

COUPLED PROBLEMS 2021

Invited Session (IS): organizer Jacques Periaux (CIMNE, Spain)

Title: Numerical solutions of Coupled Problems Arising from Concerns about the Environmental Climate Impact, Safety, Impact on Global Health Related to International Air Transport .

Objectives:

The accelerating demand for global air services is producing enhanced challenges for the climate, the environment, safety, and public health. Insuring that the air transport system is resilient against both emerging and sustained challenges will require research as well as the development and the application of innovative technologies.

Toward this end, this session will focus on some mathematical and computational models that focus on and describe these issues. Among the topics to be discussed the impact and the emission of CO² and other greenhouse gases, the global spread of infectious disease (biological threats), long range climate change, and the aeronautical hazards presented by operations in adverse weather (wind shear, icing, microbursts, clear air turbulence, and thunderstorms).

In addition to discussing that development and the numerical simulation of these coupled models the presenters will also discuss a strategic approach to the resolution of these issues.

Tentative invited speakers:

- William Fitzgibbon (Univ. of Houston, TX, USA)
- Olivier Pironneau (Sorbonne Université, France)
- Ning Qin (Sheffield Univ., UK)
- Jacques Periaux (CIMNE, Spain)
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JP, Barcelona, 22/03/21

