



## PMC 2018 – 10<sup>th</sup>-11<sup>th</sup> September

### 4<sup>th</sup> Biennial International Conference on Powertrain Modelling and Control, Testing, Mapping and Calibration

#### Programme



#### Sunday September 9<sup>th</sup> – Welcome Evening

Time	Activity	Location
17:00-19:00	Welcome Evening	Atrium, Stewart Miller Building

#### Monday September 10<sup>th</sup> – Registration & Welcome

Time	Activity	Location
8:30-9:00	Registration	The Babbage, HCC*
9:00-9:15	<p>PMC4-2018 Chair:</p> <p><b>Prof. Kambiz Ebrahimi – Professor of Advanced Propulsion – Loughborough University</b></p> <ul style="list-style-type: none"><li>➤ Welcome and Introduction to Loughborough University</li><li>➤ Conference Program</li></ul>	Stephenson Lecture Theatre, HCC

\*HCC: Holywell Conference Centre



Monday September 10 <sup>th</sup> – Morning Session		
Time	Activity	Location
9:15-9:45	<p><b>Keynote 1:</b></p> <p><b>Dr. Chris Dudfield – CTO - Intelligent Energy</b></p> <ul style="list-style-type: none"> <li>➤ <b>PEM Fuel Cell for Motive Applications Status, Achievements and Roadmap</b></li> </ul>	Stephenson Lecture Theatre, HCC
9:45-10:45	<p><b>Session 1</b></p> <ul style="list-style-type: none"> <li>➤ <b>PMC-101: Model-based Swarm Intelligent Optimization for Sizing and Energy Management of Hybrid Electric Vehicles</b>, Q. Zhou , S. Cash , B. Shuai , Y. He , J. Li , and H. Xu</li> <li>➤ <b>PMC-102: Design of a Test Rig in Support of E-clutch Dynamics Characterization, Modelling, and Control</b>, M. Hoić, M. Hrgetić, J. Deur, and A. Tissot</li> <li>➤ <b>PMC-103: Boosting System Options for High Efficiency Fuel Cell Electric Vehicles</b>, A. Kerviel, A. Pesyridis , and D. Chalet</li> </ul>	Stephenson Lecture Theatre, HCC
10:45-11:00	<b>Coffee Break</b>	The Babbage, HCC
11:00-11:30	<p><b>Keynote 2:</b></p> <p><b>Dr. Dimitrios Savvidis – Directorate General of Climate Action – European Commission</b></p> <ul style="list-style-type: none"> <li>➤ <b>VECTO and CO2 Emissions; Latest Developments in the Heavy Duty Vehicles' Sector</b></li> </ul>	Stephenson Lecture Theatre, HCC
11:30-12:30	<p><b>Session 2</b></p> <ul style="list-style-type: none"> <li>➤ <b>PMC-104: An Electrically Assisted Turbocharger System for Formula Student</b>, R.S. Latif and J.M. Allport</li> <li>➤ <b>PMC-105: A Robust Fuzzy Logic Field-Oriented Control Scheme for Hybrid and Electric Vehicles</b>, S. Cash, Q. Zhou, H. Xu and O. Olatunbosun</li> <li>➤ <b>PMC-201: Transient Real World Driving Emissions Measured Using Fast Response On-Board Analyzers</b>, M. Peckham – Cambustion Ltd</li> </ul>	Stephenson Lecture Theatre, HCC
12:30-13:30	<b>Lunch</b>	The Babbage, HCC



Monday September 10 <sup>th</sup> – Afternoon Session		
Time	Activity	Location
13:30-14:00	<p><b>Keynote 3:</b></p> <p><b>Prof. Dr. techn. Christian Beidl – Head of Institute for Internal Combustion Engines and Powertrain Systems – Darmstadt University of Technology</b></p> <ul style="list-style-type: none"> <li>➤ <b>Powertrain Scenario 2030 – Are we Prepared for Future Development Challenges?</b></li> </ul>	Stephenson Lecture Theatre, HCC
14:00-15:00	<p><b>Session 3</b></p> <ul style="list-style-type: none"> <li>➤ <b>PMC-202: Fitting a 1D Gasoline Engine Model at Full and Part Load</b>, R. Norris – Ricardo</li> <li>➤ <b>PMC-106: Measurement of Vibrations Affecting the Power Transmission Seals</b>, P. Nomikos, E. Kozuch, N. Morris, R. Rahmani and H. Rahnejat</li> <li>➤ <b>PMC-107: Optimal Energy Management and Shift Scheduling Control of a Parallel Plug-in Hybrid Electric Vehicle</b>, J. Soldo, B. Škugor and J. Deur</li> </ul>	Stephenson Lecture Theatre, HCC
15:00-15:15	<b>Coffee Break</b>	The Babbage, HCC
15:15-15:45	<p><b>Keynote 4:</b></p> <p><b>Dr. Chang Soo Kim – Head of Fuel Cell Research – Korean Institute of Energy</b></p> <ul style="list-style-type: none"> <li>➤ <b>R&amp;D Status and Prospects on Fuel Cells in Korea</b></li> </ul>	Stephenson Lecture Theatre, HCC
15:45-16:45	<p><b>Session 4</b></p> <ul style="list-style-type: none"> <li>➤ <b>PMC-203: Control and Calibration Challenge and Opportunity with RDE Regulation</b>, A.Haris – AVL</li> <li>➤ <b>PMC-108: Prediction of Friction in EHL Contacts for Drivetrain Applications</b>, G. Sivayogan, R. Rahmani and H. Rahnejat</li> <li>➤ <b>PMC-109: Performance Evaluation of Constant Velocity (CV) Joints of High Performance Vehicular Drivelines</b>, A. Dunn, S. Ganesan, N. Dolatabadi, R. Rahmani, M. Mohammad-Pour, H. Rahnejat and I. Karagiannis</li> </ul>	Stephenson Lecture Theatre, HCC
16:45-17:00	<b>Finish and Support for Visitors as Required</b>	The Babbage, HCC
19:00-22:00	<b>Dinner and Entertainment</b>	Burleigh Court



