INCOM 2015
15th IFAC/IEEE/IFIP/IFORS Symposium
Information Control Problems in Manufacturing
Ottawa, Canada, May 11-13, 2015
Ottawa Convention Centre

IFAC
INTERNATIONAL FEDERATION
OF AUTOMATIC CONTROL

INDUSTRIAL PANEL

Service Engineering in Industrial Companies.

Challenges, opportunities and solutions.

coordinated by:
Sergio Cavalieri, CELS - University of Bergamo, Italy
Zied M. Ouertani, ABB Corporate Research, Germany

Wednesday, 13 May 2015 - 9:15 – 12:30 – Conference Room 214

The recent transformation of industry in the digital era, characterized by saturated and commoditized global environments, where companies strive for attracting and retaining customers, has pushed manufacturing organizations to rethink their traditional dominant logic based on the provision of artefacts. The development of differentiation strategies rooted on the **Product-Service System (PSS) paradigm** may represent a key element for competitive advantage.

It is recognized that over one-third of large manufacturing firms offer services. The successful stories of IBM, Rolls Royce Aerospace, Siemens and Xerox, are only some popular examples of how competing on the basis of a service-based business model allows to prosper in markets affected by weak demand, hard competition and decreasing margins.

In this context, **Service Engineering is becoming a predominant field**. It calls for a design and development of an integrated offering valuable to customers in order to contribute to a continuous positive change of state throughout the journey of experience they stage with a PSS. This cultural shift from a transaction-based approach to a long-term relational journey with the customer still needs to be thoroughly understood by industrial companies.

This industrial panel within INCOM 2015 will focus on **understanding how manufacturing companies are engineering their service to make the shift to a service dominant logic**. The event aims to reduce the current gap between theory and practice by providing insights from leading service providers. This will offer a valuable opportunity to hear the latest developments in PSS engineering.

In particular, in a recent Special Issue[1] published on the journal Computers in Industry, **five relevant key issues** have been pointed out as priorities for a research and industrial agenda:

- What **reference framework** for service engineering could the industrial world embrace that could lead to a standard practice for the community?
- What **successful mechanisms** are needed to transfer the research findings onto practical and pragmatic – commercial – IT tools for the industrial partners, in order to raise the awareness of the PSS engineering body of knowledge?
- What **role for the service engineer** in the future of manufacturing companies, and in particular in the new digital world?
- What **role for academia** to shape the new landscape of PSS engineering by delivering targeted graduate and postgraduate service engineering courses?

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[1] *Special Issue on "Product-Service System Engineering" published on Computers in Industry, Vol. 63, Issue 4, May 2012*

These challenges will provide food for thought and discussion during the panel, where industrial panellists will share their own experiences in the field of PSS engineering (an industrial positioning white paper would then be drafted and made available to the community).

PANEL TARGET AUDIENCE

Senior Executives, R&D managers, Service Operations Managers, Technical Directors, Customer Support Managers, Consultants, IT Solutions Providers, Academic Researchers in the manufacturing and service domain.

PANEL SCHEDULE

9:20 – 9:30	Introduction to the panel by the session organisers
9:30 – 9:55	*Quality Differentiation in Product-Service Bundles: A Paradigm for Implementing Servicization* **–Morris A. Cohen - *Wharton School – University of Pennsylvania***
9:55 – 10.20	*The journey towards service transformation: ABB experience –* **Ben C. Venter - *ABB Service Canada***
10:20 – 10:45	*Service Science: Bringing Industry and Academic Together -* **Kelly Lyons – *University of Toronto***
10:45 – 11:00	*Coffee Break*
11:00 – 11:20	*Providing services to critical infrastructure sector organizations –* **Frank Turbide** - ***CCIRC (Canadian Cyber Incident Response Centre)***
11:20 – 12:30	Panel discussion with the participation of the speakers and of **Jim Charboneau** - *Utopia Global* and **Gladwin Rao** – *IBM*

