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# Proceedings of the Sixth International Conference on Engineering Computational Technology

*Edited by*

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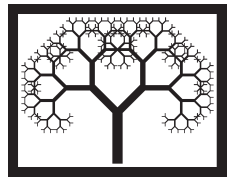

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# Preface

This volume comprises the summaries of contributed papers presented at The Sixth International Conference on Engineering Computational Technology (ECT 2008) held in Athens, Greece from 2 to 5 September 2008. The full papers from the conference are available on the accompanying CD-ROM. This conference is part of the Civil-Comp Series series that commenced in 1991. The 2008 conference was held concurrently with The Ninth International Conference on Computational Structures Technology (CST 2008).

The special sessions included in this volume of Proceedings are:

- High Performance Computing: Novel Architectures and Applications
  *organised by G.A. Gravvanis*
- Partitioned Methods for the Computation of Fluid-Structure Interactions
  *organised by H. Bijl*
- Quantification of Uncertainty in Simulations
  *organised by M.Y. Hussaini and S.V. Poroseva*
- Advances in Modelling and Computation of Interfaces
  *organised by F. Lebon*
- Decision Making in Engineering Management
  *organised by N.F. Pan*
- Multiscale Simulation
  *organised by D. Roose*
- Computational Fluid Mechanics
  *organised by N.C. Markatos*
- Mesh Generation and Adaption
  *organised by J. Sarrate Ramos and J.M. Escobar Sánchez*
- New Methods of Characterisation of Bone Quality
  *organised by L. Hadjileontiadis*
- Analyses of Performance and Failures of Constructed Facilities
  *organised by H.M. Al-Humaidi and F.C. Hadipriono*
- Information Modeling and Technology Applications for Construction
  *organised by Q.V. Chen and F.C. Hadipriono*
- Numerical and Computational Linear Algebra
  *organised by R. Bru*
- Genetic Algorithms and Neural Networks in Engineering
  *organised by B.H.V. Topping*

We are particularly grateful to the organisers of these special sessions.

The following sessions are also included in this volume:

- Parallel Computations
- Distributed Computing
- Computational Fluid Dynamics: Analysis, Simulation and Optimization
- Fluid-Structure Interaction
- Modelling Multi-Physics Problems
- Coupled Problems
- Multi-Grid Methods
- Multi-Body Systems and Dynamics
- Computational Modelling, Analysis and Simulation
- Computational Simulation and Optimization
- Electrodynamic Problems
- The Extended Finite Element Method
- Meshless Methods
- Discrete Finite Element Methods
- Finite Element Solver Technology
- Finite Element Methods
- Stochastic Finite Element Methods
- Boundary Element Methods
- Numerical Methods
- Nano-Mechanics
- Particle Thermodynamics
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- Computer Aided Engineering
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- Rock Mechanics
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- Geophysics
- Geomechanics and Geotechnical Engineering
- Geotechnical Engineering: Seepage, Groundwater and Watershed Problems
- Geotechnical Engineering: Foundations
- Environmental Engineering
- Modelling Steam and Water Networks

Other papers presented at the conferences in 2008 are published as follows:

- *The Invited Lectures from CST 2008 are published in:*
  Trends in Computational Structures Technology, B.H.V. Topping and M. Papadrakakis, (Editors), Saxe-Coburg Publications, Stirlingshire, Scotland, 2008.

- *The Invited Lectures from ECT 2008 are published in:*
  Trends in Engineering Computational Technology, M. Papadrakakis and B.H.V. Topping, (Editors), Saxe-Coburg Publications, Stirlingshire, Scotland, 2008.
- *The Contributed Papers from CST 2008 are published in:*
  Proceedings of the Ninth International Conference on Computational Structures Technology, B.H.V. Topping and M. Papadrakakis, (Editors), (Book of Summaries and CD-ROM), Civil-Comp Press, Stirlingshire, Scotland, 2008.

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