

Understanding Users' Behavior in Temporary Changing Systems in the Context of Artificial Intelligence-Driven Convergence

Background

Today, we are witnessing a fundamental change of technologies becoming more autonomous and intelligent by embedding artificial intelligence (AI). A major drawback here, however, is that people are still hesitant to trust these AI-based technologies while relinquishing control. There are already many possible explanations in research. Although, it has often been neglected that such AI-based technologies arise from the convergence of non-automated technologies (e.g., cars) and AI.

The uniqueness of converged products is that we need to consider them as temporary systems, meaning a set of (sub)systems/entities (i.e., vehicles, AI, and users) working together on a complex task (i.e., driving) over a limited period of time (i.e., single ride usage). This temporary perspective needs to be considered because there might be a time-influenced change in the interaction and a change in the human-technology interaction and the locus of control.

The work aims at identifying how the changing nature of temporal systems is characterized by increased convergence, which requires immediate adaptability of control and (temporal) adaptability of scenarios.

Possible prospective tasks of the intern

- Derive and discuss potential research cases of AI-driven convergence
- Design and set up a (quantitative) research approach
- Conduct a (quantitative) research approach (e.g., via a survey or an experiment)
- Summarize the results in research articles

Introductory literature

- Renner, M., Lins, S., Söllner, M., Jarvenpaa, S., & Sunyaev, A. (2023). Artificial intelligence-driven convergence and its moderating effect on multi-source trust transfer 56th Hawaii International Conference on System Sciences (HICSS), Forthcoming.
- Renner, M., Lins, S., Söllner, M., Thiebes, S., & Sunyaev, A. (2021). Achieving Trustworthy Artificial Intelligence: Multi-Source Trust Transfer in Artificial Intelligence-capable Technology 42nd International Conference on Information Systems (ICIS), Austin, TX, USA.

General information about the workgroup, the university, and the region

Julian Lehmann is an Associate Professor at W. P. Carey School of Business at Arizona State University in Phoenix, Arizona. He holds a bachelor's and master's degree in Information Systems and a Ph.D. equivalent, Dr. rer. pol., from the University of Cologne, Germany. Prof. Lehmann's research program focuses on novel management and information systems phenomena such as how firms create strategic value from digital technology, digital innovation, and entrepreneurship. His research has appeared in premier scientific journals and conferences, including MIS Quarterly, Communications of the Association for Information Systems, Business & Information Systems Engineering, Academy of Management Proceedings, and International Conference on Information Systems

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