vertical Object Detection and Recognition
Christopher E. Parrish

11:20 Detection of Foliage-Obscured Vehicle Using a Multiwavelength Polarimetric Lidar
Songxin Tan, Jason Stoker, Susan Greenlee

11:40 Automatic Extraction of Salient Geometric Entities from LIDAR Point Clouds
Stefan Auer, Stefan Hinz

12:00 Automatic Feature Extraction from Airborne Lidar Measurements to Identify Cross-Shore Morphologies Indicative of Beach Erosion
Mike Starek, R. K. Vemula, K. Clint Slatton, Ramesh Shrestha, Bill Carter

12:20 ICESat laser altimetry near Ibiza, Spain
Bob Schutz, Timothy Urban, Amy Neuenschwander, Juan Jose Benjamin

Wednesday Afternoon (14:20 - 16:00)

Room: 122
We01AH1. Forest Mapping with VNIR Measurements
Co-Chairs: *H. Peter White , Mark Chopping*

14:20 Remote Sensing of Air Pollution and Climate Change Impacts on Pinus uncinata in the Pyrenees of Catalonia.
Shawn Kefauver, Angela Ribas, Josep Penuelas

14:40 Advances in Mapping Woody Plant Canopies Using the NASA MISR Instrument on Terra
Mark Chopping, Lihong Su, Naushad Kollikkathara, Libertad Urena

15:00 Monitoring Native Foresters in Southern Brazil.
Dejanira Luderitz Saldanha, Laurindo Guasselli, Maria do Carmo Lima e Cunha, Paulo Brack, Vitor Haertel, Jorge Ricardo Ducati, José Luis Rockembach, Rodrigo Nascimento Silva, Mônica Tagliari Kreling

15:20 Monitoring of an Andean Rainforest Environment with Remote Sensing
Anna Goerner, Richard Gloaguen, Franz Makeschin

15:40 Impact of Off-Nadir Surface Reflectance Retrieval on the Determination of Equivalent Water Thickness of a Vegetation Canopy
H. P. White, A. Abuelgasim

Wednesday Afternoon (14:20 - 18:00)
Room: 120
We02AF. Ocean Winds 1
Co-Chairs: *Zorana Jelenak , Donald R Thompson*

14:20 A Geophysical Model Function for WindSat Polarimetric Radiometer Wind Retrievals Using Linear Polarizations
Seubson Soisuvarn, Zorana Jelenak, Paul Chang

14:40 A Statistical Comparison of QuikSCAT Wind Fields to Satellite-derived Sea Surface Temperature Fronts
Timothy P. Mavor, Seubson Soisuvarn, Laurence N. Connor

15:00 A Comparison of Models for Retrieving High Wind Speeds
Yijun He, Hui Shen, Jie Guo, William Perrie

15:20 On SAR Hurricane Wind Speed Ambiguities
Hui Shen, William Perrie, Yijun He

15:40 Airborne Observations of High-Incidence C-band Ocean Surface Backscatter
Daniel Esteban Fernandez, Tao Chu, Robert Contreras, Paul S Chang, James R Carswell

16:00 COFFEE BREAK

16:20 Satellite Winds for Climate Research
Frank J. Wentz, Deborah Smith

16:40 Dependency Analysis of Normalized Radar Cross Section of Ocean Surface on Ocean Winds Using an Airborne Dual-Frequency Polarimetric SAR
Akitsugu Nadai, Toshihiko Umehara, Takeshi Matsuoka, Makoto Satake, Seiho Uratsuka

17:00 Investigation of Tropical Cyclones Using Synthetic Aperture Radar
Jochen Horstmann, Donald R. Thompson, Wolfgang Koch, Frank Monaldo, Hans C. Graber

17:20 Extracting Geophysical Parameters from Multi-Polarization SAR Imagery of the Ocean Surface
Donald R. Thompson, Frank M. Monaldo, Jochen Horstmann

17:40 ASCAT Scatterometer Ocean Calibration
Marcos Portabella, Ad Stoffelen, Jeroen Verspeek, Anton Verhoef, Jur Vogelzang

Wednesday Afternoon (14:20 - 18:00)
Room: 121
We03AF. Electromagnetic Methods in Remote Sensing II
Co-Chairs: *Simon Yueh , Albin J Gasiewski*

14:20 Scattering from Sahelian Grassland: A Coherent Modeling
Alejandro Monsivais-Huertero, Isabelle Chenerie, Kamal Sarabandi

14:40 Forward and Inverse Scattering Problems: Convenience and Limitations of the Contrast Source-Extended Born Model
Michele d'Urso, Tommaso Isernia

15:00 Measurement and Analysis of Scattering from Periodic Surfaces at 5.8 GHz
Iñigo Cuiñas, Manuel García Sánchez, Ana Vázquez Alejos, Emmanuel Van Lil, Iris De Coster, Dave Trappeniers, Antoine Van de Capelle

15:20 Half-Space Born Approximation Modeling and Inversion for Cross-Well Radar Sensing of Contaminants in Soil
He Zhan, Ann Morgenthaler, Qiuzhao Dong, Carey Rappaport, Eric Miller

15:40 Canopy Bidirectional Reflectance Calculation Based on Adding Method and SAIL Formalism
Abdelaziz Kallel, Sylvie Le Hégarat-Mascle, Catherine Ottlé, Laurence Hubert-Moy

16:00 COFFEE BREAK

16:20 Refocusing Through Single Layer Building Wall Using Synthetic Aperture Radar
Mojtaba Dehmollaian, Kamal Sarabandi

16:40 Simulation Studies of Forest Structure Using 3D Lidar and Radar Models
Guoqing Sun, Jon Ranson, Dawei Liu, Benjamin Koetz

17:00 Two-Dimensional Full-Wave Scattering from Discrete Random Media in Layered Rough Surfaces
Chih-hao Kuo, Mahta Moghaddam

17:20 Inversion Model Validation of Ground Emissivity. Contribution to the Development of SMOS Algorithm
François Demontoux, Bénédicte Le Crom, Gilles Ruffié, Jean Pierre Wigneron, Jennifer Grant, Daniel Medina Hernandez

17:40 Space - Time and Frequency - Polarization Variations in the Electromagnetic Wave Interacting with the Forest Canopy
Valery L. Mironov, Eugene D. Telpukhovsky, Vladimir P. Yakubov, Sergey N. Novik, Andrew V. Klokov

Wednesday Afternoon (14:20 - 18:00)
Room: 123
We04AF. Change Detection and Image Analysis
Co-Chairs: *Ryuei Nishii , Farid MELGANI*

14:20 Change Detection of Buildings in Urban Environment from Very High Spatial Resolution Satellite Images Using Existing Cartographic Data and Prior Knowledge
Mourad Bouziani, Kalifa Goïta, Dong-Chen He

14:40 Semi-Supervised Multitemporal Classification with Support Vector Machines and Genetic Algorithms
Noureddine Ghoggali, Farid Melgani

15:00 Testing an Automated Unsupervised Classification Algorithm with Diverse Land Covers
John Cipar, Ronald Lockwood, Thomas Cooley, Peggy Grigsby Grigsbsy

15:20 Abrupt Change Detection on Multitemporal Remote Sensing Images: A Statistical Overview of Methodologies Applied on Real Cases
Tarek Habib, Jocelyn Chanussot, Jordi Inglada, Grégoire Mercier

15:40 Reducing the Impacts of Intra-Class Spectral Classification and its Implications for Super-Resolution Mapping
Huong T. X. Doan, Giles M. Foody

16:00 COFFEE BREAK

16:20 Change Detection and Analysis with Radarsat-1 SAR Image
Fan Wu, Chao Wang, Hong Zhang, Bo Zhang

16:40 Area Spatial Object Co-Registration between Imagery and GIS data for Spatial-Temporal Change Analysis
Deyan Zhang, Guoqing Zhou

17:00 Coherent Change Detection and Classification in Synthetic Aperture Radar Imagery Using Canonical Correlation Analysis
Mahmood R Azimi-Sadjadi, Sarv Srinivasan

17:20 SAR-Based Estimation of the Baltic Sea Ice Motion
Juha Karvonen, Markku Simila, Jonni Lehtiranta

17:40 Technique of Remote Sensing Image Processing in Active Faults Survey
Aixia Dou, Xiaoqing Wang, Guoyan Wang, Dongliang Wang

Wednesday Afternoon (14:20 - 18:00)
Room: 124
We05AF. Repeat-Pass Differential Pol-SAR Interferometry
Co-Chairs: *Wolfgang-Martin Boerner , Kun Shan K.S. Chen*

14:20 Need for Developing Repeat-Pass Differential POL-SAR Interferometry
Wolfgang-Martin Boerner, Kun-Shan Chen

14:40 Quad-Polarimetry and Interferometry from Repeat-Pass Dual-Polarimetric SAR Imagery
T. L. Ainsworth, M. Preiss, N. Stacy, J.-S. Lee

15:00 Multi-Baseline Polarimetrically Optimised Phases and Scattering Mechanisms for InSAR Applications
Andreas Reigber, Maxim Neumann, Esra Erten, Marc Jäger, Pau Prats

15:20 Multibaseline POLInSAR Coherence Modelling and Optimization
Maxim Neumann, Laurent Ferro-Famil, Andreas Reigber

15:40 Disaster Monitoring and Environmental Alert in Taiwan
Chih-Tien Wang, Kun-Shen Chen, Hong-Wei Lee, Jong-Sen Lee, WOLFGANG-MARTIN Boerner, Ruei-Yuan Wang, Hong-Sen Wan

16:00 COFFEE BREAK

16:20 Application of Polarimetric SAR Images Acquired in Square-Loop Flights
Motoyuki Sato, Koichi Iribe, Takashi Hamasaki

16:40 Coherence Dependency of the PALSAR POLinSAR on Forest in Japan and Amazon
Masanobu Shimada

17:00 Estimation of Physical Properties of Persistent Scatters Using JERS-1 Data
Jun-su Kim, Wooil M. Moon

17:20 PolSAR Image Filtering based on Feature Detection using the Wavelet Transform
Gregory Farage, Samuel Foucher, Goze Bénié

17:40 Snow Wetness Monitoring using Multi-Temporal Polarimetric ASAR Data and Multi-Layer Hybrid Model
Nicolas Longépé, Sophie Allain, Eric Pottier

Wednesday Afternoon (14:20 - 18:00)
Room: 128
We06AF. ESA´s Optical Data Portfolio and Application in the Land Domain
Co-Chairs: *Bianca Hoersch , Francesco Sarti*

14:20 Intercomparison of multispectral imagers over natural targets
Marc Bouvet

14:40 Analyses of Hyperspectral Directional Data from CHRIS/PROBA Using Land Surface Models
Heike Bach, Silke Begiebing

15:00 The use of high resolution optical data in land surface studies: science and applications with Proba/CHRIS data
Jose F. Moreno, Luis Alonso, Luis Guanter, Glor Fernandez, Sole Gandia, Juan Fortea, Mari Gonzalez, Jesu Delegido, Luis Gomez-Chova, Javier Calpe

15:20 IMAGE2006: A Component of the GMES Precursor Fast Track Service on Land Monitoring
Maria Vanda Nunes de Lima, Conrad Bielski, Joanna Nowak

15:40 Integrated Water Resouces Management for Zambia: satellite-derived geo-information to support policy- and decision-making processes
Mirko Gregor, Imas Nyambe, Jona Kampata, Jack Nkhoma, Rees Mwasambili, Chri Chileshe, Geor Phiri, Greg D'Hulst, Manu Löhnertz

16:00 COFFEE BREAK

16:20 Preliminary Radiometric Calibration Assessment of ALOS AVNIR-2
Marc Bouvet, Philippe Goryl, Gyanesh Chander, Richard Santer, Sebastien Saunier

16:40 Monitoring Glaciers and Related Hazards using the ALOS PRISM Instrument. Approaches, Accuracy, Applications.
Andreas Kääb

17:00 Stereo Evaluation of ALOS/PRISM Data on ESA-AO Test Sites - First DLR Results
Manfred Lehner, Rupe Mueller, Pete Reinartz

17:20 Sentinel-2 Optical High Resolution Mission for GMES Operational Services
Philippe Martimort, Olivier Arino, Michael Berger, Roberto Biasutti, Bernardo Carnicero, Umberto Del Bello, Valérie Fernandez, Ferran Gascon, Bruno Greco, Pierluigi Silvestrin, François Spoto, Omar Sy

Wednesday Afternoon (14:20 - 18:00)
Room: 129
We07AF. Mapping & Urban Remote Sensing Applications
Co-Chairs: *Paolo Gamba , Tom G Farr*

14:20 Building Feature Extraction via a Deterministic Approach: Application to Real High Resolution SAR Images
Giorgio Franceschetti, Raffaella Guida, Antonio Iodice, Daniele Riccio, Giuseppe Ruello, Uwe Stilla

14:40 Mapping Urban Areas using the Fusion of 500 m MODIS Satellite Imagery and Ancillary Data Sources
Annemarie Schneider, Mark Friedl

15:00 Classification of Man-made Structures using IKONOS Imagery for Urban Stormwater Pollution Management
Mi-Hyun Park, Michale K. Stenstrom

15:20 Spatial Syntactic Configuration of Urban Land Use Patterns
Victor Mesev

15:40 P-band Radar Images of Desert Landforms
Tom G Farr

16:00 COFFEE BREAK

16:20 Mapping Subsurface Geology in Arid Africa using L-band SAR
Philippe Paillou, Sylv Lopez, Yannick Lasne, Ake Rosenqvist, Tom G Farr

16:40 Radar Imaging of Urban Areas by Means of Very High Resolution SAR and Interferometric SAR
Andreas R. Brenner, Ludwig Roessing

17:00 Building Characterisation in VHR SAR Data Acquired under Controlled EMSL Conditions
Dominik Brunner, Guido Lemoine, Joaquim Fortuny, Lorenzo Bruzzone

17:20 Automatic change detection using a cluster covariance distance metric, for image based revision of GIS data
Thomas Knudsen

17:40 Potential Problems with Using Reconstruction in Morphological Profiles for Classification of Remote Sensing Images from Urban Areas
Rik Bellens, Leyden Martinez-Fonte, Sidharta Gautama, Jonathan Cheung-Wai Chan, Frank Canters

Wednesday Afternoon (14:20 - 18:00)
Room: 130
We08AF. Frequency Allocation for Remote Sensing and RFI Mitigation for Microwave Radiometry
Co-Chairs: *Joel Johnson , Thomas vonDeak*

14:20 A Survey of the Scientific Usage of Microwave Frequencies for NASA Earth Science remote sensing Satellites
Fritz Policelli, Robe Ryan, Troy Frisbie

14:40 Spectrum Allocation Issues Affecting Remote Sensing for the 2007 World Radiocommunication Conference (WRC-07)
John E. Zuzek

15:00 Sensitivity of the Kurtosis Statistic as a Detector of Pulsed Sinusoidal Radio Frequency Interference in a Microwave Radiometer Receiver
Roger D. De Roo, Sidharth Misra, Christopher S. Ruf

15:20 Analog RFI Detectors for Microwave Radiometers
Jeffrey Piepmeier, Pris Mohammed, Jose Knuble

15:40 Cross-frequency Blanking for RFI Mitigation: A C-band Case Study
Joel T. Johnson, Baris Guner

16:00 COFFEE BREAK

16:20 CoSMOS: Performance of Kurtosis Algorithm for Radio Frequency Interference Detection and Mitigation
Sidharth Misra, Steen S. Kristensen, Sten S. Søbjærg, Niels Skou

16:40 An L-Band Radio Frequency Interference (RFI) Detection and Mitigation Testbed for Microwave Radiometry
Roger D. De Roo, Christopher S. Ruf, Kazem Sabet

17:00 Detection of Radio Frequency Interference with the Aquarius Radiometer
Christopher Ruf, Sidharth Misra

Wednesday Afternoon (14:20 - 18:00)
Room: 131
We09AF. Weather Radar Networks: Collaborative Adaptive Sensing of the Atmosphere
Co-Chairs: *Charles Luther , Steven C. Reising*

14:20 Rainfall Estimation and Rain Gauge Comparison for X-Band Polarimetric CASA Radars
Jorge M. Trabal, David J. McLaughlin

14:40 Radar Network Characterization
Francesc Junyent, V. Chandrasekar

15:00 Simulation of Minimal Infrastructure Short-Range Radar Networks
Brian C. Donovan, David J. McLaughlin, Michael Zink, Jim Kurose

15:20 Evaluation of First Generation CASA Radar Waveform in the IP1 Testbed
Nitin Bharadwaj, V. Chandrasekar , Francesc Junyent

15:40 Implementation of a New Refractivity Estimation Algorithm on a Network of S-Band Radars
Jason Fritz, V. Chandrasekar

16:00 COFFEE BREAK

16:20 Low Cross-Polarization Antenna Array for CASA Student Test bed Radar
Víctor J. Marrero-Fontánez, Rafael A. Rodríguez-Solís

16:40 Phase Shifter System Using Vector Modulation For X-Band Phased Array Radar Applications
Jose Colom, Luis Giraldo Castañeda, Eric Knapp

17:00 Real-Time Three-Dimensional Radar Mosaic in CASA IP1 Testbed
Yuxiang Liu, Yanting Wang, V. Chandrasekar, V.N. Bringi

17:20 A Grid Based Weather Radar Data Retrieval and Processing Framework*
Diego Arias, Cesar Sandoval, Wilson Rivera

Wednesday Afternoon (14:20 - 18:00)
Room: 132
We10AF. Atmospheric Lidar
Co-Chairs: *John A. Reagan , Gary Gimmestad*

14:20 Ground- and Space-Based Polarization Lidar Sensing of Asian Dust Transport: AFARS and CALIPSO Studies
Kenneth Sassen, Jiang Zhu, Javier Fochesatto

14:40 Intercomparison of Spanish Advanced Lidars in the Framework of EARLINET
Michael Sicard, Nadzri Reba, Francesc Rocadenbosch, Eduard Gregorio, D. Kumar, Francesc Molero, A. Comerón, S. Tomàs, Manuel Pujadas, Juan Luis Guerrero-Rascado, Lucas Alados-Arboledas, Roberto Pedros, José Antonio Martínez

15:00 Regional Aerosol Transport Study Using a Compact Aircraft Lidar.
Jasper R. Lewis, Russell J. DeYoung, Kurt Severance

15:20 Lidar Determination of the Frequency of Variations of the Boundary-Layer Top
Giovanni Martucci, Renaud Matthey, Valentin Mitev, Hans Richner

15:40 Statistical Considerations on the Extinction Error Variance for the Raman Lidar Inversion Algorithm
Francesc Rocadenbosch, Adolfo Comerón, Michaël Sicard, Mohd Nadzri Md Reba

16:00 COFFEE BREAK

16:20 Speed Measurements with a Continuous Wave Lidar Prototype
Constantino Muñoz, Alejandro Rodríguez, Adolf Comerón, Òscar Batet, David Garcia, Francesc Rocadenbosch, Michäel Sicard

16:40 A Wind Speed and Fluctuation Simulator for Characterizing the Wind Lidar Correlation Method
Sergio Tomás, Michaël Sicard, Jordi Masjuan, Mohd. Nadzri Md. Reba, Constantino Muñoz, Francesc Rocadenbosch

17:00 Numerical Simulation of a Heterodyne Doppler LIDAR for Wind Measurement in a Turbulent Atmospheric Boundary Layer
Sébastien Brousmiche, Laurent Bricteux, Piotr Sobieski, Benoît Macq, Grégoire Winckelmans

17:20 Coherent Lidar Modulated with Frequency Stepped Pulse Trains for Unambiguous High Duty Cycle Range and Velocity Sensing in the Atmosphere
Petter Lindelöw, Johan J. Mohr

17:40 Intercomparison of Calibration Techniques for the 1064nm Channel on a Nd:YAG Elastic Lidar
Shuki Chaw, Yonghua Wu, Barry Gross, Fred Moshary, Samir Ahmed

Wednesday Afternoon (14:20 - 18:00)
Room: 133
We11AF. Hyperspectral Programs & Applications
Co-Chairs: *Thomas Cooley , John P. Kerekes*

14:20 Remote Sensing of Crop Residue Cover Using Hyperion (EO-1) Data
Abdou Bannari, Karl Staenz, Shahid Khurshid

14:40 Mapping Physical Properties of Mudflat sSdiments using Hperspectral DAIS 7915 and ROSIS Airborne Spectrometer Data, Bourgneuf Bay (South West France)
Charles Verpoorter, Véronique Carrere , M. Robin

15:00 Spectral Image Utility Prediction
Marcus Stefanou, John Kerekes

15:20 Use of CHRIS PROBA Images for Land Use Products
Fabio Del Frate, Riccardo Duca, Pasquale Sellitto, Domenico Solimini

15:40 An Operational Land Imager for the Landsat Data Continuity Mission
James R. Irons, Jeanine Murphy-Morris

16:00 COFFEE BREAK

16:20 Geological Mapping on Mars by Segmentation of Hyperspectral OMEGA Data
Harald van der Werff, Frank van Ruitenbeek, Freek van der Meer

16:40 Combined Microwave and Hyperspectral Infrared Retrievals of Atmospheric Profiles in the Presence of Clouds Using Nonlinear Stochastic Methods
William Blackwell, Frederick Chen, Laura Jairam

17:00 Wavelet-SOM in Feature Extraction of Hyperspectral Data for Classification of Nematode Species
Rushabh Doshi, Roger King, Gary Lawrence

17:20 Phase Correlation Based Supervised Classification of Hyperspectral Images Using Multiple Class Representatives
Begum Demir, Sarp Ertürk

Wednesday Afternoon (16:20 - 18:00)
Room: 132
We12AH2. Lidar Sensing of Forest Structure
Co-Chairs: *Adolfo Comeron , Francesc Rocadenbosch*

16:20 Automatic Extraction of Forest Fuel and Terrain Variables with Airborne LiDAR for the Determination of Spatial Fire Risk
Luis Gonçalves-Seco, Bruño Fraga-Bugallo, David Miranda, Rafael Crecente

16:40 3D Mapping of Mangrove Forest Canopy: a Comparison Between SRTM C-band, SRTM X-band, AIRSAR, ICEsat/GLAS Waveforms and Airborne Lidar Data
Marc Simard, Keqi Zhang, Victor H. Rivera-Monroy

17:00 Comparison of SRTM–NED Data to LIDAR Derived Canopy Metrics
Lado W. Kenyi, R. Dubayah, Michelle A. Hofton, J.B. Blair, Mathias Schardt

17:20 Extracting Tree Crown Properties from Ground-Based Scanning Laser Data
Inian Moorthy, John R. Miller, Baoxin Hu, Jose A. Jimenez Berni, Pablo J. Zarco-Tejada, Qingmou Li

17:40 Retrieving 3D Canopy Structure from Synergistic Analysis of Multi-Angle and Lidar Data
Mitchell Schull, Sangram Ganguly, Arindam Samanta, Julian Jenkins, Yuri Knyazikhin, Ranga Myneni, Dong Huang

Wednesday Interactive Session (18:00 - 19:30)
Room: Foyer-2
We01EP. Optical Techniques
Co-Chairs: *John P. Kerekes*

Improved Outgassing Models for the Landsat-5 Thematic Mapper
Esad Micijevic, Gyanesh Chander, Ronald Hayes

Temporal Air Quality Monitoring Using Surveillance Camera
C. J. Wong, M. Z. MatJafri, K. Abdullah, H. S. Lim, K. L. Low

Multispectral Absorption Algorithm for Retrieving TSS Concentrations in Water
Sami Gumaan Daraigan, Syahril Amin Hashim, Mohd. Zubir Mat Jafri, Khiruddin Abdullah, Wong Chow Jeng, Nasirun Mohd. Saleh

Validation of POLDER Surface BRDF and Albedo Products Based on a Review of other Satellites, Ground and Climate Databases
Olivier Hautecoeur, Jean-Louis Roujean

Improvement of the Thermal Emissivity Calculated with the Vegetation Cover Method by Using Optical Atmospherically Corrected Images
Lucas Martínez, Vicenç Palà, Roman Arbiol, Vicente Caselles, Enric Valor

Methods of MODIS Level 1B Data Processing
Zhiming GUI, Wenjie FAN

Numeric Simulation of Viewing Geometry of Multi-Directional Polarimeteric Sensor Influence on the Retrieval of Aerosols over Land Surfaces
Zhongting Wang, Liangfu Chen, Xingfu Gu

Reflectance Spectroradiometer Measurement System in 30 Meter Mast for Validating Satellite Images
Timo Sukuvaara, Jouni Pulliainen, Esko Kyrö, Hanne Suokanerva, Pauli Heikkinen, Juha Suomalainen

Accurate Geometric References from Low B/H Stereoscopic Airborne Acquisition
Jean-Marc Delvit, Christophe Latry

Validation of Airborne Hyperspectral Scanner (AHS) surface reflectance obtained with water vapor and visibility scene derived
Marcos Jiménez, Cristina Robles, Eduardo de Miguel, José A. Gómez, Alix Fernández, Almudena García, Elena Prado

Fire monitor
Xiaocheng Zhou, Xiao Wang

Land Surface Temperature and Emissivity Determination from AVHRR Data
Sanjaa Tuya, Koji Kajiwara, Yoshiaki Honda

BRDF Calibration of Natural Samples in Support of Remote Sensing
Georgi T. Georgiev, Charles K. Gatebe, James J. Butler, Michael D. King

An Experimental Study on IMU/DGPS/Camera System Calibration
Dahai Guo Guo, Qiu Li Li

Comparision Research on Positioning Ways of Photogrammetry
Lijun Zhang, Qiu Li, Dahai Guo

Estimation of Height Measurement Accuracy for ALOS PRISM Triplet Images
Makoto Maruya, Hiroshi Ohyama

Global sensitivity analysis for the 6S atmospheric correction model.
Nicholas A. S. Hamm, Edward J. Milton, Peter M. Atkinson

A Rapid Meshing Technique for Simulations of Near-Surface Phenomena Involving Remote Sensing Technology
Owen J. Eslinger, Jerrell R. Ballard, Jr., Amanda M. Hines

The Implications of Non-Uniformity in Fields-of-View of Commonly Used Field Spectroradiometers
Alasdair A. Mac Arthur, Chris MacLellan, Tim J. Malthus

MRTWeb: Enhanced MODIS Data Discovery and Delivery Services from the LP DAAC
Thomas K. Maiersperger

Semi-Automatic True Orthophoto Production by Using LIDAR Data
Arif Günay, Hossein Arefi, Michael Hahn

Sensitivity Study for Sensor Optical and Electric Cross-talk Based on Spectral Measurements:An Application to Developmental Sensors Using Heritage Sensors Such As MODIS
Hassan Oudrari, Sanxiong Xiong, Nianzeng Che, Xiaoxiong Xiong, James J. Butler

