

Call for Papers for a Special Issue of the
Information Systems Journal

SMART SERVICE SYSTEMS: AN INTERDISCIPLINARY PERSPECTIVE

Special Issue Editors:

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Aim and Purpose

Service is a key context for use of information systems (IS), and the need for more research linking information systems research with service has already been established (Rai and Sambamurthy, 2006). Similarly, information systems are a key enabler to many services, and understanding its wider implications emerged as a key research priority for service science (Ostrom, et al., 2010). Over the last few years, both fields explored the intersection of information and communication technology (ICT) and service more broadly. While this resulted in several special issues pertaining to selected aspects of either service (e.g. Huang and Rust, 2013) or ICT (e.g. Barrett et al., 2015), the academic discourse related to technology-enabled service (e.g. Breidbach, et al., 2013) remains fragmented, and is still largely constrained to individual disciplinary silos.

The emerging interdisciplinary field of Service Science intends to weave together disparate theories and methods from multiple disciplines, to develop a scientific foundation for systematic service innovation (Maglio and Breidbach, 2014). Future service innovation, however, will depend on the effective understanding and use of data and technology in service (Maglio, 2015). We currently approach a tipping point where ICTs are beginning to augment the physical with a virtual world, resulting in *smart service systems* (e.g. Medina-Borja, 2015).

For this special issue, we build upon the National Science Foundation (2014, p. 5), and define *smart service systems* as value co-creating configurations of people, technologies, organizations and information that are capable of independent learning, adapting, and decision-making. Smart service systems, therefore, possess self-detecting, self-diagnosing, self-correcting, self-monitoring, self-organizing, self-replicating, and/or self-controlling functions and capabilities based on data that has been received, transmitted, and/or processed. Smart service systems emerge in contexts as diverse as smart manufacturing (Industry 4.0), smart health, smart mobility, smart logistics or smart living. As the boundaries between a physical world enhanced by ICT, and the service that these systems provide to humans are blurred (e.g. Normann, 2001), new markets and business models emerge (Ng 2014). And with that, substantial opportunities for future research.

As the concepts of service and smartness are beginning to intertwine (e.g. Perera, et al., 2014), understanding smart service systems requires i) adopting a human-centered perspective on service, including novel explorations of human behavior, culture, and attitudes as it pertains to smart service; ii) exploring how new sensors, cognitive computing, or types of artificial intelligence may be implemented into existing service systems, thus transforming those into smart cities, smart health, or

smart manufacturing; iii) developing new theories and concepts that advance our knowledge of the dynamics influencing the interactions between actors in smart service systems predict the dynamics of value co-creating interactions in smart service systems.

Addressing these challenges requires researchers to extend beyond traditional disciplinary boundaries. We therefore invite empirical, conceptual, and design-oriented work that explores smart service systems from a truly *interdisciplinary* service science standpoint. We expect the manuscripts in this special issue to cross traditional disciplinary boundaries and, at the same time, be firmly embedded in the emerging service science literature, concepts, and language (e.g. Maglio and Breidbach, 2014; Maglio, 2015). Manuscripts will be evaluated for their interestingness, ability to advance service research and practice and, most importantly, our theoretical understanding of smart service systems. As such, we are not interested in manuscripts that merely apply or extend established concepts and paradigms to service contexts, nor are we interested in manuscripts that remain within the paradigmatic and linguistic boundaries of a single discipline. We therefore encourage scholars from all disciplines and backgrounds to reach beyond their disciplinary silos, and to submit their resulting work to this special issue.

List of Potential Topics:

- New theoretical perspectives on smart service systems
- Innovation in smart service systems
- Business models and smart service systems
- Business process management for smart service
- Ethical challenges related to smart service
- Smart cities, smart industry, smart living/quantified self
- Cognitive computing in industrial service contexts
- Digital transformation of service systems
- Business information services, like e-consulting and business intelligence services
- Customer experiences with smart service
- Smart self-service technologies
- Societal transformation through smart service and 'big data'
- Smart human-centered service (e.g. healthcare)

Submission Guidelines

Please follow ISJ's Instructions for Authors when preparing and submitting manuscripts

Deadlines:

- **15 January 2017** (Optional): Authors are encouraged to submit an extended abstract to the Special Issue Editors in order to clarify if their manuscripts are within the intended scope of the Special issue.
- **30 May 2017**: Paper submission deadline. Only submissions made through the submission system will be considered. The editorial team will screen all submitted papers and will only forward to reviewers papers that are deemed to have a reasonable chance of acceptance.
- **30 August 2017**: First round reviews and decisions.
- **30 December 2017** Second round (revision) submission deadline.
- **30 March 2018**: Second round reviews and decisions: Papers will not undergo more than two rounds of review (i.e., one major revision). Papers not accepted (subject to minor revisions) in

the second round will be rejected.

