

MINI-SYMPOSIUM

SIMULATION AND OPTIMIZATION OF FLUID FLOW, HEAT AND MASS TRANSFER

ISABEL MALICO

Department of Mechatronics Engineering
School of Sciences and Technology
University of Évora
R. Romão Ramalho 59, 7000-761 Évora, Portugal
e-mail: imbm@uevora.pt, web: https://www.uevora.pt

LAETA/IDMEC
Instituto Superior Técnico
Universidade de Lisboa
Av. Rovisco Pais, 1049-001 Lisboa, Portugal
web: https://www.idmec.tecnico.ulisboa.pt

Keywords: Numerical computation, symbolic computation, optimization

Abstract The minisymposium aims at providing a forum for presentation and discussion of scientific results concerning both numerical and optimization problems specific to fluid flow, heat and mass transfer in science and engineering. Topics of this mini-symposium include, but are not limited to, numerical methods and applications related to:

- Multidimensional fluid flows, heat and mass transfer;
- *Multi-phase fluid flow problems*;
- Free surface, environmental and geophysical flows;
- Shock waves, combustion and explosions;
- Biological fluid flows;
- Porous media;
- Renewable and non-renewable energies;
- *Microfluidics and nanofluidics*;
- Fluid-structure interaction:
- Multiphysics involving fluid flow and heat transfer;
- *Model order reduction;*
- Design optimization;
- Topology optimization.