AHS: Operational Use and Quality Assessment
Alix Fernández-Renau, José A. Gómez, Eduardo de Miguel, Alberto Amaro, Óscar Gutiérrez de la Cámara, Marcos Jiménez, Elena Prado

Wednesday Interactive Session (18:00 - 19:30)
Room: Foyer-2
We02EP. Instrumentation and Techniques II (Passive)
Co-Chairs: *Ignasi Corbella , Serni Ribó*

Operational Derivation of Surface Albedo and Downwelling Shortwave Radiation Based on MSG Observations in the Frame of the SAF Programme on Land Surface Analysis
Dominique Carrer, Bernhard Geiger, Jean-Louis Roujean, Olivier Hautecoeur, Catherine Meurey

PAU One-Receiver Ground-based and Airbone Instruments
Adriano Camps, Albert Aguasca, Xavier Bosch-Lluis, Juan F. Marchan-Hernandez, Isaac Ramos-Perez, Nereida Rodríguez-Álvarez, Francesc Bou, Carlos Ibañez, Xavier Banqué, Ricard Prehn

PAU-RAD Instrument Web-Based Remote Control
Xavier Bosch-Lluis, Maruan Moussaif, Adriano Camps, Juan-Fernando Marchan-Hernández, Isaac Ramos-Pérez, Nereida Rodríguez-Álvarez

Implementing Assisted Navigation in Hybrid Sensor Networks
Franco Frattolillo, Nicola Quarantiello, Silvia Liberata Ullo

An Airborne Multi-Angle Power Line Inspection System
Guangjian Yan, Junfa Wang, Qiang Liu, Lin Su, Pengxin Wang, Junming Liu, Wuming Zhang, Zhiqiang Xiao

Accuracy Evaluation on Technologies of Photogrammetry
Lijun Zhang, Qiu Li, Dahai Guo

Spatial Decision Support System for Tobacco Enterprise based on Spatial Data Mining
Mei Xin, Liu Junyi, Wu Mengquan, Yang Xiaodong

ASAP, Towards a PARIS Instrument for Space
Serni Ribó, Juan Carlos Arco, Estel Cardellach, Oleguer Nogués-Correig, Antonio Rius, María Teresa Álvarez, Jesús Tabero

Automatic Block Generation and 3D Line Extraction in Photogrammetric Power Line Inspection
Wuming Zhang, Guangjian Yan, Ning Wang, Qiaozhi Li, Wei Zhao

Constrained-Trajectory Based GPS/INS Integration for Reliable Position and Attitude Determination
Pakorn Ubolkosold, Stefan Knedlik, Ezzaldeen Edwan, Otmar Loffeld

K-Band Radiometer Designed for Academic Purposes: Intercomparison of Performances as Total Power, Dicke or Noise Injection Radiometers
Jose Miguel Tarongi, Adriano Camps, Jose Antonio Pulido

Distributed Cooperative Sensor Networks using Intelligent Adaptive Antennas
Emma Jones

From Sensor Net to Sensor Grid: A Survey and Taxonomy on Sensor Web
Dafei Yin, Yu Fang

Geometric Correction and Automatic DEM Extraction of High Resolution Data
Philip Cheng

UAV Remote Sensing Grounded Simulation System Based on DM270 and TCP/IP
Shi-hu Zhao, Lei Yan, Zhou-hui Lian, Hui Zhou

High Performance Computing for Vegetation Parameters Retrieval
Luigi Dini, Giovanni Milillo, Guido D'Urso , Antonio Valentino

Internal Approach for the Geometric Accuracy Evaluation of Some Orthorectification Models Applied to QuickBird Images
Carlos Pérez, Nilda Sánchez

Laboratory Characterization of Scanning Radiometers
Charles K. Gatebe, Michael D. King, John W. Cooper, James J. Butler

Non Ideal behaviour of TXA Equipment: Simulated BER Performance
Mario Cossu, Michelangelo L'Abbate, Adriano Lupi, Ugo Pattacini, Paolo Venditti

Perspective of Remote Optical Measurement Techniques (ROMTs)
Eduard Gregorio, Francesc Rocadenbosch

The Environmental Mapping and Analysis Program (EnMAP) - Current Status
Hermann Kaufmann, Karl Segl, Stefan Hofer, Timo Stuffler, Andreas Mueller, Rudolf Richter, Christian Chlebek

The Impact of Surface Meteorological Measurements on GPS Height Determination
Chuan-Sheng Wang, Yuei-An Liou, Ta-Kang Yeh

Urban Ecotope Mapping Using QuickBird Imagery
Renzong Ruan, Liliang Ren

Multiple Aperture Imaging of Millimeter Sources via Image-Plane Interferometry
Dennis Prather, Indraneil Biswas, Christopher Schuetz, Richard Martin, Mark Mirotznik

Technologies For Distributed Aperture Millimeter-Wave Radiometric Imaging Using Optical Upconversion
Christopher A. Schuetz, Richard D. Martin, Indraneil Biswas, Mark S. Mirotznik, Dennis W. Prather

Wednesday Interactive Session (18:00 - 19:30)
Room: Foyer-2
We03EP. Solid Earth 1
Co-Chairs: *Kiyo Tomiyasu , Diane Evans*

Landslide Susceptibility Mapping using RS & GIS
Ezatallah Ghanavati, Zahr Peiryai

Evalutation of the Forest Damage by a Typhoon Using Remote Sensing Technique
Buhe Aosier, Masayuki Takada, Masami Kaneko

Automatic Landslide Detection from Remote Sensing Images Using Supervised Classification Methods
Gaelle Danneels, Eric Pirard, Hans-Balder Havenith

An Quantitative Model for Tectonic Activity Analysis And Earthquake Magnitude Predication Based on Satellite Thermal Infrared Anomaly
Jinping Li, Lixin Wu, Yanqing Dong, Xianbo Yang, Shanjun Liu

A novel method for earthquake-related thermal anomalies detection
Yali Wang, Guihua Chen, Qian Zhang, Chunli Kang

Applying NDVI as vegetation recovery index in Jiou-Jiou Mountain, Taiwan
Ming-Der Yang, Zhe-Chuan Xiou, Tung-Ching Su

Forest Monitoring of Fire-Damaged Areas by Using IKONOS Multispectral Data
Choen Kim, Sung-Hoo Hong

Identification of the Affected Areas by Mass Movement through a Physically Based Model of Landslide Hazard Combined with a Two-Dimensional Flood Routing Model for Simulating Debris Flow
Renato F. Guimarães, Roberto A. T. Gomes, Osmar A. Carvalho Júnior, Nelson F. Fernandes, Eurípedes A. Vargas Júnior, Éder S. Martins

Extraction of landslide-related factors from ASTER imagery and its application to landslide susceptibility mapping using GIS
Saro Lee, Hyun Oh, No-W Park, Sung Lee

Applying Fire Spread Simulation over Two Study Sites in California. Lessons Learned and Future Plans
Alan Forghani, Bob Cechet, John Radke, Mark Finney, Bret Butler

Mars ionosphere data inversion by MARSIS Subsurface Signals analysis
Giovanni Picardi, Robe Seu, Dani Biccari, Andr Cicchetti, Artu Masdea, Marc Cartacci, Marc Iorio, Marc Provenziani, Marc Cutigni

Subsidence and Landslide Monitoring using D- and CR-INSAR
Ye Xia, Herm Kaufmann, Xiao Guo, Daqi Ge

Alteration Mineral Mapping Using Masking Technique and Fusion With Geochemical Data For Mineral Exploration: A Case Study In Areletuobie, Xinjiang (China)
Lei Liu, Jun Zhou, Yu Wang, Bao- Liu, Yan- Xu

Modeling Depth Displacement of Rupture Zone of Ms8.1Kunlun Earthquake by Boundary Conditions of D-InSAR Co-Seismic Deformation Field
Ma Chao, Ma Xuedong, Shan Xinjian

Extracting the Flood Inundated Area on basis of ASAR Image and TM Image
Wei Zheng, Chuang Liu, En Long

Local Times of Major Earthquakes in Coastal Regions
Kiyo Tomiyasu

Geographic Information Systems applied to Teziutlán México's Debris Flow
Guillermo Cardoso

Fuzzy Risk Evaluation of Geological Hazard
Zhaoqiang Huang, Hongxi Li

Mapping Subsidence in Tianjin Area Using ASAR Images Based on PS Technique
Jinghui Fan, Xiaofang Guo, Huadong Guo, Zhengmin He, Daqing Ge, Shengwei Liu

Earthquake Damage Detection Using Remote Sensing Data
Masafumi Hosokawa, Byeong-pyo Jeong, Osamu Takizawa

Improvement and Validation of MODIS Performance in Automated Detection and Extent Estimate of Wildfires
Barbara Hirn, Concettina Di Bartola, Fabrizio Ferrucci

3-D Tsunami Coastal Hazard Mapping in Sri Lanka by Very-High Resolution, Airborne and Spaceborne Remote-Sensing
Fabrizio Ferrucci, Gianluca Calabretta, Franco Coren, Barbara Hirn, Fabio Rocca, Giuliano Savio, Paolo Sterzai

GIS Support for Flood Rescue
Genseng Liang, Darka Mioc, Francois Anton

Early Warning Monitoring and Management of Disasters
Wenling Xuan, Xiuwan Chen, Gang Zhao

DInSAR Monitoring of Land Subsidence in Orihuela City, Alicante, Spain: Comparison with Geotechnical Data
Roberto Tomas, Juan M. Lopez-Sanchez, Jose Delgado, Fernando Vicente, Artemio Cuenca, Jordi J. Mallorquí, Pablo Blanco, Sergi Duque

Statistical Landslide Hazard Mapping Using Remote Sensing Data and GIS: Case Study in Northeastern Region of Rio Grande do Sul State, Brazil
Silvia B. A. Rolim, Roberto N. Vanacôr

Landslide Interpretation Based on Data Fusion Techniques in Region Research
Lijun Zhang

ENSO impact on vegetation patterns in Indonesia during 1982-2003
Pavel A. Propastin, Martin Kappas, Oleg Parfyonov, Stefan Erasmi

Assessment of Different Classification Algorithms for Burnt Land Discrimination
Olivier Zammit, Xavier Descombes, Josiane Zerubia

Investigation and Evaluation of Geological Disasters Using Remote Sensing in the Tibetan Part of National Highway 317
Lin-qing Yu, An-xin Lu, Li-hong Wang, Zhi-yu Jia, De-fu Ran

Evaluation of RADARSAT-1 image and digital techniques to identify landslide scars in Brazil
Alessandra R. Gomes, Paulina S. Riedel

Investigation and Evaluation of Geological Hazards Using Remote Sensing in the Tibetan Part of National Highway 214
An-xin Lu, Li-hong Wang, Zhi-yu Jia, Lin-qing Yu, De-fu Ran

Harmonic Analysis of Time-Series NOAA/AVHRR Images for Hotspot Detection and Land Features Classification
Rohit Singh Gautam, Dharmendra Singh, Ankush Mittal, Sumit Bhatia

Ground deforamtion monitoring survey project with SAR Interferometry.
Kozin Wada, Shigeru Matsuzaka, Midori Fujiwara, Tomomi Amagai, Mikio Tobita, Hiroshi Yarai

Analysis of Hyperspectral Characters of Winter Wheat under Different Nitrogen and Water Stress
Yunhao Chen , Jinbao Jiang, Guifei Jing, Jing Li

Monitoring landslides with Differential SAR Interferometry Using Corner Refletors.
Jinghui Fan, Xiaofang Guo, Guang Liu, huadong Guo, Daqing Ge, Shengwei Liu

Wednesday Interactive Session (18:00 - 19:30)
Room: Foyer-2
We04EP. Data Mining and Archival
Co-Chairs: *Roger King , Hampapuram Ramapriyan*

A Disk-Based System for Producing and Distributing Science Products from MODIS
Edward J. Masuoka, Robert E. Wolfe, Scott S. Sinno, Gang Ye, Michael J. Teague

Semi-Automatic Metadata Extraction from Imagery and Cartographic Data
Laura Díaz, Cristian Martín , Michael Gould, Carlos Granell, Miguel Ángel Manso

The Data Management Technology of the Sustainable Development Information Sharing System of China
Dawei Zhong, Tianhe Chi, Xin Zhang, Xiaofeng Zhao, Qinghui Sun

A Map-based Geographic Information Retrieval System for Geo-Tagged Web Content
You-Heng Hu, Linlin Ge

The Realization of Fast Importing and Exporting Remote Sensing Images Database
Peidong Jin, Yingjie Zhou, Du Xiao, Jianchao Wang

Spatial Outlier Analysis for Optimal Planning
Kiran mai Cherukuri, Mura I.V

Study on Method of Time Series with Missing Data
Jun Zhang, Hong Wang

Legal Protection and Data Access of Remote Sensing and GIS Database
Yi-Ping Chen, Ming-Der Yang

Wednesday Interactive Session (18:00 - 19:30)
Room: Foyer-2
We05EP. Weather Radar Networks: Collaborative Adaptive Sensing of the Atmosphere
Co-Chairs: *Madhu Chandra , Steven C. Reising*

Student Developed Meteorological Radar Network for the Western Part of Puerto Rico: First Node
Manuel A. Vega, Jose G. Colom

An Algorithm to Improve the NEXRAD Rain Rate Estimates
Nazario Ramirez, Sandra Cruz-Pol, Xiomara Ortiz, Joan M. Castro, Robert Kuliwoski

Reflectivity Retrieval in a Networked Radar Environment: Demonstration from the CASA IP1 Radar Network
Sanghun Lim, V. Chandrasekar, Panhoo Lee, A.P. Jayasumana

Wednesday Interactive Session (18:00 - 19:30)
Room: Foyer-2
We06EP. Multisensor Analysis and Data Fusion
Co-Chairs: *Lori Mann Bruce , Jocelyn Chanussot*

Wavelet Image Fusion based on the High Order Polynominal Regression
Xiaobin Cai, Xiaoling Chen, Shoujin Yin, Chuqun Chen

A Study on Optical and SAR Data Fusion For Extracting Flooded Area
Sun Yonghua, Li Xiaojuan, Gong Huili, Zhao Wenji, Gong Zhaoning

Multisource Remote Sensing Images Classification/ Data Fusion Using a Multiple Classifiers System Weighted by a Neural Decision Maker
Yu-Chang Tzeng, S. H Chiu, Dana Chen, Kun-Shan Chen

Toward a Semi-Automatic Interpretation of Scenes Issued from Multisensor Satellite Images
Saheb Ettabaa Karim, Farah Imed Riadh, Soulaiman Bassel, Ben Ahmed Mohamed

Object-Based Classification of Multi-Sensor Optical Imagery to Generate Terrain Surface Roughness Information for Input to Wind Risk Simulation
Alan Forghani, Bob Cechet, Krishna Nadimpalli

Remote Sensing Image Fusion Based on the Scale-invariant Predictive Model
Junping Zhang, Chen Qi, Bin Zou, Weny Tang

Spatial Aspects of Multi-Sensor Data Fusion: Aerosol Optical Thickness
Gregory Leptoukh, Viktor Zubko, Arun Gopalan

A Zero Saturation Distortion Image Fusion Method Based on the GCOS Framework
Ying Zhang, Xiaowen Li, Qiang Liu, Cunjian Yang, Xiaofang Liu, Min Li, Huanmin Luo

Pansharpening - A Contribution towards Quantitative Evaluation.
Uwe Weidner

Wavelet Image Fusion based on Local High Order Polynomial Regression
xiaobin cai, Xiaoling Chen

Multsensor Fusion Based On Dempster-Shaefer Evidence Using Beta Mass Function
Sang-Hoon Lee

Unmixing Based Landsat ETM+ and ASTER Image Fusion For Hybrid Multispectral Image Analysis
Nouha Mezned, Saadi Abdeljaoued, M. Rached Boussema

An Adaptive Multi- Resolution Image Fusion
Hassan Ghassemian

Classification of Natural Areas in Northern Finland Using Optical Remote Sensing Images and Data Fusion
Markus Törmä

Lidar Application in Selection and Design of Power Line Route
Lijun Zhang, Qiu Li, Zizheng Wang, Huijie Liu, Zhongsheng Li, Yao Gui, Robert Kletzli, Xiaodong Yang, Shuming Chen, Yanjing Liu

Fusion of MODIS, AVHRR and ASTER Data Using Curvelet Transform for Land Cover Classification
Harish Kumar, Dharmendra Singh, Ankush Mittal

The Role of Spectral and Spatial Resolution in the Fusion of ALI Data
Konstantinos G. Nikolakopoulos

Multisensor Comparison and Data Fusion of Total Column Ozone
Mohan L. Nirala

Hypercomplex Principle Component Weighted Approach to Multiplespectral and Panchromatic Images Fusion
Huijuan Yang, Jian Qiu Zhang, Bin Wang

Wednesday Interactive Session (18:00 - 19:30)
Room: Foyer-2
We07EP. Soil Properties
Co-Chairs: *Alessandra Monerris Belda , Jean-Pierre Wigneron*

Field and laboratory spectrometry (optical – reflexive) for mapping and monitoring soil degradation and for setting satellite image analysis in the Turbolo River catchment (Calabria, south Italy)
Massimo Conforti, Antonio Leone, Pietrp Patrizio Ciro Aucelli, Carmine Maffei, Gaetano Robustelli, Fabio Scarciglia

Assessment of Land Salinization Change Using Remote Sensing Technequies in Minqin Basin, Northwest China
Youhao E, Jihe Wang, Ping Yan, Hui Han, Dekui Zhang

Monitoring and Analyzing the Soil Erosion Changes In Northern China During the Latest Twenty Years. A Case Study in Upper Chao River Basin of China
Qinghui Lin, Zhixian Li

Neural Network-Based Experimental Study on Shaft Water Sealing by Grouting
Lijun Zhang, Qiu Li, Yanbo Song

Using point spectrometry and geostatistical analysis for detailed soil mapping. An example for a Mediterranean agro-forestry system of Molise region, southern Italy.
Antonio P. Leone, Pietro P.C. Aucelli, Angelo De Angelis, Carmine Maffei, Carmen M. Rosskopf

Comparison of Measured Scattering Coefficient of Dry Soil at X-band with the Scattering Coefficient Estimated using the Dielectric Constant
O.P.N. Calla, K.C. Harit, Rajesh Vyas, Dinesh Bohra, Sanjeev Kumar Mishra

Permittivity Estimation in TDR: A Numerical Study
Phil Neveux

Evaluation of Five Algorithms for Extracting Soil Emissivity from Hyperspectral FTIR Data
Jie Cheng, Qing Xiao , Xiaowen Li, Qinhuo Liu, Yongming Du, Aixiu Nie

Algorithm Study on Mid-Infrared Emissivity Extraction from Field Measurements: A Case Study of Soil
Jie Cheng, Qing Xiao , Xiaowen Li, Qinhuo Liu, Lin sun

Preliminary Measurements of Polarization and Correlative Features between Ruffled Water Surface, Snow and Bare Soil Microwave Reflective and Emissive Characteristics at 15GHz
Artashes Arakelyan, Arse Arakelyan, Sarg Darbinyan, Mela Grigoryan, Izab Hakobyan, Vani Karyan, Mush Manukyan, Gagi Hovhannisyan, Astg Hambaryan, Stev Clifford

Quantitative Assessment of Regional Soil Erosion in Chengdu Plain of Sichuan Province
Jianxi Huang, Feng Maol, Wenbo Xu, Jinqiu Zou

Researches Radiophysical and Dielectric Behaviors of Ore Minerals in the Microwave Range
Olga Polyakova, Vasiliy Tikhonov, Dmitriy Boyarskii

Study on Complex Dielectric Properties of Frozen Soil
Liying Li, Lixi Zhang, Shao Zhao, kebi mao

Research on Factors Analysis Model of Dualistic Soil Salinization Sensitivity in Typical Northwestern Arid Area
Tao Sun, Shibing Pan, Shifeng Huang, Haiying Deng

Wednesday Interactive Session (18:00 - 19:30)
Room: Foyer-2
We08EP. Lidar
Co-Chairs: *Francesc Rocadenbosch , Barry Lienert*

Piece-Wise Variance Method for Signal-to-Noise Ratio Estimation in Elastic/Raman Lidar Signals
Mohd Nadzri Md Reba, Francesc Rocadenbosch, Michaël Sicard, Constantino Muñoz, Sergio Tomás

Design Methodology of a Ceilometer Lidar Prototype
Eduard Gregorio, Francesc Rocadenbosch, Adolfo Comerón

Statistical Classification Methodology of SHOALS 3000 Backscatter to Mapping Coastal Benthic Habitats
Antoine Collin, Antoine Cottin, Bernard Long, Philippe Archambault, Pim Kuus, John H. Clarke, Gunho Sohn, John Miller

What Optech's Bathymetric Lidar Sees Underwater
Bernard Long, Antoine Cottin, Antoine Collin

Laser Sounder Approach for Global Measurement of CO2 Concentrations in the Troposphere
James Abshire, Haris Riris, S. Randy Kawa, Xiaoli Sun, Michael Krainak, Jianping Mao, Pey-Schuam Jian, Graham Allan, G. James Collatz, Mark Stephen

Morphological Segmentation of Lidar Digital Elevation Models to Extract Stream Channels in Forested Terrain
Hyun-chong Cho, Kittipat Kampa, K. Clint Slatton

River water surface effects on minimum water depth detection from LiDAR: a theoretical study on waveforms
Jean-Stéphane Bailly, Audrey Lesaignoux, Denis Feurer

Sensitivity studies of three Lidar configurations
Julia Walterspiel, John N. Porter, David Bates

CALIPSO-AERONET Combined Application for Weather and Climate Research
Wei Gong, Yingying Ma, Zhongmin Zhu, Pingxiang Li, Shalei Song, Mengyu Liu, Zhongyu Hao, Jun Li

Modeling of small footprint airborne laser scanning returns using radiative-transfer modeling and fractal tree models
Felix Morsdorf, Othmar Frey, Benjamin Koetz, Erich Meier

LIDAR Detection of Plankton in the Ocean
James Churnside

Wednesday Interactive Session (18:00 - 19:30)
Room: Foyer-2
We09EP. Hyperspectral Image Analysis
Co-Chairs: *Antonio J. Plaza , Andrew Dyk*

A Physics-Based Statistical Signature Model for Hyperspectral Target Detection
Trym V. Haavardsholm, Torbjørn Skauli, Ingebjørg Kåsen

A Simulated Annealing Feature Extraction Approach for Hyperspectral Images
Yang-Lang Chang, Jyh-Perng Fang, Jin-Nan Liu, Hsuan Ren, Wen-Yew Liang

Integration of Field Work and Hyperspectral Data for Oil and Gas Exploration
Daqi Xu, Guoqiang Ni, Tao Jiang, Lili Jiang, Mingmin Chi

Blind Separation of Component Information from Mixed Pixels in Hyperspectral Imagery
Xin Tao, Wenjie Fan, Xiru Xu

Hyperspectral Signal Subspace Estimation
Jose M. P. Nascimento, Jose M. Bioucas-Dias

Parallel projected gradient nonnegative factorization for hyperspectral images
Stefan Robila, Lukasz Maciak

Radiative Modeling and Characterization of Aerosol Plumes in Hyperspectral Imagery
Alexandre Alakian, Rodolphe Marion, Xavier Briottet

Study on Inversion Models for the Severity of Winter Wheat Stripe Rust Using Hyperspectral Remote Sensing
Jinbao Jiang, Yunhao Chen, Adu Gong, Jing Li

A Classification Based Linear Projection of Labeled Hyperspectral Data
Lior Weizman, Jacob Goldberger

Computational Load Reduction for Anomaly Detection in Hyperspectral Images: An Experimental Comparative Analysis
Nicola Acito, Giovanni Corsini, Marco Diani

SLEX-NWFE Feature Extraction Method for Hyperspectral Image Classification
Hsiao-Yun Huang, Bor-Chen Kuo, Hsiang-Chuan Liu, Yu-Lung Liu

A Compact Inversion Algorithm for Hyperspectral Data
Xu Liu, Peter Schluessel, Dan Zhou, allen Larar, William smith, Stephen Mango

A New Approach for Atmospheric Effects Removal in Endmember Extraction from Hyperspectral Data
Mario Costantini, Claudio Testa, Massimo Zavagli

Reconfigurable Acceleration for Hyperspectral Target Detection
Reza Nekovei, Mohammad Ashtijou

New Paradigm for Hyperspectral Data Analysis
Barat Mojaradi, Hamid Abrishami Moghadam, Mohamad Javad Valadan Zoej

Impact of Spectrally Dependent Gain Errors in Hyperspectral Data on the Determination of Chlorophyll Concentrations in Vegetation
R. J. Soffer, R. A. Neville, K. Staenz, H. P. White

Wednesday Interactive Session (18:00 - 19:30)
Room: Foyer-2
We10EP. Evapotranspiration
Co-Chairs: *Pablo Zarco-Tejada , Xiwu Zhan*

Estimating Actual Evapotranspiration by means of Remote Sensing Data and Sap Flow Measurements in Pinus Sylvestris Forest Stands in a Mediterranean Mountain Region
Jordi Cristóbal, Miquel Ninyerola, Xavier Pons, Rafael Poyatos, Pilar Llorens

A Modified S-SEBI Algorithm to Estimate Evapotranspiration Using Landsat ETM+ Image and Meteorological Data over the Hanjiang Basin, China
Dengzhong Zhao, Wanchang Zhang, Chuansheng Liu

Remotely-sensed Evapotranspiration of Typical Oasis in the Southern Edge of Tarim Basin and its Relationship to Land Cover Changes
Chuansheng Liu, Wanchang Zhang, Dengzhong Zhao, Yongnian Gao

A New Algorithm for Estimating Evapotranspiration Based on Thermal Inertial
Miaofen Huang, Xu-feng Xing, Shan-shan Hu, Jian-cheng Li

Application Research of Using TM to Evaluate Evapotranspiration in Zulihe basin, Northwest China
Han Hui, Zhao Chuanyan, Li Shoubo

Estimating Daily Evapotranspiration Using Remote Sensing
Shoubo Li, Chua Zhao

Estimation of Evapotranspiration on Discontinuous Crop Canopies using High Resolution Thermal Imagery
Jose A. Jiménez-Berni, Pablo J. Zarco-Tejada, Elias Fereres, Guadalupe Sepulcre-Canto, Luca Testi, Fernando Iniesta, Francisco J. Villalobos, Francisco Orgaz, David A. Goldhamer, Mario Salinas

