

ICCST8

8TH INTERNATIONAL CONFERENCE ON COMPOSITE SCIENCE AND TECHNOLOGY

NOVOTEL HOTEL
KUALA LUMPUR, MALAYSIA
MARCH 22 - 24, 2011

TOPICS

- Mechanics of composites
- Infrastructural of composites
- Non-destructive evaluation & characterisation of composites
- Fracture and fatigue of composites
- Numerical & mathematical modelling of composites
- Ceramic composites
- Metal-matrix composites
- Composite manufacturing
- Polymer composites
- Smart materials & structures
- Nano-composites
- Structural health monitoring in composites
- Biocomposites

IMPORTANT DATES

Deadline for Abstracts.....October 15, 2010
Deadline for Full Paper....November 15, 2010
Early-bird registration.....November 30, 2010

ORGANIZED BY



DEPARTMENT OF MECHANICAL AND MANUFACTURING ENGINEERING,
UNIVERSITI PUTRA MALAYSIA (UPM)

CO-ORGANIZED BY

DEPARTMENT OF AEROSPACE ENGINEERING, UNIVERSITI PUTRA MALAYSIA
(UPM)

and
ENGINEERING COMPOSITES RESEARCH GROUP, FACULTY OF ENGINEERING,
UNIVERSITI PUTRA MALAYSIA (UPM)

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"Web of Science" via the CPCI and other
major indexes such as Ei, SCOPUS, CAS,
etc. (www.scientific.net). **Selected papers**
will be published in a special issue of
Applied Composite Materials (Springer)
and **Mechanics of Advanced Materials
and Structures (Taylor and Francis)**.

REGISTRATION FEES

By November 30, 2010 :.....USD 400
After November 30, 2010 :.....USD 450
Student registration :.....USD 200
Local participant
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After November 30, 2010 :.....RM 1100
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KEYNOTE SPEAKERS

1) Dr Peter W R Beaumont



Peter W R Beaumont, BSc (Hons), MA (Cantab), DPhil, DSc is Reader in Engineering Materials in the Engineering Department at the University of Cambridge. Upon receiving his DPhil degree in 1970 at the University of Sussex he joined the University of California at Los Angeles as assistant professor in the Department of Materials. For the next 3 years his researches were on solving problems on the fracture and fatigue of carbon fibre strengthened polymers using acoustic emission for applications in the aerospace industry. He joined the Cambridge University faculty in 1973 where he has been ever since.

His research experience has covered a wide range of materials including ceramics, polymers and composites – both experimentally as well as through mechanistic computer modelling. His research results have been published in principal scientific journals, conference proceedings, research treaties, design guides, encyclopaedia, and books. These publications are more than 175 journal articles and include 1 book on the subject of fracture of composites, as well as 2 books as Editor on related subjects. He is the Founder and Editor in Chief of the international journal *Applied Composite Materials* and a Founding Editorial Member of the *Journal of Multiscale Modelling*, as well as member of several editorial boards of other related journals. He has been a Vice-President of the international conference on composite materials

(ICCM). Dr Beaumont is the recipient of awards and honours, which include the American Society of Mechanical Engineers, and Distinguished Professor in Engineering, University of California at Los Angeles. In 2001 he was awarded an honorary Doctor of Science degree by the University of Sussex.

KEYNOTE TITLE:

Composite Fracture: Getting to the Heart of the Matter

The demands made on structural composite materials in modern design are increasingly stringent. Greater performance, lower costs, increased reliability and safety all require that the design engineer knows more and more of the material systems available. Bringing together new knowledge contained in constitutive models of continuum design and empirical information from a girth of experience is proving to be difficult because the number of service and process variables required for sophisticated, optimal design is becoming increasingly larger. Understanding Structural Integrity (SI) provides the key to the successful design, certification, and safety of large composite structures and engineering composite materials. This is because SI analysis treats simultaneously the design, the materials used, figures out how best components and parts are joined, and takes service duty into account. But predicting precisely where a crack will develop in a material under stress and exactly when in time catastrophic failure of the structure will occur remains an unsolved mystery.

