

Timetable, NSCM33

CT: Contributed Talk, KL: Keynote Lecture.

Thursday, 25 of November

8:55–9:00 (CET)	Welcome remarks, P. Hansbo		
Keynote 1	Chair: P. Hansbo		
9:00–9:30	KL	J. M. Nordbotten Bergen, Norway	Mixed-dimensional finite strain poroelasticity
Session 1	Chair: M. G. Larson		
9:30–9:45	CT	F. Ekre Braunschweig, Germany	Adaptive combination of modes in numerical model reduction for porous media
9:45–10:00	CT	F. Miralles Nice, France	Simulation of the supercritical flow around a circular cylinder using hybrid models
10:00–10:15	CT	M. E. Nielsen Aalborg, Denmark	Recent developments towards a hybrid method for fully nonlinear water waves
10:15–10:30	CT	J. Kronborg Stockholm, Sweden	Computational analysis of flow structures in turbulent ventricular blood flow associated with mitral valve intervention
10:30–10:45	CT	N. P. Khanyile Lille, France	Numerical simulation of frictional contact using Bezier-based isogeometric analysis with the penalty method
10:45–11:00	CT	M. Zhang Aalborg, Denmark	Visco-elastic modelling of a Maxwell dynamic model and experimental validation of PVC gels
11:00–11:15	CT	J. Torabi Helsinki, Finland	Nonlinear finite element analysis of cellular structures based on strain gradient plate model
11:15–11:30	CT	V. Košmerl Rijeka, Croatia	Carbon nanotube stress-strain behavior prediction using convolutional neural networks
11:30–11:45	CT	S. Berezvai Budapest, Hungary	Numerical analysis of detachment stability in soft-tip composite fibrils
11:45–12:00	CT	N. Nareshnayak Chennai, India	Finite element based analysis of the one-way flexural strength of the prestressed concrete hollow-core slabs
12:00–13:00	Lunch break		

Keynote 2	Chair: P. Hansbo		
13:00–13:30	KL	E. Wadbro Karlstad, Sweden	On material distribution topology optimization for acoustic and electromagnetic wave propagation problems
Session 2	Chair: P. Hansbo		
13:30–13:45	CT	R. Ma Trondheim, Norway	Why is the adhesion strength of hydrate only one-fifth of ice?
13:45–14:00	CT	A. L. Horváth Budapest, Hungary	Automated stress singularity calculations with Python scripts in Abaqus
14:00–14:15	CT	V. Tsiolakis Trondheim, Norway	Complexity reduction of turbulent flow around wind-turbine blades via model reduction
14:15–14:30	CT	V. Tu Gothenburg, Sweden	Variationally Consistent Homogenization of the electro-chemically coupled transport of electroactive species
14:30–14:45	CT	M. Görtz Gothenburg, Sweden	Upscaling validated linear paper network models using the localized orthogonal decomposition method
14:45–15:00	Break		
Session 3	Chair: M. G. Larson		
15:00–15:15	CT	S. M. Gomes Campinas, Brazil	Hybrid-mixed finite elements on polytopes for two-scale elasticity models with relaxed symmetry
15:15–15:30	CT	Y. Choi Livermore, USA	Nonlinear manifold to component-wise reduced order models towards multi-scale problems
16:00–16:15	CT	T. Jonsson Umeå, Sweden	Robust cut isogeometric analysis on imperfect CAD surfaces with gaps
16:15–16:30	CT	A. Johansson Oslo, Norway	Multimesh methods for flexible geometry modeling
16:30–16:45	CT	Y. Li Leuven, Belgium	Rough surface characterization using acoustic optimization framework
16:45–17:00	CT	A. Tkachuk Karlstad, Sweden	Form-finding of tensegrity structures via rank minimization formulations: relaxations, examples and limitations
Keynote 3	Chair: M. G. Larson		
17:00–17:30	KL	N. Aage Copenhagen, Denmark	Large scale structural optimization: current state of the art and new frontiers

Friday, 26 of November

Keynote 4	Chair: F. Larsson		
9:00-9:30	KL	S. Hostikka Espoo, Finland	Verification and validation of an open-source CFD-code — case Fire Dynamics Simulator
Session 4	Chair: F. Larsson		
9:30-9:45	CT	W. Liu Espoo, Finland	Investigation on strain rate effect of high strength dual-phase steel by micromechanics modeling
9:45-10:00	CT	H. Su Nanjing, China	A novel theoretical sieve curve for particle model: Piecewise linear sieve curve
10:00-10:15	CT	K. S. Akhil Chennai, India	Influence of design parameters on the natural frequency of bistable laminates
10:15-10:30	CT	M. D. Ulriksen Aalborg, Denmark	Offline eigenvector assignment for mass perturbation localization
10:30-10:45	CT	R. Bharali Gothenburg, Sweden	Numerical methods for treatment of phase-field fracture irreversibility
10:45-11:00	CT	K. A. Meyer Braunschweig, Germany	Modeling anisotropic yield surface evolution
11:00-11:15	CT	D. Carlstedt Gothenburg, Sweden	The effect of stress-assisted convection on the electro-chemo-mechanical performance of structural batteries
11:15-11:30	CT	N. A. Collins-Craft Grenoble, France	An extrinsic cohesive zone model with contact developed in the non-smooth mechanics framework
11:30-11:45	CT	Y. Ding Trondheim, Norway	Atomic insights into hydrogen-induced transgranular to intergranular fracture transition
11:45-12:00	CT	A. Kossa Budapest, Hungary	Analysis of the compressible neo-Hookean isotropic hyperelastic material model
12:00-13:00	Lunch break		

Keynote 5	Chair: T. Kvamsdal		
13:00-13:30	KL	N. Kudryavtseva Tallinn, Estonia	Modelling non-stationary loads induced by changing climate
Session 5	Chair: T. Kvamsdal		
13:30-13:45	CT	A. H. Niemi Oulu, Finland	Discontinuous Petrov-Galerkin method with optimal test functions for plate and shell structures
13:45-14:00	CT	F. Baumann Berlin, Germany	Multilevel augmented Lagrangian solvers for overconstrained contact discretization
14:00-14:15	CT	M. R. Hashemi Barcelona, Spain	An efficient two-step elliptic level-set reinitialization for droplet simulation
14:15	Closing remarks		