**Smart Engineering Product-service Development for Digital Servitization**

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**Abstract**

The rapid development of information and communication technologies (ICT) has enabled the prevailing digital transformation (i.e. digitalization), where physical products can be readily digitized in the virtual space and seamlessly interconnected. Meanwhile, industries are ever increasingly adopting service business models (i.e. servitization), to offer not only customized products but also continuous services as a solution bundle to meet individual customer needs. The convergence of such digital servitization has triggered an emerging IT-driven manufacturing servitization paradigm, i.e. smart product-service systems, where a large amount of low cost, high performance smart, connected products are introduced and further leveraged as the tool and media, to generate on-demand services. More accurately the customer needs and preferences can be captured and interpreted. Nevertheless, it is often critical to 1) synthesize and analyze the massive amounts of user-generated and product-sensed data for in-context requirement elicitation; 2) establish the appropriate mapping between those requirements and existing product-service family; 3) automate the recommend/predict personalized services to the end users with lifecycle consideration; and 4) evaluate solution alternatives with better UX, comprehensively. Given those factors, this special session aims to present the state-of-the-art, informatics-based approaches, tools and systems to support the product-service design for digital servitization in a smart, connected environment. Papers are invited in, but are not limited to, the following topics:

• Design for better UX

• Digital servitization

• AI-enabled product-service innovation

• Smart product-service system development

• Case studies in smart product-service design