



Network-based Modeling and Analysis in Design

Call for a Thematic Collection of Articles for the Design Science Journal

Network-based modeling and analysis is an emerging approach in addressing complex relations in product and system designs and their interaction with broader product ecosystems. Networks are effective in modeling the interconnectivity and interdependency among individual entities in a complex system, either artifacts such as physical components or humans such as users and designers. This thematic collection aims to explore the use of network-based approaches for design from multiple perspectives, focusing on representing the network structure and analyzing the functions and dynamic evolutions.

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Deadline for Submissions:
31st March 2017

Collection Theme Topics

Topics include, but are not limited to, the following:

- Network models and analysis techniques for products, system architecture, customer networks, and teams within and across organizations
- Complex network characterization of design collaboration/competition, community discovery, and impact on design team performance
- Analysis of network functions (e.g., robustness, resilience, information propagation, error tolerance, etc.)
- Dynamic evolution of networks and interdependent co-evolution of networks
- Network-based approaches for understanding and predicting process behavior in design
- Network-based analysis and prediction of customers' considerations and choice preferences.
- Network-based analysis of the interaction between products and their surrounding organization or ecosystem.

While a complete design case study is not required, the potential usage of using network-based modeling and analysis to support design activities and design decisions needs to be discussed.

For additional topics and other questions regarding this collection please contact any of the Guest Editors.

For all questions on the *Design Science* Journal please contact:
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