



Special Session

Operations research/Management science approaches in PSS design and assessment

IPSS 2016 : <http://ipss2016.unibg.it/>

Scope

The service sector has become the largest sector in many industrialized countries, thanks to the critical role it plays in current business environments and to the evolution of many manufacturing companies towards the provision of Product-Service Systems (PSS) (Vandermerwe & Rada, 1988) (Baines, et al., 2007). In this context, the design and performance assessment of effective and efficient services and PSSs raise unprecedented issues related to processes, people, organizations, and products. Indeed, the design of a PSS imposes peculiar requirements, often very different from the requirements emerging when designing a pure product.

In order to support both researchers and professionals in dealing with these issues, it is important to outline new ad-hoc frameworks, procedures and approaches for the design and development of PSS and services, as well as for the assessment of their performance.

Since the Operations Research and Management Science discipline (OR/MS) aims to “provide rational bases for decision making by seeking to understand and structure complex situations and to use this understanding to predict system behavior and improve system performance” (Informs), the application of OR/MS tools in the field of PSS design comes as a natural extension. As an example, simulation could model effectively the complexity of a real system (like a PSS), also providing an effective experiment environment for evaluating dynamic system behaviors. Due to its high adaptability, simulation modelling – applied traditionally in manufacturing problems – are becoming applied also in the service sector (Pezzotta et al., forthcoming), as well as other OR/MS tools and techniques.

Topics/ Keywords

This special session aims at bringing together academic researchers and practitioners working on the development of methods, technologies, models and real-life projects in the field of PSS design and assessment using OR/MS approaches. The main topics of interest include, but are not limited to:

- PSS design and assessment frameworks
- OR/MS applications in PSS design and development
- Quantitative methods and heuristics for PSS design and assessment
- Discrete event simulation, system dynamics, agent-based modelling for PSS design and assessment
- Use of analytical and numerical techniques for PSS design and assessment
- PSS design for Sustainability
- New methods for assessing PSS performance



Session Organizers

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Submission procedure

Acceptance of papers is based on review of the full manuscript (up to 6 pages). Instruction for authors are available on <http://ipss2016.unibg.it/>

To ensure the correct identification of the manuscript for inclusion into the correct Procedia Special Issue, it is important to select "**SI: 8th IPSS 2016**" for the "Article Type".

When submitting please indicate the name of the special session in the "**Comments**" section.

Please follow the submission procedure on: <http://ipss2016.unibg.it/>, with copy of your paper sent by email to the chairs of the special session.

Dead line for submission of full papers of special sessions: 15th January 2016.

References

Baines, T., Lightfoot, H., Evans, S., Neely, A., Greenough, R., Peppard, J., Tiwari, A. (2007). State-of-the-art in product-service systems, Pro-ceedings of the Institution of Mechanical Engineers. 221(10), 1543-1552.

Pezzotta, G., Pirola, F., Pinto, R., Akasaka, F., & Shimomura, Y. (Forthcoming). A Service Engineering framework to design and assess an integrated product-service. Mechatronics.

Vandermerwe, S., & Rada, J. (1988). Servitization of Business: Adding Value by Adding Services. European management Journal.