BOOK REVIEW

MODELLING AND SIMULATION IN PRACTICE/2.
Edited by M. J. O'Carroll *et al.*

This book contains the proceedings of POLYMODEL2 the second annual conference of the North East Polytechnic's Mathematical Modelling and Computer Simulation Group (based in the U.K.). It is 350 pages in length, hard back and produced from camera ready copy. Whilst there is an emphasis on finite element methods of modelling, the proceedings seem to contain a 'pot pourri' of contributions. These range from a paper on F.E. analysis of drying timber (contains a high density of integral signs), to commentary on an F.E. educational film (cost £80), through to a paper entitled 'Employment forecasting with application to the Northern Region' (maybe the dual problem is easier—unemployment forecasting).

The proceedings are divided into four sections, there being a total of seventeen papers. The first two sections concentrate on F.E. aspects and in particular the papers by O'Carroll, introducing finite element methods, and Robinson, on available F.E. software packages, are useful contributions.

For the F.E. voyeur there is a sixteen-page record of an 'open forum user discussion' which contains a heated 'discussion' on diesel engine analysis. Allow me to quote—'I disagree with the remark you've made there about diesel engines'—reply 'But you are not in the diesel engineering industry'—reply 'We have a dozen customers who are in the diesel engineering industry' etc. etc.—all good stuff!

Whilst it is difficult to be able to judge the merit of all the diverse contributions to POLYMODEL2, the very diversity seems to mitigate against recommendation. If I want information on 'Atmospheric pollution' or 'Traffic noise models' I would rather purchase the specialist text containing many articles on the topic of interest.

R. D. WOOD
University College of Swansea

ANNOUNCEMENTS

NINETEENTH ANNUAL MEETING
OF THE
SOCIETY OF ENGINEERING SCIENCE
27–29 October 1982
University of Missouri–Rolla
Rolla, Missouri, U.S.A.

The Nineteenth Annual Meeting of the Society of Engineering Science will be held at the University of Missouri–Rolla, Rolla, Missouri from Wednesday, 27 October, to Friday, 29 October, 1982. Invited and contributed papers from engineers and scientists in all fundamental disciplines of engineering sciences will be presented.

Presentation of papers will be selected on the basis of submitted and invited abstracts. Abstracts must not exceed one single-spaced typed page including references and illustrations, if any. Full names and mailing addresses of the authors must follow the title of the paper. The abstract must be typed on white bond paper ($8\frac{1}{2} \times 11$ inches) with a $1\frac{1}{4}$-inch wide margin on all four sides. One typed original and one copy

of the abstract should be mailed to:

SES Papers Committee
c/o Professor R.C. Batra
Department of Engineering Mechanics
University of Missouri–Rolla
Rolla, Missouri 65401, U.S.A.

All abstracts must be received no later than 15 April 1982, and notification of acceptance or rejection will be made by 15 June 1982.

Preliminary Programme: Around 1 September 1982, a Preliminary Programme that will include details about preregistration, housing and travel will be distributed to persons who would have expressed an interest in the conference by writing to Professor Batra at the address given above,

An International Conference on
FINITE ELEMENT METHODS
August 1982, Beijing (Peking), China
(First Announcement)

The organizing committee takes pleasure in inviting engineers, scientists and mathematicians all over the world to participate in the International Conference on Finite Element Methods to be held in Beijing, China, in late August, 1982.

The Conference is organized jointly by the Architectural Society of China, the Society of Civil Engineers of China, the Society of Mechanics of China, and the Department of Civil Engineering of the University of Hong Kong. A committee of international experts will be formed to steer the Conference.

