Communication networks stem from the study of social networks, which is a branch of systems sciences and complex systems. Communication networks can be defined as the patterns of contact that are created by the flow of messages among entities through time and space. Communication network analysis identifies the communication structure shaped by the flows of information or other material/nonmaterial resources. The complex social networks that people create and manage are dynamic, multi-modal, and increasingly mediated by social media.

The science of communication networks has progressed in parallel with the use of computer and information systems. Measuring information flows has been one of the main challenges of communication network analysis, and the development of information systems has provided social and communication network scientists with a precise representation of such flows and the ability to advance the state of the science. Additionally, the increased theoretical understanding and analytic representation of computer and information systems may provide developers with a greater sense of how people and social organizations utilize technology to manage the resources embedded in their social networks. The papers in this minitrack represent theoretical and analytic developments in communication and social network research, and all three have either a focus on new media and information technology, or use new media data in the analysis.

In Strategic Management of Other-Provided Information Online: Personality and Network Variables, Jian Rui and Michael Stefanone investigate self-presentation in social media as influenced by internal and external factors. Findings indicate that individuals who stake self-esteem on physical appearance and have diverse online networks are more strategic in their maintenance of other-provided information.

In Writing on the Wall: An Online “Community” of YouTube Patrons as Communication Network or Cyber-Graffiti?, Miri Shoham, Aarti Arora, and Adil Al-Busaidi explore the social functions of YouTube as an online platform, investigating whether it is more of a community or an asocial extension of a television. Using a multi-method approach, the authors find that viewers are largely passively consuming the video content, with few participants actively engaging, and even fewer interacting with others.

In Topological Analysis of Longitudinal Networks, Shahadat Uddin, Mahendra Piraveenan, Kon Shing Kenneth Chung, and Liaquat Hossain use a topological approach to propose a framework to analyze longitudinal networks. The authors then use the proposed approach to do a topological analysis of email communication networks of an organization during its different operational conditions. Findings from the analysis indicate changes in the behavior of actor-level dynamics.

The papers presented in this minitrack span across disciplines and levels of analysis, and all use novel approaches to uncover and discover aspects of communication and social networks. We thank the authors for submitting their manuscripts for inclusion in our minitrack, and we hope that you enjoy reading them in the proceedings and joining in the discussion during the panel at the conference.