Research Seminar

Digital Twins in Future Public Emergency Response
Dr. Jiejun Hu
Lancaster University

Date: March 25th, 2022
Time: 14:00-15:00
Teams Link: Join Seminar (We'd appreciate if you could optionally register to join our mailing list)

Abstract:
Since 1900, humankind has experienced two world wars, economic depressions, environmental disasters, and recently the pandemic. Repeated crises are lurking around humanity. These public emergencies have put extreme pressure on the various government departments and challenged society beyond expectations. Decision-makers are practicing an optimization problem of social resource allocation with variances, such as human interactions and information dissemination. To manage public emergencies, a model that can simulate the world dynamically, provide prediction, and management policy is urgently desired. Digital twins as virtual replicas of the actual cities/regions is empowered by data from the Internet of Things, organisational data sources, and social media. It will serve as a "society forecast" for future emergency responses in a large scale.

In this talk, I will introduce my current research regarding the analysis of people's behaviour when interacting with new technology (e.g., digital contact tracing systems) and the pandemic by adopting game theory. Most importantly, I will be sharing some thoughts of future research in digital twinning.

Biography:
Dr. Jiejun Hu is currently a lecturer at the Lancaster University Leipzig. She received her Ph.D. and MSc in the School of Computer Science and Technology from Jilin University, China, in 2019 and 2015, respectively. She was a senior research officer in the University of Essex, UK. Then, she served as a postdoctoral fellow in the Max-Planck Institute for Human Development, Germany. Her research focuses on incentive mechanisms design and game theory in various scenarios, such as the Internet of Things, Mobile CrowdSensing, software-defined networks, blockchain, and digital contact tracing systems.

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