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# ADVANCED CONTROL AND OPTIMIZATION METHODS IN FLUID DYNAMICS PROBLEMS TRACK NUMBER 2000

**SANDRO MANSERVISI*, GIORGIO BORNIA†, EUGENIO AULISA†, ANDREA CHIERICI *, LEONARDO CHIRCO* AND VALENTINA GIOVACCHINI***

* Alma Mater Studiorum, University of Bologna
Via dei Colli 16, 40136, Bologna, Italy
sandro.manservisi@unibo.it, leonardo.chirco2@unibo.it

† Department of Mathematics and Statistics, Texas Tech University
Lubbock, TX 79409, USA
giorgio.bornia@ttu.edu, eugenio.aulisa@ttu.edu

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## ABSTRACT

The minisymposium (MS) aims to bring together several presentations dealing with numerical methods, their analyses and applications of optimization techniques. Nonlinear inverse problems, optimal flow control, shape optimization as well as coupled systems are considered. The MS invites papers applying all optimization methods to heat transfer, fluid-based, multiscale and multiphysics problems:

1. Heat transfer problems(e.g. conduction, convection and conjugate heat transfer models, etc.).
2. Fluid flow problems (e.g. laminar/ turbulent, feedback control, etc.).
3. Multiphysics problems (e.g. fluid-structure interaction, MHD, reacting flows, species transport, two-phase flows, etc.).
4. Multiscale problems (e.g. 1D/3D (or 1D/2D) coupling, etc.).

## REFERENCES

[1] Gunzburger, M. D. *Perspectives in flow control and optimization*. Siam, Vol. 5, (2003).