

Introduction to the Processes and Technologies for Small and Large Team Collaboration Minitrack

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Charles Darwin said, “In the long history of humankind (and animal kind, too) those who learned to collaborate and improvise most effectively have prevailed”. Today, partnership plays a key role for all types and forms of organizations, yet collaboration is notoriously difficult, fraught with loss of control, multiple and sometimes conflicting goals, and tension between accountability and autonomy. Given that collaboration is no longer a choice but rather a necessity, this mini-track explores these vital issues. Problems and opportunities previously placed in organizational siloes are now meaningfully influenced by actions in adjacent organizations and technologies. Indeed, a blurring of organizational boundaries is a likely outcome of interconnectedness and unpredictability in the environment. This mini-track provides one of the key international platforms to discuss cyber-facilitated, human-to-human collaboration and how it is evolving through technological innovation and new processes. Similarly, the mini-track discusses the recent phenomenon of human-machine collaboration and how this next evolution impacts individual and team dynamics. Specifically, the mini-track addresses the following topics:

1. Theoretical foundations and design methodologies for collaborative work practices and technologies
2. Human collaboration with artificial agents and the evaluation of computer systems as team members, including agent-based support for individual decision makers
3. Automation of collaborative processes and agent-based support for group facilitation
4. Processes and tools for establishing and maintaining shared focus and shared mental models over time
5. Processes, technologies, and theoretical breakthroughs to improve and speed up shared sense-making
6. Methods and technologies for eliciting and

capturing tacit knowledge from experts (i.e., externalization) and sharing / incorporating that knowledge into collaborative efforts (i.e., team internalization)

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

This year, we have five great papers that cover a variety of important topics. The first paper explores the context around collaboration curriculum in, “A Collaborative Curriculum Review: Applicability to Higher Education Institution” and provides greater understanding on the role of higher education in this progression. In the next paper, the authors propose a framework for building tools and processes for collaborations based on problem complexity and solving wicked problems, “Designing Tools for Collectively Solving Ill-Structured Problems”. In the third paper of the session, the authors offer a compelling overview of fifteen years of collaboration engineering from two premiere experts in the field, “Collaboration Engineering: Reflections on 15 Years of Research & Practice”. For the second session, we transition from human-to-human, cyber-facilitated collaboration to human-with-machine collaboration. The first paper “Machines as Teammates: A Collaboration Research Agenda” proposes an agenda for studying this next evolution in collaboration processes and dynamics. The final paper, “Examining Trust and Reliance in Collaborations between Humans and Automated Agents”, gives insight into how personality impacts perceptions of trust in automated teammates. It looks at how this trust is violated and how it impacts human perception.

We thank the authors for submitting their work to make this an engaging mini-track. We hope you enjoy the papers and their presentation at the conference and look forward to the collaboration and enlightenment.