Wednesday Interactive Session (18:00 - 19:30)
Room: Foyer-2
We11EP. Ocean Wind Interactive Session s
Co-Chairs: *David E. Weissman , William Emery*

Measurements of Eddies in the Ocean Surface Wind Field by a Mix of Single and Multiple Frequency HF Radars on Monterey Bay California
John F. Vesecky, Jessica A. Drake, Kenneth E. Laws, Frank L. Ludwig, Calvin C. Teague, Jeff Paduan, Douglas Sinton

Active Beamforming Improves Uncertainty And Ambiguity Of Ocean-Surface Wind Estimation From Space
Pasquale Lombardi

Global Analysis of a 2 Year ERS-2 Wavemode Dataset Over the Oceans
Thomas König, Susanne Lehner, Johannes Schulz-Stellenfleth

A Novel Method for Estimating Offshore Wind Fields Using Synthetic Aperture Radar and Meteorological Model Data
Iain Cameron, Iain Woodhouse, Nick Walker

Validation of a New Empirical SAR Algorithum
Guiting Song, Susanne Lehner, Johannes Schulz-Stellenfleth, Helko Breit, Hartmut Grassl

Refined Measurements and Wind Vector Retrievals from WindSat Instrument in Storm Environments
Zorana Jelenak, Paul Chang, Qi Zhu, Seubson Soisuvarn

Validation of an X Band SAR Wind Algorithm by SIR C/X SAR Data
Susanne Lehner, Johannes Schulz-Stellenfleth, Stephan Brusch, Michael Eineder

Cantarell Natural Seep Modelation Using SAR Derived Ocean Surface Wind and Meteo-Oceanographic Buoy Data
Miguel Herrera Rodríguez, Ricardo Gómez Cáceres, Karen Bannerman, Fernando Pellon de Miranda, Enrico Campos Pedroso

ASCAT Near Real-Time Processing and Validation at NOAA
Paul S. Chang, Zorana Jelenak, Gordana Rancic, Stephen Hunt, Gene Legg, Jeffrey Augenbaum

Use of Tandem Pairs of ERS-2 and ENVISAT SAR Data for the Analysis of Oceanographic and Atmospheric Processes
Johannes Schulz-Stellenfleth, Susanne Lehner, Thomas König, Antonio Reppucci, Stephan Brusch

Instrument Design Simulations for Synthetic Aperture Microwave Radiometric Imaging of Wind Speed and Rain Rate in Hurricanes
Ruba A. Amarin, Salem F. El-Nimri, James W. Johnson, W. Linwood Jones, Boon H. Lim, Christopher S. Ruf

Computation of Wind Direction from SAR Images without External a Priori Information
Stefano Zecchetto, Francesco De Biasio, Paolo Trivero

Hurricane winds from spaceborne SAR and their applications in numerical weather prediction
Xiaofeng Li, William Pichel, Cheng-zhi Zou, Cheng-zhi Zou

Simultaneous X-Band Radar and Ka-Band Radiometer Observations of the Ocean
Vladimir Irisov, William J. Plant

L-band Doppler spectra: modelling and comparison with data
Marc Saillard, Gabriel Soriano, Phil Forget, Mami Joelson

Wednesday Interactive Session (18:00 - 19:30)
Room: Foyer-2
We12EP. Hyperspectral Applications
Co-Chairs: *Antonio J. Plaza*

Indices-based Approach for Crop Chlorophyll Content Retrieval from Hyperspectral Data
Driss Haboudane, John R. Miller, Nicolas Tremblay, Philippe Vigneault

Research on Hyperspectral Reflectance Characteristics for Spring Wheat in Rainfed Agriculture Areas of Loess Plateau
Xiaoping Wang, Ni Guo, Jing Wang

Forest Structure Mapping Using Spectral Linear Mixing Model and an Inverted Geometric-Optical Model in Three Gorges Region of China
Yuan Zeng, Michael E. Schaepman, Bingfang Wu, Jan G.P.W. Clevers, Arnold K. Bregt

Soybean LAI estimation with in-situ collected hyperspectral data based on BP-neural networks
Li Guozhu, Niu Shuwen, Song Kaishan

Wednesday Interactive Session (18:00 - 19:30)
Room: Foyer-2
We13EP. Clouds and precipitation
Co-Chairs: *Shannon Brown , Luca Baldini*

A New High-Altitude Airborne Millimeter-Wave Radar for Atmospheric Research
Gordon Farquharson, Eric Loew, Jothiram Vivekanandan, Wen-Chau Lee

Radar application for MJO study in the equatorial region
Eddy Hermawan , Tri Hadi, Find Renggono, Mega Puspawardhany, Sopi Lestari, Fikr Muhammad A.W

Optimal Estimation of Cross-correlation Function to Improve Polarimetric Radar Measurements in the Presence of Noise
Guifu Zhang, Qing Cao, Richard J. Doviak, Dusan S. Zrnic

Numeric Simulation of Flow Field Construct of Meso-βCloud Clusters
Yun Chen, Qiang Li, Zechun Li

Cloud Detection Based on the Spectral, Multi-Angular, and Polarized Characteristics of Cloud
Tianhai Cheng, Xingfa Gu, Liangfu Chen, Tao Yu, Guoliang Tian

Numerical Simulation Analysis of Rainstorm in South China based on FY-2C satellite cloud drift wind
Yun Chen, Qiang Li, Baogui Bi, Tao Chen, Bin Huang

Mining the Features of Mesoscale Convective Systems over the Tibetan Plateau Based on Spatial Association Rule
Zhongyang Guo, Xiaoyan Dai

An Improved Method for MODIS Cloud Detecting
Sun Lin, Liu Qinhuo, Chen Liangfu, Liu Qiang

Spatially and Temporally Varying Thresholds for Cloud Detection in Satellite Imagery
Gary Jedlovec, Stephanie Haines

Observations of Tropical Cyclones with a 60, 118 and 183 GHz Microwave Sounder
Shannon Brown, Bjorn Lambrigtsen, Alan Tanner, John Oswald, Douglas Dawson, Richard Denning

Comparison of Rainfall Estimates from a Distributed Collaborative Adaptive Sensing Network and Rain Gauges in Western Puerto Rico
Eric Harmsen, Sandra Cruz Pol, Jose G. Colom

Application of Single Drop Scattering Algorithms to Rain Related Retrieval
Dirk Klugmann, Ondrej Fiser

A Time Domain Clutter Filter for Staggered PRT and Dual-PRF Radar Measurements
Cuong Nguyen, Dmitri Moisseev, V. Chandrasekar

Dual-Polarization Spectral Decompositions: Application to Radar Parameter Estimation and Quality Control
V. Chandrasekar, Dmitri N. Moisseev, Jim George

Seven-year Variation of Tropical Deep Convective Clouds from AMSU-B
Hong Gang, Georg Heygster, Stefan A. Buehler

IDRA: A New Instrument for Drizzle Monitoring
Jordi Figueras i Ventura, Herman Russchenberg

Microwave Extinction and Scattering by Complex Snow Aggregates
Grant Petty, Wei Huang

Wednesday Interactive Session (18:00 - 19:30)
Room: Foyer-2
We14EP. Land Cover
Co-Chairs: *Simonetta Paloscia , Jose Moreno*

Validation of MODIS Land Surface Temperature Product as a Drought Indicator in China
Xi Yang, Jian-jun Wu, Pei-jun Shi, Hong Xia

Comparison between AVHRR and MODIS VIs in Seasonal Information
Chengyuan Hao, Chunguo Liu

Lands use and cover and correlations with soil and water quality, in Descoberto River watershed, Distrito Federal, Brazil.
Marilusa Lacerda, Auré Chaves, Hele Alves, Tati Vieira

Area Precision of the Features Abstracted from SPOT5 Image
Xiuli Feng, Ke Wang, Peng Luo

Assessing Land Cover Performance in North Piedmont of Yinshan Mountain Using Time-Series NDVI Data
Wenbo Xu, Jinlong Fan, Jianxi Huang

Using Lacunarity Index and Wavelet Analysis to Characterize Scale-dependent Landscape Heterogeneity of Hotan Oasis in China
Chuansheng Liu, Wanchang Zhang, Bin Yong

The Climatic Characteristics of Length of Extreme Drought Period and Its Relation with NDVI in Northwest China
Jinsong Wang, Feng Wei, Jianying Feng

Mapping and Monitoring Land Cover in Corumbiara Area, Brazilian Amazônia, Using JERS-1 SAR Multitemporal Data
Yosio Shimabukuro, Raimundo Almeida-Filho, Tatiana Kuplich, Ramon Freitas

Comparisons of Normalized Difference Vegetation Index from MODIS Terra and AQUA Data in Northwestern China
Jing Wang, Ni Guo, Xiaoping Wang, Jia Yang

Habitat mapping in rugged terrain using multispectral IKONOS images
Janet E Nichol, Man Sing Wong

Comparison of Vegetation Index from ASTER, CBERS and Landsat ETM+
Peijun Du , Huapeng Zhang , Linshan Yuan , Pei Liu , Hairong Zhang

Impacts of the Climate Change on the Vegetation in Maqu County in the Upper Reaches of Yellow River
Xiaoping Wang, Ni Guo, Jing Wang, Jia Yang

Estimating Vegetation Fractional Coverage for Temperate Grassland in Northern China Based on Remotely Sensed Data and Rainfall Time Series
Xiaobing Li, Hong Wang, Na Fu, DanDan Wang, Li Zhang

An Analysis about Seasonal Vegetation Variety in Fujian Province (China) Using ENVISAT MERIS Vegetation Index
Xiaocheng Zhou, Xiaoqin Wang, Bo Wu, Huiguo Li

Analysis on Spatial Pattern Change of Land Use Types and its Influences on Ecosystem Services Value: A Case Study of Wuchuan County in China
Zhigang Xu, Dafang Zhuang

Evaluation of Low Resolution Land Cover Data Sets Over the Tundra–Taiga Transition Zone in Northernmost Finland
Janne Heiskanen

Land Cover Classification Based on Vegetation Phenology and MODIS Time Series Data in Northeastern China
Pan Gong, Zhongxin Chen, Huajun Tang

Adaptive Bayesian Algorithm for Vegetated Field Parameters Extraction by Using Multi-Frequency and Multi-Polarimetric SAR Images
Claudia Notarnicola, Bartolomeo Ventura, Francesco Posa

HIDROLIM, a Franco-Spanish study on the vegetation water tress diagnostic by satellite in the Midi- Pyrénées and Calalunia regions from 1998 to 2005.
Philippe Maisongrande, Agustin Lobo

Linking Spatial Patterns of Deforestation to Land Use Using Satellite and Field Data
Rodrigo Lorena, Eric Lambin

A New Land Cover Map at 1 km Resolution over Korea
Youn-Young Park, Kyung-Soo Han, Jong-Min Yeom, Chang-Suk Yee

Vegetation Monitoring with Surface Bi-Directional Reflectivities in MODIS Near-IR and Mid-IR Channels
Bohui Tang, Yuan-Yuan Jia, Xiaoyu Zhang, Zhao-Liang Li

Retrieving LAI in the Heihe and the Hanjiang River Basins Using Landsat Images for Accuracy Evaluation on MODIS LAI Product
Wanchang Zhang, Yanhua Chen, Shaoying Hu

Application of a Coherent Modeling on Sahelian Grassland
Alejandro Monsivais-Huertero, Isabelle Chenerie, Kamal Sarabandi, Frederic Baup

Land Cover Analysis at a Regional Scale Exploiting Low and Medium Resolution ENVISAT ASAR Data: Application to Poyang Lake Area (Jiangxi, P.R. China)
Rémi Andreoli, Hervé Yésou, Shifeng Huang, Jiren Li, Desnos Y-L.

Updating the Landuse Data by Remote Sensing Images and GIS
Cunjian Yang, Jieming Zhou, He Huang, Lili Deng, Rong He

Knowledge-Based Multi-layer Synthesis Image Classification Approach in Land Use and Land Cover Mapping
Liye Ou, Huabing Huang

The influences of land cover and land use in the local and regional climate of Piracicaba, Brazil.
Priscila P. Coltri, Nelson J. Ferreira, Valdemar A. Demetrio, Saulo R. Freitas

Radiometric Signature of the Vegetation Coverage of a Boreal Forest
Jules R. Dim, Koji Kajiwara, Yoshiaki Honda

Comparison and Evaluation Between MODIS Vegetation Indices in Northwest China
Ni Guo, Xiaoping Wang, Dihua Cai, Jia Yang

Supervised Farm Classification from Remote Sensing Images Based on Kernel Adatron Algorithm
Adrian Gonzalez, Graham Russell, Astrid Márquez, José Alí Moreno, Cristina Garcia, Carlos Domínguez, Omar Colmenares, Juan José Machado

Lidar Remote Sensing of Habitat Heterogeneity as a Predictor of Bird Species Richness
Scott Goetz, Daniel C Steinberg, Ralp Dubayah, Bryan Blair

Wednesday Interactive Session (18:00 - 19:30)
Room: Foyer-2
We15EP. Land Use Change
Co-Chairs: *Roland Goetzke , Beatriz Martinez*

Grassland Resources Degradation of the Loess Plateau Based on Remote Sensing and GIS
Fu Kun, Chen Xingpeng, Liu Qingguang

Land Use Change and Regional Differences in the Farming-pastoral Zone of Northern China.
Jing Liu, Jint Zhao, Jing Wang

Hydrological responses of a semiarid catchment to land use change in North China: case study the Laohahe River Basin
Xiuqin Fang, Liliang Ren, Qiongfang Li, Fei Yuan

Integration of Remote Sensing and GIS Techniques for Updating the Land Use Map - Riyadh City - Case Study -
Ahmed. H. Al-Ashaikh, Abdulrahman A. Al-Sultan, Mohamed M. Ali

Monitoring Grassland Degradation in Yiminhe Mine of China using TM Remotely Sensed Data
Hong Wang, Xiaobing Li, Xia Li, Huiling Long, Xu Xu

Application of SPOT5 Images to the Project of returning land for farming to forest
Boji Yan, Chun Zhao, Hongmei Yin

The Research and Realization of the Land-Use Change Forecasting Model in Development Zones Based on RS and GIS
Dan Yin , Xiuwan Chen, Lei Yan, Zhaoqiang Huang

the analysis of land use changes
Xiaoxia Sun, Ji X Zhang, Zhen Liu

Study on the Rainfall Effect on Vegetation Change in the North Piedmont of Yin Mountain
Xia Hong, Wu Jian-jun, Fan Jin-long

Land Use and Land Cover Changes and Farmer Vulnerability in Xishuangbanna Prefecture in Southwestern China
Fu kun, Chen Xingpeng, Liu Qingguang

Land Cover Change in the Aral Sea basin
Galina Stulina, Yele Roshenko

Study on Land Cover Remote Sensing Monitoring and LUCC Analysis in Frontier Small River Basin
Wang Dandan, Yuan Xiping, Gan Shu

Land Use Changes Driven by 2008 Beijing Olympic Playground Constructions and Depicted by LANDSTAD Temporal Data
Ma Jianwen, Chen Xue, Dai Qin, Li Liwei

Grassland Degradation and Some Proposals for Sustainable Development -----A Case Study in Madoi County, Yellow River Source Regions, China
Chunhua Li , Xing Chen , Qing Liu, Kun Fu, Hong Miao

Land Desertification and Some Proposals for Promoting Sustainable Development in Qinghai Lake Area, China
Chunhua Li , Xingpeng Chen, Yong Chen, Kun Fu, Qingguang Liu

LULC Classification of Landsat -7 ETM+ Image from Rugged Terrain Using TC, CA and SOFM Neural Network
Yongnian Gao, Wanchang Zhang, Jing Wang, Chuansheng Liu

Fractal Studies on Changes of Land Use Structure and Urban Form in Tianjin city
Xinping Bai, z

Statistical Analysis and Feedback Exploration of Land Use Change Determinants at Local Scale in the Brazilian Amazon
Luciana de Souza Soler, Peter Verburg, Antonie Veldkamp, Maria Isabel Sobral Escada, Gilberto Câmara

Analysis of Land Use Changes in Manasi region, northwestern China Using Remote Sensing and GIS
XiaoHong Gao, XiaoLei Zhang, Xi Chen, GePing Luo, ShiXin Wu

Monitoring of Vegetation Changes Using Multi-Temporal NDVI in Peripheral Regions around Minqin Oasis, Northwestern China
Youhao E, Jihe Wang, Shangyu Gao, Ping Yan, Zihui Yang

Urban Landuse Change and Its Impacts on Travel Demand
Hu Peng, Huapu Lu, Jifeng Wang

A Comparison of the Methods for the Urban Land Cover Change Detection by High-Resolution SAR Data
Takashi Nonaka, Takashi Shibayama, Hiroko Umakawa, Seiho Uratsuka

Monitoring of Cultivated and Woods Land and Simulating of the Changes based on GeoCA Model in typical area of Three Gorges
Lixin Dong, Binfang Wu

Studies on the Changes and Driving Forces of Landscape Pattern of Urban Land Use in Tianjin city
Xinping Bai, Zhenxin Song

Unsupervised Change Detection of Multitemporal Landsat Imagery to Identify Changes in Land Cover Following the Chernobyl Accident
Corine Davids, Anthony Doulgeris

Agent-based approaches to land use change in eastern China
Chang-Qing Ke

The changes of land use and land cover and its influences factors in upriver key regions of the Yellow river
Lixin Dong, Binfang Wu, Yuan Zeng

An Analysis On the Degradation Pattern of the Steppe Grassland On Different Slope in North China
Su-ying Li, Xiao-bing Li, Na Fu, Dan-dan Wang, Hong Wang, Hui-ling Long

Implementation of 3D Discrete Wavelet Scheme for Space-Borne Imagery Classification and Its Application
Hee-Young Yoo, Kiwon Lee, Byung-Doo Kwon

Procedure for the Regional Scale Mapping of FVC and LAI over Land Degradated Areas in the DeSurvey Project
Beatriz Martínez, Aleixandre Verger, Javier García-Haro, Mª Amparo Gilabert Navarro, Joaquín Meliá

A Multiresolution Analysis (MRA) Based on the Wavelet Transform to Study Vegetation Dynamics. A Case Study on a Desertification Hot Spot Area
Beatriz Martinez Diaz, Jaime Gimeno Ferrer, Mª Amparo Gilabert Navarro

Evaluation of Driving Forces of Land-Use Change and Urban Growth in North Rhine-Westphalia (Germany)
Roland Goetzke, Michael Judex, Matthias Braun, Gunter Menz

Thursday Morning (09:00 - 12:40)
Room: 120
Th01MF. Ocean Winds 2
Co-Chairs: *Jochen Horstmann , David E. Weissman*

09:00 Canadian Space Agency's Hurricane Watch Program: Archive Contents, Data Access and Improved Planning Strategies
Sonya Banal, Steve Iris, Robert Saint-Jean

09:20 Estimating Scatterometer Wind Speeds from a Spatially Varying Wind Field
Ernesto Rodriguez

09:40 Mapping of Northern Adriatic Bora winds using SAR data
Jochen Horstmann, Richard P. Signell, Jacopo Chiggiato, James D. Doyle, Julie Pullen

10:00 Oceanic Rainfall Retrievals Using Passive and Active Measurements from Sea Winds Remote Sensor
Khalil Ahmad, Linwood Jones, Takis Kasparis

10:20 Operational Wind Field Retrieval from Synthetic Aperture Radar
Jochen Horstmann, Wolfgang Koch

10:40 COFFEE BREAK

11:00 QuikSCAT and SSM/I Ocean Surface Winds for Wind Energy
Charlotte Hasager, Poul Astrup, Per Nielsen

11:20 Scatterometer Wind and Stress Model Function Applicable to Varying Sea States
Mark Bourassa, David E. Weissman

11:40 Towards a High-Resolution ASCAT Scatterometer Wind Product
Marcos Portabella, Ad Stoffelen, Jur Vogelzang, Anton Verhoef, Jeroen Verspeek

12:00 Statistical Characterization of Radar Sea Scatter for Breaking Wave Detection
Paul A. Hwang, Mark A. Sletten , Jakov V. Toporkov

12:20 Wind Jet Transition and Its Localized Impact on Wave Height Distribution along the Pacific Coast of Northern Japan
Teruhisa Shimada, Hiroshi Kawamura

Thursday Morning (09:00 - 12:40)
Room: 121
Th02MF. Current and Future Altimetry Missions and their Performance
Co-Chairs: *Mònica Roca , Seymour Laxon*

09:00 ESA Altimetry Missions Status
Pierre Féménias

09:20 ICESat Measurements of Ice Sheets and Sea Ice: Recent Results and Future Mission Planning
H. Jay Zwally

09:40 An Assessment of the Ka Band Interferometric Radar Altimeter for Monitoring Rivers and Lakes with the WatER Mission
Vivien Enjolras, Ernesto Rodriguez

10:00 CryoSat: from disaster to rebirth
Richard Francis

10:20 The Sentinel-3 Mission and its Topography Element
Constantin Mavrocordatos, Bruno Berruti, Miguel Aguirre, Mark Drinkwater

10:40 COFFEE BREAK

11:00 Re-Tracking of SAR Altimeter Ocean Power-Waveforms and Related Accuracies of the Retrieved Sea Surface Height, Significant Wave Height and Wind Speed
Laurent Phalippou, Vivien Enjolras

11:20 Validating CryoSat-2/Sentinel-3 altimeter retrievals using the Airborne SAR/Interferometric Radar Altimeter System (ASIRAS)
Robert Cullen, Malcolm W. J. Davidson, Constantin Mavrocordatos, Dunc Wingham

11:40 Mapping Ocean Surface Topography and Water Levels of Rivers, Lakes, and Wetlands from a Wide-Swath Satellite Altimetry Mission
Lee-Lueng Fu, Ernesto Rodriguez, Doug Alsdorf, Nelly Mognard

12:00 An Advanced Concept of Radar Altimetry over Oceans with Improved Performances and Improved Ocean Sampling : AltiKa
Jacques Richard, Laurent Phalippou, Frédéric Robert, Nathalie Stenou, Eric Thouvenot, Pierre Sengenès

12:20 The RA-2 Individual Echoes Processing Description and some Scientific Results
Mònica Roca, Daniel Martínez, Mercedes Reche

Thursday Morning (09:00 - 12:40)
Room: 122
Th03MF. GPM
Co-Chairs: *V. Chandrasekar , Shuji Shimizu*

09:00 The Global Precipitation Measurement (GPM) Mission: Overview and U.S. Science Status
Arthur Hou

09:20 The Global Precipitation Measurement (GPM) Mission development status
Ardeshir Art Azarbarzin, Paul H. Hwang

09:40 Prototype of NASA's Global Precipitation Measurement Ground Validation System
Mathew R. Schwaller, K. Robert Morris, Walter A. Petersen

10:00 Level 1 algorithm development of spaceborne dual-frequency precipitation radar (DPR) for GPM
Shuji Shimizu, Hiro Hanado, Naof Yoshida, Tomo Higashiuwatoko

10:20 Preliminary Design of the Spaceborne Dual-Frequency Precipitation Radar for the Global Precipitation Measurement
Kinji Furukawa, Hiroshi Hanado, Yasutoshi Hyakusoku, Yasuyuki Ishii, Masahiro Kojima, Nobuhiro Takahashi, Toshio Iguchi, Minoru Okumura

10:40 COFFEE BREAK

11:00 Tests of spaceborne rain retrieval algorithms using airborne radar data
Robert Meneghini, Liang Liao

11:20 Towards a Fully Parametric Rainfall Algorithm for GPM
Christian Kummerow, Sara Finn, Jani Bytheway, Joe Munchak

11:40 Rain Microphysics Estimation Using X-Band Dual Polarization Radar Measurements
Eugenio Gorgucci, Luca Baldini, V. Chandrasekar

12:00 Investigating the Sensitivity of TRMM to the Onset of Rainfall Using Data from CloudSat
Wesley Berg, Tristan L'Ecuyer, Christian Kummerow

Thursday Morning (09:00 - 12:40)
Room: 123
Th04MF. Radar Data Processing
Co-Chairs: *Antoni Broquetas, Marco Martorella*

09:00 Waveform Coding for Dual Polarization Weather Radars
Chandraseakr V. Chandra, Nitin Bharadwaj, Jim George

09:20 Radar Sounding of Fast Flowing Outlet Glaciers and Ice Margins
Chandini Veeramachaneni, Jilu Li, Sahana Raghunandan, Carl Leuschen, Sivaprasad Gogineni

09:40 Surface Clutter Suppression for Ice Sounding Radars by Coherent Combination of Repeat-Pass Data
Rolf Scheiber, Pau Prats

10:00 Wide Area Traffic Monitoring with the PAMIR System
Delphine Cerutti-Maori, Jens Klare, Wolfram Bürger, Andreas Brenner, Joachim Ender

10:20 Synthetic Range Profile Focusing Via Contrast Optimization
Fabrizio Berizzi, Marco Martorella, Andrea Cacciamano

10:40 COFFEE BREAK

11:00 Cross hole radar imaging with full waveform inversion of interferometric processed data
Seiichiro Kuroda, Hee Joon Kim, Mutsuo Takeuchi

11:20 Evaluation of X-Band Polarimetric Radar Estimates of Drop Size Distributions from Coincident S-Band Polarimetric Estimates and Measured Raindrop Spectra
Marios N. Anagnostou, Emmanouil N. Anagnostou , Gianfranco Vulpiani , Mario Montopoli , Frank S. Marzano, Jothiram Vivekanandan

11:40 Ground penetrating radar resolution enhancement by wavelet dispersion removal
Sixin Liu, Bo Xu

12:00 Elimination of Oil Spill Like Structures from Radar Image using MODIS Data
Liis Sipelgas, Rivo Uiboupin

12:20 Survey of Bathymetry and Current Fields by Radar Image Series Acquired by Shore Based X-Band Radar
Stylianos Flampouris, Friedwart Ziemer, Joerg Seemann

Thursday Morning (09:00 - 12:40)
Room: 124
Th05MF. ALOS CALVAL Update 2007
Co-Chairs: *Masanobu Shimada , Richard Lucas*

09:00 Advanced Land Observing Satellite (ALOS): On-Orbit Status and Platform Calibration
Takanori Iwata

09:20 ALOS Mission Operation Status
Shinichi Suzuki, Mitsuhiro Tsuchiya, Satoko Miura

09:40 InSAR Results from PALSAR: Southern San Andreas Fault and Hawaii
David Sandwell, Masanobu Shimada, Benj Brooks

10:00 PALSAR CALVAL Summary and Update 2007
Masanobu Shimada, Osamu Isoguchi, Takeo Tadono, Riko Higuchi, Kazuo Isono

