

Elsevier Special Issue of CIRP Journal of Manufacturing Science and Technology

Design of sustainable Product Service Systems and their Value Creation Chains

Guest editors: Pr. Xavier Boucher (FR), Pr. Daniel Brissaud (FR), Pr. Yoshiki Shimomura (JP)

Industrial Product Service Systems (PSS) are a new concept offering strong opportunities both for business innovation and sustainability improvement. Coupling or even integrating industrial production and service delivering poses many innovative challenges for the manufacturing industry at the technological, organizational and even human level. In the recent years, many international projects have contributed to important scientific advances in the field. Product Service Systems offer innovative opportunities of value creation for the industry. Opening new possibilities of extracting value from the usage phase of product-life cycle for the users/customers, for the providers and for various stakeholders, IPS2 bring new economic and business models, but also a deep change in the production models of the industry. A heated controversy concerns the sustainable impact of such innovations: IPS2 are often considered as a potential lever to improve life cycle management, but the business reality tends to reduce IPS2 to a set of processes aiming at increasing profits. The potential of value creation brought by Product Service Systems strongly depends on the way they are designed and engineered within the industry: this is the focus of the special issue.

The Special issue aims at gathering a state of the art on latest advances on models, methods, and tools developed in order to support the design and engineering of Product Service Systems and their associated value creation chains. This covers the various dimensions which can contribute to design, configure and evaluate both the PSS offer itself, but also the servitized logistic and production chain required to deliver it: Usage capture and customer analysis; Evaluation of PSS performance, value creation and sustainability; Modelling formalisms and methods to support PSS engineering; Decision-making approaches for PSS configuration; Engineering Methodologies for PSS; Lean engineering and management of PSS, etc...

The special issue is open both to PSS Case Studies, thus more oriented on applied research, and theoretical contributions participating to the progressive formalization of a scientific and structured knowledge for this multidisciplinary domain.

This call for paper is specifically supported by IPSS CIRP International Conference on Industrial Product Service Systems (<http://ipss2015.emse.fr/>)

Key words

- **Model and meta-models for Product Service Systems.**
- **Ontologies for PSS engineering and management.**
- **Modelling formalisms and methods to support PSS Engineering**
- **PSS Design and Engineering**
- **Sustainable design and engineering of PSS.**
- **Performance assessment and performance systems for sustainable PSS**
- **Design, Configuration and management of PSS value creation chains**
- **Design and management of servitized logistic chains.**
- **Lean engineering and management of Product Service Systems**

- **Decision-making for PSS design and engineering.**
- **Decision Support Systems for design and assessment of PSS delivery systems.**
- **Life cycle modelling and engineering for PSS**
- **Life cycle cost engineering**
- **Engineering of servitized economic and business models.**

Please note that the submission should respect the general orientations and guidelines of the CIRP Journal of Manufacturing Science and Technology (see <http://www.journals.elsevier.com/cirp-journal-of-manufacturing-science-and-technology/>).

Dead lines

Submission of full paper: 2015, October 15th.
 Notification of acceptance: 2016, January 15th.
 Submission of final versions: 2016, February 30th.

Submission procedure

[Please, first send an intention of publication containing the planned title, authors, and a short abstract to the guest editors \(boucher@emse.fr, Daniel.Brissaud@grenoble-inp.fr, yoshiki-shimomura@center.tmu.ac.jp\).](mailto:boucher@emse.fr)

Then submit your paper on the web site of the CIRP Journal of Manufacturing Science and Technology (<http://ees.elsevier.com/cirpj/>) following the submission guidelines of the Journal

When submitting, authors have to indicate the special issue “**Design and Engineering of sustainable Product Service Systems and their Value Creation Chains**” (Short name ‘**PSS Design and Engineering**’).

Please follow strictly the instruction for authors available on Elsevier web site.

Please note that, when submitting the journal will propose you 2 kinds of submission: (i) regular submission with no fee to be paid by the author of the paper (articles are made available to Elsevier subscribers, as well as developing countries and patient groups through Elsevier access programs), or (ii) Open Access submission with a some fees to be paid by the authors when submitted (Articles are freely available to both subscribers and the wider public with permitted reuse). The author can choose individually the submission mode he prefers.