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FUTURE TECHNOLOGIES
IN COMPUTING AND ENGINEERING

Proceedings
of
Computing and Engineering Annual Researchers’ Conference 2010

CEARC’10

Edited By:
Prof. Gary Lucas, Dr. Zhijie Xu

Organising Committee:
Prof. Gary Lucas, Dr. Zhijie Xu, Mrs. Trudy Lockwood, Mrs. Gwen Wood

The Proceedings of the Computing and Engineering Annual Researchers’ Conference 2010
CEARC’10, December 2010, University of Huddersfield
Preface

It is my pleasure to introduce this volume of proceedings for the 2010 School of Computing and Engineering Annual Researchers’ Conference (CEARC’10). The proceedings include 30 papers and 10 posters submitted from postgraduate researchers across the Informatics and Engineering and Technology Departments within the School of Computing and Engineering at the University of Huddersfield.

The Annual Conference started in its current format in 2006 and is intended as a forum for encouraging postgraduate researchers to develop their research and innovation skills and to present their findings to a technical audience. The CEARC conference series covers frontier issues in the computing and engineering sciences and the application of these issues to business, industry, and other areas.

This year the conference has a special theme ‘Future Technologies’, with particular emphases on (i) bio-fuels and (ii) techniques for the diagnosis of faults in machinery as well as a range of other topics.

The papers in the proceedings were selected after careful consideration of their research quality and the content of the presentations. The wide spectrum and depth of subject material contained within the papers reflect the aims and objectives of the research strategies of both the School and the University.

I trust that you will find this volume to be a valuable record of research carried out in the last 12 months and to provide an excellent reference source for both established academics and young researchers.

Finally, I would like to thank the authors and the reviewers for their input to this issue of the proceedings.

Professor Gary Lucas and Dr. Zhijie Xu
School of Computing and Engineering
University of Huddersfield
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**Consumers Channel Choice Behaviour in Multi-Channel Environments: What are the Influences on Consumers to Choose the Online Distribution Channels over other alternative Offline Channels?**

F Al-Majali, Knowledge Engineering and Intelligent Interfaces (KEII) Research Group

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**A Diagnostic Study on the Teaching And Learning Styles in Engineering Education**

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A Bashir, Systems Engineering Research Group

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**Online Monitoring of Engine Oil Quality Based on AE Signal Analysis**

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**The Effectiveness of using Project Management Tools and Techniques for Delivering Projects**

M Hajjaji, Systems Engineering Research Group

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**Mobile Phone Text Processing And Question-Answering**

A Jilani, Knowledge Engineering and Intelligent Interfaces (KEII) Research Group

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**Improving Prototype Consistence for Wizard-Of-Oz Simulations and Evaluations**

X Li, Computer Graphics, Imaging and Vision (CGIV) Research Group

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**Investigation of Doppler Effects on High Mobility Ofdm-Mimo Systems**

H Mohammed, Systems Engineering Research Group

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**Vibration Compensation of Wavelength Scanning Interferometer for In-Process Surface Inspection**

H Muhamedsalih, Systems Engineering Research Group

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**Predicting and Determining the Contact Pressure Distribution in Joints Formed by V-Band Clamps**

M Muller, Engineering Control and Machine Performance (ECMPG) Research Group

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**The Effect of Tool Geometry on Rubbing and Ploughing Phenomena in Nano Abrasive Machining**

J Oluwajobi, Advanced Machining Technology (AMTG) Research Group

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**Finite Element Simulation of Chip Formation**

T Opoz, Advanced Machining Technology (AMTG) Research Group

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**Modeling of The Concepts in Iso Standards for Profile Surface Texture**

Q Qi, Centre for Precision Technologies

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**Investigation of the Material Removal Characteristic for Polishing CoCr Alloy**

S Zeng, Surface Metrology Research Group
Abstracts

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Microelectronic Implementation of Error Correcting Codes for Dicode Pulse Position Modulation
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Machine Performance and Condition Monitoring through Data Mining and Database Optimization
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A Low Cost Electronic Load for Renewable Energy Systems
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Performance of Di-Code Pulse Position Modulation Technique in Diffuse Indoor Wireless Optical Communication Systems
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Non-Contact Measurement and Analysis of Machine Tool Spindles
D Clough, Engineering Control and Machine Performance (ECMPG) Research Group

A Fast Algorithm for Morphological Filters
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Measurement Two Phase Flow Parameters using Impedance Cross-Correlation and Electromagnetic Flow Meters
Y Muhamedsalih, Systems Engineering Research Group

Limitations of Data Handling within the Machine Tool Service
C Perkins, Engineering Control and Machine Performance (ECMPG) Research Group

Intelligent Wireless Sensor Network
B Saeed, Systems Engineering Research Group