10:20 Pol-InSAR Results from ALOS-PalSAR
Konstantinos P. Papathanassiou, Luca Marotti, Rafael Schneider, Irena Hajnsek

10:40 COFFEE BREAK

11:00 Relationship between Wind Vectors and L-Band Radar Cross Sections Examined Using PALSAR
Osamu Isoguchi, Masanobu Shimada

11:20 Results of calibration and validation of ALOS Optical Sensors, and their Accuracy Assessments
Takeo Tadono, Masanobu Shimada, Toshiaki Hashimoto, Junichi Takaku, Akira Mukaida, Sach Kawamoto

11:40 DSM Generation with ALOS/PRISM Data Using SAT-PP
Armin Gruen, Kirsten Wolff

12:00 ALOS PALSAR for Characterising Wooded Savannas in Northern Australia
Richard Lucas, John Armston

12:20 The ALOS Kyoto & Carbon Initiative
A. Rosenqvist, M. Shimada, Anthony K. Milne

Thursday Morning (09:00 - 12:40)
Room: 128
Th06MF. SMOS (I): Instrument and Mission
Co-Chairs: *Achim Hahne , Manuel Martin-Neira*

09:00 Overview of the SMOS Mission and System
Hubert M.J.P. Barre

09:20 SMOS Payload: MIRAS
Manuel Martin-Neira, Kevin McMullan, Willy Rits, Sten Ekholm, Joel Marti, Jerzy Lemanczyk, Francois Garat

09:40 Design and Technical Implementation of MIRAS Payload
Andrés Borges

10:00 MIRAS In-Orbit Calibration
Ignasi Corbella, Francesc Torres, Nuria Duffo, Adriano Camps, Mercè Vall-llossera, Verónica González

10:20 SMOS L1 Processor Prototype: From Digital Counts to Brightness Temperatures
Antonio Gutiérrez, José Barbosa, Nuno Almeida, Nuno Catarino, José Freitas, Marco Ventura, José Reis, Michele Zundo

10:40 COFFEE BREAK

11:00 High-Accuracy Calibration of the SMOS Radiometer Antenna Patterns at the DTU-ESA Spherical Near-Field Antenna Test Facility
S. Pivnenko, J. M. Nielsen, C. Cappellin, G. Lemanczyk, Olav Breinbjerg

11:20 Ground Calibration of SMOS: NIR and CAS
Andreas Colliander, Juha Lemmetyinen, Josu Uusitalo, Jani Suomela, Katriina Veijola, Anna Kontu, Sami Kemppainen, Jörgen Pihlflyckt, Kimmo Rautiainen, Martti Hallikainen, Janne Lahtinen

11:40 Spaceborne L-band Radiometry: Problems with the Ionosphere, the Atmosphere, Extra-Terrestrial Radiation and RFI
Niels Skou, Sidh Misra, Sten Søbjærg, Stee Kristensen

12:00 Helsinki University of Technology Synthetic Aperture Radiometer - HUT-2D
Kimmo Rautiainen, Juha Kainulainen, Tuomo Auer, Simo Tauriainen, Martti T. Hallikainen

12:20 Some Results of the MIRAS-SMOS Demonstrator Campaigns
Nuria Duffo, Francesc Torres, Ignasi Corbella, Verónica González, Sebastian Blanch, Adriano Camps, Mercè Vall-llossera, J.L. Álvarez, Serni Ribó, Manuel Martin-Neira

Thursday Morning (09:00 - 12:40)
Room: 129
Th07MF. Agroecosystems and Crop Monitoring
Co-Chairs: *Guadalupe Sepulcre , P. Ferrazzoli*

09:00 Detecting Crop Irrigation Status in Orchard Canopies with Airborne and ASTER Thermal Imagery
Guadalupe Sepulcre-Canto, Pablo J. Zarco-Tejada, Jose A. Jimenez-Berni, Juan C. Jimenez-Muñoz, Jose A. Sobrino, Antonio J. Rodriguez, Victor Cifuentes

09:20 Remote Sensing Data Assimilation for Regional Crop Growth Modelling in the Region of Bonn (Germany)
Vanessa Heinzel, Björn Waske, Matthias Braun, Gunter Menz

09:40 Sensitivity of Multi-Temporal High Resolution Polarimetric C and L-Band SAR to Grapes in Vineyards
Giovanni Schiavon, Domenico Solimini, Alessandro Burini

10:00 Corn Monitoring and Crop Yield Using Optical and Radarsat-2 Images
Jesus Soria-Ruiz, Yolanda Fernandez-Ordonez, Heather McNairm , Joni Bugden-Storie

10:20 Joint use of ENVISAT/ASAR and SPOT/VGT data for rice mapping and crop parameters retrieval in China
Bouvet Alexandre, Le Toan Thuy, Tan Bingxiang, Li Bingbai, He Wei, Zhang Pingping

10:40 COFFEE BREAK

11:00 Multi-Temporal Classification for Irrigation Detection in the Vinalopó Region in Spain Using ASTER Images
Mercè Llopis-Ferrer, Berta Hoyos-Ortega, Ana Vidal-Pantaleoni

11:20 Polarimetric Measurements of Radar Backscatters of a Wet-land Rice Field throughout a Growth Period at L- and C-bands
Jin-Young Hong, Yisok Oh, Sukyoung Hong

11:40 A semi-empirical backscattering model for estimation of leaf area index (LAI) of rice in southern China
Jinsong Chen, Hui Lin, Aixia Liu, Yun Shao, Limin Yang

12:00 Real-Time Monitoring of Growth and Biophysical Properties of Crops in Millimeter and Optical Ranges
Yaroslav Savenko, Volodymir Vodotovka

12:20 Monitoring the Spatial Distribution of High-Resolution Leaf Area Index Using Observations from DMC+4
Huiran Jin, Xin Tao, Wenjie Fan, Xiru Xu, Peijun Li

Thursday Morning (09:00 - 12:40)
Room: 130
Th08MF. Active Microwave Remote Sensing in Hydrology
Co-Chairs: *Paolo Pampaloni , Alexander Loew*

09:00 Multitemporal C band backscattering of wetland marshes for various flood conditions, angles and polarizations
Francisco Grings, Haydee Karszenbaum, Paolo Ferrazzoli, Leila Guerriero, Mercedes Salvia, Patricia Kandus, Pablo Perna

09:20 Evaluation of the Influence of Land Cover on the Noise Level of ERS-Scatterometer Backscatter
Vahid Naeimi, Claudia Kuenzer, Stefan Hausenauer, Zoltan Bartalis, Wolfgang Wagner

09:40 Effect of Salinity on the Dielectric Properties of Geological Materials: Implications for Soil Moisture Detection by Means of Remote Sensing
Yannick Lasne, Philippe Paillou, Gilles Ruffié, Carlos Serradilla, François Demontoux, Anthony Freeman, Tom Farr, K. McDonald, B. Chapman

10:00 Potential of X-Band Spaceborne Synthetic Aperture Radar for Precipitation Retrieval over Land
Frank S. Marzano, G. Poccia, R. Cantelmi, Nazzareno Pierdicca, Jim Weinman, Ventaklan Chandrasekar, Alberto Mugnai

10:20 Integration of L-band SAR Data into Land Surface Process Models
Alexander Loew, Dirk Hoekman, Irena Hajnsek, Martin Vissers

10:40 COFFEE BREAK

11:00 Soil moisture mapping in Western Africa based on ERS Scatterometer
Mehrez Zribil, Cyrille André, Bertrand Ducharme

11:20 Application of C and Ku-Band Scatterometer Data for Catchment Hydrology in Northern Latitudes
Annett Bartsch, Wolfgang Wagner, Karl Rupp, Richard Kidd

11:40 Soil Parameter Estimation and Analysis of Bistatic Scattering X-Band Controlled Measurements
Kais Khadhra, Thomas Boerner, Madhu Chandra, Manfred Zink, David Hounam

12:00 ALOS PALSAR Radar Observation of Tropical Peat Swamp Forest as a Monotering Tool for Hydrological for Environmental Protection and Restoration
Dirk Hoekman, Martin Vissers

12:20 Optimal Configurations of Bistatic Radar for Retrieving Soil Moisture and Vegetation Biomass
Nazzareno Pierdicca, Luca Pulvirenti, Leila Guerriero, Giuliano Della Pietra

Thursday Morning (09:00 - 12:40)
Room: 131
Th09MF. Geohazards-2
Co-Chairs: *Alberto Martinez-Vazquez*

09:00 On the Features and Mechanism of Satellite Infrared Anomaly before Earthquakes in Taiwan Region
Shanjun Liu, Dongping Yang, Baodong Ma, Lixin Wu, Jinping Li, Yanqing Dong

09:20 Theoretical Analysis to Impending Tectonic Earthquake Warning on Satellite Infrared Anomaly
Lixin Wu, Shanjun Liu, Jinping Li, Yanqing Dong, Xiudeng Xu

09:40 Hazards Influencing Coastal Plains Management along the Eastern Stretch of the Gulf of Suez, using Remote Sensing and GIS
Mahmoud H. Ahmed, Osman H. Abdel-Kader, Mona F. Kaiser

10:00 Extracting Thermal Anomalies of Underground Coal Fire from Multi-Temporal Daytime Images
Wei Zhuang, Yunhao Chen, Hongchun Cai , Jie Xu

10:20 Object Oriented Assessment of Damage due to Natural Disaster using Very High Resolution Images
Anne-Lise Chesnel, Renaud Binet, Lucien Wald

10:40 COFFEE BREAK

11:00 Snow Avalanche Detection and Classification Algorithm for GB-SAR Imagery
Alberto Martinez-Vazquez, Joaquim Fortuny-Guasch

11:20 Near-Tactical Eruption Rate Monitoring of Pu'u O'o (Hawaii) 2000-2005 by Synergetic Merge of Payloads ASTER and MODIS
Barbara Hirn, Concettina Di Bartola, Fabrizio Ferrucci

11:40 Microwave Radar Remote Sensing of Plinian Volcanic Ash Clouds for Aviation Hazard and Civil Protection Applications
Frank S. Marzano, Stefano Barbieri, Errico Picciotti, Gianfranco Vulpiani

12:00 LIDAR DEM for Characterizing the Volcanic Landforms of Tatun Volcanoes in Metropolitan Taipei
Jin-King Liu, Tian-Yuan Shih, Yu-Chang Chan, Yu-Chung Hsieh

12:20 Multi-sources Data Integration for Mine Geohazards Monitoring
Zhi Zhang, Yusen Dong, Shaojun Wang

Thursday Morning (09:00 - 12:40)
Room: 132
Th10MF. Vegetation Fluorescence
Co-Chairs: *José F. Moreno , Michael Berger*

09:00 Vegetation Fluorescence: The Road From Basic Science to the Operational Mapping of Vegetation Photosynthesis From Space
José F. Moreno

09:20 A Novel Model of Electron Transport, Xanthophyll De-Epoxidation and Dissipation of Excess Light
Federico Magnani, Sabr Raddi

09:40 Sensitivity Analysis of the Fraunhofer Line Discrimination Method for the Measurement of Chlorophyll Fluorescence Using a Field Spectroradiometer
Luis Alonso, Luis Gómez-Chova, Joan Vila-Francés, Julia Amorós-López, Luis Guanter, Javier Calpe, José Moreno

10:00 Canopy Level Solar Induced Fluorescence for Vegetation in Controlled Experiments
Elizabeth Middleton, Lawrence Corp, Petya K. E. Campbell

10:20 Mapping of solar-induced vegetation chlorophyll fluorescence from space measurements: sensitivity analysis and results from ENVISAT/MERIS and CASI-1500 data
Luis Guanter, Jose F. Moreno

10:40 COFFEE BREAK

11:00 Surface Temperature in the Context of FLuorescence EXplorer (FLEX) Mission
José A. Sobrino, Guillem Soria, Juan C. Jimenez-Muñoz, Belen Franch, Victoria Hidalgo, Guadalupe Sepulcre-Cantó, Pablo J. Zarco-Tejada, José Moreno, Ismael Moya

11:20 Remote Sensing of Chlorophyll Fluorescence for Estimation of Stress in Vegetation. Recommendations for Future Missions
Julia Amorós-Lopez, Joan Vila-Francés, Luis Gómez-Chova, Luis Alonso, Luis Guanter, Secundino del Valle-Tascon, Javier Calpe, José F. Moreno

11:40 Physically Based Methodology for Generating LAI and FPAR Earth System Data Records from AVHRR and MODIS
Sangram Ganguly, Mitchell Schull, Arindam Samanta, Yuri Knyazikhin, Nikolay Shabanov, Ranga B. Myneni, Dong Huang

12:00 Spectral Dependence of the Bidirectional Reflectance Function in Coastal Waters and Its Impact on Retrieval Algorithms
Alexander Gilerson, Jing Zhou, Rodolfo Fortich, Ioannis Ioannou, Soe Hlaing, Barry Gross, Fred Moshary, Samir Ahmed

Thursday Morning (09:00 - 12:40)
Room: 133
Th11MF. Hyperspectral Data Classification
Co-Chairs: *Melba Crawford , Lorenzo Bruzzone*

09:00 Regression Approaches to Small Sample Inverse Covariance Matrix Estimation for Hyperspectral Image Classification
Are C. Jensen, Asbjørn Berge, Anne S. Solberg

09:20 Multiresolution Manifold Learning for Classification of Hyperspectral Data
Wonkook Kim, Yangchi Chen, Melba M. Crawford, James C. Tilton, Joydeep Ghosh

09:40 Hyperspectral Image Classification Using KNWFE with Conformal Transformation for Kernel Selection
Bor-Chen Kuo, Cheng-Hsuan Li, Tian-Wei Sheu, Chih-Cheng Hung

10:00 Classification of Hyperspectral Data by Continuation Semi-Supervised SVM
Mingmin Chi, Lorenzo Bruzzone

10:20 Controlling the Spectral-Spatial Mix in Context Classification Using Markov Random Fields
Xiuping Jia, John A. Richards

10:40 COFFEE BREAK

11:00 Hyperspectral Image Classification with Mahalanobis Relevance Vector Machines
Gustavo Camps-Valls, Antonio Rodrigo-González, Jordi Muñoz-Marí, Luis Gómez-Chova, Javi Calpe-Maravilla

11:20 Improving Hyperspectral Classification Based on Wavelet Decomposition
Ophir Almog, Maxim Shoshany, Victor Alchanatis

11:40 Evaluation of Bayesian Hyperspectral Image Segmentation with a Discriminative Class Learning
Janete S. Borges, André R.S. Marçal, José M. Bioucas-Dias

12:00 Does An Endmember Set Really Yield Maximum Simplex Volume?
Chao-Cheng Wu, Chein-I Chang

12:20 A Machine Learning Approach for Finding Hyperspectral Endmembers
Amit Banerjee, Philippe Burlina, Joshua Broadwater

Thursday Afternoon (14:20 - 16:00)
Room: 121
Th01AH1. Radar Altimetry: On-board and On-ground Processing Techniques
Co-Chairs: *Robert Hawley , Mònica Roca*

14:20 An Interferometric Imaging Altimeter Applied for both Ocean and Land Observation
Yunhua Zhang, Xiangkun Zhang, Xin Meng, Zhixin Zhou, Wei Luo, Jingshan Jiang

14:40 Across-track processing for elevation retrievals from a Synthetic Aperture Interferometric radar altimeter
Robert L Hawley, Andrew P. Shepherd

15:00 A New Tracker for Ocean-Land Compatible Radar Altimeter
Ke Xu, Jingshan Jiang, Heguang Liu

15:20 An Innovative Algorithm for Radar Altimeter Acceleration Bias Compensation
Xi-Yu Xu, He-Guang Liu

15:40 Theoretic Error Analysis of Split-Gate Tracker in Satellite Radar Altimetry
He-Guang Liu, Xi-Yu Xu, Ke Xu

Thursday Afternoon (14:20 - 16:00)
Room: 123
Th02AH1. Multitemporal Land Cover Mapping
Co-Chairs: *Mário Caetano*

14:20 An Approach for Land Cover Mapping with Multi-Temporal MERIS Imagery
Luís Capão, Hugo Carrão, António Araújo, Mário Caetano

14:40 Multi-Temporal SAR Images at X-Band: Scattering Features and Potential in Land Cover Classification
Cosimo Putignano, Fabio Del Frate, Giorgio Licciardi, Giovanni Schiavon, Domenico Solimini

15:00 Multitemporal Analysis of the Spectral Response of Scars of Burnt Areas Using the Landsat/ETM Sensor
Felix Carriello, Liana Oighstein Anderson, Marcos Adami

15:20 Climate, Vegetation Phenology and Forest Fires in Siberia
Heiko Balzter, France Fanny Gerard, Graham Weedon, Will Grey, Sietse Los, Bruno Combal, Etienne Bartholome, Sergey Bartalev

15:40 Self-Organizing Map for Surface Characterization in Time Series
Bassam Abdel Latif, Grégoire Mercier, Basel Solaiman, Rémi Lecerf

Thursday Afternoon (14:20 - 16:00)
Room: 132
Th03AH1. Optical Sensors
Co-Chairs: *John P. Kerekes*

14:20 A High Performance EO Small Satellite Platform & Sensor Suite
Mike Cutter, Phil Davies, Adam Baker, Martin Sweeting

14:40 Geosynchronous Imaging Fourier Transform Spectrometer (GIFTS): Imaging and Tracking Capability
Daniel K. Zhou, Allen M. Larar, Xu Liu, Robert A. Reisse, William L. Smith, Henry E. Revercomb, G. E. Bingham, Lorin J. Zollinger, Joe J. Tansock, Ron J. Huppi

15:00 Diffraction Effects on the Meteosat Third Generation Infrared Sounder (MTG IRS)
Jochen Grandell, Rolf Stuhlmann

15:20 Differential Radiometers Using Fabry-Perot Interferometer Technique for Remote Sensing Determination for Various Atmospheric Trace Gases
Elena M. Georgieva, William S. Heaps, Emily L. Wilson

Thursday Afternoon (14:20 - 18:00)
Room: 120
Th04AF. HR SAR
Co-Chairs: *Mihai Datcu , Gottfried Schwarz*

14:20 Very High Resolution Interferogram Acquisition Campaign and Processing
Xavier Dupuis, Sébastien Angelliaume, Hélène Oriot, Pascale Dubois-Fernandez, Hubert Cantalloube, Colette Coulombeix, Olivier du Plessis, Patrick Fromage, Grégory Bonin, Daniel Heuzé

14:40 Polarimetric Analysis of Maritime SAR Data Collected with the DSTO Ingara X-Band Radar
D.J. Crisp, N.J.S. Stacy, D.A. Hudson, P.B. Pincus, A.S. Goh

15:00 Ship-Iceberg Discrimination Using High-Resolution Polarimetric SAR Data
Gordon Staples, Des Power, Carl Howell, Kell Dodge

15:20 Integrating Point, Curve and Area Descriptors into Geospatial Databases for Metric Resolution SAR Image Analysis
Serena Avolio, Luca Galli, Davide Passaro, Marco Quartulli, Manuela Sagona, Giusy Sinatra, Carlo Zelli

15:40 Multiscale Filtering of SAR Images Using Scale and Space Consistency
Samuel Foucher

16:00 COFFEE BREAK

16:20 Robust Change Analysis of SAR Data Through Information-Theoretic Multitemporal Features
Luciano Alparone, Bruno Aiazzi, Stefano Baronti, Andrea Garzelli, Filippo Nencini

16:40 Stochastic Models of SLC HR SAR Images
Matteo Soccorsi, Mihai Datcu

17:00 Unsupervised SAR Images Segmentation Using Triplet Markov Fields and Fisher Noise Distributions
Dalila Benboudjema, Florence Tupin, Wojciech Pieczynski, Marc Sigelle, Jean-Marie Nicolas

17:20 Linear Versus Non-Linear Analysis of Relevant Scatterers in High Resolution SAR Images
Houda Chaabouni-Chouayakh, Mihai Datcu

17:40 Progress and perspectives of information extraction from high resolution SAR data
Mihai Datcu, Gottfried Schwarz, Houda Chaabouni, Matteo Soccorsi

Thursday Afternoon (14:20 - 18:00)
Room: 122
Th05AF. TRMM
Co-Chairs: *Shuji Shimizu , V. Chandrasekar*

14:20 Effective Dielectric Constants of Non-Spherical Melting Hydrometeors
Liang Liao, Robert Meneghini

14:40 Simultaneous Radar Observations of Tropical Cyclones by Space-Based and Ground-Based Radar
Direk Khajonrat, V. Chandrasekar, G Viswanathan, Vikas Shellar

15:00 Intercalibration of Passive Microwave Rain Rates
Kyle Hilburn, Frank Wentz

15:20 Level-3 Error Oceanic Rainfall Algorithm for TMI
Thomas Wilheit, Rich Weitz

15:40 Observational Data Set in Support of Falling Snow Retrieval Algorithm Development
Gail Skofronick Jackson, Ben Johnson, Ali Tokay, Walter Petersen

16:00 COFFEE BREAK

16:20 Adjustment of Cross-Track Dependence of TRMM Precipitation Radar Observation
Basim J. Zafar, V. Chandrasekar

16:40 Global Satellite Millimeter-Wave Precipitation Retrievals Trained with a Cloud-Resolving Numerical Weather Prediction Model
Chinnawat Surussavadee, David H. Staelin

17:00 Analysis of Densely Observed TRMM/PR Data During 180-Degree Yaw Maneuver
Nobuhiro Takahashi, Toshio Iguchi

17:20 Modification of the Beam Mismatch Correction Algorithm
Tetsuya Tagawa, Shuji Shimizu, Riko Oki, Hiroshi Hanado

17:40 Comparison of NOWRAD, AMSU, AMSR-E, TMI, and SSM/I Surface Precipitation Rate Retrievals over the United States Great Plains
Chinnawat Surussavadee, David Staelin, Virat Chadarong, Dennis McLaughlin, Dara Entekhabi

Thursday Afternoon (14:20 - 18:00)
Room: 124
Th06AF. TerraSAR-X: First Post-Launch Reports and Results
Co-Chairs: *Achim Roth , Irena Hajnsek*

14:20 TerraSAR-X Mission Status
Rolf Werninghaus, Stefan Buckreuss, Wolf Pitz

14:40 In-Orbit SAR Performance of TerraSAR-X
Jose Marquez-Martinez, Carolina Gonzalez, Marwan Younis, S. Wollstadt, R. Metzig, U. Steinbrecher, Nuria Tous-Ramon, Adriano Meta, Josef Mittermayer

15:00 TerraSAR-X Calibration - First Results
Marco Schwerdt, Benjamin Bräutigam, Markus Bachmann, Björn Döring

15:20 TerraSAR-X Payload Data Processing - First Experiences
Helko Breit, Thom Fritz, Birg Schättler, Elke Börner, Mari Lachaise, Andreas G. Niedermeier, Michael Eineder, Ulri Balss

15:40 Quality of Orthorectified TerraSAR-X Products
Martin Huber, Birgit Wessel, Martin Habermeyer, Achim Roth

16:00 COFFEE BREAK

16:20 TerraSAR-X Value Added Image Products
Nadine Schmidt, Juergen Janoth, Johannes Raggam, Karlheinz Gutjahr, Andreas Wimmer

16:40 TerraSAR-X Interferometry: Report on a First Assessment
Nico Adam, Michael Eineder, Birg Schättler, Richard Bamler

17:00 First Results of Ground Moving Target Analysis in TerraSAR-X Data
Steffen Suchandt, Hartmut Runge, Michael Eineder, Helko Breit, Alexander Kotenkov, Ulrich Balss

17:20 TerraSAR-X: Exploration of Multitemporal Pol-InSAR Data over Agricultural Areas
Irena Hajnsek, Kost Papathanassiou

17:40 The TanDEM-X Mission: Overview and Status
Manfred Zink, Gerhard Krieger, Hauke Fiedler, Alberto Moreira

Thursday Afternoon (14:20 - 18:00)
Room: 128
Th07AF. SMOS (II): Science Issues
Co-Chairs: *Yann H. Kerr , Jordi Font*

14:20 New parameterisation and calibration of L-MEB – application to simulations over south-western France
Jean-Pierre Wigneron , Yann Kerr, Christophe Rüdi, Jean-Christophe Calvet, André Chan, Kauzar Sale, Jennifer Gran, Béatrice Bert, Patricia De Rosnay, Maria José Escorihuela

14:40 The CoSMOS L-Band Experiment in Southeast Australia
Kauzar Saleh, Yann H. Kerr, Gill Boulet, Philippe Maisongrande, Patricia de Rosnay, Dana Floricioiu, M. J. Escorihuela, Jean-Pierre Wigneron, Aurelio Cano, Ernesto López-Baeza, J. P. Grant, J. Balling, N. Skou, M. Berger, S. Delwart, P. Wursteisen, R. Panciera, J. P. Walker

15:00 Assimilation of SMOS data: Plans and expected results
Matthias Drusch, Erik Andersson, Gian Balsamo, Thom Holmes

15:20 The SMOS Soil moisture retrieval algorithm
Yann H. Kerr, Philippe Waldteufel, Phil Richaume, Jean-Pierre Wigneron, Arna Mialon, Ali Mahmoodi, Dana Floricioiu, Paolo Ferrazzoli, Francois Cabot, Steven Delwart

15:40 Optimizing the Algorithm for Retrieving Soil Moisture from SMOS Data
Philippe Waldteufel, Philippe Richaume, Yann Kerr, Jean Pierre Wigneron, Ali Mahmoodi, Arnaud Mialon, Jean Luc Vergely, François Cabot, Paolo Ferrazzoli, Steven Delwart

16:00 COFFEE BREAK

16:20 Salinity Remote Sensing and the Study of the Global Water Cycle
Gary Lagerloef, David M Le Vine, Yi Chao, F. R Colomb, Jordi Font

16:40 SMOS Sea Surface Salinity Prototype Processor: Algorithm Validation
Sonia Zine, Jacqueline Boutin, Jordi Font, Carolina Gabarró, Marco Talone, Nicolas Reul, Joe Tenerelli, Philippe Waldteufel, Francois Petitcolin , Jean-Luc Vergely

17:00 Analysis of L-band radiometric measurements conducted over the North Sea during the CoSMOS-OS airborne campaign
Nicolas Reul, Joseph Tenerelli, Sebastien Guimbard, Fabrice Collard, Niels Skou, Estel Cardellach, Simo Tauriainen, Catherine Bouzinac, Patrick Wursteisen, Bertrand Chapron

17:20 Azimuth Signatures in the L-Band Brightness Temperature Signal from the Sea Surface
Sten Schmidl Søbjærg, Niels Skou

17:40 Towards a Coherent Sea Surface Salinity Product from SMOS Radiometric Measurements and ARGO Buoys
Marco Talone, Adriano Camps, Roberto Sabia, Jordi Font

