### Parallel Sessions (A—1, A—2, A—3, A—4, A—5)

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<tr>
<th>Time</th>
<th>Session A—1 Control Applications 1</th>
<th>Session A—2 System Diagnosis &amp; Condition Monitoring 1</th>
<th>Session A—3 Information Systems 1</th>
<th>Session A—4 Information Systems 2</th>
<th>Session A—5 Manufacture Systems 1</th>
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</thead>
<tbody>
<tr>
<td>10:40 – 12:20</td>
<td>Octavian Stefan &amp; Wenhua Chen</td>
<td>Xiangdong Mo &amp; Yanmeng Xu</td>
<td>Hui Yu &amp; Lili Yang</td>
<td>Giping Li &amp; Shuanghua Yang</td>
<td>Zhijie Xu &amp; Xun Chen</td>
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<td>12:20 – 13:00</td>
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<td>13:10 – 13:20</td>
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#### 10:40 – 11:00

**A—1.3** Stabilization of LOAD Frequency Control System Under Networked Environment (11)
- Ashraf Khalil (University of Benghazi, Libya);
- Jihong Wang (University of Warwick, UK)

**A—2.1** Transmissibility Damage Indicator for Wind Turbine Blade Condition Monitoring (7)
- Long Zhang, ZiQiang Lang (University of Sheffield, UK);
- Wen-Xian Yang (Newcastle University, UK)

**A—3.1** Creative Computing for Personalised Meta-Search Engine Based on Semantic Web (53)
- Sichong Ma, Siyan Li, Hongji Yang (Bath Spa University, UK)

**A—4.1** Message Dissemination Reliability in Vehicular Networks (71)
- Elias Eze, Siqing Zhang, Enjie Liu (University of Bedfordshire, UK)

**A—5.1** Dynamic Analysis of An Underwater Leveling-Gripping System of An Jacket Platform Under Offshore Environmental Loads (55)
- Peiran Jiang, Lipan Wang (Harbin Engineering University, China);
- Xichun Luo (University of Strathclyde, UK)

#### 11:00 – 11:20

**A—1.2** Observer-based Delay Compensation for Networked Control Systems – analysis and synthesis (74)
- Octavian Stefan, Toma-Leonida Dragomir (Politehnica University Timisoara, Romania);
- Alexandru Codrean (Technical University of Cluj-Napoca, Romania)

**A—2.2** Condition monitoring of wind turbines based on extreme learning machine (61)
- Peng Qian, Xiangdong Mo, Yiwei Fan (Lancaster University, UK)

**A—3.2** Applying Semantic Web Technology to Poem Analysis (51)
- Xuan Wang, Hongji Yang (Bath Spa University, UK)

**A—4.2** Joint Resource Blocks Switching Off and Bandwidth Expansion for Energy Saving in LTE Networks (34)
- Kapil Kanwal, Ghazanfar A. Safdar, Shyqyri Hasza (University of Bedfordshire, UK)

**A—5.2** Design of compliant parallel grippers using the position space concept for manipulating sub-millimeter objects (54)
- Guangbo Hao, Ronan Han (University College Cork, Ireland);
- Xianwen Kong (Heriot-Watt University, UK);
- Wenlong Chang, Xichun Luo (University of Strathclyde, UK)

#### 11:20 – 11:40

**A—1.3** Performance Analysis for Operational Optimal Control for Complex Industrial Processes – the Square Impact Principle (52)
- Aiping Wang (Anhui university, China);
- Hong Wang (University of Manchester, UK);
- Nian Sheng (Northeastern university, China);
- Xin Yin (University of Manchester, UK)

**A—2.3** Detection and Diagnosis of Motor Stator Faults using Electric Signals from Variable Speed Drives (19)
- Abdulkarim Shaeboub, Samah Abusaid (University of Huddersfield, UK);
- Niaoqing Hu (National University of Defense Technology, China);
- Fengshou Gu, Andrew Ball (University of Huddersfield, UK)

**A—3.3** Creative Computing for Decision Making: Combining Game Theory and Latent Language (49)
- Lin Zou, Hongji Yang (Bath Spa University, UK)

**A—4.3** Energy Harvesting Wireless Sensor Node for Monitoring of Surface Water (88)
- Zivorad Mihajlovic, Ana Jozza, Vladimir Milosavljevic, Vladimir Raji, Milos Zivanov (University of Novi Sad, Serbia)

**A—5.3** Analysis and Characterisation of a Kinematically Decoupled Compliant XY Stage (76)
- Xavier Herpe, Ross Walker, Xianwen Kong, Matthew Dunning (Heriot-Watt University, UK)