2) Prof Dr Azman Hassan



Azman Hassan is a Professor and currently serving as a Deputy Director, Research Management center (RMC), Universiti Teknologi Malaysia (UTM). He was the former Head of Polymer Engineering Department and Acting Dean of the Faculty of Chemical and Natural Resources Engineering, Universiti Teknologi Malaysia. He received his PhD from Loughborough University (UK) in 1997. He has approximately 20 years of experience in teaching and research. His area of research interests includes PVC technology, polymer blend, rubber toughened polymer, toughened polyamide composites and polylactic acid nanocomposites. He has published over 100 papers of journals and conferences/seminars (national and international) and over 10 publications in faculty bulletin, thesis, technical reports, translation of books, chapters in book and other papers. He has been appointed as reviewer for Journal of Materials Processing Technology (Elsevier), Journal of Industrial Technology (SIRIM), Jurnal Sains Nuklear Malaysia, Journal of Institute of Materials (JIMM) Malaysia, Jurnal Teknologi (UTM), Canadian Journal of Chemical Engineering, Journal of Applied Polymer Science (Wiley) and Macromolecular Symposia (Wiley). He also has reviewed articles in Ensiklopedia Sains and Teknologi Penyalutan Polimer. He is the Editor in Chief of the Malaysian Polymer Journal.

Prof Azman Hassan is the recipient of Best Presenter in "Thermal Analysis Conference", Organised by Mettler Toledo Shah Alam (2004), Excellent Service Award 2002 and 2005 (UTM), Second Best National Paper Award in Journal of Industrial Technology

(2004), Third Best National Paper in Journal of Institute of Malaysia (2004), Third Best International Paper Award in Journal of IEEE Trans. on Dielectrics and Electrical Insulation (2005).

KEYNOTE TITLE:

Recent Development in PA6/PP Nanocomposites

Composite Science and Technology
Part 1, pages 1-696

S.M. Sapuan, F. Mustapha, D.L. Majid, Z.
Leman, A.H.M. Ariff, M.K.A. Ariffin,
M.Y.M. Zuhri, M.R. Ishak and J.Sahari



Composite Science and Technology

Part 1

Edited by
S.M. Sapuan, F. Mustapha, D.L. Majid, Z. Leman,
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Composite Science and Technology

Part 1

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Edited by

**S.M. Sapuan, F. Mustapha, D.L. Majid, Z. Leman,
A.H.M. Ariff, M.K.A. Ariffin, M.Y.M. Zuhri,
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Preface

ICCST conference series was founded in 1996 and was initially held in Durban, South Africa. ICCST8 is held in Kuala Lumpur, Malaysia and is jointly organized by Department of Mechanical and Manufacturing Engineering, Department of Aerospace Engineering, Engineering Composite Research Group of Faculty of Engineering, Universiti Putra Malaysia (UPM) and supported by American University of Sharjah meant to boost composite enthusiasts locally and the world as a whole.

The ICCST8 organizers received over 320 abstracts of papers from all over the world. However, only 204 papers were accepted for the conference and published in Key Engineering Materials. All papers have undergone review process by at least two experts in composites.

The objective of this conference is to bring together composite scientists, engineers and technologists to exchange ideas, to discuss the latest development and to present their work to the international composite community. ICCST8 have managed to gather researchers and scientists not only from Malaysia but also from countries such as Turkey, Iran, Kuwait, Australia, UK, Qatar, UAE, Indonesia, India, France, Germany, Japan, Saudi Arabia, Thailand, Oman, Poland and Czech Republic. The response is very encouraging and shows a common ground of interest in composites.

In this conference, composites research topics presented include mechanics of composites, infrastructural composites, non destructive evaluation and characterization of composites, fracture and fatigue of composites, numerical and mathematical modelling, ceramic matrix composites, metal matrix composites, composite manufacturing, polymer composites, smart materials and structures, nano composites, bio composites and structural health monitoring.

In UPM, the work presented in this conference were mainly based on research performed by various groups of researchers funded by various funding agencies such Ministry of Science, Technology and Innovation (MOSTI), Ministry of Higher Education (MOHE), Ministry of Agriculture and Agro-Based Industry (MOA), Economic Planning Unit (EPU), UN Industrial Development Organisation (UNIDO) and UPM internal grants to whom the researchers are greatly indebted.

The editors would like to thank the authors for their contributions, to the reviewers for their expertise and valuable comments. The editors would also like to thank the organizing committee and international advisory board for their tremendous support. Deep gratitude is extended to the American University of Sharjah for their trust in UPM in organising the conference in particular to Associate Professor Dr Hany El Kadi.

The editors would also like to thank Tourism Malaysia for promoting the conference, the Faculty of Engineering, UPM for the financial assistance, and the Ministry of Higher Education Malaysia for their consent to organize this conference.

The Editors

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