Thursday Afternoon (14:20 - 18:00)
Room: 129
Th08AF. Agricultural Applications of Remote Sensing
Co-Chairs: *Josée Lévesque*

14:20 Spectral Discrimination And Mapping Of Invasive Wetland Weeds
Chisholm Laurie

14:40 Climate Changes And Variations In Satellite-Based Vegetation Index In China's Agroecosystem, 1982-2002
Peng Yang, Wenbin Wu, Jinqiu Zou, Yan Zha, Huajun Tang, Masahide Kimoto

15:00 The Study Of Evaluation Of Agriculture Ecosystem Environment Quality On The Basis Of The Information Technology Of Geographical
Yang Feiling, Gan Shu

15:20 Relationship between Vegetation Distribution and Groundwater Level in the Lower Reaches of Heihe River Basin, China
Chuanyan Zhao, Zhongren Nan, Guodong Cheng, Shoubo Li

16:00 COFFEE BREAK

16:20 Global-scale modeling of agricultural land use changes by integration of socio-economic and bio-geophysical aspects
Wen Bin Wu, Peng Yang, Ryosuke Shibasaki

16:40 Remote Sensing Techniques for Invasive Species Management
Nancy F. Glenn, Jessica Mitchell, Shane Cherry, Janelle Downs, Jerry Tagestad

17:00 A Reference Sample Database for the Accuracy Assessment of Medium Spatial Resolution Land Cover Products in Portugal
Hugo Carrão, António Araújo, Cecília Cerdeira, Pedro Sarmento, Luís Capão, Mário Caetano

17:20 Direct Validation of FVC, LAI and FAPAR VEGETATION/SPOT Derived Products Using LSA SAF Methodology
Aleixandre Verger, Fernando Camacho-de Coca, Javier García-Haro, Joaquín Meliá

Thursday Afternoon (14:20 - 18:00)
Room: 130
Th09AF. Remote Sensing of the Cryosphere
Co-Chairs: *Ellsworth LeDrew , Siri Jodha Khalsa*

14:20 Improved Resolution for the Detection of Snow With MODIS Using Wavelet Fusion
Pascal Sirguey, Renaud Mathieu, Yves Arnaud, Muhammad M. Khan, Jocelyn Chanussot

14:40 Operational Snow Monitoring Using Satellite Observations
Jarkko Koskinen, Jouni Pulliainen, Pirkko Pylkkö, Panu Lahtinen, Matias Takala, Simona Oancea, Juha-Petri Kärnä, Sari Metsämäki, Miia Eskelinen, Saku Anttila

15:00 The Influence of Tundra Lakes on Passive Microwave Remote Sensing of Snow Water Equivalent in the Hudson Bay Lowlands.
Peter Toose, Ellsworth LeDrew, Chris Derksen

15:20 COMPARISON BETWEEN ICE OBSERVATIONS MADE ABOARD SHIPS IN THE ANTARCTIC SEA ICE AND AMSR-E/AQUA GEOPHYSICAL PRODUCTS
Burcu Ozsoy-Cicek, Hongjie Xie, Steve Ackley

15:40 Interpretation of C-Band SAR Backscattering Coefficient Time Series for the Baltic Sea Landfast Sea Ice Using a 1-D Thermodynamic Snow/Ice Model
Marko P. Makynen, Bin Cheng, Markku Similä, Timo Vihma, Martti Hallikainen

16:00 COFFEE BREAK

16:20 A New Algorithm to Calculate Sea Ice Concentration from the SSM/I 85GHz Observations
Mohammed S. Shokr, Andrew L. Lambe, Tom A. Agnew

16:40 GLIMS: Progress in Mapping the World's Glaciers
Bruce H. Raup, Siri Jodha S. Khalsa, Richard Armstrong, Christopher Helm, Mark Dyurgerov

17:00 Glacier Volume Changes using ASTER Optical Stereo. A Test Study in Eastern Svalbard
Andreas Kääb

17:20 An Innovative Laser Altimeter for Cryosphere Mapping: The Swath Imaging Multi-polarization Photon-counting Lidar (SIMPL)
David J. Harding, James B. Abshire, Phil W. Dabney, Ted A. Scambos, Anotonios A. Seas, Christopher A. Shuman, Xiaoli Sun

17:40 Retrieval of Ice Thickness Distribution in the Seasonal Ice Zone from L-Band SAR
Takenobu Toyota, Kazuki Nakamura, Shotaro Uto, Kay I. Ohshima, Naoto Ebuchi

18:00 Study of Himalayas Ice using MSMR Data
O.P.N. Calla, Sugandha Lohar

Thursday Afternoon (14:20 - 18:00)
Room: 131
Th10AF. Data Search, Access, Distribution and Specialized Services
Co-Chairs: *Hampapuram Ramapriyan , Liping Di*

14:20 Earth Observing System (EOS) Data and Information System (EOSDIS) – Evolution Update and Future
Mary Esfandiari, Hampapuram Ramapriyan, Jeanne Behnke, Edwin Sofinowski

14:40 Finding and Accessing Data at the Atmospheric Science Data Center
Michelle T. Ferebee, David E. Cordner, Nancy A. Ritchey, Linda A. Hunt, Peter Piatko, Susan J. Haberer, Fenny Y. Wang

15:00 Data Access Tools - Filling the Usability Gap in Cryophere Data
Vincent J. Troisi, Mary J Brodzik, Terr Haran, John Maurer, Matt Savoie, Ros Swick, Rona Weaver

15:20 ECHO - Enabling Interoperability with NASA Earth Science Data and Services
Michael Burnett, Beth Weinstein, Andrew Mitchell

15:40 Implementation of Web-service-based Product Virtualization in GeoBrain
Liping Di, Peis Zhao

16:00 COFFEE BREAK

16:20 DataFed: Mediated Web Services for Distributed Air Quality Data Access and Processing
Rudolf Husar, Kari Hoijarvi

16:40 Discovery, Query and Access Services for Imagery, Gridded and Coverage Data - A Clearinghouse Solution
Stefano Nativi, Lorenzo Bigagli, Paolo Mazzetti, Ugo Mattia, Enrico Boldrini

17:00 Large-Scale, Collaborative Science Using Web Services and the SciFlo Grid Dataflow Engine.
Brian Wilson, Gera Manipon, Zhan Xing, Thom Yunck

17:20 Enterprise IT Support for NOAA Archives
Robert Rank

Thursday Afternoon (14:20 - 18:00)
Room: 133
Th11AF. Hyperspectral Image Analysis
Co-Chairs: *Maria Petrou , Lori Mann Bruce*

14:20 Anomaly Detection in Hyperspectral Data Using Spectral Unmixing with Negative and Superunity Abundance Weights
Olga Duran, Maria Petrou

14:40 Hyperspectral Unmixing Algorithm Via Dependent Component Analysis
Jose M. P. Nascimento, Jose M. Bioucas-Dias

15:00 Joint Linear/Nonlinear Spectral Unmixing of Hyperspectral Image Data
Javier Plaza, Antonio Plaza, Rosa Pérez, Pablo Martínez

15:20 Kernel Fully Constrained Least Squares Abundance Estimates
Joshua Broadwater, Ramalingam Chellappa, Amit Banerjee, Philippe Burlina

15:40 Sparsity Promoting Iterated Constrained Endmember Detection with Integrated Band Selection
Alina Zare, Paul D. Gader

16:00 COFFEE BREAK

16:20 Limitations of Subspace LDA in Hyperspectral Target Recognition Applications
Saurabh Prasad, Lori M. Bruce

16:40 A Comparison of Approaches for Hyperspectral Image Segmentation: N-FINDR, ICA, and NNMF
Michael E. Winter, Edwin M. Winter

17:00 Level Set Hyperspectral Image Segmentation Using Spectral Information Divergence-Based Best Band Selection
John E. Ball, Terrance R. West, Saurabh Prasad, Lori M. Bruce

17:20 On-Line Hyperspectral Image Segmentation Based On Textural-Spectral Feature Fusion
Hassan Ghassemian, David Landgrebe

17:40 Physically-Based Retrievals of Norway Spruce Canopy Variables from very High Spatial Resolution Hyperspectral Data
Zbynek Malenovsky, Lucie Homolova, Pavel Cudlin, Raul Zurita-Milla, Michael E. Schaepman, Jan G.P.W. Clevers, Emmanuel Martin, Jean-Philippe Gastellu-Etchegorry

Thursday Afternoon (16:20 - 18:00)
Room: 121
Th12AH2. Special Session: A Tribute to Professor Mikio Takagi
Co-Chairs: *Kiyo Tomiyasu , Motoyuki Sato*

Professor Mikio Takagi passed away on February 6, 2006. He was an accomplished engineer and professor in digital image processing and remote sensing technology. He will be remembered for his lifetime research, development and dissemination of digital image processing and achievements that span almost the entire spectrum of remote sensing.

He was General Chairman of the 1993 GRSS International Symposium held in Tokyo, the first IGARSS held in the Far East. His interest in that IGARSS started 10 years earlier, in 1983 when he attended the IGARSS held in San Francisco. His dedicated interest and pursuit was matched with his interest and commensurate service on the GRSS Administrative Committee.

Dr. Takagi was born on May 16, 1936 in Tokyo. He received his BS, MS and PhD from the University of Tokyo. He joined the University of Tokyo as Associate Professor and promoted to Professor in 1979. He spent 1971-72 as a visiting research scientist at the University of California in Santa Barbara.

As Professor he taught numerous students, many receiving their PhD. He served the technical profession in numerous ways and received numerous recognitions. The Japanese Emperor awarded him The Order of the Sacred Treasure, Gold Rays with Neck Ribbon.

Introductory Remarks
Leung Tsang

In Memory of Professor Mikio Takagi
David Goodenough

Professor Takagi's Contributions to Weather Satellite Imagers
William Emery

Mikio Takagi's Career as Professor
Haruhisa Shimoda

Remarks from former Students
Associate Professor Asanobu Kitamoto
Dr. Masaki Yasukawa

Professor Mikio Takagi Student Prize
Kiyo Tomiyasu

Introduce Mrs. Atsuko Takagi
Kiyo Tomiyasu

Concluding Remarks
Kiyo Tomiyasu

Thursday Afternoon (16:20 - 18:00)
Room: 123
Th13AH2. Image Visualization
Co-Chairs: *Holger Nies*

16:20 OpenStereo: Converting Satellite Image Pairs into Anaglyph Stereoscopic Views
Severino Gomes Neto, Veronica Teichrieb, João Marcelo Teixeira, Judith Kelner

16:40 Automated Adaptive Morphological Image Composition for Mosaicing Large Image Data Sets
Conrad Bielski, Jacopo Grazzini, Pierre Soille

17:00 A System for 3D Error Visualization and Assessment of Digital Elevation Models
Michael B. Gousie, Sarah Milewski

17:20 GPU-based Framework for Interactive Visualization of SAR Data
Martin Lambers, Andreas Kolb, Holger Nies, Marc Kalkuhl

17:40 A Novel Algorithm for Filling the Depressions in Massive DEM Data
Jingwen Xu, Wanchang Zhang, Chuansheng Liu

Thursday Afternoon (16:20 - 18:00)
Room: 132
Th14AH2. Sensor Application to International Disaster Management
Co-Chairs: *Thomas vonDeak , Joel Johnson*

16:20 Developing A Summary of Remote Sensing Data Useful for Mitigating Natural and Man-Made Disasters
Charles D. Wende

16:40 Sensor Application to International Disaster Management
Thomas vonDeak

17:00 Emphasizing Spectrum Management for Sustainable Development Research and Applications in Disaster Management
Stephen Ambrose, Shahid Habib

17:20 Active Remote Sensing Applications to Disaster Management and Implications to Spectrum Management.
Bryan L. Huneycutt

17:40 GEONETCast: Meeting Societal Benefits Requirements Disasters
Thomas Adang

Thursday Interactive Session (18:00 - 19:30)
Room: Foyer-2
Th01EP. Ground and Foliage Penetrating Radar
Co-Chairs: *Ludovic Villard , Olga Lopera*

Analysis of the effect of target and soil properties on the detection performance of ground penetrating radar: experimental and in filed results
Olga L. Lopera, Jan Rhebergen, Nada Milisavljevic, Sebastien Lambot

Bistatic Foliage Penetration Modeling
Ludovic Villard, Pierre Borderies

The Characteristic of Surface Clutter in Forward-looking and Down-looking Ground Penetrating Radar
Chunlin Huang, Yi Su, Min Lu, Xuan L

i **Focusing Problems of Subsurface Imaging by a Low-Frequency SAR**
S. Redadaa, J.- M. Le Caillec, B. Solaiman, M. Benslama

Experimental Validation of a Kirchhoff Based Shape Reconstruction Algorithm in Realistic Conditions: A Test Case for Buried Pipes
Francesco Soldovieri, Adriana Brancaccio, G. Prisco, Domenico Sglavo, Rocco Pierri, Giovanni Leone

Polarimetric RADARSAT-2 FOR Wetland Monitoring
Ridha Touzi, Alic Deschamps, Robe Hélie

A New Design of TEM Horn Antenna System for Ground Penetrating Radar
Shi-tao Zhu, An-xue Zhang, Yan-sheng Jiang

GPR Missions on Mars: Subsurface Detection Using the Surface Topography
Marc Iorio, Riccardo Mecozzi, Roberto Seu, Giovanni Picardi, Franco Fois

Thursday Interactive Session (18:00 - 19:30)
Room: Foyer-2
Th02EP. Optical Calibration
Co-Chairs: *Gyanesh Chander , Pauli Heikkinen*

Comparison of MODIS Surface Reflectance with Mast-Based Spectrometer Observations Using CORINE2000 Land Cover Database
Pauli Heikkinen, Jouni Pulliainen, Esko Kyrö, Timo Sukuvaara, Hanne Suokanerva, Anna Kontu

A Vicarious Calibration for Thermal Infrared Bands of TERRA-MODIS Sensor using a New Calibration Test Site-Lake Dali, China
Li Zhu, Xingfa Gu, Yuxiang Zhang, Tao Yu, Liangfu Chen, Hui Gong, Hongyan Huai

Surface Characterization Analysis of Inner Mongolia Plateau Area (China) as Potential Satellite Calibration Sites, Using MODIS(Terra and Aqua) Instrument
Hailiang Gao, Yuxiang Zhang, Xingfa Gu, Tao Yu, Hui Gong, Li Zhu

Vicarious Calibration of MODIS Visible and Near-Infrared Bands Using Gongger Test Site
Hui Gong, Guoliang Tian, Yuxiang Zhang, Tao Yu, Xingfa Gu, Jin Xing, Hongyou Liang, Li Zhu

On-orbit Noise Characterization Methodology and Results for MODIS Reflective Solar Bands
xiao xie, Jack xiong

Summary of Terra and Aqua MODIS On-orbit Calibration and Characterization Results
Xiaoxiong Xiong, Vincent V. Salomonson, Brian Wenny, Xiaobo Xie, Nianzhen Che, Aisheng Wu, William Barnes

Radiometric Recalibration Procedure for Landsat-5 Thematic Mapper Data
Gyanesh Chander, Esad Micijevic, Ronald W. Hayes, Julia A. Barsi

New Development of 1.6 µm InGaAs Radiometer for Preflight Cross-Calibration Measurement
Fumihiro Sakuma

Digital Metric Camera Radiometric and Colorimetric Calibration with Simultaneous CASI Imagery to a CIE Standard Observer Based Colour Space
Lucas Martínez, Roman Arbiol, Vicenç Palà, Fernando Pérez

Thursday Interactive Session (18:00 - 19:30)
Room: Foyer-2
Th03EP. Radar Polarimetry
Co-Chairs: *R. Keith Raney , X. Fàbregas*

Unsupervised full-polarimetric segmentation for evaluation of backscatter mechanisms of agricultural crops
Dirk Hoekman, Thanh Tran, Martin Vissers

Crop Growth Detection by Using Polarimetric SAR Data
Muhtar Qong, Atsu Iwashita

Properties of Polarimetric Sea Clutter at 35 GHz
Hartmut Schimpf, Hans-Hellmuth Fuchs

The Problem of Parameter Estimation for Spatially Correlated Polarimetric Ground Clutter at Millimeterwave Frequencies
Anika Kurz, Hartmut Schimpf

Degree of Polarization for Weather Radars
Michele Galletti, Madhu Chandra, Thomas Boerner, David H. O. Bebbington

A Ship Detection Method for Dual Polarization SAR Data Based on Whitening Filtering
Xiaowei Li, Jinsong Chong, Minhui Zhu

Polarimetric Optical Tools and Decompositions Applied to SAR Images
Elise K. Colin

Retrieval of Fully Polarimetric Mueller Matrix Under Faraday Rotation Effect at P Band in Space-borne Polarimetric SAR Observation
Ya-Qiu Jin, Ren-Yuan Qi

The Dependence of Polarimetric Decomposition Parameters on Biophysical Forest Parameters, Frequency and Methodology
Lukas Zuberbuehler, Erich Meier

GRECOSAR, a SAR Simulator for Complex Targets: Application to Urban Environments
Gerard Margarit, Jordi J. Mallorqui, Carlos López-Martínez

Multi-Look Polar Decomposition of Polarimetric SAR Images
Jean-Claude Souyris, Celine Tison

A Neural Approach for Unsupervised Classification of Very-High Resolution Polarimetric SAR Data
Alessandro Burini, Cosimo Putignano, Fabio Del Frate, Marco Del Greco, Giovanni Schiavon, Domenico Solimini

An Approach to Classify Polarimetric P-Band SAR Images for Land Use and Land Cover Mapping in the Brazilian Amazonia
Luciana de Souza Soler, Sidnei João Siqueira Sant'Anna, Corina da Costa Freitas, Luciano Vieira Dutra, João Roberto dos Santos

Bayesian Classification of Hydrometeors from Polarimetric Radars at S and X Band: Algorithm Design and Experimental Comparisons
Frank S. Marzano, Daniele Scaranari, Mario Montopoli, Gianfranco Vulpiani , Marios Anagnostou, Emmanouil Anagnostou

Signatures of Polarimetric Parameters and their Implication on Land Cover Classification
Henning Skriver

Design of FMCW Millimeter-Wave Radar for Helicopter Assisted Landing System
Mustafa Rangwala, Juseop Lee, Kamal Sarabandi

Comparison of Parameter Estimation Accuracy of Distributed-Target Polarimetric Calibration Techniques
Alvin S. Goh, Mark Preiss, Douglas A. Gray, Nick J. S. Stacy

Thursday Interactive Session (18:00 - 19:30)
Room: Foyer-2
Th04EP. Remote Sensing of the Cryosphere
Co-Chairs: *Ellsworth LeDrew , James Garrison*

Baltic Sea Ice Thickness Charts Based on Thermodynamic Ice Model and SAR Data
Juha Karvonen, Bin Cheng, Markku Simila

Simulating the Radiobrightness of a Wet Colorado Snowpack in Early Spring
Yi-Ching Chung, Roger De Roo, Anthony W England

P-Sounder: An Airborne P-Band Ice Sounding Radar
Jorgen Dall, Niels Skou, Anders Kusk, Steen Savstrup Kristensen, Viktor Krozer

Potential of a C-band SAR Mission with 12-day Repeat Cycle to Derive Ice Surface Velocity with Interferometry and Offset Tracking
Tazio Strozzi, Urs Wegmüller, Charles Werner , Andreas Wiesmann , Maurizio Santoro

Development of a Snow Water Equivalent (SWE) Retrieval Algorithm over First-Year Sea Ice using In-Situ Passive Microwave Data
Alex Langlois, David G. Barber, Byong J. Hwang

Comparative Study of Sea Ice Concentration by Using DMSP SSM/I, Aqua AMSR-E and Kompsat-1 EOC
Hyangsun Han, Hoonyol Lee

Assimilating Spaceborne Radar and Ground-Based Weather Station Data for Operational Snow-Covered Area Estimation
Kari Luojus, Jouni Pulliainen, Sari Metsämäki, Saku Anttila, Martti Hallikainen

Retrieval from AMSR-E Data of the Snow Temperature Profiles at Dome-C Antarctica
Giovanni Macelloni, Marco Brogioni, Emanuele Santi

Ice Flow Estimation of Shirase Glacier by Using JERS-1/SAR Image Correlation
Kazuki Nakamura, Hiroyuki Wakabayashi, Koichiro Doi, Kazuo Shibuya

Robust Measurement of Glacier Surface Motion from Multiscale Speckle Tracking Using Local Constraints
Esra Erten, Andreas Reigber, Marc Jaeger, Olaf Hellwich

Effective snow properties for brightness temperature estimation using coupled hydrologic and electromagnetic models
Konstantinos M. Andreadis, Marco Tedesco, Dennis P. Lettenmaier, Eric F. Wood

Provision of Snow Water Equivalent from Satellite Data and the Hydrological Model PROMET Using Data Assimilation Techniques
Florian Appel, Heike Bach, Natalie Ohl, Wolfram Mauser

Comparing satellite radar altimetry estimates of Antarctic sea ice elevation in-situ data.
Katharine Giles, Seymour Laxon

Passive Microwave Signatures of Autumnal Sea Ice Types from Ship-Based Observation
Byongjun Hwang, Jens K. Ehn, Ryan Galley, David G. Barber

The coherence analysis for detecting the subsidence at permanent frozen area in Qinhai-Tibetan Plateau
Chou Xie, Qing Dong, Zhen LI, Xinwu Li

Geo-statistical Analysis of Snow Grain Size Derived by HUT Snow Emission Model
Amir E Azar, Narges Shahroudi, Atiq Rahman, Reza Khanbilvardi, Hosni Ghedira, Marco Tedesco

Estimating properties of snow on sea ice using multispectral microwave radiometry
Thomas M. Schrøder, Leif T. Pedersen, Rasmus T. Tonboe

An Improved Methodology to Map Snow Cover by Means of Landsat and MODIS Imagery
Cristina Cea, Jordi Cristóbal, Xavier Pons

Diurnal SAR Variability Due to Ice and Snow Air Interface Wetness Overnight Changes
Eric Hudier, Jean-Sebastien Gosselin, Deborah Febres

Global Sea Ice Monitoring at NIC: Tactical to Climate Observations
Pablo Clemente-Colón, Paul Seymour, John Woods, Brian Melchior, Wanshu Huang, Bryan Wagonseller, John Peña

Development of an Advanced Technique for Mapping and Monitoring Sea and Lake Ice for the Future GOES-R Advanced Baseline Imager (ABI)
Hosni Ghedira, Reza Khanbilvardi, Peter Romanov

The Circumpolar Flaw Lead (CFL) System Study
David G. Barber

Estimating the Snow Melt Onset Using AMSR-E Data in Eurasia
Matias Takala, Jouni Pulliainen, Panu Lahtinen

Comparison of Three Algorithms to Estimate Snow Water Equivalent (SWE) over La Grande River Watershed by using SSM/I Data in the Context of Hydro-Quebec's Hydraulic Power Management
Danielle De Sève, Noël Évora, Dominique Tapsoba

Small Scale Spatial Variability of Snow Cover during the 2002-2003 CLPX
B. B Stankov, Albin J Gasiewski, Don Cline, Bob Wweber, Garr Wick, Richard Kelly, Marian Klein, Marco Tedesco

Thursday Interactive Session (18:00 - 19:30)
Room: Foyer-2
Th05EP. Aerosols and Pollution
Co-Chairs: *Elisa Palazzi , Fabrizio Cuccoli*

Dust Aerosol Transportation Characteristic in Yanchi area of Ninxia Autonomous Region during Spring
Landong Sun, Pengxiang Wang, Zhongmin Xu, Ping Yue

Extracting Spatial Data from Satellite Sensor to Support Air Pollution Determination using Remote Sensing Technique
H.S. Lim, M.Z. MatJafri, K. Abdullah, N.Mohd. Saleh, C.J. Wong

A Synergetic Approach for the Retrieval of Aerosol Optical Thickness from both AATSR Data and MODIS BRDF Data over Land
Jianping Guo, Yong Xue, Jie Guang, Ying Luo, Wei Wan, Linyan Bai, Lei Zheng, Wei Wei

Nationwide Aerosol Optical Thickness Application Using Grid Computing Platform
Wei Wan, Yong Xue, Ying Luo, Jianping Guo, Lei Zheng, Linyan Bai, Jie Guang, Wei Wei

Five Years Measurements of CO2 Air Concentrations by DSA IR Laser Devices. Results and Perspectives for Laser Remote Sensing Systems of Gas Emissions by Critical Areas
Fabrizio Cuccoli, Luca Facheris, Orlando Vaselli, Franco Tassi

Evaluation of Optical Properties of Atmospheric Aerosols Estimated from Ground-based Polarization Measurements
Takashi Kusaka, Hiroto Kitaguchi

Daily Evolution of Atmospheric Gas Pollutants Vertical Profile in a Coastal Mediterranean Area
Elisa Palazzi, Andrea Petritoli, Fabrizio Ravegnani, Giorgio Giovanelli, Ivan Kostadinov, Daniele Bortoli

Investigation of Thermal Inversions as a Major Contributer to the Black Cloud Episodes over Cairo
Hesham El-Askary, Menas Kafatos

Remote sensing of Aerosols over urban area based on its BRDF model
Lin sun, Qinhuo Liu, Qiang Liu, Liangfu Chen, Jie Cheng

A New Approach to Retrieve Aerosol Optical Thickness from AATSR over Land
Jianping Guo, Yong Xue, Jie Guang, Linyan Bai

The Active-Passive Remote Sensing for Aerosol Optical Depth Retrieval
Zhongmin Zhu, Wei Gong, Pingxiang Li, Liangpei Zhang, Qianqing Qin, Yingying Ma, Shalei Song, Jun Li, Mengyu Liu, Zhongyu Hao

Monitoring of stratospheric ozone by ground-based microwave radiometer: comparison of two retrieval algorithms.
Eliane Maillard, Dominique Ruffieux, Klemens Hocke, Yasmine Calisesi

Numerical simulation of long distance transport of pollutants of Environmental Emergency Response by using HYSPLIT modeling system
Zhenxin Song

Dispersion modelling validation of GOME NO2 images
Yvonne Scorgie, Harold Annegarn, Andreas Richter, Kristy Ross, Lucien Burger

Retrieval aerosol optical thickness by using MODIS TERRA data over urban area of Mongolia
Jadamba Batbayar, Nas-Urt Tugjsuren

A-Train Data Depot – Bringing Atmospheric Measurements Together
Andrey Savtchenko, Robert Kummerer, Peter Smith, Steve Kempler, Greg Leptoukh

An Investigation of Air Pollution in Southern Ontario, Canada, with MODIS and MISR Aerosol Data
Julie Wallace, Pavlos Kanaroglou