**Tuesday September 11<sup>th</sup> – Morning Session**

<b>Time</b>	<b>Activity</b>	<b>Location</b>
8:30-9:00	<b>Registration</b>	The Babbage, HCC
9:00-10:00	<p style="text-align: center;"><b>Session 5</b></p> <ul style="list-style-type: none"> <li>➤ <b>PMC-110: Design, Modelling and Simulation of a Lithium-Sulphur Battery Pack for an Electric Bus</b>, V. Calvo-Serra, A. Fotouhi and D.J. Auger</li> <li>➤ <b>PMC-111: Dynamic Torque Characterisation for Rapid Engine Mapping</b>, M. Ghomashi, M. Cary, B. A. Mason &amp; K. M. Ebrahimi</li> <li>➤ <b>PMC-112: Modelling and Simulation of Diesel Exhaust After-treatment System for Efficient Calibration</b>, F. Mehmood</li> </ul>	Stephenson Lecture Theatre, HCC
10:00-10:15	<b>Coffee Break</b>	The Babbage, HCC
10:15-11:15	<p style="text-align: center;"><b>Session 6</b></p> <ul style="list-style-type: none"> <li>➤ <b>PMC-113: Design, Development and Performance Evaluation of ICE Exhaust Silencer</b>, A. Ahmedov, N.J. Beavis, A. Pezouvanis, D. Rogers and K. Ebrahimi</li> <li>➤ <b>PMC-114: Introduction of Fuel Cell Industrialization in China</b>, X. Song, Y. Shu and T. Ma</li> <li>➤ <b>PMC-115: A Generic On-Line Calibration Interface</b>, A. Emtage, S. Filippou, A. Pezouvanis, I. Noell, P. Peeling, A. Koh, J. Pinkey and P. Day</li> </ul>	Stephenson Lecture Theatre, HCC
11:15-11:30	<b>Coffee Break</b>	The Babbage, HCC
11:30-12:30	<p style="text-align: center;"><b>Session 7</b></p> <ul style="list-style-type: none"> <li>➤ <b>PMC-116: Modelling &amp; Simulation of a Turbogenerator for Energy Recovery</b>, S. Petrovich</li> <li>➤ <b>PMC-117: Analysis of Influence of Inertia Coupling on Automatic Transmission Shift Dynamics</b>, V. Ranogajec and J. Deur</li> <li>➤ <b>PMC-118: Virtual Vehicle Powertrain Calibration Using Co-Simulation</b>, T. Fletcher, N. Kalantzis, A. Pezouvanis and K.Ebrahimi</li> </ul>	Stephenson Lecture Theatre, HCC
12:30-13:30	<b>Lunch</b>	The Babbage, HCC



Tuesday September 11<sup>th</sup> – Afternoon Session

Time	Activity	Location
13:30-14:30	<p style="text-align: center;"><b>Session 9</b></p> <ul style="list-style-type: none"><li>➤ <b>PMC-119: Optimising and Comparing Modern Powertrain Architectures using ELVIO (Electrified Vehicle library for simulation and Optimisation)</b>, T. Steffen</li><li>➤ <b>PMC-120: Modelling Environment for Holistic Vehicle Simulation</b>, N. Kalantzis, T. Fletcher, A. Pezouvanis, K. Ebrahimi, M. Cary and B. Lygoe</li><li>➤ <b>PMC-121: Local Model Network Identification using Hierarchical Model Trees and Backward Elimination Structure Optimisation</b>, A. Shahzad, M. Cary, K. Ebrahimi &amp; B. Mason</li></ul>	Stephenson Lecture Theatre, HCC
14:30-14:45	<b>Coffee Break</b>	The Babbage, HCC
14:45-15:45	<p style="text-align: center;"><b>Session 10</b></p> <ul style="list-style-type: none"><li>➤ <b>PMC-122: Rapid Air Change Characterisation</b>, P. Schaal, M. Cary, K. Ebrahimi and B. Mason</li></ul>	Stephenson Lecture Theatre, HCC
15:45-16:00	<b>Finish and Support for Visitors as Required</b>	The Babbage, HCC