

Introduction to Advances in Design Science for Information Systems Minitrack

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This minitrack has two sessions of three papers each featuring the work of scholars who focus on theory development in design science research (DSR).

"A Conceptual Framework to Construct an Artefact for Meta-Abstract Design Knowledge in Design Science Research" by Ostrowski and Helfert provides a new perspective on the relationship between two DSR outcomes - theories and novel artifacts. Their work merges the evaluation framework of Pries-Heje et al and the DSR model of Peffer et al. They elaborate on the latter, decomposing the design and development phases into the two sub-phases of meta-design and design practice, each having its own evaluation component and outcomes.

"IS Design Thinking in Disaster Management Research" by Schryen and Wex reviews research on IS for natural disaster management (NDM) and classifies the research based on an NDM life cycle of preparedness, response, and recovery. The paper also offers a brief overview and critique of the "pragmatic design" and "design theory" camps of DSR. Finally, the paper presents several problems in the design of IS for NDM that could be addressed by the DSR community.

"A Design Theory for IT supporting Online Communities" by Spagnoletti and Resca uses the ISDT framework to propose a design theory based on kernel theories of collective action from the field of political economy, particularly the work of Ostrom. The theory is applied to the design of an

online community for elderly persons.

In "Combining Design Science and Design Research Perspectives - Findings of Three Prototyping Projects" Weber, Beck, and Gregory describe an industry-academic collaboration involving three real-world software development projects. The authors developed a research model integrating their project experience with prior DSR models.

"Systematic Service Innovation in Organizations: EDCI - A Template for Human-Centered Design of E-Services" by Melville and Hopps introduces a template for human-centered design of e-services consisting of the four phases of explore, discover, concept and design, and implement and assess (EDCI). Examples and reflections from applying EDCI in numerous experiential learning projects are provided. The paper also suggests how this template might be developed into a full e-service design theory.

In "The Creativity Passdown Effect: Sharing Design Thinking Processes with Design Theory" Lee, Baskerville, and Pries-Heje conceive of DSR as encapsulating a two-person team consisting of a design theorist and an artifact instance designer. The theorist defines the problem domain. The instance designer operates in this domain as he or she engages in design thinking to achieve an innovative design by merging theoretical knowledge with experiential knowledge of the artifact being built. A case study is offered as empirical support for their ideas.