#### 11:40 – 12:00

**A—1.4** Parametric Covariance Assignment using Reduced-order Closed-form Covariance Model (56)
- Qichun Zhang (University of Manchester, UK);
- Zhuo Wang (Hong Kong University of Science and Technology, HK);
- Wang Hong (University of Manchester, UK)

**A—2.4** Investigation of Motor Current Signature Analysis to Detect Motor Resistance Imbalances (28)
- Mark Lane, Dijon Ashari, Fengshou Gu, Andrew Ball (University of Huddersfield, UK)

**A—3.4** A Decision Tree based Recommendation System for Tourists (43)
- Peeri Thengjuranathan, Shuang Cang, Hongnian Yu (University of Bournemouth, UK)

**A—4.4** Insider Threats in Information Security Categories and Approaches (67)
- Nebrasa Elmrabit, Shuang Hua Yang, Lili Yang (Loughborough University, UK)

**A—5.4** Analysis of Frictional Effects on the Dynamic Response of Gear Systems and the Implications for Diagnostics (42)
- Khaldoon F. Brethee (University of Huddersfield, UK);
- Jingwei Gao (National University of Defense Technology, China);
- Fengshou Gu, Andrew D. Ball (University of Huddersfield, UK)

#### 12:00 – 12:20

**A—1.5** Stabilizing slug flow at large valve opening using active feedback control (60)
- Adeboyega Ehinmowo, Yi Cao (Cranfield University, UK)

**A—2.5** Survey of Greener Ignition and Combustion Systems for Internal Combustion Engines (41)
- Wuqiao Luo, Yun Li (University of Glasgow, UK);
- Zhong Tian, Bo Gao, Ling Tong, Houjun Wang, Baoping Zeng (University of Electronic Science and Technology of China, China)

**A—3.5** Innovative Developments in HCl and FUTURE Trends (45)
- Mohammad S. Hasan (Staffordshire University, UK);
- Hongnian Yu (University of Bournemouth, UK)

**A—4.5** Energy Efficiency in Smartphones: A Survey on Modern Tools and Techniques (59)
- Naiya Nehered, Munam Ali Shah (COMSATS Institute of Information Technology, Pakistan);
- Sijing Zhang (University of Bedfordshire, UK)

**A—5.5** Characterisation of Acoustic Emissions for the Frictional Effect in Engines using Wavelets based Multi-resolution Analysis (48)
- Nasha Wei, Fengshou Gu (Huddersfield University, UK);
- Tie Wang, Guoxing Li, Yuandong Xu, Longjie Yang (Taiyuan University of Technology, China);
- Andrew D. Ball (University of Huddersfield, UK)

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12:20 – 13:00, 12/09/2015: **Lunch**

13:10 – 13:20, 12/09/2015: **Photo session**
Parallel Sessions (P1—1, P1—2, P1—3, P1—4, P1—5)


P1—1 Control Applications 2
Venue: Main Auditorium Section A (level 2)
Chair: Parikshit Singh & Hong Yue

P1—1.1 Implementation of an Advanced Heating Control System at the University Academic Building (77)
Vildan V. Abdullin, Dmitry A. Shnayder (South Ural State University, Russia)

P1—1.2 Self-Tuned Fuzzy Logic Control of a pH Neutralization Process (15)
Parikshit Kishor Singh, Surekha Bhanot, Hare Krishna Mohanta (BITS Pilani, India); Vinit Bansal (National Instruments, India)

P1—1.3 Decentralised PI Controller Design and Tuning Approaches (33)
Lanxiang Zhu, Feng Yu (Changchun Architecture & Civil Engineering College, China); Dongwen Yu (Northeastern University at Qinhuangdao, China); Dingli Yu (Liverpool John Moores University, UK)

P1—1.4 ULDAR-based Wind Speed Modelling and Control System Design (39)
Mengling Wang, Hong Yue, Jie Bao, William E. Leithead (University of Strathclyde, UK)

P1—1.5 Design of Configurable DC Motor Power-Hardware-in-the-Loop Emulator for Electronic-Control-Unit Testing (75)
Jan Chalupa, Robert Grepl, Václav Sova (Brno University of Technology, Czech)

P1—1.6 Symbolic Kinematic and Dynamic Modelling toolbox for Multi-DOF Robotic Manipulators (20)
Paolo Righettini, Roberto Strada, Ehsan Khadem Olama, Sirin Valliou (University of Bergamo, Italy)

