

Special Session on Advancements and Emerging Trends in Cyber Security

Name and affiliation of organizers:

Dr Vassilios Vassilakis Dr Niddal H. Imam Dr Insaf Kraidia Saudi Electronic University Al-Ahliyya Amman University, Jordan University of York, UK n.imam@seu.edu.sa i.kraidia@ammanu.edu.jo vv573@york.ac.uk Dr Niddal H. Imam received the Dr Insaf Kraidia is a cybersecurity and AI Dr Vassilios Vassilakis is an Associate Ph.D. in Computer Science researcher specializing in adversarial machine Professor in Cyber Security at the (Cybersecurity) from the University learning, social engineering defence, and ethical University of York. He's been involved of York. He is an Assistant Professor in EU, UK, and industry funded R&D AI. With a PhD in Computer Science, she focuses projects related to the design and of Computer Science at SEU. His on developing robust detection models against analysis of next generation networks research area of interest is focusing evolving cyber threats using deep learning (LSTM, and technologies. He's served as an on the intersection between CNN, GPT) and multimodal analysis. Currently she Associate Editor in Elsevier's Journal cybersecurity and Machine is an Assistant Professor at Al Ahliyya Amman of Information Security and Learning in social media platforms University, teaching cybersecurity while Applications, IEICE Transactions on and Digital twins. advancing research in Al-driven security solutions. Communications, IET Networks, and

Scope of the session

With the advancement of new technologies, modern society is surrounded by various types of devices, networks, and services that offer Internet connectivity. These advancements provide a better lifestyle and the convenience of improved services and communications. However, this ubiquitous connectivity also introduces new security threats and exposes vulnerabilities in systems and networks, creating new avenues for attacks. The objective of this Special Session is to share recent advancements and emerging trends in cybersecurity, with a focus on a wide range of solutions, technologies, as well as novel attack vectors and methodologies for threat analysis.

Prospective authors are invited to submit original and unpublished work on the following research topics related to this Special Session:

- Mobile networks and technologies
- Software-defined networks
- Digital twins
- Adaptive and autonomous systems
- Unmanned aerial vehicles
- Secure execution environments
- Online social networks

• Blockchain and distributed ledger systems

Optical Switching & Networking.

- Malware analysis and detection
- Industrial control systems
- Cyber-physical systems
- Generative artificial intelligence
- Smart devices and Internet of things
- Intelligent networking