WITH THE COLLABORATION OF:

Cloud Manufacturing and Social Software Based Context Sensitive Product-Service Engineering Environment for Globally Distributed Enterprise)
A EU Horizon 2020 research and innovation project under grant agreement No 636692

SHORT BIO OF THE PANELISTS

MORRIS A. COHEN – Panasonic Professor of Manufacturing & Logistics - Co-Director, Fishman-Davidson Center for Service and Operations Management – Wharton School, University of Pennsylvania

Morris A. Cohen is the Panasonic Professor of Manufacturing and Logistics in the Operations and Information Management Department, the Wharton School at the University of Pennsylvania He is also Co-Director of Wharton's Fishman-Davidson Center for Service and Operations Management.   Until recently he was founder and chair of the board of MCA Solutions, a software company specializing in after-sales logistics planning systems, which recently merged with PTC, a leading provider of product design and service life cycle management decision support systems.

Dr. Cohen's research includes analysis of current drivers of global supply chain sourcing strategy and product-service system modeling with a focus on performance based incentives for servicization as well as advanced optimization tools for supply chain resource planning. His recent application and consulting work includes development of strategic and tactical planning systems for service supply chains in industries such as Aerospace & Defense, Consumer Electronics, Health Care Technology, Oil and Gas, Automobile, Semiconductor Equipment, Computers, and Telecommunications. Professor Cohen holds a B.A.Sc. in Engineering Sciences from the University of Toronto, and an M.S. and Ph.D. in Operations Research from Northwestern University.

BEN C. VENTER - Vice President and General Manager – ABB Service Canada

Ben Venter has been Vice President and General Manager, Service Canada, since 2013. In this role, he leads ABB's Service business within Canada across the complete service portfolio and represents ABB's service capability within the industrial and utility customer base. Ben's career within the ABB service group began in 2000 when Ben joined ABB as a Site Manager and reliability consultant within the Full Service group. Within this position Ben started Full Service Sites within South Africa and Canada and consulted on service implementation strategies. Before joining ABB Ben held various engineering and reliability management positions within global industrial companies. Ben is recognized as a specialist in service strategies, plant performance improvement and the implementation of reliability concepts. Ben has presented reliability improvement concepts through data management in control systems and equipment data monitoring at various reliability forums. Ben has also published articles on overall equipment effectiveness improvement through technology platforms and service contract management concepts.

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KELLY LYONS - University of Toronto

Dr. Kelly Lyons is an Associate Professor in the Faculty of Information at the University of Toronto. Prior to joining the Faculty of Information, she was the Program Director of the IBM Toronto Lab Centre for Advanced Studies (CAS). Her current research interests include service science, social media, and collaborative work. Currently, she is focusing on ways in which social media can support human-to- human interactions in service systems. Kelly has co-authored a number of papers, served on program committees for conferences, given many keynote and invited presentations, and co-chaired several workshops. She has been the recipient of an NSERC Discovery Grant, an NSERC Collaborative Research and Development Grant with SAP, and an IBM Smarter Planet Faculty Innovation Grant, has received funding through the GRAND Networks of Centres of Excellence (NCE) and has been the recipient of two NSERC Engage Grants (one with Sciencescape and one with Dell). Kelly holds a cross-appointment with the University of Toronto's Department of Computer Science, is a member of the Executive Committee of the University of Toronto's Knowledge Media Design Institute, and is an IBM Faculty Fellow. From 2008 to 2012, she was a Member-at-Large of the ACM Council and a member of the Executive Council of ACM-W. Kelly is very interested in promoting Women in Technology initiatives and has given several presentations to young people and teachers on this topic. More details can be found at: http://individual.utoronto.ca/klyons

JAMES CHARBONEAU - Director, Enterprise Asset Management (EAM) at Utopia Global, Inc.

