

Introduction to the Digital Services and Digitalization of Services Minitrack

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This minitrack deals with the innovation, design, development, management, and use of digital services and the digitalization of services. The key drivers in this area of research are the multiplying technological opportunities for digital services, such as ubiquitous connectivity, wearable devices, cyber-physical systems, Internet of Things (IoT), natural language assistants, virtual/augmented reality, cognitive computing, and so on. The minitrack provides a discussion forum for researchers interested theoretical and practical problems related to such services [1, 2].

In a broad sense, digital services can be defined as systems that enable value co-creation and limit value co-destruction through the development and implementation of ICT enabled processes that integrate system value propositions with customer value drivers [3, 4]. Such services meld the worlds of bits and atoms and promise to transform the transportation, energy, and other sectors like the media industries before them. They draw on different technologies such as sensors, real-time analytics of data, augmented and virtual realities, computer hardware, software, and human and system actors. Such technologies form a service platform where different actors [5] assemble the service together, *in situ*. As a result, the embedded systems of today and the Internet-of-things of tomorrow are the precursors for the upcoming era of cyber physical services (CPS). Examples of such services are, e.g., biomedical and healthcare systems such as telerobotic surgery, (semi)autonomous vehicles and intelligent highways, augmented human capabilities with body net sensors and virtual reality, and intelligent machines.

Furthermore, there are substantial opportunities for ICT and digitalization driven service innovation in industrial and business-to-business settings. These opportunities exist particularly in manufacturing in which innovation activities increase the digitization of products and production processes. We see that the global awareness of the power of the manufacturing

industry will be linked to horizontal cyber-physical systems that enable value co-creation and co-destruction in the networked business environment. The cyber-aspects of such systems are ICT infrastructure, computer hardware, software, and different kind of sensors and actors. These components turn cyber-physical systems into platforms for designing and operating service. The data on products and processes gained through networked CPS and the ability to act on this data through control systems and actors enables novel ways of co-creating service in industrial contexts.

The papers included in this year's minitrack cover topics such as digital service platforms' evolution and but also resource orchestration, data-driven services, service innovation in social care, humanoid service robots, optimization of service supply chains, utilitarian use of social media services, and how to engage users to co-create with service systems.

References

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