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## IIUM ENGINEERING CONGRESS 2012



ICMAE'12
2ND INTERNATIONAL CONFERENCE ON
MATHEMATICAL APPLICATIONS IN ENGINEERING



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#### **PREFACE**



## INTERNATIONAL CONFERENCE ON MATHEMATICAL APPLICATIONS IN ENGINEERING (ICMAE'10)



## FACULTY OF ENGINEERING INTERNATIONAL ISLAMIC UNIVERSITY MALAYSIA

The International Conference on Mathematical Applications in Engineering (ICMAE'12) organized by Faculty of Engineering, International Islamic University Malaysia (IIUM) will be held during 3<sup>rd</sup> - 4<sup>th</sup> July 2012 at the Seri Pacific Hotel, Kuala Lumpur, Malaysia.

The aim of the conference is to stimulate collaboration between active researcher, educators, mathematicians and engineers representing educational institutions, government agencies and engineering related organizations. The prime objective is to act as the main forum to exchange, examine, promote and discuss issues related to the latest trend, importance, needs and future developments of mathematics within its own domain as well as its effective applications in engineering.

The present proceedings capture part of the excitement of the conference documenting well over one hundred papers contributed by participants from more than twenty countries. They cover all four main areas in mathematical science i.e. pure mathematics, applied Mathematics and Theoretical Sciences, Statistics and Mathematics Education but ones that mirror the interests of the regional community of mathematical scientist and practitioners.

The organizers would like to thank all the invited speakers and participants for their contributions in making this conference a success and hence brought forth this valuable proceeding.

Deepest appreciation is to all faculty members of the Faculty of Engineering, International Islamic University Malaysia (IIUM) for their sincere cooperation in making the conference successful. Gratitude also goes to all parties who have lent their helping hands in realizing the meaningful event.

Last but not least, the organizing committee would like to express thanks to external and internal reviewers for their valuable suggestions to improve the quality of this proceeding.

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