

## WEDNESDAY 4<sup>TH</sup> November 2015, Old Music Room, St John's College

17:30 - 19:30 | Drinks Reception

## THURSDAY 5<sup>TH</sup> November 2015, Boys Smith Room, Fisher Building, St John's College

08:00 - 08:30 | Registration

08:30 - 08:45 | Opening Session

08:45 - 09:30 | **Plenary Session: "Evolution or Revolution – A Few Thoughts from a Radical Control Freak"**  
*Craig Battles, Technical Fellow of Robotics and Automation with Boeing Research and Technology, USA*

09:30 - 10:00 | Coffee Break

10:00 - 11:20 | **TS 1: Applications of Intelligent Products [APIP]**

11:20 - 12:40 | **TS 2: Recent Advances in Control for Physical Internet and Interconnected Logistics [PIIL]**

12:40 - 13:40 | Lunch

13:40 - 15:40 | **TS 3: Sustainability issues in Intelligent Manufacturing Systems [SUSM]**

15:40 - 16:10 | Coffee Break

16:10 - 17:50 | **TS 4: Holonic and Multi-agent system Design for Industry and Service [HMAD]**

19:30 | Gala dinner, Wordsworth Room, St John's College

## FRIDAY 6<sup>TH</sup> November 2015, Boys Smith Room & Castlereagh Room, Fisher Building, St John's College

08:00 - 08:30 | Registration

08:30 - 09:15 | **Plenary Session: MAS Technology and SOA Architectures in Industry 4.0: Experiences and Challenges**  
*Professor Vladimir Marik, Czech Technical University, Prague, Czech Republic*

09:15 - 09:45 | Coffee Break

09:45 - 11:05 | **TS 5: Service Oriented Enterprise Management and Control [SOMC]**

11:05 - 12:25 | **TS 6: Cloud and Computing-oriented Manufacturing [CCOM]** | **TS 7: Smart Grids and Wireless Sensor Networks [SGWN]**

12:25 - 12:35 | Closing Session, wrap up

12:35 - 13:35 | Lunch

## THURSDAY 5<sup>TH</sup> November 2015, Boys Smith Room, Fisher Building, St John's College

08:45 - 09:30	<b>Plenary Session: "Evolution or Revolution – A Few Thoughts from a Radical Control Freak"</b> <i>Craig Battles, Technical Fellow of Robotics and Automation with Boeing Research and Technology, UK</i> Chair: Duncan McFarlane, UK
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<b>Technical Session 1: Applications of Intelligent Products [APIP]</b>	
Chair: Vincent Thomson, CA	
10:00-10:20	<i>Centralized MES with Environment Adaptation for Production of Radiopharmaceuticals,</i> Silviu Răileanu, Theodor Borangiu and Andrei Silișteanu
10:20-10:40	<i>Improving the delivery of a building,</i> Vincent Thomson and Xiaoqi Zhang
10:40-11:00	<i>Repair Services for Domestic Appliances,</i> Rachel Cuthbert, Vaggelis Giannikas, Duncan McFarlane and Raj Srinivasan
11:00-11:20	<i>End-of-Life information sharing for a circular economy: existing literature and research opportunities,</i> William Derigent and André Thomas

<b>Technical Session 2: Recent Advances in Control for Physical Internet and Interconnected Logistics [PIIL]</b>	
Chair: Yves Sallez, FR	
11:20-11:40	<i>The Internet of Things Applied to the Automotive Sector: an Unified Intelligent Transport System Approach,</i> Valentín Cañas, Andrés García, Jesús Blanco and Javier de las Morenas
11:40-12:00	<i>Using the Crowd of Taxis to Last Mile Delivery in E-commerce: a Methodological Research,</i> Chao Chen and Shenle Pan
12:00-12:20	<i>Framework for Smart Containers in the Physical Internet,</i> Yves Sallez and Thierry Berger
12:20-12:40	<i>On the usage of Wireless Sensor Networks to facilitate composition/decomposition of Physical Internet containers,</i> Nicolas Krommenacker, Patrick Charpentier, Thierry Berger and Yves Sallez

### Technical Session 3: Sustainability issues in Intelligent Manufacturing Systems [SUSM]

Chair: Damien Trentesaux, FR

13:40-14:00	<i>Artifacts and Guidelines for Designing Sustainable Manufacturing Systems,</i> Adriana Giret and Damien Trentesaux
14:00-14:20	<i>A human-centered design to break the myth of the « Magic Human » in Intelligent Manufacturing Systems,</i> Damien Trentesaux and Patrick Millot
14:20-14:40	<i>Sustainability in Production Systems: A Review of Social Responsibility Issues in Workforce Scheduling,</i> Carlos Moreno-Camacho and Jairo Montoya-Torres
14:40-15:00	<i>Identifying the Requirements for Resilient Production Control Systems,</i> Rengarajan Srinivasan, Duncan McFarlane and Alan Thorne
15:00-15:20	<i>Requirements verification method for system engineering based on a RDF logic view,</i> Albéric Cornière, Virginie Fortineau, Thomas Paviot and Samir Lamouri
15:20-15:40	<i>Approaching Industrial Sustainability Investments in Resource Efficiency through Agent-Based Simulation,</i> Flavio Tonelli

