Introduction to Adversarial Coordination in Collaboration and Social Media Systems Minitrack of the Collaboration Systems and Technologies Track

Christy M.K. Cheung
Department of Finance and Decision Sciences
Hong Kong Baptist University
cheung@hkbu.edu.hk

Marten Risius
School of Business
University of Queensland
m.risius@business.uq.edu.au

Matthew K.O. Lee
Department of Information Systems
City University of Hong Kong
cbmatlee@cityu.edu.hk

Christian Wagner
School of Creative Media
City University of Hong Kong
c.wagner@cityu.edu.hk

Social media platforms facilitate global collaboration and communication among users. This has substantially empowered users in their everyday lives (e.g., unlimited access to information, immediate contact with information sources, building global relationships, broadly sharing own views). However, digital technologies also enable adversarial actors to leverage online technologies to coordinate and extend the impact of their malevolent agenda.

Digital technologies do not only present a new context for traditional adversarial behaviors to occur (e.g., bullying online instead of offline) but rather fundamentally transform adversarial coordination. This digital transformation of adversarial coordination creates novel forms of adversary behaviors, broadens the societal impact of these malicious actions, and offers opportunities for new counter measures.

Addressing the unique challenges of adversarial coordination in collaboration and social media systems requires a focus on the technological implications of online adversarial behavior. This minitrack offers a forum for research ideas that consider the interaction between digital technologies and adversarial coordination to understand the transformational implications of collaboration systems. This year, three papers were selected for inclusion in the proceedings.

The first paper, titled "The Scamdemic Conspiracy Theory and Twitter's Failure to Moderate COVID-19 Misinformation" by Sippo Rossi investigates the spread of conspiracy theories regarding COVID-19 related misinformation on Twitter. The study explored the interaction of 8,540 accounts via 8,263 tweets over a two-month period. He found that the majority of misinformation is spread from a set of 55 highly active and influential accounts that comprised a mix of trolls, bots and users assumed to be authentic conspiracy theorists or believers. The suspected bots were mostly used for retweeting conspiracy content without generating original content. The author also raised concerns about Twitter's enforcement of its misinformation policy as only 7 of the 55 accounts were banned during the two-month period despite them spreading easily identifiable misinformation.

The second paper, "Social Media and Fake News Detection using Adversarial Collaboration" by Karen M. DSouza and Aaron M. French, develops a Long-term Short-term memory (LSTM) model for fake news classification. The LSTM model achieved a 98.9% accuracy in a Kaggle dataset, which comprised a collection of 23,481 sentences from fake news and 21,416 from verified news articles.

The last paper, titled "Unravelling the Origins of Infobesity: The Impact of Frequency on Intensity" by Ojaswi Malik, Prasanna Karhade, Abhishek Kathuria, Ankur Jaiswal and Benjamin Yen, addresses the issue of "Infobesity", which describes an information overload that impairs organizational and employee decision making efficiency by collecting more information through enterprise systems than is needed. The authors identified three rules that determine the relationship between the frequency and degree of infobesity.

We thank the authors for submitting their wonderful works to this new minitrack. Their attempts help to deepen and broaden our understanding of the impact of social media. In particular, how the adversarial coordination and devastating consequences of social media use influence individual, organization, and society.