- **30 July 2018:** Final submission deadline: For accepted papers (subject to minor revisions).
- **30 September 2018:** Final approval of papers.
- **30 December 2018:** Online publication of special issue (anticipated date).

References

Maglio, P. P. (2015), Editorial – Smart Service Systems, Human-Centered Service Systems, and the Mission of Service Science, *Service Science*, 7(2), ii-iii.

Medina-Borja A (2015) Editorial—Smart things as service providers: A call for convergence of disciplines to build a research agenda for the service systems of the future. *Service Sci.* 7(1):ii–v.

Ng I (2014) *Creating New Markets in the Digital Economy* (Cambridge University Press, Cambridge, UK).

Normann R (2001) *Reframing Business: When the Map Changes the Landscape* (John Wiley & Sons, Hoboken, NJ).

National Science Foundation (2014) *Partnerships for Innovation: Building Innovation Capacity (PFI:BIC)*. Program Solicitation NSF14-610, National Science Foundation, Arlington, VA.
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Guest Editors' Biographies

Daniel Beverungen is a full Professor at the University of Paderborn, Germany. His main research interests comprise service science management and engineering, business process management, information modelling, and the socio-technical design of information systems. His work has been published in peer-reviewed academic journals (including *IEEE Transactions on Engineering Management, Business & Information Systems Engineering* and *Government Information Quarterly*) and presented at all major Information Systems conferences. In addition, Daniel was involved in developing various industry standards. He is a member of the editorial board for the journal *Business & Information Systems Engineering*, a guest editor for the journal *Information Systems and E-Business Management*, and has been serving as a chair, associate editor, and reviewer for various academic conferences and journals. Daniel is the president-elect of the Special Interest Group on Services (SIGSVC) in the Association for Information Systems (AIS), representing some 200 researchers from all three regions of the AIS.

Christoph F. Breidbach is a Lecturer (Assistant Professor) at The University of Melbourne, Department of Computing and Information Systems. Prior to moving 'down under', Dr. Breidbach was a Postdoctoral Scientist at the University of California, Merced, and held visiting positions at the Indian School of Business and IBM's Almaden Research Center. His research addresses the fundamental question of how ICTs transform service systems, and has won multiple awards, including Best Paper of the Year by the INFORMS Service Science section. Dr. Breidbach's publications appeared in the *Journal of Service Research*, *Managing Service Quality*, *The Service Industries Journal*, *Service Science*, *Marketing Theory*, and other outlets. He serves on the Editorial Boards of the *Journal of Service Research* and the *Journal of Service Theory and Practice*, and holds leadership positions at ISSIP, the International Society of Service Innovation Professionals, as well as the AIS SIG Services.

Jens Poeppelbuss is Professor for Industrial Services at the University of Bremen, Germany. In 2012, he received the Ph.D. degree in Information Systems from the University of Muenster for his work on developing methods and tools for assessing and improving business process management capabilities in service networks. His main research interests are in the areas of managing and innovating industrial services as well as business process management. His work has been published in peer-reviewed academic journals (including *IEEE Transactions on Engineering Management*, *Communications of the AIS*, *Scandinavian Journal of Information Systems*, and *Business & Information Systems Engineering*) and presented at major IS conferences. Jens Poeppelbuss has been serving as associate editor and track chair (Service Innovation, Engineering, and Management) for ECIS conferences since 2012 and as minitrack chair for AMCIS conferences since 2013.

Virpi Kristiina Tuunainen is professor of information systems science at the Department of Information and Service Economy of Aalto University School of Business. Her current research focuses on ICT enabled or enhanced services, customer and community digital innovation, and creative use of ICT. Her work has appeared in journals, such as, *MIS Quarterly*, *Communications of the ACM*, *Journal of Management Information Systems*, *Journal of Strategic Information Systems*, *Information & Management* and *Information Society*, and in conferences, such as, ICIS, HICSS and ECIS. She's the current VP of Publications of the AIS (2013-2016), and the past Chair of AIS SIG Services. She currently serves as senior associate editor for *EJIS*, as a member of the editorial boards for *Information Systems Journal*, *The Journal of Strategic Information Systems* and *Electronic Markets - The International Journal of Electronic Commerce and Business Media*.