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ANNOUNCEMENTS

INTERNATIONAL CONFERENCE ON NUMERICAL METHODS FOR COUPLED PROBLEMS

University College, Swansea, 7-11 September 1981

Objectives

Numerical techniques are extensively applied in the solution of problems which involve coupling:

Interacting Physical Systems

(examples: fluid–structure interaction, multi-phase flow, soil–structure interaction, contact between solids, soil liquefaction, electro-magnetic fields, thermo-mechanical coupling, biomechanics, elastohydrodynamic lubrication, magnetohydrodynamics, heat and mass transfer, phenomenological relations and moisture stress development.)

Discretization/Solution Techniques

(examples: implicit–explicit and staggered time stepping schemes, linking of finite elements to—boundary integrals, special singularity elements, and infinite elements, radiation boundary conditions.)

The conference will be concerned with the application of numerical methods to coupled field problems, and to the use of coupled numerical techniques, with the main aim of establishing the state-of-the-art of such methods. Analysis of industrial and technological applications will be especially welcomed. The proceedings will be published prior to the conference, and selected papers will be published later to commemorate the event.

Invited key note speakers include:
J. H. Argyris, R. W. Clough, J. Douglas, R. H. Gallagher, T. J. R. Hughes, A. R. Mitchell, J. T. Oden, K. C. Park, I. M. Smith, R. L. Taylor, C. W. Trowbridge, G. B. Warburton

Call for papers

Abstracts are invited on the topics outlined above. Other papers of merit in related topics will also be considered for inclusion. The abstracts should be approximately 300 words in length and submitted before 31 January 1981. Final papers should be submitted by 30 April 1981.

For further details contact
Dr. P. Bettess,
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University College of Swansea,
Swansea SA2 8PP, U.K.

An Announcement for TWO Conferences

7–10 July 1981
International Conference on
NUMERICAL METHODS
IN
THERMAL PROBLEMS

13–16 July 1981
International Conference on
NUMERICAL METHODS
IN
LAMINAR & TURBULENT FLOW

Both to be held in Venice, Italy

Following on from the first conferences held in Swansea, these second conferences will be held with the view of consolidating the recent advances in the application of numerical techniques, particularly finite difference and finite element methods, to the solution of thermal and fluids problems.

Authors are requested to submit papers to the appropriate conference using as a general guide Thermal Problems—emphasis on Heat Transfer, Laminar and Turbulent Flow—Mass Transfer.

Call for papers

Abstracts are invited on the topics outlined previously. Other papers of merit in related topics will also be considered for inclusion. The abstracts should be approximately 300 words in length and submitted before 1 September 1980. Final papers will be required by 1 February 1981 for inclusion in the appropriate Conference Proceedings.

All abstracts for both conferences should be sent to:

DR. C. TAYLOR
Department of Civil Engineering
University College
Swansea SA2 8PP
U.K.

SHORT COURSES
on
FINITE ELEMENT METHODS IN FLUIDS
8–10 July 1981
and
FINITE ELEMENT METHODS IN THERMAL PROBLEMS
13–15 July 1981
to be held at PADOVA, ITALY

Course lecturers

D. K. Gartling (Sandia Laboratories, U.S.A.); P. M. Gresho (Lawrence Livermore Labs., U.S.A.); R. W. Lewis (University College of Swansea, U.K.); K. Morgan (University College of Swansea, U.K.); C. Taylor (University College of Swansea, U.K.); H. R. Thomas (University College of Cardiff, U.K.).

Objectives

The courses are aimed at practising engineers, research scientists and those engaged in industrial research and development who wish to acquire a knowledge of the fundamentals of the Finite Element Method (F.E.M.) and the application of the method to solve engineering problems.

Two courses, each of three days duration, are to be arranged. The first will concentrate on the application of the F.E.M. in fluid mechanics and the second on its application in thermal problems. Some basic introductory lectures, common to both courses, will precede some in-depth lectures on specific topics and related solution techniques. These include

F.E.M. in Fluids	F.E.M. in Thermal Problems
• Basic concepts • Method of weighted residuals	
• Potential Flow	• Heat Conduction
• Advection/Diffusion	• Phase Change
• Coupled Problems	• Heat and Mass Transfer
• Navier Stokes and Heat Transfer	• Non-Linear Problems
• Introduction to Turbulent Flow	• Convection Problems
• Recent Advances	• Recent Advances
8–10 July 1981	13–15 July 1981

Location

The courses will be held at the University of Padova located in the North East of Italy some 30 km from Venice.

Accommodation

Details regarding accommodation during the courses can be obtained from,

Dr. B. Schrefler,
Istituto di Costruzioni, Ponti e Strade,
Facolta D'Ingegneria,
Universita Di Padova,
35100, PADOVA,
ITALY

Early booking is recommended.

Course fees and registration

The fee for one course is £180 and for two courses is £320. Early registration is recommended since a limit is placed on the number of participants. Cancellation will be fully refunded up to one month prior to the course and substitutions can be made at any time.

For further information contact:

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