Computational Methods and Experimental Measurements XII

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Computational Methods and Experimental Measurements XII

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Published by

WIT Press
Ashurst Lodge, Ashurst, Southampton, SO40 7AA, UK
Tel: 44 (0) 238 029 3223; Fax: 44 (0) 238 029 2853
E-Mail: witpress@witpress.com
http://www.witpress.com

For USA, Canada and Mexico

Computational Mechanics Inc
25 Bridge Street, Billerica, MA 01821, USA
Tel: 978 667 5841; Fax: 978 667 7582
E-Mail: info@compmech.com
http://www.witpress.com

British Library Cataloguing-in-Publication Data

A Catalogue record for this book is available
from the British Library

ISBN: 1-84564-020-9
ISSN: 1746-4064 (print)
ISSN: 1743-355X (on-line)

The texts of the papers in this volume were set individually by the authors or under their supervision. Only minor corrections to the text may have been carried out by the publisher.

Printed in Great Britain by Cambridge Printing

Preface

This volume contains most of the papers presented at the 12th International Conference on Computational Methods and Experimental Measurements (CMEM) held in Malta in 2005. This important meeting has been reconvened biannually since the first conference took place in Washington DC at the beginning of the 1980s. Their continuous success reflects the need to provide a forum to review the latest work on the interaction between computational methods and experimental measurements.

The CMEM/05 Conference in Malta allowed scientists working on experimental methods to communicate with researchers developing computer software, whose increasingly complex models require more complete and reliable data. New types of experiments allowing for more reliable interpretation of physical systems results in better virtual representation of reality. Experimental results are themselves increasingly dependent on specialised computer codes. It is only through the harmonious progressive development of the experimental and computational fields that engineering sciences will be able to progress.

This volume comprises a substantial number of excellent papers grouped in the following sections:

- Computational and analytical methods
- Experimental and computational analysis;
- Direct, indirect and in-situ measurements;
- Particle methods
- Structural and stress analysis
- Structural dynamics
- Dynamics and vibrations
- Electrical and electromagnetic applications
- Bioengineering applications
- Heat transfer
- Thermal processes
- Fluid flow

The Editors are grateful to all authors for their contributions and are most specially indebted to the members of the International Scientific Advisory Committee and other colleagues for their help in reviewing the material published in the book.

The Editors
Malta, 2005

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