P1—2 System Diagnosis & Condition Monitoring 2
Venue: Conference Room 1 (level 3)
Chair: Yi Cao & Dingli Yu

P1—2.1 Techniques for Monitoring and Predicting the OCV for VRLA Battery systems (70)
Alessandro Mariani, Kary Thanapalan (University of South Wales, UK); Peter Stevenson (Yuasa Battery (UK) Ltd, UK); Thomas Stockey, Jonathan Williams (University of South Wales, UK)

P1—2.2 A Study of the Performance of the Combination of Energy Storage Fibres (62)
Ruirong Zhang, Yanmeng Xu, David Harrison, John Fyson (Brunel university London, UK); Darren Southee (Loughborough University, UK); Anan Tanwilaisiri (Brunel university London, UK)

P1—3 Computer Vision
Venue: Conference Room 2 (level 3)
Chair: Shengfeng Qin & Yang Dai

P1—3.1 Pose Estimation Using Visual Entropy (47)
Jianjun Gai, Dongping Gu, Huosheng Hu (University of Essex, UK)

P1—3.2 Building a grid-point cloud-semantic map based on graph for the navigation of intelligent wheelchair (86)
Cheng Zhao, Huosheng Hu, Dongping Gu (University of Essex, UK)

P1—3.3 Geometrical and statistical feature extraction of images for rotation invariant classification systems based on industrial devices (30)
Rodrigo D. C. Silva, George A. P. Thé, Fátima N. S. de Medeiros (Federal University of Ceará, Brazil)

P1—3.4 Point cloud partitioning approach for Cyber-Physical Integration: A Design and Manufacture Perspective (31)
Nicolas S. Pereira, Cinthya R. Carvalho, George A. P. Thé (Federal University of Ceará, Brazil)

P1—3.5 On the Algorithm For Reconstruction of Polyhedral Objects From a Single Line Drawing (69)
Shengfeng Qin (University of Northumbria, UK); Huazwen Tian (Southwest Jiaotong University, China)

P1—3.6 Morphology Elements Research on Chinese Small-Sized Liquor Bottle Design (63)
Ye Zhang, Huanzhi Lou (Beijing Jiaotong University, China); Hu Yu (University of Portsmouth, UK)

P1—4 Special Session: Industry 4.0
Venue: Conference Room 3 (level 3)
Chair: Yun Li & Hongnian Yu

P1—4.1 Invited Talk: Towards Industry 4.0
Paulino Rocher (Manufacturing Technology Centre, UK)

P1—4.2 Forum Discussion: Design Knowledge Capture, Optimisation and Automation to Advance Industry 4.0
Chaired by: Joo Hock Ang (Sembawang Shipyard Pte Ltd, Singapore)

P1—4.3 The Factory of the Future Production System Research (90)
Milan Gregor (Central European Institute of Technology, Slovakia); Josef Heribo, Patrik Grznár (University of Žilina, Slovakia)

P1—4.4 Industry 4.0 with Cyber-Physical Integration: A Design and Manufacture Perspective (81)
Alfredo Alan Flores Saldivar, Yun Li (University of Glasgow, UK); Wei-neng Chen, Zhi-hui Zhan, Jun Zhang (Sun Yat-sen University, China); Leo Yi Chen (Glasgow Caledonian University, UK)

P1—5 Manufacure Systems 2
Venue: Conference Room 6 (level 3)
Chair: Jingsheng Kang & Tai Yang

P1—5.1 Determination of the material constants of creep damage constitutive equations using Matlab optimisation procedure (80)
Javier Zamorano Igal, Qiang Xu (University of Huddersfield, UK)

P1—5.2 The Interpretation of Experimental Observation Data for the Development of Mechanisms based Creep Damage Constitutive Equations for High Chromium Steel (81)
Xin Yang, Zhengyu Li, Qiang Xu (University of Huddersfield, UK)

P1—5.3 Experimental investigation into micro machinability of Mg based metal matrix composites (MMCs) with nano-sized reinforcements (57)
Xiangyu Teng, Dehong Huo, Wai Leong Eugene Wong (Newcastle University, UK); Manoj Gupta (National University of Singapore, Singapore)

P1—5.4 Computational Investigation of Superalloy Persistent Slip Bands Formation (91)
Jianfeng Huang, Zhonglai Wang (Glasgow Caledonian University, UK); Yuanxin Luo (Chongqing University, China); Yun Li (University of Glasgow, UK); Erfu Yang (University of Strathclyde, UK); Yi Chen (Glasgow Caledonian University, UK)

