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# ANNOUNCEMENTS

## EUROTHERM — SEMINAR No. 49

## PHYSICAL MODELS FOR THERMAL ENERGY STORES

Eindhoven, The Netherlands

*25–27 March 1996*

**Scope of the Seminar**

Thermal energy storage provides a solution to bridge the temporal mismatch between energy need and availability, both for heating and cooling purposes. Following the basic classification thermal energy can be stored as sensible heat in hot liquids and solids and as latent heat in melts, vapours, chemical reactions and adsorption processes.

The emphasis of the proposed seminar lays primarily on the physical modelling of the fluid flow phenomena and heat and mass transfer processes that occur in thermal energy stores.

Hence, the objectives of the seminar are

—the exchange of recent progress in theoretical models, numerical simulations and experimental analyses of the physical processes occurring and

—to discuss the consequences of the gained physical insights for the improved design of thermal energy stores.

To enhance the scientific interactions the number of participants will be restricted to approximately 50.

**Topics of the seminar**

- Heat and mass transfer
  - —natural and forced convection
  - —thermocline development
  - —internal wave phenomena, mixing
  - —solidification and melting processes
  - —diffusion/convection limitations
  - —fouling of heat exchanging surface
- Thermodynamics
  - —first and second law analyses
  - —parasitic energy losses
- Design implications
  - —optimal storage geometry
  - —integrated heat exchangers
  - —operation strategies.

**Scientific Committee**

Professor E. W. P. Hahne (Co-chairman)
*University of Stuttgart, Germany*

Professor C. W. J. van Koppen
*Emeritus-professor, former member of the board of ISES*

Professor Jose M. Redondo
*Universitat Politecnica de Catalunya, Barcelona, Spain*

Professor A. A. van Steenhoven (Chairman)
*Eindhoven University of Technology, The Netherlands*

**Local Organizing Committee**

Ir J. van Berkel
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## *Call for Papers*

# FIRST INTERNATIONAL CONFERENCE ON ADVANCES IN FLUID MECHANICS

New Orleans, LA, U.S.A.

*11–13 June 1996*

**Objectives**

This first *International Conference on Advances in Fluid Mechanics* is convened by the Scientific Editors of the international series on Advances in Fluid Mechanics to provide a forum for the interchange of new ideas and the presentation of the latest work in the field. The meeting has been motivated by the success of the Book Series and the need to provide a mechanism for discussing new work which may afterwards appear in future volumes.

The Conference covers a wide range of topics as described below, with emphasis on new applications and to research currently in progress. The basic mathematical formulations of fluid mechanics and their computer modelling will be discussed as well as the relationship between experimental and analytical results.

**Conference topics**

- Experimental versus computational methods
- Numerical methods in fluid mechanics
- Boundary element methods for fluids
- Inverse fluid mechanics problems
- Fluid–structure interaction
- Heat and mass transfer
- Bio-fluid mechanics
- Geophysical fluid dynamics
- Environmental fluid mechanics
- Hydrodynamics
- Aerodynamics
- River lake and estuary fluid dynamics
- Coastal sea modelling
- Non-linear ocean waves
- Data assimilation in oceanic/atmospheric models
- Air–sea coupling dynamics
- Wave propagation and scattering
- Non Newtonian fluid
- Constitutive relationships
- Multiphase flow
- Acoustics
- High performance computing in fluid mechanics
- Visualization

**Conference chairmen**

Professor C. A. Brebbia, *Wessex Institute of Technology, U.K.*

Professor M. Rahman, *Technical University of Nova Scotia, Canada*

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