



Call for Papers, Issue 3/2020

User Assistance for Intelligent Systems

Stefan Morana · Jella Pfeiffer · Marc T. P. Adam

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1 Special Issue

Intelligent systems have become ubiquitous in modern life and increasingly shift the performance of tasks away from humans (Davenport and Kirby 2016). Although this development has many advantages, the interplay between intelligent systems and humans remains a societal and technological challenge. On the one hand, taking humans out of the loop may lead to “mindless” ways of working and cause a range of errors due to unforeseen task complexities. On the other hand, human capabilities cannot always cope with intelligent systems’ functionalities (Brynjolfsson and McAfee 2016). In sum, intelligent systems have increased their capabilities and functionalities with a rapid pace and thereby widened the gap to the humans’ (cognitive) capabilities to comprehend and utilize these systems.

One way to support humans in the usage of intelligent systems is providing user assistance that can be instantiated in many different forms such as decision aids, recommendation agents, virtual assistants, guidance systems, task-support systems, conversational agents, chatbots, or robo-advisors. Recent assistance functionalities in the private life context (e.g., navigation and mobility assistants or smart home assistants) have demonstrated their usefulness.

Furthermore, technology giants (e.g., *Amazon*, *Google*, and *Microsoft*) have announced to release even smarter digital assistants to the market. In an organizational context, recent assistance functionalities support users in semi-automatic invoice processing and intelligent calendar management. In light of these increasingly available assistance functionalities, the role of user assistance for interactive intelligent systems deserves more research.

We define user assistance as a specific capability of intelligent systems that support users in performing their tasks better. Thereby, user assistance results in a human-, task-, and context-dependent augmentation of task performance. It bridges the gap between the system’s functionalities and the human’s individual capabilities with the goal of positively influencing task outcomes (Benyon 2014; Maedche et al. 2016). User assistance for intelligent systems can be classified along two dimensions: (1) the degree of interactivity enabled by user assistance, and (2) the degree of intelligence of user assistance. The degree of interactivity characterizes the assistance systems capability to support humans in an ongoing reciprocal and activating dialog using, potentially, different channels. Highly interactive systems are able to provide feedback and reference earlier points in communication. They furthermore allow the user to control and influence the communication process (Kioussis 2002). The degree of intelligence describes a system’s capability to provide assistance to the user based on the person, the context, and the current activity. It covers aspects of artificial intelligence such as the intention to create machines with minds (Haugeland 1989) and emotional intelligence, i.e. the capabilities to manage, understand, use, and perceive emotions (Mayer et al. 2001).

This special issue welcomes a diversity of submissions and is hence open for conceptual, empirical, and/or

S. Morana (✉) · J. Pfeiffer
Karlsruhe Institute of Technology, Karlsruhe, Germany
e-mail: stefan.morana@kit.edu

J. Pfeiffer
e-mail: jella.pfeiffer@kit.edu

M. T. P. Adam
The University of Newcastle, Newcastle, Australia
e-mail: marc.adam@newcastle.edu.au

theoretical research focusing on user assistance for intelligent systems. Thereby, we seek for manuscripts that include, but are not limited to, the following topics:

- Theory-grounded conceptualization of user assistance in general or along the two dimensions of interactivity and intelligence.
- Design of user assistance in the form of decision aids, recommendation systems, virtual assistants, guidance systems, task-support systems, conversational agents, chatbots, and robo-advisors.
- Research on the IT-based support of individuals' working routines in organizational or private life contexts.
- Emerging methods and tools for research into user assistance and interactive intelligent systems.
- Empirical (qualitative or quantitative) evaluation of user assistance artifacts in, e.g. laboratory experiments, focus groups/interviews studies, online surveys, or field studies.
- Research focusing on the potential detrimental aspects of user assistance for intelligent systems (e.g., privacy concerns, societal issues, technology induced stress).
- Research addressing the context and situation when user assistance is required.
- Understanding and designing anthropomorphism in user assistance systems.
- Research on individuals' cognitive and emotional processes when using user assistance and the related outcomes.

2 Submission Guidelines

Please submit papers by 15 July 2019 at the latest via the journal's online submission system (<http://www.editorialmanager.com/buis/>). Please observe the instructions regarding the format and size of contributions to Business and Information Systems Engineering (BISE). Papers

should adhere to the submission general BISE author guidelines.

All papers will be reviewed anonymously (double-blind process) by at least two referees with regard to relevance, originality, and research quality. In addition to the editors of the journal, including those of this special focus, distinguished international professionals with scientific and practical backgrounds will be involved in the review process.

3 Schedule

Paper submission due: 15 July 2019

Notification of authors: 30 September 2019

Revision due: 10 November 2019

Notification of authors: 15 December 2019

Completion of a second revision (if needed): 19 January 2020

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