Study of Atmospheric Aerosol in Beijing by Spectral, Multi-angular, and Polarimetric Measurements from Ground
Hongyan Huai, Liangfu Chen, Zhengqiang Li, Zhongting Wang

Simultaneous Views of Aerosol Events from the A-Train
Linda A. Hunt, Michelle T. Ferebee

Improvement of MODIS Retrieval of Aerosols over Urban Areas Using a Regionally Tuned Ground Albedo Model
Min Oo, Eduardo Hernandez, Leona Charles, Barry Gross, Fred Moshary, Samir Ahmed

Aerosol Optical Properties over China Sea Based on Measurements by Handheld Sun Photometer
Liqiao Tian, Xiaoling Chen, Hongmei Zhao, Wei Zhao

Thursday Interactive Session (18:00 - 19:30)
Room: Foyer-2
Th06EP. Forest Mapping and Structure
Co-Chairs: *Yolanda Fernandez-Ordonez , Eriko Ito*

Correlations of the Biomass of the Main Tropical Forest Vegetation Types and LANDSAT TM Data in Xishuangbanna of P. R. of China
Cunjian Yang, Jieming Zhou, He Huang , Xi Chen

Retrieval of Vegetation Understory Information Fusing Hyperion and Panchromatic QuickBird Data in the Method of Neural Network
Jianxi Huang, Feng Mao, Wenbo Xu

Deforestation Detection and Monitoring in Cedar Forests of the Moroccan Middle-Atlas Mountains
Driss Haboudane, El Mustapha Bahri

Leaf-shedding Phenology in Tropical Seasonal Forests of Cambodia Estimated from NOAA Satellite Images
Eriko Ito, Matoko Araki, Akihiro Tani, Mamoru Kanzaki, Khorn Saret, Det Seila, Pith Phearak, Lim Sopheap, Pol Sopheavuth

Development of an object-oriented framework for classifying and inventorying human-dominated forest ecosystems
Weiqi Zhou, Austin Troy

Spatial And Temporal Dynamics Of Tamarix Forest In The Peripheral Areas Of The Minqin Oasis
Quanlin Ma, Jihe Wang, Xinrong Li

Forest Structural Information Derived from Multi-Angular FIFEDOM (Frequent Image Frames Enhanced Digital Ortho-Rectified Mapping) Data
K. Frank Zhang, Baoxin Hu, John R. Miller

Mapping Mangrove Forest Structure
Maria de los Angeles Liceaga-Correa, Artu Zaldivar-Jimenez, Jorg Herrera-Silveira , Jorg Euan-Avila

Classification of Forest Stand Considering Shapes and Sizes of Tree Crown Calculated from High Spatial Resolution Satellite Image
Ryotaro Komura, Ken-Ichiro Muramoto

Forest stand mapping by object-oriented classification
Cristina Pascual, Lara Anoia Arroyo-Mendez, Susana Martin, Antonio Garcia-Abril, Luis Gonzaga Garcia-Montero, Warren Cohen

Satellite Remote Sensing Technology For Forest Type Classification And Inventory In Gunung Stong Forest Reserve, Kelantan, Malaysia
Zailani Khuzaimah, Shattri Mansor, Siti Noradzah Adam

Monitoring Canopy Grain of Tropical Forest Using Fourier-Based Textural Ordination (FOTO) of Very High Resolution Images
Christophe Proisy, Pierre Couteron, Raphael Pélissier, Nicolas Barbier, Julien Engel

Estimation of Tree Crown Number in a Quickbird Image Using an Image Processing Method
Priscila B. Gomes, Marcos C. Ferreira

Estimation of Forest Stem Volume Using ALOS PALSAR Satellite Images
Mattias Magnusson, Johan E.S. Fransson, Leif E.B. Eriksson, Gustaf Sandberg, Gary Smith-Jonforsen, Lars M.H. Ulander

Utilization of Neural Networks to Estimate Forest Biomass from Ikonos Satellite Image Data and Multi-Source Geo-Scientific Data
Pierre Migolet, Lacina Coulibaly, Hector.G Adegbidi, E. Hervet

Forest Inventory Applications Using Optical and RADARSAT-2 Images In Mexico
Yolanda Fernandez-Ordonez, Jesus Soria-Ruiz, Iain H. Woodhouse

Comparative observations of woody fractional cover derived from endmember bundles using MODIS data
Laurie A Chisholm, Carol Wessman, Steve Archer, Greg Asner

Thursday Interactive Session (18:00 - 19:30)
Room: Foyer-2
Th07EP. Inverse Problems and Parameter Estimation
Co-Chairs: *Mahta Moghaddam , Francesc Rocadenbosch*

SVD Analysis of the Multi-View Scattering Operator in 1-D Inverse Problems
Raffaella Barresi, Giovanni Leone, Raffaele Solimene

A Review of Multi-Angle Remote Sensing Research in China
Jie Guang, Yong Xue, Xiaowen Li, Jianping Guo, Linyan Bai, Ying Luo, Wei Wei, Wei Wan

Scaling Effect Study on Land Surface Parameters Quantitative Inversion Using Remote Sensing
xiaoning Song , Qinh Liu, Xiao Li, Xiao Xin

Retrieving Downward Atmospheric Long-Wave Radiation Using Satellite Data
Miaofen Huang, Jiu-qi LI, Xi-feng Wang, Yin-hui Lin

Multi-layer Perceptron Neural Network Based Algorithm for Simultaneous Retrieving Temperature and Emissivity from Hyperspectral FTIR Dataset
Jie Cheng, Qing Xiao , Xiaowen Li, Qinhuo Liu, Yongming Du, Aixiu Nie

A Multiple-Band Algorithm Optimized by Using Neural Network for Separating Land Surface Emissivity and Temperature from ASTER Imagery
K.B. Mao, H.J. Tang, X.F. Wang, Z.X. Chen, X.F. Wang

A Microwave Imaging Circular Setup for Soil Moisture Information
Raphael Lencrerot, Amélie Litman, Hervé Tortel, Jean-Michel Geffrin

Land Surface Parameters Retrieval Using Time Series Remotely Sensed Observations
Dongwei Wang, Jindi Wang, Zhiqiang Xiao, Ge Zhang

Morphological Tools for Range-Interval Segmentation of Elastic Lidar Signals
Francesc Rocadenbosch, Michaël Sicard, Mohd Nadzri Md Reba, Sergio Tomás

A Multiobjective PSO Inflation Methodology for SVM Regression with Limited Training Samples
Yakoub Bazi, Farid Melgani

Inversion of a Layered Rough Surface Model: Maximizing the Number of Retrievable Parameters for the Design of Future Subsurface Sensing Radar Systems
Alireza Tabatabaeenejad, Mahta Moghaddam

Retrieval of Total Column Methane Concentration from IR Sounding Measurements
Nadia Smith, Elizabeth Weisz, Hung-Lung Huang, Harold J. Annegarn

New Inversion Algorithm for Raman Lidar without Derivative of the Inelastic Signal
Francisco Molero, Manuel Pujadas

Use of Geostationary Satellite Thermal Infrared Data to Monitor Surface Exchanges at Local Scale over Heterogeneous Landscape: Application to Meteosat 8 Data
Benoit Coudert, Catherine Ottlé, Brice Boudevillain, Christine Guérin, B. de Solan, D. Boisgontier, O. Deudon, J. Testud, E. Moreau, E. Lebouar, A. Olioso

Matching Stereoscopic SAR Images for Radargrammetric Applications
Franck Fayard, Stéphane Méric, Eric Pottier

A Neural Network Technique for Retrieving Land Surface Temperature and Emissivity from MODIS Data
K.B. Mao, H.J. Tang, L.Y Li, Y.B. Qiu

Thursday Interactive Session (18:00 - 19:30)
Room: Foyer-2
Th08EP. Passive Microwave: Missions and Calibration
Co-Chairs: *Albin J. Gasiewski , Ignasi Corbella*

The effect of receiver temperature differences in interferometric microwave radiometry
Janne Lahtinen, Kimmo Rautiainen, Manuel Martin-Neira

A 22 GHz Mobile Microwave Radiometer for the Study of Stratospheric Water Vapour
Erwan Motte, Philippe Ricaud, Mathieu Niclas, Benjamin Gabard, Fabrice Gangneron

Calibration of the Ground-Based Microwave Radiometer in Monitoring Soil Moisture
Zhongjun Zhang, Lixin Zhang, Thomas Rose

Hardware Specification and System Performance of Dual-Channel Radiometers for Earth and Atmosphere Monitoring (DREAM) Flight Model
Ho-Jin Lee, Sung-Hyun Kim, Nam-Won Moon, Jin-Taek Seong, Yong-Hoon Kim, De-Hai Zhang, Jing-Shan Jiang, Jong-Oh Park, Eun-Sup Sim

Impact of the Calibration on the Performance of a Total Power Radiometer
Thierry Amiot, Christophe Goldstein

FPIR: A One Dimensional Full Polarization Interferometric Radiometer
Jingye Yan, Ji Wu, Manuel Martin-Neira

A Neural-Network Technique for Retrieving Land Surface Temperature From AMSR-E Passive Microwave Data
K.B Mao, J.C. Shi, H.J. Tang, Y. Guo, Y.B. Qiu, L.Y. Li

NASA's Application of Catalog Interoperability Specifications and the GEOSS Clearinghouse Concept
Marge Cole, Nadine Alameh, Myra Bambacus

SMOS L1 Processor Prototype for Near Field Targets
Antonio Gutiérrez, José Barbosa, Nuno Almeida, Nuno Catarino

Remote Sensing of the Moon Sub-Surface from a Spaceborne Microwawe Radiometer aboard the European Student Moon Orbiter (ESMO)
Mario Montopoli , Piero Tognolatti, Frank S. Marzano, Mauro Pierdicca, Giorgio Perrotta

Thermal Stabilized Front-End PCB with Active Cold Calibration Load for L-Band Radiometer
Sami Kemppainen, Juha Lemmetyinen, Tuomo Auer, Andreas Colliander, Aleksi Aalto, Kimmo Rautiainen, Martti Hallikainen

Brightness Temperature Validation for SeaWinds Radiometer Using Advanced Microwave Scanning Radiometer on ADEOS-II
Rafik Hanna, Linwood Jones

GPM Microwave Imager Instrument Design and Predicted Performance
David Newell, Don Figgins, Thach Ta, Barry Berdanier

Calibration of SMOS Geolocation Biases
Francois Cabot, Yann H. Kerr, Philippe Waldteufel

Geolocation of AMSR-E data
Heidrun Wiebe, Georg Heygster, Lothar Meyer-Lerbs

Study on Sensitivity of Interferometric Radiometer
Jingye Yan, Ji Wu, Manuel Martin-Neira

Thursday Interactive Session (18:00 - 19:30)
Room: Foyer-2
Th09EP. Scatterometry
Co-Chairs: *Marcos Portabella , David Weissman*

The Effect of Rain on Retrieval of C- and Ku-Band Scatterometer Surface Winds during Hurricane Isabel (2003)
Robert Contreras, Stephen Frasier, Daniel Esteban-Fernandez, Paul Chang

Frequency Impact on the Bistatic Radar Scattering from an Ocean Surface
Ahmad Awada, Ali Khenchaf, Arnaud Coatanhay

Simultaneous Wind and Rain Retrieval for ERS Scatterometer Measurements

Congling Nie, David Long

Accuracy and Resolution Analysis of the Pencil Beam Radar Scatterometer Onboard China's HY-2 Satellite
Xiaolong Dong, Shuyan Lang, Tao Wang, Heguang Liu

Polarimetric, Combined, Short Pulse Scatterometer-Radiometer System at 5.6GHz
Astghik Hambaryan, Arta Arakelyan, Arse Arakelyan, Sarg Darbinyan, Mela Grigoryan, Izab Hakobyan, Vani Karyan, Mush Manukyan, Gagi Hovhannisyan, Nuba Poghosyan, N. G. Poghosyan

Thursday Interactive Session (18:00 - 19:30)
Room: Foyer-2
Th10EP. Radar Interferometry
Co-Chairs: *Wolfgang-Martin Boerner , Juan M. Lopez-Sanchez*

DEM Estimation from Multi-Baseline ENVISAT-ASAR Interferometric Data through Maximum Likelihood Techniques
Federica Meglio, Gilda Schirinzi

Offset Phase Estimation in Multi-Channel InSAR DEM Reconstruction
Giampaolo Ferraioli, Vito Pascazio, Giancarlo Ferraiuolo

Impact of SAR Impulse Response Function in Interferometric Measurements
Javier Duro, Nuno Miranda, Geraint Cooksley, E. Biescas, Alain Arnaud

Image Coregistration in SAR Interferometry Only by Means of Arithmetic Operations
Jesus Selva, Juan M. Lopez-Sanchez

Development of a Baseband Signal ATI-SAR Simulator for Ground Moving Target Indication
Zheng-Shu Zhou, Bevan D. Bates, Yunhan Dong

Remote Sensing of Glacier by Ground-Based Radar Interferometry
Daniele Mecatti, Linhsia Noferini, Giovanni Macaluso, Massimiliano Pieraccini, Guido Luzi, Carlo Atzeni, Andrea Tamburini

Improving Interferometric Radar Measurement Accuracy Using local Meteorological Data
Richard Norland

A Multi-Baseline InSAR DEM Reconstruction Approach without Gound Control Points
Jie Li, Haifeng Huang, Diannong Liang

Introduction of a Grid-based Filter Approach for InSAR Phase Filtering and Unwrapping
Juan J. Martinez-Espla, Tomas Martinez-Marin, Juan M. Lopez-Sanchez

Statistical Description of Tropospheric Delay for InSAR: Overview and a New Model
John P. Merryman Boncori, Johan J. Mohr

A Novel Phase Unwrapping Method Based on Image Segmentation
Tao Xiong, Jian Yang, Weijie Zhang

Mixture Model for the Segmentation of the InSAR Coherence Map
Riadh Abdelfattah, Jean-Marie Nicolas

DEM Calibration Concept for TanDEM-X
Jaime Hueso González, Markus Bachmann, Hauke Fiedler, Sigurd Huber, Gerhard Krieger, Manfred Zink

Investigation of Creation Methods of Digital Elevation Model
Dashi Darizhapov, Alexander Leonov

Analysis of urban land use pattern based on high resolution radar imagery
Thom Esch, Achim Roth, Stef Dech

Thursday Interactive Session (18:00 - 19:30)
Room: Foyer-2
Th11EP. General Hydrology
Co-Chairs: *Vijendra Boken , Jean-Michel Martinez*

Water Constituents Inversion in Taihu Lake Based on Artificial Neural Network and Bio-optical Model
Qinghua Fu, Shixin Wang, Yi Zhou, Jianping Guo

Using Remote Sensing to Estimate Water Use Efficiency in Western China
Ling Lu, Xin Li, Chunlin Huang, Frank Veroustraete

Application of Satellite Based Rainfall Products and SRTM DEM in Hydrological Modelling of Large River Catchments
Durga Rao Korada, Bhan V, Roy PS, Nava Ranganad

Inspection with Geoprocessing Techniques in the Microbasins of Ribeirão Mestre D'Armas, Federal District of Brazil.
Bruno Lousada, Mari Lacerda, Ana Boschini

Impact of Land-use Changes on Water Resource in Arid Inland River Basin of Northwest China
Guojing Yang, Lihu Zhou, Xiao Li, Duni Xiao, Dong-Sheng Song

Identification Mode of Petroleum Pollution in Water Based on Remote Sensing Technique and Its Application
Xufeng Xing, Miao Huang, Xiao Qi, Wuyi Yu, Yimi Zhang

A Study on the Spatial Scaling Properties of Topographic Index for China
Bin Yong, Wanc Zhang, Dengzhong Zhao

A Two-Parameter Exponential Function Approach to Simply and Accurately Characterize Spatial Regime of Topographic Index for Land-Surface Parameterizations
Bin Yong, Wanchang Zhang, Chuansheng Liu

Determination of Suspended Sediment Concentration of Taihu Lake, Based on Season Difference Using Multi-Temporal MODIS Image Data
Shix Wang, Yunqing Jiao, Yi Zhou, Litao Wang

Inland water constituents retrieval in Three Gorges Dam area using CHRIS/PROBA data: preprocessing and preliminary results
Zhengjun Liu, Guan Dong, Liya Gai

Study the Role of Thermal Band for Landcover Mapping of Playa in Arid Lands (Case Study; Damghan Playa, Iran)
Amirhoushang Ehsani

The LUCC and Spatio-Temporal Variability of Climate and their Impacts on Streamflow in the Eco-Environment Source Region of the Yellow River
Hongchang Hu, Genxu Wang, Lajiao Chen, Ling Lu

Localization of small dams by remote sensing techniques to better manage the water resources
Ahmad BILAL

Turbidity in the Amazon Floodplain Assessed through a Spatial Regression Model Applied to Fraction Images Derived from MODIS/Terra
Jose Stech, Enner Alcantara, Evlyn Novo, Yosio Shimabukuro, Claudio Barbosa

Monitoring the Water Quality of Weishan lake by reflected spectrum field measurements and HYPERION data
Lin sun, Tongguang Shi, Yanfang Ming, Qinhuo Liu, Hui Wang

The Variations Characteristics and Respond to Climate Change of Runoff of Main Rivers in Gansu
Jianying Feng, Jinsong Wang, Yingdong Zhao, Denrong Lu

Integrating Web-GIS and Hydrological Model: A Case Study with Google Maps and IHACRES in the Oak Ridges Moraine Area, Southern Ontario, Canada
Yinhuan Yuan, Qiuming Cheng

A Comparison of Number-of-Rain-Days Estimation Techniques for Continental Hydrological Modelling
Elias Symeonakis, Rogerio Bonifaçio, Nick Drake

An Analysis of Influence of the Climatic Change on Water Resource and Ecological Environment over Shiyang River Basin
Baojian Wang, Yuxia Huang

The Study of Typical Glaciers and Lakes Fluctuations Using Remote Sensing in Qinghai-Tibetan Plateau
Li-hong Wang, An-xin Lu, Tandong Yao, Ning-lian Wang

Assessing Impact of Land Use and Climate Changes on River Flow of Heihe Watershed on Loess Plateau
Li Zhi, Liu Wenzhao, Zhang Xunchang

Surface Water Quality Monitoring in Large Rivers with MODIS Data
Jean-Michel Martinez, Jean-Loup Guyot, Gérard Cochonneau, Frédérique Seyler

Study on Groundwater Distribution in the Southern Part of the Taklamakan Desert -example of Kirya Oasis
Yalikun Tashi, Marie-Françoise Courel, Tashpolat Tiyip

Assimilation of Remotely Sensed Soil Moisture Indices in Conceptual Hydrological Models: A Step Towards More Reliable Flood Forecasts
Sonia Heitz, Hugo Hellebrand, Patrick Matgen, Guy Schumann, Laurent Pfister

Thursday Interactive Session (18:00 - 19:30)
Room: Foyer-2
Th12EP. Wetlands and Flooding
Co-Chairs: *Pere Serra*

Inland Lake Monitoring Using Low and Medium Resolution ENVISAT ASAR and Optical Data: Case Study of Poyang Lake (Jiangxi, P.R. China)
Rémi Andreoli, Hervé Yésou, Jiren Li, Y-L. Desnos

River depth measurement with through-water photogrammetry using non-metric cameras : error sources analysis
Denis Feurer, Christian Puech, Alain A. Viau, Jean-Stéphane Bailly, Yann Le Coarer

Design and Implementation of a Web-based Spatial Decision Support System for Flood Forecasting and Flood Risk Mapping
Lei Wang, Qiuming Cheng

Floods mapping based on ERS/SAR radar images over the SOMME French catchment
Mehrez ZRIBI, Cyrille André, Catherine Ottlé, Miriam Guichaoua, Florence Habets

Dynamic Monitoring of Wetland in Maqu by Means of Remote Sensing
Dihua Cai, Ni Guo

An Analysis of the Flood Area in the Middle Reaches of Yangtze River by Satellite and DEM Data
Yasunori Nakayama, Yun Du, Jun Nakamura

An Object-Oriented Approach to Map Wetland Vegetation: A Case Study of Yellow River Delta
Mingchang Cao, Gaohuan Liu, Xiaoyu Zhang

Mapping wetlands cover types with directional polarization signatures
Vern C. Vanderbilt, Jonathan Greenberg, Gerald Livingston, Shruti Khanna, Susan L. Ustin, Ute Böttger

Identification of Inland Fresh Water Wetland Using SAR and ETM+ Data
Renzong Ruan, Liliang Ren

Multi-Satellite Remote Sensing of Global Inundation Dynamics 1993-2000
Fabrice Papa, Catherine Prigent, William B. Rossow, Filipe Aires, Elaine Matthews

Using RS and GIS to Monitoring Beijing Wetland Resources Evolution
Gong Zhaoning, Gong Huili, Zhao Wenji, Li Xiaojuan, Hu Zhuowei

Space Monitoring of Floods in Kazakhstan (Five Years of Activity)
Oleg Arkhipkin, Lev Spivak, Gulshat Sagatdinova

The Study of Wetlands Change in Yellow River Delta Based on RS and GIS
Xiaotao Li , Shifeng Huang, Ji-ren Li, Mei Xu, Xiaoning Song

A Study on the Wetland Dynamic and Its Relation with Cropland Reclamation in Sanjiang Plain, China
Li Guozhu, Song Kaishan, Niu Shuwen

Study on method of extracting wetland and its changed area based on multispectral images
FangFang Li, Yong Jia

Thursday Interactive Session (18:00 - 19:30)
Room: Foyer-2
Th13EP. Information Systems and GIS
Co-Chairs: *Deyan Zhang , Richard Ullman*

A Long-distance Control Platform on Environment Urgency Incident Based on GSM\GPRS and 3S Technology
Li Wenzheng, Li Su, Zhou Jianjun, Zhuang Dafang

Spatial Analysis of City Level Economic Disparity in China
Yongqiang Zhao, Jin Wang

Road Network Spatial Data Co-Registration of Different Sources using Imagery-to-GIS Mining
Deyan Zhang, Guoqing Zhou

Methodology for Spatial Scaling in NPP Under the Influence of Variable Topography and Vegetation
Xinfang Chen, Jing M. Chen, Weimin Ju, Liliang Ren

The Research of Geospatial Data Interoperability Based on Web Service
Hongmei Yin, Shan Su, Boji Yan

Secondary Development of GIS Based on ArcGIS Engine
Boji Yan, Chun Zhao, Hongmei Yin

The Research of Using Ajax in Web GIS Application
Hongmei Yin, Shan Su, Boji Yan

NASA's Earth Science Data Systems Standards Process Experiences
Richard Ullman, Yonsook Enloe

Study On the Automatic Mosaicing Algorithm of Remote Sensing Data Based On Network
Hu Zhengguang, Bi Jiantao, Chi Tianhe, Wang Xingxing

Production of CEOP satellite dataset by JAXA
Kazuo Umezawa

Use of GIS and Spatial Data to Support Economic Evaluation of Economic Assistance Projects in Benin, Africa
John S. Felkner

Tibet Plateau Entironmental and Geological Information Monitoring System (TPEGIMS) Based on ArcGIS
Zhengmin He, Jianchao Wang, Hongbin Fang, Yunpeng Yan, Jinghui Fan

Spatial Temporal Geographic Ontology
Zhaoqiang Huang, Wenling Xuan, Xiuwan Chen

The Discussion on How to Construct the Digital Earth System
lanwei Zhu, huadong Guo, changlin Wang

A Distributed Approach for Retrieving Spatial Data in GIS
Xiaohui Zhao, Yu Fang, Bin Chen

Uncertainty in the Raster Image to Vector Data Conversion of Polygon Object
Dawei Zhong, Tianhe Chi, Qinghui Sun, Shukui Bo

GIS-based data service system of multi-source spatial data for Yangtze Three Gorges Project
Liang Zhu, Bingfang Wu

Information Sharing WebGIS Service Platform
cuilingji Ji, Tianhe Chi, Jiantao Bi, Guojun Peng, Banghui Yang, Yunhai Miao

A Multi-Scale Line Tree
Yingchao Ren, Wenwen LI, Chongjun YANG

The 3D Visualization of Spatial Data Using Mobile Equipment, and It's Application
JeongHo Park, SeongIk Cho

Thursday Interactive Session (18:00 - 19:30)
Room: Foyer-2
Th14EP. Web and Grid Services
Co-Chairs: *Hampapuram Ramapriyan*

A Prototype Intelligent Geospatial Knowledge System Based on Semantic Web Service Technology
Meixia Deng, Liping Di

Technological Approaches for Secure DATA Processing in Networked RFID Architectural Framework
Namje Park, Kyoil Chung

A Design Method for Building a Multi-Scale Navigation Electronic Map
Yanhui Wang, Wenji Zhao, Huili Gong, Xiaomeng Liu

Thursday Interactive Session (18:00 - 19:30)
Room: Foyer-2
Th15EP. Solid Earth 2
Co-Chairs: *Diane Evans , Herve Yesou*

Study on Construction Seismic Loss Assessment Using RS and GIS
Long Wang Wang, Xiaoqing Wang Wang, Aixia Dou Dou, Dongliang Wang Wang

WIN: A New SOA for Risk Management
Chri Alegre, Ceci Monfort, Araceli Pi Figueroa

Regional Landslide Hazard Assessment based on Distance Evaluation Model
Jiacun Li, Jing Li, Ab T Jasmi

Severe Wind Gust Risk for Australia Cities – A National Risk Assessment Approach
Robert (Bob) Cechet, Krishna Nadimpalli, Mark Edwards

Uncertainty Analysis of Flood Disaster Assessment Using Radar Imagery
Yunqing Jiao, Shixin Wang, Yi Zhou, Litao Wang

The Analysis of Regional Slope Stability Based on GIS—A Case Study in Daqu Watershed from Donggu to Ranchong of the First Stage of the West Line of Water Diversion Project from South to North of China
Jinfeng Liu, Guoqiang Ou, Weiya Ren

The Hydraulic Condition Analysis and Optimal Cross-Section Design of the "Rectangle -V" Shaped Drainage Canal of Debris Flow
Yong You, Jinfeng Liu , Guoqiang Ou

Research on Web-based Emergency Management Information System for City Flood
Xiaofeng Zhao, Tianhe Chi, Litao Wang

Study and Design of a Distributed Spatial Database Web Services of Crustal Stress in China and Adjacent Areas Based on WebGIS
Zhihui Li , Jingfa Zhang, Fujun Zhao

The Remote Sensing Image Interpretation and the Research of Mechanism for Qianjiangping Landslide in the Three Gorges Reservoir Region
Ri-Hong Yang, Zhi-Hua Wang, Jin-Zhong Yang, Pei-Dong Jin, Zheng-Min He