P1—5.5 Numerical Simulation of Triaxial Tests to Determine the Drucker-Prager Parameters of Silicon (83)
Amir Mir, Xichun Luo (University of Strathclyde, UK); Amir Siddiq (University of Aberdeen, UK)

P1—5.6 The Loading Design and Simulation of Beam Pumping Unit (36)
Wenlei Sun, Li Cao, Qing Tao (Xinjiang University, China); Tan Yuanhua (Karamay Hong You Software Company, China)
### 15:40 – 17:20, 12/09/2015

#### Parallel Sessions (P2—1, P2—2, P2—3, P2—4)

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<th>P2—4 Information Systems 4</th>
<th>CASUK Committee Meeting</th>
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<td>15:40 – 16:00</td>
<td><strong>P2—1.1</strong> Quad-rotor Lifting-Transporting Cable-Suspended Payloads Control (87) Yaser Alothman, Wesam Jasim, Dongbing Gu (University of Essex, UK)</td>
<td><strong>P2—2.1</strong> Actuator Fault Monitoring and Fault Tolerant Control in Distillation Columns (58) Suleyman A. Lawal, Jie Zhang (Newcastle University, UK)</td>
<td><strong>P2—3.1</strong> Applying Feedback to Stock Trading: Exploring A New Field of Research (11) Tai Yang, Zhong Li, Yu Shu (University of Sussex, UK)</td>
<td><strong>P2—4.1</strong> Reconfigurable software architecture for a hybrid micro machine tool (84) Wenbin Zhong, Wenlong Chang, Luis Rubio, Xiuchun Luo (University of Strathclyde, UK)</td>
<td><strong>Venue:</strong> Conference Room 1 (level 3) <strong>Chair:</strong> Ehsan KhademOlama &amp; Luis Rubio <strong>Venue:</strong> Conference Room 1 (level 3) <strong>Chair:</strong> Robert Grepl &amp; Qiang Xu <strong>Venue:</strong> Conference Room 2 (level 3) <strong>Chair:</strong> Dianwei Wang &amp; Erfu Yang <strong>Venue:</strong> Conference Room 3 (level 3) <strong>Chair:</strong> Vildan Abdullahin &amp; Leo Chen</td>
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<td>16:00 – 16:20</td>
<td><strong>P2—1.2</strong> Output Feedback Sliding Mode Controller with H_2 Performance for Robot Manipulator (25) Paolo Righi, Raffaello Strada, Sirin Vailou, Ehsan Khadem Olama (University of Bergamo, Italy)</td>
<td><strong>P2—2.2</strong> Fault Detection and Diagnosis for Operational Control Systems (50) Ning Sheng (Northeastern university, China); Hong Wang (University of Manchester, UK)</td>
<td><strong>P2—3.2</strong> Research into Big Data for Smart Grids (14) Chinedu Eze, Tai Yang, Chris Chatwin (University of Sussex, UK); Dong Yue (Nanjing University of Posts and Telecommunications, China); Hong Yu (University of Bournemouth, UK)</td>
<td><strong>P2—4.2</strong> Measurement Station Planning of Single Laser Tracker based on PSO (64) Zhenying Xu, Baozhong Wu, Meng Zhang (National University of Defense Technology, China); Feng Zou (China National South Aviation Industry Co., Ltd, China); Yuehui Yan (Beijing Institute of Space Long March Vehicle, China)</td>
<td><strong>Venue:</strong> Conference Room 3 (level 3) <strong>Chair:</strong> Cheng Zhang (Beijing University of Aeronautics and Astronautics, China) <strong>Venue:</strong> Conference Room 4 (level 3) <strong>Chair:</strong> B. V. K. Vijaya Kumar &amp; Ahmad Saad Abdelhadi (Liverpool John Moores University, UK) <strong>Venue:</strong> Conference Room 4 (level 3) <strong>Chair:</strong> M.K. Saha &amp; M. Zaman (Indian Institute of Technology, Kharagpur, India) <strong>Venue:</strong> Conference Room 5 (level 3) <strong>Chair:</strong> A. M. S. Ertiame, Dingli Yu (University of Huddersfield, UK) <strong>Venue:</strong> Conference Room 6 (level 3) <strong>Chair:</strong> J. Barry Gomm &amp; Ahmed Saad Abdelhadi (Liverpool John Moores University, UK)</td>
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<td>16:20 – 16:40</td>
<td><strong>P2—1.3</strong> On Periodically Pendulum-Diven Systems for Underactuated Locomotion: a Viscoelastic Jointed Model (17) Pengcheng Liu, Hongnian Yu, Shuang Cang (Bournememy University, UK)</td>
