



The following special sessions have been presented at APMS 2010.

**Collaborative Innovation.** It is widely recognised that collaborating with other firms can be an important source of innovation, sustainability and competitive advantage. Although collaboration and innovation are subjects which are researched in their own right, the area of collaborative innovation is under researched. Thus, the objective of the special session is to start a debate in the area of Collaborative Innovation covering specific topics on the area.

Session chairs: Dr. Kepa Mendibi (Strathclyde University), Prof. Dan Wang (Harbin University), Prof. Bin Lu (Harbin University), and Prof. Umit S. Bititci (Strathclyde University).

**Transformations to Servitized Organizational Forms.** Management literature reports several analysis and studies dedicated to better understand the economical and strategic implications that can be obtained from the integration of services in traditionally goods based offers as Product-Service Systems. At the same time research on the change processes toward servitization appears to be lagging behind. This session welcomes high-quality original unpublished research contributions, case studies, statistical analysis and implementation experiences on the following suggested topics: product-service Business Models, value proposition and portfolio definition, servitization strategies, service transformation paths, barriers and enablers, Blue print for servitization, organisational theories and change management in the servitization context.

Session chairs: Paolo Gaiardelli (University of Bergamo) and Veronica Martinez (Cranfield School of Management).

**Sustainable Initiatives in Developing Countries.** This session has the objective of discussing endogenous sustainable development of the production process and automation in developing countries. The topics may also discuss the integrated expansion of private and governmental policy towards a positive balance in strategically reducing damaging environmental impacts.

Session chairs: Irenilza de Alencar Naas and Cecilia M. V.B de Almeida (Paulista University).

**Product Service System Engineering - Theoretical and Empirical Evidences.**

Nowadays, the distinction which links goods to something tangible and services to something intangible is vanishing. In this context, the Product-Service System (PSS) concept finds its root. The idea behind this concept is that it ensues from an innovation strategy, shifting the business focus from the design and sales of products to the design and sales of a system. Its aim is to generate profits throughout the whole life cycle. Moreover, PSS has a strong link with sustainability, supporting industries to embrace environmental and social dimensions. The success of a PSS depends on its conceptualisation and design. Service Engineering has been dealing with the development and design of a PSS by using an appropriate set of models, methods and tools. Papers offering novel research contributions in any aspect of previous topics are solicited.

Session chairs: Dr. Giuditta Pezzotta, Dr. Sergio Terzi (University of Bergamo) and Carlo Vezzoli (Politecnico di Milano).

**Product-Related Service Delivery Networks Design, Management and Optimization.**

Manufacturing companies all over the world are increasingly servitising their business by offering packages of products and services instead of just manufactured goods. One of the most challenging tasks that these companies have to face, is to set-up and manage a service delivery network able to effectively support their products and customers throughout the products life-cycle. As a result, there is a strong need of models, techniques and technologies to support manufacturers in such a complex task. This session welcomes papers covering the following topics: (i) Product-related service delivery network configuration, management and optimization, (ii) Technology enabling the delivery of product-related services, (iii) Field service management and optimization, and (iv) Performance measurement in product-related service delivery network.

Session chairs: Walter Ganz (Fraunhofer Inst. für Arbeitswirtschaft und Organisation IAO), Mario Rapaccini and Filippo Visintin (University of Florence).

**Risk Management as a Powerful Means for Sustainability.** Sustainability is the necessary perspective for industrial organizations to guarantee the resiliency of the environment in which business continuity is not placed in danger. Sustainability needs a pervasive risk management process involving all the levels of the organization, down towards the business operations units. The disruption of business operations due to the occurrence of few operational risks has become a serious threat to the viability and effectiveness of the sustainable business model, largely dependent on the ability of enhancing business opportunities and mitigating the operational disruptions or disturbances. In this sense, operational risk is much more than risks related to operations; in fact operations risk represents only a subset of the operational risks, including risks related to the production process and planning.

Session chairs: Prof. Enrico Cagno and Dr. Guido Micheli (Politecnico di Milano).

