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## User Experience-driven Innovation—Theory and Practice: Introduction to Special Issue

Soussan Djamasbi

Worcester Polytechnic Institute, [djamasbi@wpi.edu](mailto:djamasbi@wpi.edu)

Diane Strong

Worcester Polytechnic Institute, [dstrong@wpi.edu](mailto:dstrong@wpi.edu)

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## User Experience-driven Innovation – Theory and Practice: Introduction to Special Issue

Soussan Djamasbi

*Foisie Business School, Worcester Polytechnic Institute, [djamasbi@wpi.edu](mailto:djamasbi@wpi.edu)*

Diane Strong

*Foisie Business School, Worcester Polytechnic Institute, [dstrong@wpi.edu](mailto:dstrong@wpi.edu)*

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# Transactions on Human-Computer Interaction

Editorial

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## User Experience-driven Innovation – Theory and Practice: Introduction to Special Issue

**Soussan Djasmasbi, Diane Strong**

Foisie Business School, Worcester Polytechnic Institute

*djasmasbi@wpi.edu, dstrong@wpi.edu*

### Abstract:

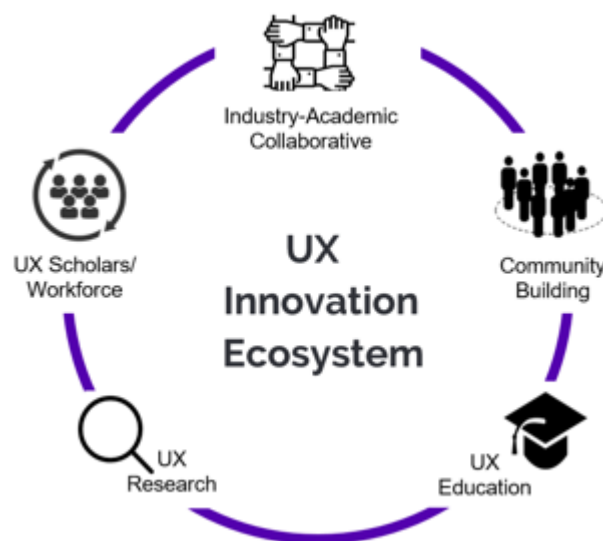
This special issue is motivated by the need for user experience (UX) innovation ecosystems and the difficulty of creating and maintaining them. The papers in this special issue reflect the emerging views of the scholars and industry experts involved in one such UX innovation ecosystem. Authors presented the papers at the 2019 UX Symposium (<https://uxsym.org/>), an annual conference with the mission to continue to build its vibrant community of scholars and practitioners dedicated to advancing UX theory, education, and practice.

**Keywords:** User Experience (UX), UX Innovation Ecosystems, UX Theory, UX Education, UX Practice

## 1 Introduction

Technological products and services have become an integral part of our lives as we rely on them for completing our day-to-day activities (Abhari, Davidson, & Xiao, 2019; Strohmamm, Siemon, & Robra-Bissantz, 2019; Strohmeier & Rohrs, 2017; Schwalb & Klecun, 2019; Zhang, Nah, & Preece, 2004). Our experiences with these technologies lead individuals to demand more interesting and useful experiences as the current experiences become routine. This behavior creates a never-ending cycle of demand for improved user experiences (UX) that motivates a continual need for innovation and becomes a driving force for market competition.

Innovation ecosystems that close collaboration between academia and industry form can best address the continual need for UX innovation (see Figure 1). Such ecosystems facilitate scientific UX research for value creation and provide UX education that can address complex UX innovation challenges, such as those that increasingly connected products pose. Industry-academia collaboration is both difficult to develop and difficult to maintain. Thus, any UX innovation ecosystem must include community-building efforts to maintain and grow the ecosystem.



**Figure 1. UX Innovation Ecosystem and its Typical Components**

This special issue is motivated by the need for UX innovation ecosystems and the difficulty of creating and maintaining them. The human-computer interaction (HCI) community has long recognized the need for collaboration between academia and industry to advance UX research and education (Nah et al., 2015). This paper extends this point of view by emphasizing that academic-industry collaboration is an absolute must for developing UX innovation ecosystems.

