Design and Development of Collaboration Technologies

COVID-19 demonstrated the importance and prevalence of collaboration technologies. It radically changed the way we work and the frequency of use of various collaboration technologies. The recent pandemic has demonstrated the impact of collaboration on organizational performance and has proven to be more critical than strategic orientation or market and technological turbulence. However, successful collaboration is often complex. Groups and teams often need to overcome both physical and metaphorical distance. Other challenges include groupthink, dominance, lack of efficiency, lack of focus, overwhelming information, differing motivations, and uncertainty. The challenge for researchers and practitioners alike is to design sustainable processes and systems within and between organizations that allow people, groups, teams, and machines to collaborate successfully. This challenge has many dimensions that cross technical, behavioral, social, emotional, economic, and political boundaries.

Never have so many people used collaborative technologies for so many varied purposes. The value of new developments in collaboration technology has never been higher. For the past two years, collaborative systems have been one of the most vital forces in the business world. Many businesses could not survive without these technologies. This forced digital transformation has impacted almost all organization processes: decision-making, project management, fundraising, recruiting, training, development, etc.

This year's papers provide a unique look at collaboration technology. As we continue to understand the relationship between collaborators and their technological tools more clearly, we can improve these tools' ability to facilitate effective and meaningful sharing of ideas.

Specifically, this mini-track addresses the following topics:
1. Impacts of COVID-19 on the Design and Development of Collaboration Technologies
2. Evaluation of new collaboration technologies and work processes due to COVID-19
4. Theoretical foundations and design methodologies for collaborative work practices and technologies
5. Processes and tools for establishing and maintaining shared focus and shared mental models over time and when working in remote environments
6. Processes, technologies, and theoretical breakthroughs to improve and speed up shared sense-making
7. Facilitation methods, techniques, patterns, and procedures to improve (a)synchronous collaboration between co-located and distributed people, teams, or groups
8. Assessment models and methods for team collaboration and performance
9. Design, codification, and reuse of work practices and pattern languages for group collaboration
10. Design and building of automated virtual agents to participate in online collaborations (e.g., ChatOps)

This year we have four papers covering the design and creation of collaboration technology. The first paper, "License to VIT - A Design Taxonomy for Visual Inquiry Tools," proposes a taxonomy of visual inquiry tools and options for their design. "How to get things done in social virtual reality – A study of team cohesion in social virtual reality–enabled teams" identifies five primary affordances and 11 sub-affordances for team cohesion. The paper "How Feature- and Communication Constraints in CSS Affect Creative Collaboration in Virtual Teams - An Activity Theory Perspective" provides two practical takeaways for Creativity Support Systems developers and virtual teams. Finally, "Open Innovation Platform Design: The Case of Social Product Development" builds on experience and affordances theories and offers a design framework to inform the design and evaluation of open innovation platforms.

We thank the authors for their effort in preparing these excellent manuscripts for the conference. We hope you enjoy the papers and presentations at the conference and look forward to more insights that enable collaborative work.