### Technical Session 4: Holonic and Multi-agent system Design for Industry and Service [HMAD]

Chair: Andre Thomas, FR

16:10-16:30	<i>Increasing dependability by agent-based model-checking during run-time,</i> Sebastian Rehberger, Thomas Aicher and Birgit Vogel-Heuser
16:30-16:50	<i>A Synchronous CNP – based Coordination Mechanism for Holonic Manufacturing Systems,</i> Doru Panescu and Carlos Pascal
16:50-17:10	<i>Interfacing BDI Agent Systems with Geometric Reasoning for Robotics and Manufacturing,</i> Lavindra de Silva, Felipe Meneguzzi, David Sanderson, Jack Chaplin, Otto Bakker, Nikolas Antzoulatos and Svetan Ratchev
17:10-17:30	<i>A holonic manufacturing system for a copper smelter process,</i> Carlos Herrera, José Rosales, André Thomas and Víctor Parada
17:30-17:50	<i>A Nervousness regulator framework for dynamic hybrid control architectures,</i> Jose-Fernando Jimenez Gordillo, Abdelghani Bekrar, Damien Trentesaux and Paulo Leitão

**FRIDAY 6<sup>TH</sup> November 2015, Boys Smith Room & Castlereagh Room (TS7), Fisher Building, St John's College**

08:30 - 09:15	<p><b>Plenary Session: MAS Technology and SOA Architectures in Industry 4.0: Experiences and Challenges</b></p> <p><i>Professor Vladimir Marik, Czech Technical University, Prague, Czech Republic</i></p> <p>Chair: Theodor Borangiu, RO</p>
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<p><b>Technical Session 5: Service Oriented Enterprise Management and Control [SOMC]</b></p> <p>Chair: Olivier Cardin, FR</p>	
09:45-10:05	<p><i>Automation Services Orchestration with Function Blocks: Web-service Implementation and Performance Evaluation,</i></p> <p>Evgenii Demin, Victor Dubinin, Sandeep Patil and Valeriy Vyatkin</p>
10:05-10:25	<p><i>An IoT visibility software architecture to provide smart workforce allocation,</i></p> <p>Pablo Garcia Ansola, Andrés García and Javier de las Morenas</p>
10:25-10:45	<p><i>Virtual commissioning-based development and implementation of a service-oriented holonic control for retrofit manufacturing systems,</i></p> <p>Francisco Gamboa Quintanilla, Olivier Cardin, Anne L'Anton and Pierre Castagna</p>
10:45-11:05	<p><i>Security Issues in Service Oriented Manufacturing Architectures with Distributed Intelligence,</i></p> <p>Cristina Morariu, Octavian Morariu and Theodor Borangiu</p>

<p><b>Technical Session 6: Cloud and Computing-oriented Manufacturing [CCOM]</b></p> <p>Chair: Radu Băbiceanu, USA</p>	
11:05-11:25	<p><i>Technological Theory of Cloud Manufacturing,</i></p> <p>Sylvain Kubler, Jan Holmström, Kary Främling and Petra Turkama</p>
11:25-11:45	<p><i>Integrated Scheduling for Make-to-Order Multi-Factory Manufacturing: An Agent-Based Cloud-Assisted Approach,</i></p> <p>Iman Badr</p>
11:45-12:05	<p><i>Secure and Resilient Manufacturing Operations Inspired by Software-Defined Networking,</i></p> <p>Radu Băbiceanu and Remzi Seker</p>
12:05-12:25	<p><i>Building a Robotic Cyber-Physical Production Component,</i></p> <p>Paulo Leitão and José Barbosa</p>

## Technical Session 7: Smart Grids and Wireless Sensor Networks [SGWN]

Chair: Petr Skobelev, RU

11:05-11:25	<i>Multi-Agent Planning of Spacecraft Group for Earth Remote Sensing,</i> Petr Skobelev, Elena Simonova, Alexey Zhilyaev and Vitaliy Travin
11:25-11:45	<i>Ant Intelligent Robot: A Versatile and Low Cost Miniature Mobile Robot Platform for Swarm Robotics Research and Education,</i> Dan Novischi and Adina Magda Florea
11:45-12:05	<i>Methodology and Framework for Development of Smart Grid Control,</i> Gheorghe Florea, Oana Chenaru, Radu Dobrescu, Mircea Eremia and Lucian Toma
12:05-12:25	<i>Sink Node Embedded, Multi-Agent Systems Based Cluster Management in Industrial Wireless Sensor Networks,</i> Mohammed Taboun and Robert Brennan