Topics

Theoretical Developments
Solid Mechanics
Structural Dynamics and Stability
Probabilistic Methods
Geomechanics
Fluid Flow
Field Problems
Soil-Structure Interaction
Fluid-Structure Interaction

Nonlinear Problems
Semi-analytical Methods
Optimization Techniques
Special Elements
Boundary Solution Process
Computation and Solution Techniques
Applied Computer Programs
Practical Applications

Abstracts of papers of approximately 500 words should be submitted to the Conference Secretary for review by 1 October 1981. Details of format etc. will be sent to successful contributors. Accepted papers of up to fifteen pages will be required by 1 March 1982 for publication in the Conference Proceedings.

Abstracts and requests for further information should be sent to:

Professor Y.K. Cheung,
International Conference on
   Finite Element Methods,
c/o Department of Civil Engineering,
University of Hong Kong,
Hong Kong.

INTERNATIONAL CONFERENCE ON NUMERICAL METHODS
IN INDUSTRIAL FORMING PROCESSES

University College, Swansea, 12–16 July 1982

Objectives
To establish the state of the art, with respect to research and practice, for numerical methods in forming processes. It is intended that the conference be broadly based, encompassing such topics as metal and polymer forming, metal and glass casting and sheet metal forming.

Topics
Viscoplastic flow and coupled heat transfer, phase change problems, viscoelastic flow, free surface flow, time dependent and steady state problems, deformation dependent boundary conditions, large deformation elasto-plasticity, extrusion, drawing, rolling, forging, casting, sheet forming, injection moulding, blow moulding, wire coating, calendering and spinning.

Advisory panel/keynote speakers
M. J. Crochet, R. T. Fenner, S. Kobayashi, E. H. Lee, G. Menges, J. C. Nagtegaal, A. Samuelson, E. G. Thompson, R. I. Tanner, N–M. Wang.

Call for papers
Abstracts are invited on the above and related topics and should be approximately 300 words in length and submitted before 30 November 1981. Final papers are required by 26 February 1982.

For further details contact
      DR. R. D. WOOD
      Department of Civil Engineering,
      University College of Swansea,
      SWANSEA SA2 8PP, U.K.

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, multiphase flow, soil–structure interaction, contact between solids, soil liquefaction, electromagnetic 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 establish-ing 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,
Department of Civil Engineering,
University College of Swansea,
Swansea SA2 8PP, U.K.

INTERNATIONAL SYMPOSIUM ON OPTIMUM STRUCTURAL DESIGN

The University of Arizona campus, Tucson, Arizona, U.S.A. 19–22 October 1981

Presented by: The United States Office of Naval Research and The University of Arizona, College of Engineering.

Objective: The programme is intended to have broad coverage in the general area of structural optimization, with sessions on such topics as optimality criteria methods, mathematical programming approaches, optimal control theory, special methods of optimization, practical applications and computer software, and interactive graphics in the structural design process. The language of the symposium will be English.

For more information contact:
Dr. Erdal Atrek
Dept. of Civil Engineering
Bldg. #72
University of Arizona
Tucson, Arizona 85721, U.S.A.
Phone: (602) 626–3234 or 626–2266

THIRD SYMPOSIUM ON
TURBULENT SHEAR FLOWS
University of California, Davis, California, U.S.A.
9–11 September 1981

Purpose

The Symposium aims to advance understanding of the physical processes of turbulent motion and the capabilities for predicting momentum, heat or mass transport in turbulent shear flows.

Sessions

Approximately 20 formal sessions and panel discussions are planned. Contributed papers are welcome in the following general areas:

Fundamentals. New theories and concepts or measurements that illuminate the nature of turbulence;

Turbulence models. New developments within the framework of classical single- or two-point closures;

Heat and pollutant transport. Particular emphasis on the physics of scalar transport by turbulence whether passive or coupled through buoyancy or other agencies;

Combustion. Physical aspects of turbulence effects on pre-mixed and diffusion flames;

Numerical schemes. New and improved numerical methods for calculating turbulent flows;

Applications. Turbulent flow calculation schemes applied to problems of engineering importance.

The 3rd Symposium will focus particular attention on time-dependent phenomena in turbulence.

For Further Information on the Technical Content Contact:

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