

## **Minitrack Summary—Collaboration in Online Communities: Information Processing and Decision Making**

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### **Abstract**

*This document summarizes the research articles accepted to the Collaboration in Online Communities: Information Processing and Decision Making minitrack within the Collaboration Systems and Technologies track at HICSS 2021.*

### **1. Introduction**

Online communities consist of individuals who share a common interest and who use the internet to communicate with each other and work together in pursuit of shared interests. Individuals seek out information online for both utilitarian and hedonic reasons. Online forums are one example of a pervasive platform where individuals can submit and receive answers to questions as well as browse the experiences of others. Individuals with questions often turn to these forums, either directly or indirectly (through search engine results), to find answers to problems they face. While research has begun to address utilitarian and hedonic seeking and consumption of information, there is much yet to understand about how and why these platforms are used as information sources in online communities.

This minitrack focuses on research related to understanding information processing and decision making in the context of online communities and online information exchange platforms. The four papers featured in this minitrack address a variety of research questions within this domain, including characteristics of communities that influence organizational task completion, situational factors that prompt reliance on peer vs. expert opinions in online forums, contributions to online forums as a means of job skill signaling, and automatic sentiment-based classification of email messages. The following section summarizes each of these papers in further detail.

### **2. Minitrack Papers**

Online communities can take on different forms--from long-lasting structures to temporary organizations, from small, intimate groups to large and massive collaborations, from vague or missing tasks and ad hoc responsibilities to well-defined roles and responsibilities. The article, "Social Capital in Online Temporary Organizations: Addressing Critical, Complex Tasks through Deliberation," explores temporary organizations where members have specific tasks they are trying to complete. The paper investigates the impact of two social network attributes (cohesion and diversity) in temporary organizations on task completion. Data extracted from Wikipedia illustrates how these attributes impact the likelihood of task completion.

Individuals turn to online forums to acquire information on a range of topics; yet, quality and relevancy of such information can vary greatly. To assist information seekers, many forums incorporate contextual cues that provide signals originating from both expert and lay forum users about the quality of solutions. The paper entitled "Expert vs. Peer: The Role of Situational Characteristics in Electronic Networks of Practice" employs situation theory to examine how six situational characteristics influence individuals' propensity to rely on peer vs. expert recommendations in online forums. Results demonstrate that users rely more on expert recommendations when seeking information for situations that they perceive as stressful, task-oriented, or requiring greater cognitive processing, while peer recommendations are preferred for situations perceived as fun.

The signals online community members send to each other through their contributions to community resources can help grow the community. The paper entitled "When to Signal? The Contextual Conditions

for Career-Motivated User Contributions in Online Collaboration Communities” addresses what motivates these contributions to community resources by examining Q&A boards of software developer communities and demonstrates that contributions are positively associated with career concern as well as market conditions (e.g., job vacancies, salary, and market transparency). The paper concludes that contributions to Q&A boards are a primary means of skill signaling that community members use to position themselves for employment advancement.

Email is a ubiquitous mechanism of communication for communities of all shapes and sizes. Although not typically classified as online forums, email systems share many similar characteristics with forums in that they provide a large-scale, online platform for information exchange between two or more parties. One challenge associated with email and similar high-volume information exchange platforms is facilitating rapid processing and assessment of messages according to various criteria of

interest to the information consumer. The article entitled “EmoG- Towards Emojifying Gmail Conversations” describes the development and application of EmoG, a Google Chrome plugin that automatically annotates email messages with emojis that convey the overall sentiment of the email content. Data from a preliminary survey offers feedback on the potential utility of this type of system.

### **3. Conclusion**

As online communities continue to proliferate, further research is needed to better understand how these communities use technology-mediated communication platforms for both hedonic and utilitarian purposes, including enhanced decision-making. The papers in this minitrack illustrate some of the fruitful and interesting opportunities available to researchers in this domain.