# Boundary Elements XXVII

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## Electrical Engineering and Electromagnetics

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# Boundary Elements
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TWENTY-SEVENTH WORLD CONFERENCE ON
BOUNDARY ELEMENTS AND
OTHER MESH REDUCTION METHODS

incorporating papers from

SEVENTH INTERNATIONAL SEMINAR ON
COMPUTATIONAL METHODS IN
ELECTRICAL ENGINEERING AND ELECTROMAGNETICS

# BEM XXVII




**Organised by**
Wessex Institute of Technology, UK., University of Central Florida, USA.,
& University of Split, Croatia

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## Electrical Engineering and Electromagnetics

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# Preface

This book contains the edited proceedings of the 27th World Conference on Boundary Elements and other Mesh Reduction Methods and the papers presented at the associated 7th International Seminar on Computational Methods in Electrical Engineering and Electromagnetics. The contributions collected in this volume were presented during the course of the meetings held at the College of Engineering and Computer Science of the University of Central Florida in Orlando and were organised by the Wessex Institute of Technology, University of Central Florida and the University of Split.

The theme of the Boundary Element Conference series, which always attracts original contributions on theoretical and fundamental developments of the technique, as well as innovative applications has recently been expanded to include other mesh reduction methods. Such techniques are sometimes referred to as "meshless methods" and part of this book is dedicated to them. The organisers of the section are C.S. Chen of the University of Las Vegas; A.H.D. Cheng of the University of Mississippi; and A.J. Kassab of the University of Central Florida. The financial support of the International Activities Committee of the College of Engineering and Computer Science of the University of Central Florida is gratefully acknowledged. It has permitted supporting several invited speakers presenting keynote addresses on the subject.

The papers presented at the Computational Methods in Electrical Engineering and Electromagnetics Seminar cover a wide variety of theoretical and applied topics. Of particular importance are the papers collected in the Special Section on Interaction of Humans with Electromagnetic Fields, organised by D. Poljak of the University of Split. Another very important part deals with High Frequency Electromagnetic Fields Applied to Transmission Lines, organised by S. Tkachenko of Otto-von-Guericke University of Magdeburg in Germany and F. Rachidi of the Swiss Federal Institute of Technology.

The Editors would like to thank the members of the International Scientific Advisory Committee of both conferences for their assistance and guidance in promoting these Meetings. They would also like to express our gratitude to them, and to other colleagues, for their diligent review of abstracts and follow-up papers that are contained in this book. Their work has ensured the high quality of this volume. Finally, the authors are to be commended for their excellent contributions which advance the field of computational methods.

The Editors
Orlando, 2005

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