

" Advanced Hybridized software for solving challenging multi-disciplinary design applications"

chaired by Tadeusz Burczynski (IPPT, Poland) and Jacques Periaux (CIMNE)

Title : The main objectives of the above MS is to show that similar hybridized software (CAD/ meshing data, PDEs modeled analyzer, optimizer) can be used efficiently with high quality design for a large spectrum of multi-disciplinary applications namely Aeronautics, Transport, Marine, Structures, Bio Medicine among others.

Targeted applications :

- Aeronautics (Civil aircraft and UAVs)
- Structures (Marine Off shore design)
- Biomedicine (Stents)
- Logistics (Transport)
- Environmental problems
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Methods, tools and data software :

- Goal oriented methods
- Immune systems methods
- Mesh adaptation
- Games strategies
- Neural networks
- PSO, Immune systems and Evolutionary Algorithms

Results from numerical experiments will illustrate the potential of such decision making tools for advanced design in industrial and societal environments.

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