BOOK REVIEW

INTERDISCIPLINARY FINITE ELEMENT ANALYSIS, (Ed. John F. Abel, Takahiko Kawai and Shan-Fu Shen), Cornell University, Ithaca, N.Y. 14853.

The Proceedings of the U.S.–Japan Seminar on Interdisciplinary Finite Element Analysis conducted at Cornell University in August 1978 consists of 43 papers covering a wide range of topics and interests. The 834 page volume is divided into four general topic areas entitled: Basic Theory, Formulative Methods and General Techniques; Flow Problems; Interdisciplinary Analysis and; Numerical Analysis, Computer Program Technology and Computer Graphics. Each part contains ten or eleven papers.

The cloth bound book is produced from camera ready copy and is moderately priced at $33·00, including surface-mail postage. Owing to the production method employed, the editors have not attempted to enforce a uniform notation or approach to the subject matter. While this may be a distraction to some, most readers will find the many diverse subjects considered in the book to be too broad for general assimilation. Specialists in some areas, especially fluid mechanics, electrical and electromagnetic fields and transient analysis undoubtedly will find the proceedings quite useful for their research. In addition, general practioners of the finite element method can benefit greatly from a review of the various approaches advocated in the utilization of the finite element method to solve complex problems. Problem areas addressed include: hydrodynamics, fluid flow, shallow water waves, thermal analysis with phase changes, fracture analysis, welding simulation, identification of material properties, fusion analysis, electrical field analysis, electromagnetics, graphical presentation of results, finite element computer software design, among other areas.

Several of the papers conclude with some of the informal discussion of the conference. In some papers the discussion provides valuable insights to the subject matter of the presentation.

The last few papers in the proceedings are devoted to finite element software and use of graphical presentation of results. Developers and users of computer software will find valuable information for various uses of interactive computing and graphics for finite element simulations.

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University of California
Berkeley, California

ANNOUNCEMENTS

FIFTH GAMM CONFERENCE ON NUMERICAL METHODS IN FLUID MECHANICS

to be held at the Università di Roma, Italy, 5–7 October 1983

The Gamm Committee for Numerical Methods in Fluid Mechanics announces its fifth Conference organized in cooperation with the Università di Roma and the Consiglio Nazionale delle Ricerche, Italy.

The Conference, which will be held at the 'Facoltà di Ingegneria, Università di Roma', will be concerned with the theory and the application of numerical methods in fluid mechanics. The emphasis will be on the development of novelties in methods.

Deadline for abstracts (one page, two pages at maximum) is 15 March 1983. The proceedings of the conference will be published by the Vieweg Verlag in the series *Notes on Numerical Fluid Mechanics.*

Further information and registration forms can be obtained from the first of the Chairmen of the Conference:

Prof. Maurizio Pandolfi,
Istituto di Macchine Motori
per Aeromobili,
Politecnico di Torino,
C. so Duca degli Abruzzi 24
10129 TORINO—Italy
Tel. (011) 538939
Telex: POLITO 220646

Prof. Renzo Piva,
Istituto di Meccanica Applicata,
Facoltà di Ingegneria,
Università di Roma
Via Eudossiana 18
00184 ROMA—Italy
Tel. (06) 484854

ANNOUNCEMENTS

INTERNATIONAL CONFERENCE ON NUMERICAL METHODS IN LAMINAR AND TURBULENT FLOW

The University of Washington, Seattle, U.S.A. 8–11 August 1983

Organizing committee

C. Taylor
University College of Swansea, U.K.

J. A. Johnson
Weyerhaeuser Company, Tacoma, U.S.A.

R. Smith
College of Forest Resources, University of Washington, Seattle, U.S.A.

Advisory committee

P. M. Gresho
Lawrence Livermore Laboratories, California, U.S.A.

M. D. Olson
The University of British Columbia, Canada

W. Habashi
Concordia University, Canada

G. Keramidas
Naval Research Laboratory, Washington, D.C., U.S.A.

B. A. Schrefler
University of Padova, Italy

Objectives

The objectives of this conference are similar to those of the first held in Swansea, 1978, and the second, held at Venice, 1981. Again the main objective is to consolidate the recent advances in the application of numerical techniques, particularly finite difference and finite element methods, to solve laminar and turbulent flow problems. Both techniques have received considerable attention in recent years and their application and development is continually expanding. It is hoped that the conference will provide a forum for numerical analysts to present new numerical methods and applications and experimentalists to present a comparison between measured quantities and calculated values using standard numerical techniques. The subject matter should be of interest to both researchers and industry.