The papers in this issue reflect the emerging views of the scholars and industry experts involved in one such UX innovation ecosystem. Authors first presented the papers at the 2019 UX Symposium (<https://uxsym.org/>), an annual conference with the mission to continue to build its vibrant community of scholars and practitioners and expand it beyond its origins in central Massachusetts. This community is dedicated to advancing UX theory, education, and practice.

The papers featured in this THCI special issue present emerging ideas about the theory and practice of UX design. In addition to this introduction (the first paper in this issue), the special issue includes five other papers. Soussan Djasasbi and Diane Strong, the senior editors of this issue, write one of these five papers. Industry experts author the remaining four papers. We briefly describe the five papers in the issue in the following paragraphs.

The first paper "User Experience-driven Innovation in Smart and Connected Worlds" by Soussan Djasasbi and Diane Strong offers a new way of looking at UX research—through the innovation lens. It provides conceptual models for designing UX-driven innovations in both traditional and Internet of things (IoT) settings.

The second paper “Experience-driven Engineering in IoT: The Importance of User Experience for Developing Connected Products People Love” by Dave Stanton and Calvin Smith discusses the importance of practical UX issues. These issues are essential in building modern connected and smart UX experiences.

The third paper “The Design of Not-so-everyday Things: Designing for Emerging Experiences” by John Wyatt and Andy Piggott discusses the role of wearable technologies in designing seamless experiences. It points to the need for more industry-academic collaboration to tackle open ended UX design challenges and to train high quality workforce through UX education.

The fourth paper “Accessibility and IoT / Smart and Connected Communities” by John Rochford explains the importance of universal design for smart and connected environments to empower people with disabilities and improve their quality of life.

Finally, the fifth paper “User Experience, IoT, and Healthcare” by Adarsha Bajracharya , Kristen Reader, and Stephen Erban discusses the importance of UX for all stakeholders (e.g., patients, doctors, nurses, administrators, etc.) in connected health ecosystems (CHES) delivered through Internet of medical things (IoMT).

In summary, this special issue focuses on UX-driven innovation in theory and practice. The papers in this issue cover a range of opportunities for advancing research and creating social and business value. They highlight the need for close collaboration between academia and industry to create UX innovation ecosystems that can advance UX education, UX research, and UX practice.

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## About the Authors

**Soussan Djamasbi** is a Professor of Information Systems (IS) at Worcester Polytechnic Institute (WPI). She is the Founder and Director of User Experience and Decision Making (UXDM) research laboratory and UX Innovation Consortium at WPI. She is also the Director of Innovation with UX (IUX) graduate degree and certificate program at WPI (<https://www.wpi.edu/academics/study/iux-ms>). Dr. Djamasbi is an organizing member of the annual UX Symposium (<https://uxsym.org/>). She directs the Innovation with UX (IUX) graduate and certificate program at WPI. Her most recent research focuses on creating value with UX innovation. Motivated by the growing need for novel user experiences, her research focuses on developing models and theories that guide the design, development, and implementation of innovative products and services. Particularly, theories and models that can address UX design for connected products in a complex network of smart systems.

**Diane Strong** is a professor of IT and Department Head in the School of Business at Worcester Polytechnic Institute. Her research focuses on advanced information technologies, such as enterprise systems and electronic health record systems, and how their design, implementation, and use affect integration, standardization, and other outcomes in organizations. Recently, she has been focusing on health IT. With NSF funding, she is investigating how electronic health record systems can improve the delivery of primary care and how mobile devices can help patients better manage their chronic conditions. She is a founding member of WPI's Healthcare Delivery Institute. Her publications have appeared in MIS Quarterly, Journal of Management Information Systems, Information and Organization, Information & Management, Decision Support Systems, European Journal of Information Systems, Communications of the ACM, and ACM Transactions on Information Systems.

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