<td><strong>P2—2.3</strong> Improved Kernel Canonical Variate Analysis for Process Monitoring (78) Raphael Samuel, Yi Cao (Cranfield University, UK)</td>
<td><strong>P2—3.3</strong> Cash Flow Prediction Using a Grey-Box Model (35) Yang Pang, Kwaku Opong, Lu Moutinho, Yun Li (University of Glasgow, UK)</td>
<td><strong>P2—4.3</strong> Grey-box Identification for Photovoltaic Power Systems via Particle-Swarm Algorithm (68) Naiji Al-Messabi, Cindy Goh, Yun Li (University of Glasgow, UK)</td>
<td><strong>Venue:</strong> Conference Room 5 (level 3) <strong>Chair:</strong> M. K. Saha &amp; M. Zaman (Indian Institute of Technology, Kharagpur, India) <strong>Venue:</strong> Conference Room 6 (level 3) <strong>Chair:</strong> J. Barry Gomm &amp; Ahmed Saad Abdelhadi (Liverpool John Moores University, UK) <strong>Venue:</strong> Conference Room 7 (level 3) <strong>Chair:</strong> A. M. S. Ertiame, Dingli Yu (University of Huddersfield, UK) <strong>Venue:</strong> Conference Room 8 (level 3) <strong>Chair:</strong> B. V. K. Vijaya Kumar &amp; Ahmad Saad Abdelhadi (Liverpool John Moores University, UK)</td>
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<td>16:40 – 17:00</td>
<td><strong>P2—1.4</strong> Fault Tolerant BLDC Motor Control for Hall Sensors Failure (73) Václav Sova, Jan Chalupa, Robert Grepl (Brno University of Technology, Czech)</td>
<td><strong>P2—2.4</strong> Solution to Failure Detection of Closed-loop Systems and Application to IC Engines (32) Laxiang Zhu, Feng Yu (Changchun Architecture &amp; Civil Engineering College, China); Dingwen Yu (Northeastern University at Qinhuangdao, China); A.M.S. Eltame, Dingli Yu (Liverpool John Moores University, UK)</td>
<td><strong>P2—3.4</strong> Organization Based Intelligent Process Scheduling Algorithm (OIPSA) (66) Muhammad Bilal Shahid, Munam Ali Shah (COMSATS Institute of Information Technology, Pakistan); Siqing Zhang (University of Bedfordshire, UK); Safi Mustafa, Mushahid Hussain (COMSATS Institute of Information Technology, Pakistan)</td>
<td><strong>P2—4.4</strong> KEY CHALLENGES AND OPPORTUNITIES IN HULL FORM DESIGN OPTIMISATION FOR MARINE AND OFFSHORE APPLICATIONS (17) Joo Hock Ang (Sembawang Shipyard Pte Ltd, Singapore); Cindy Goh, Yun Li (University of Glasgow, UK)</td>
<td><strong>Venue:</strong> Venue: Main Auditorium Section A(level 2) <strong>Closing and prize giving ceremony</strong> <strong>Venue:</strong> SeeWoo Restaurant *</td>
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<td>17:00 – 17:20</td>
<td><strong>P2—1.5</strong> Design of a Fault Tolerant Redundant Control for Electro-Mechanical Drive System (72) Robert Grepl, Michal Matejasko, Basti, M., Zouhar, F. (Brno University of Technology, Czech)</td>
<td><strong>P2—2.5</strong> An Adaptive Time-frequency Filtering Algorithm for Multi-component LFM Signals based on Generalized S-transform (92) Dianwei Wang (Xi’an University of Posts and Telecommunications, China); Jing Wang (University of Huddersfield, UK); Ying Liu (Xi’an University of Posts and Telecommunications, China); Zhijie Xu (University of Huddersfield, UK)</td>
<td><strong>P2—3.5</strong> An Improved Search Space Resizing Method for Model identification by Standard Genetic Algorithm (22) Kumaran Rajarathinam, J. Barry Gomm, Dingli Yu, Ahmed Saad Abdelhadi (Liverpool John Moores University, UK)</td>
<td><strong>Venue:</strong> SeeWoo Restaurant * <strong>Closing and prize giving ceremony</strong> <strong>Venue:</strong> SeeWoo Restaurant *</td>
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* Address: 29 Saracen Street, Glasgow, G22 5HT  
* URL: [http://www.seewoorestaurant.com/](http://www.seewoorestaurant.com/)  
* (A coach will pick up from the conference venue at 18:15 and return from the restaurant at 9pm on 12 Sep. 2015)