Call for papers

Abstracts are invited on all research and practical application related to laminar and turbulent flow. A provisional list of possible areas of interest is as below.

Provisional session headings

Laminar Flow
Lubrication
Turbulent Flow
Boundary Layers
Flow with Separation
Estuary and Coastline Hydrodynamics
Flow in Rivers and Channels
Turbo Machinery
Meteorology
Reactor Technology
Free and Forced Convection
Coupled Conduction and Convection
Turbulent Heat Transfer
Explosions
Scientific and Industrial Applications

Abstracts, of approximately 500 words in length, should be submitted for consideration before 1 September 1982, whether their papers have been accepted. Final manuscripts will be required by 1 March 1983, for inclusion in the Conference Proceedings. The proceedings will be made available world-wide after the Conference and authors will be encouraged to submit an extended form of their papers to *The International Journal for Numerical Methods in Fluids* (Wiley).

Abstracts and requests for further information should be addressed to

Dr. C. TAYLOR,
Department of Civil Engineering,
University College of Swansea,
Singleton Park,
SWANSEA SA2 8PP, U.K.

INTERNATIONAL CONFERENCE ON NUMERICAL METHODS IN THERMAL PROBLEMS

The University of Washington, Seattle, U.S.A.
2–5 August 1983

Organizing committee

R. W. Lewis
University College of Swansea, Wales, U.K.

J. A. Johnson
Weyerhaeuser Company, Tacoma, U.S.A.

R. Smith
College of Forest Resources, University of Washington, Seattle, U.S.A.

Programme committee

G. De Vahl Davis	Sydney, Australia
L. Imre	Budapest, Hungary
K. Morgan	Swansea, Wales
S. V. Patankar	Minnesota, USA
J. Rae	Harwell, England
B. A. Schrefler	Padova, Italy
O. C. Zienkiewicz	Swansea, Wales

Objectives

The objectives of this conference are to consolidate the advances made in the numerical modelling of thermal problems which were presented at Swansea in 1979 and at Venice in 1981. The use of numerical techniques, such as the finite element and finite difference methods, is essential for solving problems of extreme complexity or difficult mathematical representations, which can occur in a wide range of disciplines.

It is expected that this conference will continue the unifying theme of the previous conferences in bringing together engineers and scientists to discuss thermal problems from a diverse spectrum of disciplines and ultimately produce a text on the latest 'state of the art'. Keynote speakers will present lectures on the diverse nature of the problems and the similarities of the solution techniques used would be emphasized.

Call for papers

Abstracts are invited on topics which deal with numerical methods of computation for thermal problems and also their application to practical studies. The abstracts, of approximately 500 words in length, should be submitted before 1 September 1982. The authors will be informed by 1 November 1982, whether or not their papers have been accepted for presentation. Final manuscripts will be required by 1 March 1983 for inclusion in the conference proceedings. A text of the accepted papers will be available at the conference. Authors will be encouraged to submit an extended form of their papers for consideration in the *International Journal for Numerical Methods in Engineering*.

A provisional list of possible areas of interest is as follows:
Heat Conduction
Phase Change
Heat and Mass Transfer in Porous Bodies
Geothermal Reservoir Simulation
Thermal and Drying Stresses
Industrial and Scientific Applications
Solar Energy
Turbulent Heat Transfer
Fire and Combustion Simulation
Coupled Conduction and Convection
Mathematical and Computational Techniques
Free and Forced Convection
Nuclear Waste Disposal

Correspondence

Abstracts and requests for further information should be addressed to

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University College of Swansea
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SWANSEA SA2 8PP
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