The Hydraulic Characteristics in Compound Channels of Viscous Debris Flow: A Case Study on the Dabaini Debris Flow Gully in Xiaojiang Basin of Yunnan Province, China
Yong You, Jinfeng Liu, Guoqiang Ou, Huali Pan

Typhoon Monitoring/Operational Forecasting and Services 2005 in China
Yun Chen, Qiang Li, Zechun Li, Zifang Xu

Study on GIS based Quick Collecting of the Seismic Disaster Messages
Zhang Xihai, Wang Xiaoqing, Deng Mingxian

SAR Measurements of Surface Displacements at Augustine Volcano, Alaska from 1992 to 2005
Chang-Wook Lee, Zhong Lu, Oh-Ig Kwoun

Runoff Coefficients using a Quickbird Image for Mapping Flood Hazard in a Tropical Coastal City, Campeche, Mexico
Gerardo Palacio

Retrieval of Vegetation Moisture Indicators for Dynamic Fire Risk Assessment with Simulated MODIS Radiance
Carmine Maffei, Antonio P. Leone, Mauro Vella, Giuseppe Meoli, Maurizio Tosca, Massimo Menenti

Rapid Mapping Serving Civil Defence Agencies and Humanitarian Actions. SERTIT's Experience Gained in Change Detection and Product Elaboration During the 2005 and 2006 Charter Actions
Herve Yesou, Bernard Allenbach, Remi Andreoli, Stephanie Battiston, Claude Bestault, Stephen Clandillon , Kader Fellah, Colette Meyer, Nadine Tholey, Paul de Fraipont

Monsoon and Typhoons Flood Rapid Mapping in China Based on ENVISAT Data during the 2005 and 2006 years
Herve Yesou, Remi Andreoli, Rita Malosti, Fabrizia Cattaneo, Jiren Li, Shifeng Huang, Jingfeng Xin

Unified Exploitation of Multitemporal and Multispectral Information in Geostationary Optical Images for Fire Detection and Monitoring
Mario Costantini, Massimo Zavagli

Uplift of a Coral Island in the Andaman Sea Due to the 2004 Sumatra Earthquake Measured Using Remote Sensing Reflectance of Water
Soo Chin Liew, Jiangcheng He

Monitoring Volcanic Threats Using ASTER Satellite Data
Kenneth A. Duda, Rick Wessels, Michael Ramsey, Jonathan Dehn

Study on GIS and RS Based Seismic Prevention and Disaster Reduction Management Information System
Xiaoqing Wang, Xiang Ding, Aixia Dou, Long Wang, Dongliang Wang

Near-real time wild fire detection and monitoring over Asia using MTSAT
Wataru Takeuchi, Yoshifumi Yasuoka

TVDI based Crop Yield Prediction Model for Stressed Surfaces
Chuan Jin, Qiming Qin, Lin Zhu, Peng Nan, Abduwasit Ghulam

Study on Early Fast Assessment System of Disaster and Loss Caused by Earthquake Based on GIS
Jun He, Shijun Chen, Aixia Dou

The Study of Disaster Investigation by Using Remote Sensing on the Sichuan-Tibet Highway in Tibet
Li-hong Wang, An-xin Lu, Zhi-yu Jia, Lin-qing Yu

SLF Remote Sensing Technique Based Coal Mine Gas Exploration
Qiming Qin, Xia Ye, BaiShou Li, Bao Cao, Jian Li, Guiting Hou, Peijun Li

Post-Fire Vegetation Phenology in Siberian Burn Scars
Heiko Balzter, France Gerard, Maria Cuevas-Gonzalez, David Riaño

Study on the Development of Seismic Disaster Prediction of Lifeline Systems Based on ESRI ArcGIS Engine
Xiang DING, Xiaoqing Wang, Long WANG, Aixia Dou

The seismicity of Makran subduction zone (Oman Sea) and definition of Tsunami generated effect on its coastal region and the related Tsunami Early System.
M. Mokhtari, M. Heidarzadeh, F. Sharifi Broujerdi

Small Scale Surface Deformation Detection of the Gulf of Corinth (Hellas) Using Permanent Scatterers Technique
Panagiotis Elias, Charalabos Kontoes, Ioannis Papoutsis, Ioannis Kotsis

Thursday Interactive Session (18:00 - 19:30)
Room: Foyer-2
Th16EP. Image Visualization
Co-Chairs: *Taejung Kim , Jiakui Tang*

Semiautomatic Reconstruction of Building Height and Footprints from Single Satellite Images
Taejung Kim, Javzandulam Ts., Tae-Yoon Lee

A Novel Spherical Panorama Mosaic Algorithm Based on Curve Surface Mosaic
Xiaohui Li, Yinqing Zhou, Zulin Wang

Modeling and Planning of Three-dimensional Forest Landscape Based on Virtual Reality
Zhangang Wang, Dafang Zhuang, Tao Ming

Three Dimensional Groundwater Virtual Reality System and Its Spatial Database
Huili Gong, Zhuowei Hu, Wenji Zhao, Xiaojuan Li, Yanhui Wang, Zhaoning Gong, Songmei Zhang

Variable Empirical Coefficient Algorithm for Removal of Topographic Effects on Remotely Sensed Data from Rugged Terrain
Yongnian Gao, Wanchang Zhang

Using SVG Technique to Organize and Display Data of Embedded GIS
JuanZhu Liang, Hang Chen

Friday Morning (09:00 - 10:40)
Room: 120
Fr01MH1. Inverse Problems and Parameters Estimation
Co-Chairs: *Josef Kellndorfer*

09:00 SRTM, Landsat ETM+, and Ancillary Data Fusion for Vegetation Height and Biomass Estimation in Support of the North American Carbon Program
Josef M. Kellndorfer, Wayne S. Walker, Jesse Bishop, Elizabeth LaPoint, Mike Hoppus, James Westfall

09:20 Contaminant Source Estimation in a Two-Layers Porous Environment Using a Bayesian Approach
Aurélien Hazart, Jean-François Giovannelli, Stéphanie Dubost, Laurence Chatellier

09:40 Error Analysis of ICESat Waveform Processing by Investigating Overlapping Pairs over Europe
Hieu Duong, Roderik Lindenbergh, Norbert Pfeifer, George Vosselman

10:00 Random Walk/Markov Chain Model for Sensor Positional Uncertainty with Application to UXO Discrimination
Alireza Aliamiri, Eric Miller

10:20 Dense Estimation of Motion Fields on Meteosat Second Generation Images using a Dynamical Consistency
Thomas Corpetti, Nicolas Papadakis, Etienne Mémin

Friday Morning (09:00 - 10:40)
Room: 123
Fr02MH1. Data Mining, Web and Grid Services
Co-Chairs: *Nick Younan , Mihai Datcu*

09:00 Managing Earth Observation Data with Distributed Geoprocessing Services
Carlos Granell, Laura Díaz, Michael Gould

09:20 Learning - Unlearning for Mining High Resolution EO Images
Mihai Costache, Mihai Datcu

09:40 An Fast Integrated Searching Strategy and Application in Multi-Source Massive Image Database for Disaster Mitigation and Relief
Jian Zhang, Xiaoling Chen, Xiaobin Cai, Biyu Chen, Jianzhong Lu, Wei Wu, Xubin Yang

10:00 NASA's NPP Land Earth Science Data Records Evaluation Facility
Alice T. Isaacman, Robert E. Wolfe, Edward J. Masuoka

10:20 Grid-Enabled OGC Environment for EO Data and Services in Support of Canada's Forest Applications
David Goodenough, Hao Chen, Liping Di, Aimin Guan, Yaxing Wei, Andrew Dyk, Geordie Hobart

Friday Morning (09:00 - 10:40)
Room: 130
Fr03MH1. Remote Sensing of Soil Properties
Co-Chairs: *Alessandra Monerris Belda , Magaly Koch*

09:00 Comparison of Metrics to Remove the Influence of Geometrical Conditions on Soil Reflectance
François Tavin, Audrey Roman, Sandrine Mathieu, Frédéric Baret, Liu Weidong, Ludovic Journaux, Pierre Gouton

09:20 Remote sensing techniques for monitoring burn severity, soil water repellency and eolian soil transport in semiarid environments
Nancy F. Glenn, Charlie Finley, Joel Sankey, Matt Germino

09:40 Apparent Soil Thermal Diffusivity Determination Method for Use in Thermal Modeling
Darrell Wesley Johnson, Jr., Jerrell R. Ballard, Jr., David Leese, Owen J. Eslinger

10:00 Multisensor Approach to Assess Soil Degradation Stages in Semi-Arid Soils (Spain)
José Gumuzzio, Thomas Schmid, Magaly Koch

Friday Morning (09:00 - 10:40)
Room: 133
Fr04MH1. Hyperspectral Imaging Training
Co-Chairs: *Antonio J Plaza , Michael Schaepman*

09:00 HYPER-I-NET: European Research Network on Hyperspectral Imaging
Antonio Plaza, Andreas Mueller, Rudolph Richter, Torbjørn Skauli, Zbynek Malenovský, José Bioucas, Stefan Hofer, Jocelyn Chanussot, Christian Jutten, Veronique Carrère, Ivar Baarstad, Peter Kaspersen, Jens Nieke, Klauss Itten, Timo Hyvarinen, Paolo Gamba, Fabio Dell'Acqua, John A. Benediktsson, Michael E. Schaepman, Jan G.P.W. Clevers, Bogdan Zagajewski

09:20 Recent Developments in the Field of Hyperspectral Imaging at Wageningen University, the Netherlands
Mich Schaepman, Lamm Kooistra, Jan Clevers

09:40 CALIBRATION AND VALIDATION ACTIVITIES IN THE SCOPE OF HYPER-I-NET: THE RSL APPROACH
J. Nieke, F. Dell'Endice, A. Hüni, M. Kneubühler, D. Schläpfer, B. Kötz, J. Schopfer, K.I. Itten, A. Plaza

10:00 European Perspectives in Hyperspectral Data Analysis
Paolo Gamba, Antonio J. Plaza, Jon Atli Benediktsson, Jocelyn Chanussot

10:20 Advanced imaging spectroscopy derived products and applications
Michael Schaepman, Jan Clevers, Lamm Koositra, Gabr Schaepman-Strub, Zbyn Malenovsky, Vero Carrere, Bogd Zagajewski

Friday Morning (09:00 - 12:40)
Room: 121
Fr05MF. Detection and Object Recognition
Co-Chairs: *Richard Bamler , Ludvik Lidicky*

09:00 Spatial Reasoning and Multiscale Segmentation for Object Recognition in HR Optical Remote Sensing Images
Jordi Inglada, Julien Michel

09:20 A New Method for Moving Target Indication and Detection in Multi-Channel SAR Data
Ludvik Lidicky

09:40 Simulation of LIDAR-Based Aircraft Wake Vortex Detection Using a Bi-Gaussian Spectral Model
Sébastien Lugan, Laurent Bricteux, Benoît Macq, Piotr Sobieski, Grégoire Winckelmans, Damien Douxchamps

10:00 An Improved Linear Sampling Method for Location and Shape Reconstruction of 3D Buried Targets
Ilaria Catapano, Lorenzo Crocco, Tommaso Isernia

10:20 New Object-Oriented Approach for Urban Objects Extraction from VHSR Images
Imane Sebari, Dong-Chen He

10:40 COFFEE BREAK

11:00 Detecting Moving Targets in Dual-Channel High Resolution Spaceborne SAR Images with a Compound Detection Scheme
Diana Weihing, Stefan Hinz, Franz Meyer, Steffen Suchandt, Richard Bamler

11:20 Multiband CFAR Detection of Thermal Anomalies Using Principal Component Analysis
Maurizio Di Bisceglie, Roberto Episcopo, Carmela Galdi, Silvia L. Ullo

11:40 Modeling Urban Structures Using Graph-Based Spatial Patterns
Emel Dogrusoz, Selim Aksoy

12:00 Moving Targets Detection using Multi-Look Polarimetric SAR Images
Bin Zou, Tao Wei, Tat Soon Yeo, Junping Zhang

12:20 Penalized Spectral Matched Filter for Target Detection in Hyperspectral Imagery
Nasser M. Nasrabadi

Friday Morning (09:00 - 12:40)
Room: 122
Fr06MF. Data Fusion I
Co-Chairs: *Paolo Gamba , Jocelyn Chanussot*

09:00 Spectral and Spatial Classification of Hyperspectral Data Using SVMs and Morphological Profiles
Mathieu Fauvel, Jocelyn Chanussot, Jon Atli Benediktsson, Johannes R. Sveinsson

09:20 Fusion of Spectral and Spatial Information by a Novel SVM Classification Technique
Lorenzo Bruzzone, Mattia Marconcini, Claudio Persello

09:40 Fusion of Support Vector Machines for Classifying SAR and Multispectral Imagery from Agricultural Areas
Björn Waske, Gunter Menz, Jón Atli Benediktsson

10:00 Hyperspectral Feature Space Partitioning via Mutual Information for Data Fusion
Saurabh Prasad, Lori Mann Bruce

10:20 Multiclassifiers and Decision Fusion in the Wavelet Domain for Exploitation of Hyperspectral Data
Terrance West, Saurabh Prasad, Lori Bruce

10:40 COFFEE BREAK

11:00 Unsupervised Change Detection by Multichannel SAR Data Fusion
Gabriele Moser, Sebastiano Serpico

11:20 Similarity Measures between SAR and OPTIC Data
Aymen Shabou, Florence Tupin, Ferdaous Chaabane

11:40 Coherent-Stable Scatterers detection in SAR Multi-Interferograms: Feature Fuzzy Fusion in Alpine Glacier Geophysical Context
Gabriel Vasile, Emmanuel Trouvé, Lionel Valet, Jean-Marie Nicolas, Lionel Bombrun, Michel Gay, Ivan Petillot, Philippe Bolon, Vasile Buzuloiu

12:00 Super-Resolution of Remotely Sensed Images Using SRVPLR and SRASW
Maria Teresa Merino, Jorge Núñez

12:20 Probabilistic Fusion of Spatio-Temporal Data to Estimate Stream Flow Via Bayesian Networks
Karthik Nagarajan, Carolyn Krekeler, K. Clint Slatton

Friday Morning (09:00 - 12:40)
Room: 124
Fr07MF. Radar Interferometry (I)
Co-Chairs: *Andreas Reigber , Jordi J Mallorqui*

09:00 Research of the Influence of Transients, Non-Equidistance of the Taken Readings, Divergence of Beams on Characteristics of the Interferometric SAR
Ilya D. Zolotarev, Timur O. Pozharsky, Iakov E. Miller

09:20 ScanSAR Repeat-Pass Interferometry Time Series Analysis for Urban Deformation Monitoring
Krishnavikas Gudipati, Sean M. Buckley

09:40 X-Band Airborne Differential Interferometry over the Perugia Area
Stefano Perna, Christian Wimmer , João Moreira, Gianfranco Fornaro

10:00 Advanced D-InSAR Techniques Applied to a Time Series of Airborne SAR Data
Pau Prats, Rolf Scheiber, Alberto Moreira, Andreas Reigber, Jordi J. Mallorquí

10:20 An Autofocus Approach for Residual Motion Errors with Application to Airborne Repeat-Pass SAR Interferometry
Karlus A. C. de Macedo, Rolf Scheiber, Alberto Moreira

10:40 COFFEE BREAK

11:00 DEM Alignment and Registration in Interferometric SAR Processing and Evaluation
Zhengxiao Tony Li, James Bethel

11:20 Dynamic Persistent Scatterer Interferometry
Petar Marinkovic, Ramon Hanssen

11:40 Ground Deformation Retrieval of Urban and Suburb Areas Based on Multi-baseline DInSAR Algorithm: A Case Study in Cangzhou City (China)
Tao Wu, Hong Zhang, Chao Wang

12:00 Enhancement of Radar Based DEMs Using 3D Techniques
Veronica Teichrieb, Judith Kelner

Friday Morning (09:00 - 12:40)
Room: 128
Fr08MF. AMSR-E
Co-Chairs: *Elena Lobl , Akira Shibata*

09:00 Positive SST Anomalies in High-Latitude Oceans of the Northern Hemisphere as Observed by AMSR-E
Akira Shibata

09:20 Tropical Cyclone Warm Core as Observed from the ADEOS-II Advanced Microwave Scanning Radiometer
Leonid M. Mitnik, Maia L. Mitnik

09:40 Atmospheric water content over oceans derived from the Advanced Microwave Scanning Radiometer for the Earth Observing System
Daisaku Uesawa, Yosh Sato, Yosh Takeuchi

10:00 Improvements to the AMSR-E Rainfall Algorithm
Christian Kummerow, Sara Finn

10:20 Impact of 3-D Structure on Retrievals of Oceanic Rainfall from AMSR-E.
Thomas Wilheit, Christian Kummerow

10:40 COFFEE BREAK

11:00 Validation of High Latitude Ocean Precipitation Retrievals from AMSR-E
Grant Petty, Long Wu

11:20 Relationship between rainfall and soil moisture based on model simulations coupled with AMSR-E observations
Kyoungwook Jin, Eni G. Njoku, Steven Chan

11:40 AMSR-E Based Down-scaling System for Regional/Local Hydrology
Toshio Koike, Kun Yang, Tobi Graff, Xin Li, Cyru Mirza, Bous Souhail

12:00 A simple approach for improving the AMSR-E spatial resolution and checking for the calibration anomalies
Simonetta Paloscia, Giovanni Macelloni, Emanuele Santi

12:20 Sea Ice Concentrations and Extents from AMSR-E and SSM/I Data
Josefino Comiso

Friday Morning (09:00 - 12:40)
Room: 129
Fr09MF. SAR and Radar Technology
Co-Chairs: *Josef Mittermayer , Rafael F Rincon*

09:00 Genesis of a New NASA InSAR Mission Concept, and Natural Hazards Applications
Ronald G. Blom, Andrea Donnellan, Eric Fielding, Anthony Freeman, Scott Hensley, William TK Johnson, Adam Loverro, Paul Lundgren, Paul Rosen, Sassan Saatchi

09:20 Spaceborne Doppler Wind Radar Concept for Observations of Extreme Weather Events
Alexandre Houpert, Chung-Chi Lin, Jacques Testud, Catherine Prigent, Yves Quilfen, Pierre Thibaut, Jérome Donnadille

09:40 RadSTAR L-Band Imaging Scatterometer: Performance Assessment
Rafael F. Rincon, Peter Hildebrand, Lawrence Hilliard

10:00 Advanced Control and Processing Capabilities in the Aquarius Scatterometer Flight Electronics
Mark A. Fischman, Dalia A. McWatters, Andrew C. Berkun, Craig M. Cheetham, Anhua J. Chu, Vu A. Duong, Adam P. Freedman, Robert W. Hausmann, Michael N. Jourdan, Edward C. Kang, Peter A. Kobzeff, Mimi Paller

10:20 TerraSAR-X and TanDEM-X: Revolution in Spaceborne Radar
Nikolaus Faller, Marco Weber

10:40 COFFEE BREAK

11:00 Verification of TerraSAR-X System
Josef Mittermayer, Marwan Younis, Benjamin Bräutigam, Thomas Fritz, Ralph Kahle, Robert Metzig, Birgit Schäettler

11:20 First Steps Towards Multimodal Georeferencing of 3D VHR Optical and X-Band SAR Imagery
Antonella Belmonte, Dominique Derauw, Christian Barbier, Jacques Verly

11:40 Multidimensional Radar Waveforms: A New Paradigm for the Design and Operation of Highly Performant Spaceborne Synthetic Aperture Radar Systems
Gerhard Krieger, Nicolas Gebert, Alberto Moreira

12:00 FPGA Based Signal Processing Platform for Weather Radar
Suganth Paul, Sunil Khatri, Charlie Martin, Tom Brimeyer, Eric Loew, Jothiram Vivekanandan

12:20 SBRAS - An Advanced Simulator of Spaceborne Radar
Min Wang, Diannong Liang, Haifeng Huang, Zhen Dong

Friday Morning (09:00 - 12:40)
Room: 131
Fr10MF. Geologic and Environmental Applications
Co-Chairs: *Alberto Martinez-Vazquez , Oscar Mora*

09:00 Climate Change and Disaster Response-Case Study of Historical Locust Plagues of Shaanxi in Central China
Gang Li, Nai-ang Wang, Chunhui Zhang, Wenyong Feng, Cuiyun Wang

09:20 Disaster Monitoring by Extracting Geophysical Parameters from SAR Data
Gerardo Di Martino, Antonio Iodice, Daniele Riccio, Giuseppe Ruello

09:40 ICC's project for DInSAR terrain subsidence monitoring of the Catalonian territory
Oscar Mora, Roman Arbiol, Vicenç Palà

10:00 Numerical Simulation of Electromagnetic-Wave Propagation for Land Mine Detection Using GPR
María A. González-Huici, Udo Uschkerat, Andreas Hoerdt

10:20 Time dense analysis of Hawaii's deformation by using several tracks' ScanSAR-strip and strip-strip interferometry
Ana Bertran Ortiz, Howard Zebker

10:40 COFFEE BREAK

11:00 Retrieval of the displacement of the Bors glacier in the Monterosa chain with GB-SAR imagery
Alberto Martinez-Vazquez, Giuseppe Antonello, Joaquim Fortuny-Guasch

11:20 Estimation of Forest Fuel Load from Radar Remote Sensing
Sassan Saatchi, Yifa Yu, Kerr Halligan, Don Despain, Robe Crabtree

11:40 An Efficient Electromagnetic Approach to Train the SVM for Depth Estimation of Shallow Buried Objects with Microwave Remote Sensing Data
Dharmendra Singh

12:00 The Geology Environmental Investigation And Evaluation By Radar Remote Sensing At DATONG Jurassic & Carboniferous Period Coalfield
Ma Chao, Jia Xiuming

Friday Morning (09:00 - 12:40)
Room: 132
Fr11MF. Spaceborne Lidar
Co-Chairs: *John A. Reagan , Ali H. Omar*

09:00 Distribution and properties of polar clouds and haze as observed by CALIOP
Dave M Winker, Char Trepte, Yongxiang Hu

09:20 A Brief History of Fully Automated Data Processing of Space-Based Laser Backscatter Measurements from the LITE, GLAS, and CALIPSO Missions.
Mark Vaughan, Stephen Palm, Zhao Liu, Will Hunt, Kath Powell, Char Trepte, Will Hart, Dennis Hlavka, Kam- Lee, Stuart Ashleigh Young

09:40 Performance of the Instrument Design and Data Algorithms for the GLAS Global Cloud and Aerosol Measurements
James Spinhirne, Stephen Palm, Dennis Hlavka, Will Hart

10:00 Improving cloud climatology analysis using space lidar observations : first results from the CALIPSO mission and comparison with classifications from the MSG imaging radiometer SEVIRI
Gene Sèze, Jacques Pelon, Dave M Winker

10:20 The Geoscience Laser Altimeter System (GLAS) on the ICESat Mission
Xiaoli Sun, James Abshire, Hari Riris, Dong Yi, Stephen Palm, Pegg Jester, Jan McGarry, Davi Harding, Pame Millar, Michael A Krainak

10:40 COFFEE BREAK

11:00 The CALIOP Cloud and Aerosol Discrimination Algorithm: Overview and CLoud and Aerosol Distributions Derived from the Initial CALIOP Measurements
Zhaoyan Liu, Mark Vaughan, Ralp Kuehn, Ali Omar, Yongxiang Hu

11:20 Extinction-to-backscatter ratios of lofted aerosol layers observed during the first three months of CALIPSO measurements
Ali H Omar, Mark Vaughan, Zhao Liu, Yongxiang Hu, John A. Reagan, Davi Winker

11:40 ADM-Aeolus: The First Space-Based High Spectral Resolution Doppler Wind Lidar
Anne Grete Straume-Lindner, Paul Ingmann

12:00 Initial CRAM Aerosol Retrievals from CALIPSO and Supporting Airborne HSRL Measurements
John A. Reagan, Christopher McPherson, Chris Hostetler, Johnathan Hair, Richard Ferrare

12:20 The EarthCARE Mission: Mission Concept and Lidar Instrument Pre-Development
Arnaud Hélière, Alain Lefebvre, Tobias Wehr, Jean-Loup Bézy, Yannig Durand

Friday Morning (11:00 - 12:40)
Room: 120
Fr12MH2. Instruments and GPS/GNSS
Co-Chairs: *Antonio Rius , James L. Garrison*

11:00 Retrieval of atmospheric bending angle from mountain-based GPS occultations over ocean.
Laust Olsen, Anders Carström, Per Høeg

11:20 The Tracking, Occultation and Ranging (TOR) Instrument Onboard TerraSAR-X and on TanDEM-X
Markus Rothacher, Byron D. Tapley, Cristoph Reigber, Rolf Koenig, Carsten Falck, Ludwig Grunwaldt, Wolfgang Koehler, Franz-Heinrich Massmann, Grzegorz Michalak

11:40 Prototype Autonomous Mini-buoy for use in a Wireless Networked, Ocean Surface Sensor Array
John F. Vesecky, Kenneth E. Laws, Stephen Petersen, Cyrus Bazeghi, Don Wiberg

12:00 Applications of an Integrated GPS Receiver for Reflected GPS Signals L1/L2 Observation Techniques with Remote Sensing Ocean Altimetry and Ground Object Detection
Lie-Chung Shen, Jyh-Ching Juang, Ching-Lang Tsai, Ping-Ya Ko, Chia-Chun Chang, Ching-Liang Tseng

Friday Morning (11:00 - 12:40)
Room: 123
Fr13MH2. Information Systems and GIS
Co-Chairs: *Hampapuram Ramapriyan , Joan Serra-Sagrista*

11:00 Role and Utility of Metrics in Data Systems
Hampapuram K. Ramapriyan, Paul Davis, Gregory W. Hunolt

11:20 Region of Interest Coding Applied to Map Overlapping in Geographic Information Systems
Joan Bartrina-Rapesta, Francesc Aulí-Llinàs, Joan Serra-Sagristà, Alaitz Zabala-Torres, Xavier Pons-Fernández, Joan Masó-Pau

11:40 Extending OGC Data Services for CEOP Science Community
Min Min, Kenneth McDonald, Wenli Yang, Liping Di, Yonsook Enloe, Dan Holloway

12:00 3D Building Reconstruction and Visualization for Single High Resolution Satellite Image
Xiaojing Huang, Leong Keong Kwoh

12:20 Replication Strategy in Peer-to-Peer Geospatial Data Grid
Dafei Yin, Bin Chen, Zhou Huang, Xin Lin, Ke Zhang, Yu Fang

