



Submission deadline– 10<sup>th</sup> March 2025



## Call for Papers

Special Issue on  
**Security and Safety in Network Simulation and Evaluation**

Guest Editors:

- **Zhaoquan Gu**, Harbin Institute of Technology (Shenzhen), China
- **Guandong Xu**, University of Technology Sydney, Australia
- **Ning Hu**, Peng Cheng Laboratory, China





# Call for Papers

Special Issue on

## *Security and Safety in Network Simulation and Evaluation*

### Background

Cyberspace technology has already penetrated various areas such as science, economy, politics as well as defense and military. Cyberspace has now become one of the most important areas which draws attention from both academics, professionals, and industrial communities. With the emergence of new technologies and applications in cyberspace, cyberspace security has been also facing great challenges. On the one hand, new technologies emerged with the prevalence of data science and artificial intelligence can largely advance and exceed the traditional security technologies, which largely improve the security defense capability of cyberspace. On the other hand, the malicious usage of new technologies, or exploiting the defects in new technologies and new applications have further exacerbated the security threat of cyberspace. To better handle the security risks caused by the new technologies and new applications and develop effective approaches and techniques for defending such potential security concerns, the network simulation technology can realize the security evaluation of these technologies by simulating in a controllable network environment, which has significant research value and great social benefit.

### Aims and Scope of the Special Issue

The purpose of the special issue is to attract world-class researchers, practitioner and engineers in the theoretical and practical areas related to security and safety in network simulation and security evaluation to share their latest research results and discuss about the future development directions. Original and research articles are solicited in all aspects of including theoretical studies, practical applications and related new techniques. All submitted papers will be reviewed by the editor and sent to at least three independent referees for single-blind peer review and selected on the basis of both their quality and their relevance to the theme of this special issue.

This special issue covers (but not be limited to) the following topics:

- Network intrusion detection technologies
- Network attack and defense technologies
- Security and safety evaluation of networked systems
- Artificial Intelligence-based network attack detection technologies
- The application and security of big data, cloud computing, 5G network
- Security and safety of complex network and system simulation
- Networked system simulation
- Network virtualization
- Security and safety of network simulation applications

### Submissions

Authors should submit their manuscripts online directly at: <https://sands.nestor-edp.org> and choose, during submission, the special issue: **Security and Safety in Network Simulation and Evaluation**. All relevant papers will be carefully considered and peer-reviewed by a distinguished team of international experts. The instructions for authors are detailed at: <https://sands.edpsciences.org/author-information/instructions-for-authors>.

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**Article Processing Charges** - S&S is an Open Access journal and no APCs in 2024 and 2025.

**Recommendation Editor** - **Yan Jia**, Harbin Institute of Technology (Shenzhen), China, [jiayanjy@vip.sina.com](mailto:jiayanjy@vip.sina.com)

### Guest Editors

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**S&S Website**

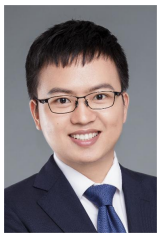


## Recommendation Editor Biography



**Yan Jia** is a professor at Harbin Institute of Technology, Shenzhen (HITSZ) and Peng Cheng Laboratory (PCL). She serves as a vice president at . She is the co-founder of the international Forum of Future Data (FFD) and IEEE International Conference of Data Science in Cyberspace (IEEE ICDSC). She is the founder of the international open source organization OW2 and Socialysis. Her research interests cover Cyberspace Security, Big Data Analysis and Online Social Network Analysis. As the principal investigator, she undertook more than 20 national projects, including the National Key Project of 863 Program and National Natural Science Foundation of China. She published over 300 research papers with EI and SCI index in international journals and conferences proceedings, and authored/edited 8 books, as well as owning 73 patents for invention and 93 Software Copyrights. She led to develop 16 professional standards. She awarded 4 National Grade II Prize of Science and Technology Progress (ranking 1, 1, 2, and 3) and 7 Ministerial (Provincial) Grade I Prize of Science and Technology Progress. She supervised more than 100 Ph.D. and master students. She is an editorial board member of nearly 10 journals including the Chinese Journal of Network and Information Security and is now an associate Editor of *Security and Safety* (S&S).

## Guest Editor Biographies



**Zhaoquan Gu** is currently a professor at Harbin Institute of Technology (Shenzhen), and a researcher at Peng Cheng Laboratory. His research interests include cyberspace range, network attack detection and analysis, network security situational awareness, artificial intelligence security, *etc.* He has been awarded the Outstanding Doctoral Graduate of Tsinghua University, Outstanding Graduates of Beijing, and Hong Kong Scholar. He has been selected for the Youth Talent Support Project of the China Association for Science and Technology, as well as the Top Young Talents in Science and Technology Innovation in Guangdong Province. He has also won the first prize of Guangdong Province's Science and Technology Progress Award twice and the Wu Wenjun Artificial Intelligence Science and Technology Progress Award. He has published 5 monographs/compilations, 140 academic papers, applied for or authorized nearly 200 patents, and participated in the development of multiple cybersecurity industry standards.



**Guandong Xu** is a Full Professor in Data Science at the School of Computer Science and Data Analytics Institute, University of Technology Sydney, with PhD degree in Computer Science. His research interests cover Data Science, Recommender Systems, User Modelling, and Social Computing. He has published three monographs in Springer and CRC press, and 220+ journal and conference papers, including TOIS, TKDD, TKDE, TNNLS, TCYB, TMM, TSE, TSC, TIFS, VLDB, IJCAI, AAAI, SIGKDD, SIGIR, CVPR, NIPS, WWW, WSDM, ICDM, ICDE, ICSE, and FSE conferences. He is the Editor-in-Chief of Human-centric Intelligent Systems and the assistant Editor-in-Chief of World Wide Web Journal. He has been serving on the editorial board or as a guest editor for several international journals, such as TOIS, TII, TCSS, PR *etc.* He has received several awards from the academic and industry community. He is elevated as the Fellow of the Institute of Engineering and Technology (IET) and Australian Computer Society (ACS) in 2022 and 2021, respectively.



**Ning Hu** is currently a professor with institute of the new network research department of Peng Cheng Laboratory, China. He received his B.S., M.S. and Ph.D degrees in computer science college of National University of Defense Technology (NUDT), China. His current research interests include cyberspace security, industrial control system security, software-defined networks and network virtualization, *etc.* He has published more than 50 academic papers in SCI journals such as *IEEE Network*, *Computer Communications*, *International Journal of Machine Learning and Cybernetics*, *Computers, Materials & Continua*, *IEEE Transactions on Green Communications and Networking*, as well as *Journal of Software*, *Journal of Communications*, and *Computer Research and Development* and other domestic core journals. He is a Senior Member of the China Computer Federation.