**New Product Introduction and Innovation in the 21st century - Methods, Tools and Techniques for new value proposition.**

Global customers and markets call for new business models able to improve the offered value propositions, incorporating customisation, cultural aspects as well as sustainability. Continuous innovation in product introduction and development processes are mandatory tasks for the Western manufacturing system in order to face competition from emerging countries. Such innovation requires integration and collaboration as fundamental elements to keep production networks on the market and emphasize their competitive value proposition. In this context, this APMS Special Session calls for original contributions which address methods, tools, techniques, projects and initiatives able to provide any answers to such a new searched model.

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Session chairs: Dr. Sergio Terzi (University of Bergamo), Dr. Dimitris Kiritsis (Ecole Polytechnique Federale de Lausanne), Prof. Chris McMahon (University of Bath), and Prof. Alain Bernard (Ecole Centrale de Nantes).

**Intelligent Non-Hierarchical Manufacturing Networks.** Traditional hierarchical manufacturing networks usually implement centralized strategies and control models, where some of the involved actors are forced to adapt to the constraints and purposes of dominant ones. The application of this centralized model to Non-hierarchical Manufacturing Networks (NHMN) results in many limitations and drawbacks, including substantial performance losses due to poor communication and coordination activities and

reciprocal trust. Nowadays, NHMN aim to overcome these limitations by establishing network-based relationships and coordination mechanisms among involved partners, aiming at realizing more harmonious and equitable peer-to-peer enterprise relationships. Current research topics in NHMN are Reference Collaboration Models, Distributed Decision Making Processes and Technologies, Strategic and Operational Flexibility, Resiliency and Business Continuity and Sustainability among other.

Session chair: Raul Poler (Polytechnic University of Valencia).

**Supply Risk Management - Theory, Models, and Experiences.** In today's uncertain business and living environment, ensuring the supply continuity without disruptions has become a challenging task for supply chain managers. Globalization trend, lean manufacturing practices, just - in - time approaches and low - cost - country sourcing can provide organizations with opportunities and tools for cost minimization, but can also concur to increase companies' exposure and vulnerability to risks that might lead to supply chain disruptions. As companies realize that suppliers are key components of success, supply risk management is gaining more and more attention in procurement and supply management. The objective of this special session is to foster discussion in the area of Supply Risk Management covering specific topics such as supply risk identification and evaluation, supply risk mitigation strategies and tools and models for supply risk management.

Session chair: Dr. Roberto Pinto (University of Bergamo).

**Managing operations globally.** In a more and more competitive context, the globalization of operations has become a common trend among companies in order to remain competitive in the medium-long term. The internationalization of operations can take different forms and entails the development of new configurations like international distribution systems, a network of global suppliers and offshore manufacturing. This session aims at discussing about the different paths a company can undertake in order to face the globalization and addresses what are the main barriers, enablers and trends of the globalization as far as operations are concerned. This session welcomes original papers that could feed the debate on these topics.

Session chairs: Prof. Alessandro Pozzetti, Donatella Corti (Politecnico di Milano) and Ander Errasti (University of Navarra).

**Fostering Energy Efficiency in Manufacturing through Advances in Production Management Systems.** Energy efficiency is more and more becoming the main target for future factories, due to business-driven and social-driven motivations. Until now energy efficiency in factories often resulted in a set of occasional projects conducted to address specific energy-related improvements. A holistic approach that supports the dynamic monitoring, analysis and management of energy efficiency performances of the overall factory is still far from the reality. In this context, Production Management Systems need to play a major role. Future Production Management Systems will require to fully support integrated visualization of energy consumption in order to support decision makers to foster energy efficiency improvements in comprehensive way. The aim of the proposed special session is to collect international academic and industrial experiences in this field, in order to define the state of art and suggest advances in Production Management Systems to foster Energy Efficiency in Manufacturing.

Session chairs: Prof. Marco Taisch, Alessandro Cannata (Politecnico di Milan) and Prof. Masaru Nakano (Keio University).