For over 35 years, in Employment and Contractor roles Jim Charboneau has been a Trusted Advisor with leadership in the area of Technology, Operations and Maintenance.He is a versatile, performance-driven professional providing strong business acumen in operations and maintenance (O&M) and with formal training and experience in Business Transformation, Maintenance Strategies and Enterprise Asset Management (EAM) Solution and Technology Architectures. Jim Charboneau's unique balance of functional operations and information technology experience includes assessment, strategic planning, design and delivery of EAM and Enterprise Resource Planning (ERP) solution architectures. He is an effective and motivating team leader with excellent managerial, interpersonal, communication and analytic skills and capable of developing and managing excellent relationships at all levels within medium/ large organizations.

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GLADWIN RAO - Lead Architect- Electronic Information Environment (EIE) Executive IT Architect SOA Solutions at IBM

Mr. Gladwin Rao is an Executive Information Technology Open Group Certified Master Architect with IBM and has extensive experience in architecting and engineering service oriented solutions for large programs across the federal government. Most recently, he has lead his client with architecting and designing solutions with a focus on enabling services required to manage and sustain platforms such as aircraft, armoured automotive vehicles. Lead his client in designing and realization of services for domains such as: Logistics support analysis, reliability and maintainability (R&M), engineering and supply chain services that would be consumed during the in-service-support phase of the platform with the respective service providers.He has also architected and developed service oriented solutions where access to federated data was provided as a service across the enterprise using model driven services enablement.

He has presented at a number of conferences related to Service oriented architectures that covered services design from a business process driven model and realized using a set of IT enabled and process oriented services. He is also responsible for leading a group of IT professionals in the area of services architecture and design within IBM.

FRANK TURBIDE - *CCIRC (Canadian Cyber Incident Response Centre)*

Mr. Turbide has over twenty five years' experience in the information technology field. He has spent the last eighteen years involved in all aspects of information technology security, first as an operational responsibility, in teaching, consulting and since 2010 as a technical analyst at the Canadian Cyber Incident Response Centre (CCIRC) where he is responsible for the industrial control systems portfolio

SERGIO CAVALIERI – Director CELS Group – University of Bergamo

Sergio Cavalieri is Full Professor at the Department of Management, Information and Production Engineering of University of Bergamo and Director of CELS - Research Group on Industrial Engineering, Logistics and Service Operations. He holds a Master degree and a PhD in Management and Production Engineering from Politecnico di Milano. He has been founder and coordinator of an Italian joint industry-academic Service Management Forum, made up of 50 associated industrial companies, consultancies and research centers. Currently, he is scientific coordinator of PROSSALIC (PROduct-Service System Across Life Cycle), a global research network funded by the FP7 EU program involving nine research centers from all over the world. He is author of 4 books and more than 100 papers, published in national and international journals or presented in conference proceedings. He is Scientific Director of "Bergamo 2.(035) – A new Urban Concept for a New World", a joint project of University of Bergamo and GSD – Harvard University, funded by Italcementi Foundation.

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ZIED M. OUERTANI – ABB Corporate Research

Zied Ouertani is currently a senior scientist at the ABB corporate research centre Germany, leading research on Industrial Service Management, Business Model Innovation, and Service Engineering. Prior to ABB, he was a postdoctoral researcher at the Cambridge University Engineering Department, and as a member of its Institute for Manufacturing Zied led the research projects "Strategies for Asset Information Management" and "Cambridge Strategic Performance Information Lab" funded by the EPSRC Innovative Manufacturing Research Centre (IMRC). Zied also led for two years the "Service Performance Information and Analytics" project of the Cambridge Service Alliance, a cross-university platform dedicated to service management research in collaboration with IBM, BAE Systems and Caterpillar.

Zied obtained a Ph.D. in computer science in 2007 from Nancy University for a dissertation on product information management support to the engineering change process. Zied is a frequent speaker at leading conferences and public events and has published over 70 contributions in renowned journals, conferences and books.