Friday Morning (11:00 - 12:40)
Room: 130
Fr14MH2. Hydrologic Applications
Co-Chairs: *Okke Batelaan , David Mason*

11:00 Using Airborne Laser Altimetry to Improve River Flood Extents Delineated from SAR Data
David C. Mason, Johanna T. Dall'Amico, Tania R. Scott, Matthew S. Horritt, Paul D. Bates

11:20 Improved Distributed RUNOFF Modelling of Urbanised Catchments by Integration of Multi-Resolution Remote Sensing
Okke Batelaan, Jaroslaw Chormanski, Tim Van de Voorde, Frank Canters

11:40 Linking Landuse and Groundwater Quality Using Satellite Data
Vijendra K. Boken

12:00 Remote Sensing of Ecological Responses to Changes in the Hydrological Cycles of the Tonle Sap, Cambodia
Simon N. Benger

12:20 Imaging spectroscopy for ecohydrological characterization of vegetation, soil moisture and evapotranspiration of a floodplain mire
Okke Batelaan, Le Q. Hung, Boud Verbeiren

Friday Morning (11:00 - 12:40)
Room: 133
Fr15MH2. Multichannel Coherent SAR Data Combination - Airborne
Co-Chairs: *Fabrizio Lombardini , Fabio Rocca*

11:00 Some Polarimetric Aspects of Processing Sea Surface M-ATI SAR Data
Brian C. Barber

11:20 A Novel Optimization Approach to Forest Height Reconstruction from Multi-Baseline Data
A. Capozzoli, G. D'Elia, Angelo Liseno, A. Moreira, K. P. Papathanassiou

11:40 Height Dependent Motion Compensation and Coregistration for Airborne SAR Tomography
Matteo Nannini, Rolf Scheiber

12:00 A Model-Based Combination of Multibaseline and Multifrequency InSAR Data for Tropical-Forest Profiles
Robert Treuhaft, Bruce Chapman, Jaso Drake, Luciano Vieira Dutra, João dos Santos, Fabi Gonçalves, Paul Graça, José Mura, Cori Freitas

12:20 Physical Parameter Extraction over Urban Areas using L-Band POLSAR Data and Interferometric Baseline Diversity
Stefan Sauer, Laurent Ferro-Famil, Andreas Reigber, Eric Pottier

Friday Afternoon (14:20 - 16:00)
Room: 124
Fr01AH1. Radar Interferometry (II)
Co-Chairs: *Jordi J. Mallorqui , Alberto Moreira*

14:20 Highly Accurate DSM Reconstruction Using Ku-band Airborne InSAR
Yu Okada, Chie Hirao, Takeshi Horiuchi, Yoshihisa Hara, Jonathan Yedidia, Ali Azarbayejani, Noboru Oishi, Masatada Furuhata, Nobuo Kumagai, Shouji Morioka, Yoshihiko Kato

14:40 Modeling and Analyzing InSAR Phase Profiles at Building Locations
Antje Thiele, Erich Cadario, Karsten Schulz, Ulrich Thoennessen, Uwe Soergel

15:00 The Repeat-Pass Interferometric SAR by Pi-SAR(L)
Hitoshi Nohmi, Masanobu Shimada, Masanori Miyawaki

15:20 Mapping the Lunar South Pole with Earth Based Radar Interferometry
Scott Hensley, Eric Gurrola, Paul Rosen, Martin Slade, Joseph Jao, Raymond Jurgens

15:40 High Resolution Millimeter Wave SAR Interferometry
Christophe Magnard, Erich Meier, Maurice Rueegg, Thorsten Brehm, Helmut Essen

Friday Afternoon (14:20 - 16:00)
Room: 129
Fr02AH1. Detection and Monitoring of Land Conversion
Co-Chairs: *Karsten Schulz , Laerte Ferreira*

14:20 Physical Basis Supporting Land Conversion in the Brazilian Savanna Areas
Manuel E. Ferreira, Laerte G. Ferreira jr., Edgardo M. Latrubesse, Nilson C. Ferreira, Fábio C. Lobo, Marlon N. Pontes

14:40 Temporal dynamics of land occupation of the Serra Negra Complex in Patrocínio, state of Minas Gerais in Brazil
Tiago Bernardes, Helena M. R. Alves, Tatiana G. C. Vieira, Marilusa P. C. Lacerda

15:00 Land Conversion in the Amazon Forest: Assessing Anthropogenic Causes and Ecological Impacts
Nilson C. Ferreira, Laerte G. Ferreira, Alfredo Huete, Manuel E. Ferreira, Fausto Miziara

15:20 Application of Fractal Analysis to Assess Land Use Changes on Woody Cover and Landscape Fragmentation in the Orinoco Savannas
Dirk R. Thielen, José J. San José, Rafael Lairet, Rubén A. Montes

15:40 Forecasting Land-Use Changes with the Use of Neural Networks and GIS
Athanasios T. Vafeidis, Sotirios Koukoulas, Ioannis Gatsis, Katerina Gkoltsiou

Friday Afternoon (14:20 - 16:00)
Room: 131
Fr03AH1. Carbon Fluxes and Kyoto Monitoring
Co-Chairs: *Christiana Schmullius , Scott Goetz*

14:20 Sib-ESS-C Siberian Earth System Science Cluster
Christiana Schmullius, Heiko Balzter, Sergey Bartalev, Roman Gerlach

14:40 Retrospective quantification of forest above ground biomass and carbon stock dynamics using lidar and aerial photographs
St-Onge Benoît, Véga Cédric, Wulder Mike, Preza Yazbek Camila, Vepakomma Udayalakshmi, Kurz Werner

15:00 Are High Latitude Ecosystems Greening as a Result of Climate Change?
Scott Goetz, Andr Bunn, Greg Fiske, Daniel C Steinberg

15:20 Assimilating MODIS Reflectance Data into an Ecosystem Model to Improve Estimates of Terrestrial Carbon Flux: Recent Progress
Tristan Quaife, Martin De Kauwe, Philip Lewis, Mathew Williams

15:40 Terrestrial Carbon Flux Modeling Over Siberia Using Satellite Derived Parameters
Ian McCallum, Wolfgang Wagner, Christiane Schmullius, Anatoly Shvidenko, Michael Obersteiner, Sten Nilsson

Friday Afternoon (14:20 - 18:00)
Room: 120
Fr04AF. GNSS-R Applications and Technologies
Co-Chairs: *Giulio Ruffini , Stephen Lowe*

14:20 Status and Perspectives of GNSS-R at ESA
Christopher Buck, Salvatore D'Addio

14:40 Oceanpal®: Monitoring Sea State with a GNSS-R Coastal Instrument
Marco Caparrini, Alejandro Egido, François Soulat, Olivier Germain, Esteve Farres, Stephen Dunne, Giulio Ruffini

15:00 Status of GNSS Reflectometry Related Receiver Developments and Feasibility Studies within the German Indonesian Tsunami Early Warning System
Achim Helm, Ralf Stosius, Georg Beyerle, Oliver Montenbruck, Markus Rothacher

15:20 First Results of GNSS-R Coastal Experiment in China
Zhang Xunxie, Wang Xin, Shao Lianjun, Sun Qiang, Hu Xiong, Xu Li, Giulio Ruffini, D. Stephen, F. Soulat

15:40 GPS Ocean Altimetry From Aircraft Using the P(Y) Code Signal
Benjamin Wilmhoff, Farzin Lalezari, Valery Zavorotny, Edward Walsh

16:00 COFFEE BREAK

16:20 Fading Statistics of Bistatically Scattered GNSS Signals Detected From Ocean and Land in Low Earth Orbit
Scott Gleason

16:40 A GNSS-Reflections Simulator and its Application to Widelane Observations
Stephen Lowe, Julian Chaubell, George Hajj

17:00 Development and Testing of the GISMOS Instrument
James L. Garrison, Michael Walker, Jennifer Haase, Tyler Lulich, Feiqin Xie, Brian D. Ventre, Michael H. Boehme, Ben Wilmhoff, Stephen J. Katzberg

17:20 TOGA, a Prototype for an Optimal Orbiting GNSS-R Instrument
T.K. Meehan, Stephan Esterhuizen, Garth Franklin, Steve Lowe, Tim Munson, David Robison, D. J. Spitzmesser, Jeff Tien, Larry Young

17:40 PAU-GNSS/R, a Real-Time GPS-Reflectometer for Earth Observation Applications: Architecture Insights and Preliminary Results
Juan Fernando Marchán , Isaac Ramos , Xavi Bosch , Adriano Camps, Nereida Rodriguez, David Albiol

Friday Afternoon (14:20 - 18:00)
Room: 121
Fr05AF. Altimetry Applications
Co-Chairs: *William J. Emery , Richard Francis*

14:20 New Scientific Exploitations Of ENVISAT RA2 Individual Echoes Over The Ocean
Christine Gommenginger, GRAHAM QUARTLY

14:40 Ice Cap Mass Fluctuations From Satellite Radar Altimetry
Andrew Shepherd, Gare Marshall, Alan Muir, Dunc Wingham, Stev Baker, Toby Benham, Tazio Strozzi

15:00 Recent Advances And Forthcoming Initiatives In Coastal Altimetry
Paolo Cipollini, Helen M. Snaith , Stefano Vignudelli , Florent Lyard , Florence Birol , Jérôme Bouffard , Laurent Roblou

15:20 Altimetric Calibration Experiences in the Western Mediterranean
Juan Jose Martinez-Benjamin, Marina Martinez-Garcia, Miquel Angel Ortiz-Castellon, Julia Talaya, Anna Baron, Pascal Bonnefond, Jose Martin-Davila, Jorge Garate, Gema Rodriguez-Velasco, Begoña Perez

15:40 ALTICORE - A Consortium Serving European Seas With Coastal Altimetry
Stefano Vignudelli , Helen M Snaith , Paolo Cipollini, Fabio Venuti , Florent Lyard , Jean François Cretaux , Florence Birol , Jérôme Bouffard , Laurent Roblou , Andrey Kostianoy , Anna Ginzsburg, Nickolay Sheremet, Elena Kuzmina, Sergey Lebedev, Alexander Sirota, Dmitry Medvedev, Sveltana Khlebnikova, Ramiz Mamedov, Khasiyat Ismatova, Amir Alyev, Tural Nabiyev

16:00 COFFEE BREAK

16:20 Satellite altimeter estimates of sea ice thickness and mass balance
Seymour Laxon, Katharine Giles, Sinead Farrell, Andrew Ridout

16:40 Characterizing and Following Eddies in Drake Passage
Jesus Gomez-Enri, Gabriel Navarro, Graham Quartly, Pilar Villares

17:00 X-track, a New Processing Tool for Altimetry in Coastal Oceans
Laurent Roblou , Florent Lyard , Matthieu Le Hénaff, Claire Maraldi

17:20 A widespread subglacial water system under the Whillans and Mercer ice streams revealed using ICESat and image differencing
Helen Fricker, Ted Scambos, Robert Bindschadler, Laurie Padman

17:40 Evaluation of the Altimetric Information from RADARSAT-1, ASTER and SRTM Data for Topographic Mapping in the Amazon Region
Waldir R. Paradella, Cleber G. Oliveira

Friday Afternoon (14:20 - 18:00)
Room: 122
Fr06AF. Multisensor Analysis and Data Fusion
Co-Chairs: *Jon Atli Benediktsson , Maria Teresa Merino*

14:20 A New Method for Quality Assessment of Hyperspectral Images
Andrea Garzelli, Filippo Nencini, Luciano Alparone, Stefano Baronti

14:40 Multi-Approach System Based on Fusion of Multi-Spectral Images for Land Cover Classification
Boulila Wadii, Farah Imed Riadh, Saheb Ettabaa karim, Ben Ahmed Mohamed

15:00 On Spatial Priors for Satellite Image Fusion
Henrik Aanæs, Jóhannes Sveinsson, Thomas Bøvith, Jón Atli Benediktsson, Allan Nielsen, Sigurjón Árni Guðmundsson

15:20 Multisensor Scene Interpretation Using Very High-Resolution Optical Imagery And Polarimetric SAR Data
Yannick Allard, Alexandre Jouan, Goze Benie

15:40 Fusion of Reconstructed Multispectral Images
Valery Starovoitov, Aliaksei Makarau, Igor Zakharov, Dmitry Dovnar

16:00 COFFEE BREAK

16:20 A Wavelet-Based Method for the Determination of the Relative Resolution between Remotely Sensed images.
Maria Teresa Merino, Jorge Núñez, Octavi Fors, Xavier Otazu

16:40 The Effect of Variations in Relative Spectral Response on the Retrieval of Land Surface Parameters from Multiple Sources of Remotely Sensed Imagery
David Meyer, Gyanesh Chander

17:00 Panchromatic Wavelet Texture Features Fused with Multispectral Bands for Improved Classification of High-Resolution Satellite Imagery
Arko Lucieer, Harald van der Werff

17:20 Spatial Enhancement of Hyperion Hyperspectral Data Through ALI Panchromatic Image
Luca Capobianco, Andrea Garzelli, Filippo Nencini, Luciano Alparone, Stefano Baronti

17:40 A Fusion Method for Mixed Pixels Based on Prior Type Judgment
Linhai Jing, Qiuming Cheng

Friday Afternoon (14:20 - 18:00)
Room: 123
Fr07AF. Applications of Joint Time-Frequency Analysis (JTFA) to SAR Image Processing
Co-Chairs: *Paul R. Kersten , Laurent Ferro-Famil*

14:20 Joint Time-Frequency Analysis for Radar Signal and Imaging
Victor Chen

14:40 SAR Traffic Monitoring Using Time-Frequency Analysis for Detection, Parameter Estimation and Imaging
Stefan Baumgartner, Gerhard Krieger, Karl Bethke

15:00 An Improved Time-Frequency Phase Adjustment Technique for ISAR
Mengmeng Zhu, Junfeng Wang, Xingzhao Liu

15:20 The Fractional Fourier Transform and its Application to High Resolution SAR Imaging
Ahmed Amein, John Soraghan

15:40 The Cross Time-Frequency Distribution Series for Synthetic Aperture Radar (SAR) Applications
Paul R. Kersten, Robert W. Jansen, Tom L. Ainsworth

16:00 COFFEE BREAK

16:20 Complex Scene Analysis from Time-Frequency Statistics of POLSAR Data
Laurent Ferro-Famil, Andreas Reigber

16:40 Characterization of Scatterers by their Anisotropic and Dispersive Behavior
Mickael Duquenoy, Jean Ovarlez, Laurent Ferro-Famil, Eric Pottier, Luc Vignaud

17:00 Subaperture Analysis of Polarimetric SAR Imagery
John Kelly, Thomas Ainsworth, Jong-Sen Lee

17:20 Inversion of Soil Moisture Content from L- and P-Band AIRSAR Polarimetric SAR Data
Sang-Eun Park, Wooil M. Moon

17:40 Contributive Processing Methods Integrated in a Robust Tool for Ocean Monitoring from SAR Imagery
Marivi Tello, Carlos Lopez-Martinez, Jordi J. Mallorqui, Ramon Bonastre

Friday Afternoon (14:20 - 18:00)
Room: 128
Fr08AF. Radar and SAR Calibration
Co-Chairs: *Jeremy Nicoll , Adrian Schubert*

14:20 Geometric Validation of TerraSAR-X High-Resolution Products
Adrian Schubert, David Small, Erich Meier

14:40 Full Motion Compensation for LFM-CW Synthetic Aperture Radar
Evan C. Zaugg, David G. Long

15:00 Individual T/R Module Characterisation of the TerraSAR-X Active Phased Array Antenna by Calibration Pulse Sequences with Orthogonal Codes
Benjamin Bräutigam, Marco Schwerdt, Markus Bachmann, Martin Stangl

15:20 Performance Prediction and Verification for the Synchronization Link of TanDEM-X
Marwan Younis, Robert Metzig, Gerhard Krieger, Markus Bachmann, Rainer Klein

15:40 Characterization of Local Regularity in SAR Imagery by Means of Multiscale Techniques: Application to Oil Spill Detection
Marivi Tello, Carlos López-Martínez, Jordi Mallorquí, Ramon Bonastre, Alessandro Danisi, Gerardo Di Martino, Antonio Iodice, Giuseppe Ruello, Daniele Riccio

16:00 COFFEE BREAK

16:20 Effects of Pointing Errors of an Imaging Spaceborne SAR
Ales Bazzoni, Marc Iorio, Giov Picardi, Roberto Venturini, Artu Masdea

16:40 ALOS PALSAR Products Verification
Thomas Börner, Konstantinos P. Papathanassiou, Nicolas Marquart, Manfred Zink, Peter J. Meadows, Anthony J. Rye, Patricia Wright, M. Meininger, Betlem Rosich Tell, Ignacio Navas Traver

17:00 Calibration of the SHARAD Instrument
Renato Croci, Franco Fois, Mauro Guelfi, Paolo Noschese, Riccardo Mecozzi, Roberto Seu

17:20 Analysis and Improvement of Polarimetric Calibration Techniques
Carlos López-Martínez, Antonio Cortés, Xavier Fàbregas Cànobas

17:40 Prediction and Detection of Faraday Rotation in ALOS PALSAR Data
Jeremy Nicoll, Franz Meyer, Michael Jehle

Friday Afternoon (14:20 - 18:00)
Room: 130
Fr09AF. Passive Microwave: Missions and Calibration
Co-Chairs: *Ignasi Corbella , Francisco Torres*

14:20 Developing a GeoSTAR Science Mission
Bjorn Lambrigtsen, Alan Tanner, Todd Gaier, Pekka Kangaslahti, Shannon Brown

14:40 GPM Microwave Imager Selected Calibration Features and Predicted Performance
John B. Sechler

15:00 Inter-Satellite Radiometer Calibrations between WindSat, TMI and AMSR
Liang Hong, Linwood Jones, Thomas Wilheit

15:20 Spurious 3rd and 4th Stokes Signals ("Shadowing") in Polarimetric Microwave Radiometry over Oceans: Origin, Characteristics, and Mitigation
Craig Kenton Smith, David A. Thompson

15:40 Clock Scan of Imaging Interferometric Radiometer and Its Applications
Ji Wu, Cheng Zhang, Hao Liu, Weiying Sun, Jingye Yan

16:00 COFFEE BREAK

16:20 Improved Receiver Architecture for Future L-Band Radiometer Missions
Janne Lahtinen, Petri Piironen, Andreas Colliander, Manuel Martin-Neira

16:40 Restrictions on the Field of View for an Undersampled 1-D Synthetic Thinned Aperture Radiometry
Boon Lim, Ruba Amarin, Salem El-Nimri, James Johnson, Linwood Jones, Christopher Ruf

17:00 Accurate L-Band Measurements of the Dielectric Constant of Seawater
Roger H. Lang, Cuneyt Utku, Jared Janiczek, Yalcin Tarkocin, David M. Le Vine

17:20 Calibration of an L-Band Soil Moisture Radiometer Using System Identification Technique
Miao Tian, Albin J. Gasiewski

Friday Afternoon (14:20 - 18:00)
Room: 132
Fr10AF. Advances in Lidar Remote Sensing
Co-Chairs: *Barry Lienert , John Porter*

14:20 Development Of 2-Micron Solid-State Laser For Space-Based Measurement Of Wind And Carbon Dioxide
Upendra Singh

14:40 Eye Safe, Visible Wavelength Lidar Systems: Design and Operational Advances
James Spinhirne, Timothy Berkoff, Ellsworth Welton, James Campbell

15:00 Applications and continued development of the Raman-shifted Eye-safe Aerosol Lidar (REAL)
Shane Mayor

15:20 Development and applications of a ground-based 2-micron DIAL system to profile tropospheric CO2
Syed Ismail, Grad Koch, Nuru Abedin, Tame Refaat, Manu Rubio, Kenn Davis, Scot Richardson, Char Miller, Upen Singh

15:40 Advances in Real Time Lidar Spectroscopy
Barry Lienert, Shiv K. Sharma, Teng Chen, John M.J. Madey

16:00 COFFEE BREAK

16:20 Lidar Method for Determination of Quartz concentration in the Tropospheric Mineral Aerosols
Boyan Tatarov, Nobuo Sugimoto, Ichiro Matsui

16:40 Lidar, Sun Photometer and Polar Nephelometer Measurements: Remote Sensing of Aerosol Size Distribution Properties
John Porter, David Bates, Julia Walterspiel

17:00 Mobile Scanning Lidar: A Flexible Platform From Air Quality Studies To Satellite Validation
Kevin Strawbridge, Michael Harwood, Michael Travis

17:20 Using Lidar Backscatter Measurements and Data Fusion Techniques to Derive an Improved MODIS Cloud Mask.
Mark Vaughan, Shar Rodier, Yongxiang Hu, Robe Holz

17:40 A New Type of LIDAR for Atmospheric Optical Turbulence
Gary Gimmestad, David Roberts, John Stewart, Jack Wood

Friday Afternoon (14:20 - 18:00)
Room: 133
Fr11AF. Multichannel Coherent SAR Data Combination - Spaceborne
Co-Chairs: *Fabio Rocca , Fabrizio Lombardini*

14:20 Multi Baseline SAR Acquisition Concepts and Phase Unwrapping Algorithms for the TanDEM-X Mission
Marie Lachaise, Michael Eineder, Thomas Fritz

14:40 Multiple Acquisition InSAR Analysis: A Combined Approach For Maximizing the Abundance of Useful Pixels
Andrew Hooper

15:00 Preliminary investigation of the weight of evidence method and permanent scatterers for In-SAR
Flora Paganelli , Paul A. Rosen

15:20 Persistent Scatterer Selection Using Maximum Likelihood Approach
Piyush S. Agram, Howard Zebker

15:40 A New Method for Identification and Analysis of Coherent Scatterers in Series of SAR Images
Mario Costantini, Salvatore Falco, Fabio Malvarosa, Federico Minati

16:00 COFFEE BREAK

16:20 Spaceborne Multi-Dimensional SAR Imaging: Current Status and Perspectives
G. Fornaro, F. Lombardini, M. Pardini, F. Serafino, F. Soldovieri, M. Costantini

16:40 New Potentials of Differential SAR Tomography: Volumetric Differential Interferometry and Robust DEM Generation
Fabrizio Lombardini

17:00 A Space-Time Minimum Cost Flow Phase Unwrapping for the Generation of Persistent Scatterers Deformation Time-Series
Antonio Pepe, Michele Manunta, Riccardo Lanari

17:20 A New Framework for Multi-Pass SAR Interferometry with Distributed Targets
Andrea Monti Guarnieri, Stefano Tebaldini

17:40 New Phase Unwrapping Strategies for Permanent Scatterer Analysis
Francesco De Zan, Alessandro Ferretti, Alfio Fumagalli, Fabrizio Novali, Alessio Rucci

Friday Afternoon (16:20 - 18:00)
Room: 123
Fr12AH2. Land Use Change
Co-Chairs: *Laerte Guimaraes Ferreira , Jeff Masek*

16:20 Assessing North American Forest Disturbance from the Landsat Archive
Jeffrey G. Masek, Robert Wolfe, Forrest Hall, Samuel Goward, Chengquan Huang, Warren Cohen, Robert Kennedy, Scott Powell, Sean Healey, Gretchen Moisen

16:40 Land Cover Change Analysis within the GLOWA Volta Basin in West Africa Using 30-Meter Landsat Data Snapshots
Tobias Landmann, Christiane Herty, Stefan Dech, Michael Schmidt, Paul Vlek

17:00 Monitoring Land Conversion in Savanna Regions: Possibilities and Approaches from an Optical Remote Sensing Perspective
Laerte Ferreira, Manuel Ferreira, Nilson Ferreira, Fabio Lobo

17:20 Remote Sensing of Pan-Tropical Deforestation Rates and Forest Degradation: New Opportunities with ALOS/PALSAR Radar Imagery
Josef M. Kellndorfer, Daniel Nepstad, Richard Houghton, Nadine Laporte, Scott Goetz, Wayne Walker, Jesse Bishop, Jared Stabach, Claudia Stickler

17:40 Change Detection in the Amazon Rainforest with Radiometric Rotation Technique RCEN Multi-Spectral Case Study: Guarayos - Bolivia
H. Ferrufino Ugarte, T. Zawila-Niedzwiecki, J. R. Santos, F. D. Maldonado

Friday Afternoon (16:20 - 18:00)
Room: 124
Fr13AH2. New Intruments in UAV
Co-Chairs: *Joachim Ender , Shannon Rodriguez*

16:20 X-band radar for Studies of Tropical Storms from High Altitude UAV Platform.
Shannon Rodriguez, Gerald Heymsfield, Lihua Li, Damon Bradley

16:40 A Low-Cost Imaging Radar: DRIVE on Board ONERA Motorglider
Jean-Francois Nouvel, Serge Roques, Olivier du Plessis

17:00 Image Quality Analysis of the Vibrating Sparse MIMO Antenna Array of the Airborne 3D Imaging Radar ARTINO
Jens Klare, Delphine Cerutti-Maori, Andreas Brenner, Joachim Ender

17:20 A Three Dimensional SAR System on an UAV
Matthias Weiß, Olaf Peters, Joachim Ender

17:40 Civil UAV System for Earth Observation
Guoqing Zhou, Deyan Zhang

Friday Afternoon (16:20 - 18:00)

Room: 131

Fr14AH2. Water Monitoring and Hazards

Co-Chairs: *Mona Kaiser , Samir Ahmed*

16:20 Water Resources Assessment at El-Arish Area, Using Remote Sensing and GIS, North Sinai, Egypt
Mona F. Kaiser, Mohammed H. Geriesh

16:40 Dynamic Monitoring of Yellow River Estuary Based on Remote Sensing in the Recent Ten Years and Analysis of Correlation with Flow and Sediment Condition
Shifeng Huang, Jiren Li, Mei Xu, Xiaotao Li, Tao Sun

17:00 Study on Ecological Security Assessment of Yangtze River Delta
Haiyan Zhang, Jun Bi, Lei Shi, Yi Ge, Fengying Li, Jie Yang

17:20 Monitoring and Statistical Analysis of Lanslides in Taiwan Island using Multi Satellite Images and GIS Data
Long-Shin Liang, Kun-Shan Chen, Yang-Lang Chang, Jung-Chi Lien

17:40 Fusion and Differentiation of NASA's Global Elevation Models for Quantitative Natural Hazard Assessments
Robert Crippen

SMOS BARCELONA EXPERT CENTRE

The **SMOS Barcelona Expert Centre on Radiometric Calibration and Ocean Salinity**, a joint initiative of the Spanish Research Council and the Universitat Politècnica de Catalunya, in the framework of the Spanish National Space Program, to contribute to the **Soil Moisture and Ocean Salinity** mission of the European Space Agency.

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