

**Title:**

Security and Privacy in Data Science

Abstract:

Recent years have witnessed the considerable development of data science, including artificial intelligence, cloud computing, and blockchain technology. While these data-centric techniques play vital roles in advancing industry manufacturing, business management, and other public administration services, unlimited data abusing also incurs severe privacy and security problems. To this end, eliminating the increasing data security vulnerability and protecting data in use receive much attention from academics and industries. As it is known, the straightforward approach to realize data security is doing encryption, however, this brings many practical issues. For example, most existing services cannot work with encrypted data except doing expensive decryption operations. There is a need to better isolate sensitive data in a protected environment without utility loss. This workshop aims to provide an international platform for scholars, experts, and students to interact and engage creatively and to display the most interesting and trustworthy solutions of data protection and corresponding applications.

Scope and Topics:

Potential topics include but are not limited to:

- ✧ Searchable Encryption and Its Applications
- ✧ Data Security in Cloud Computing
- ✧ Secure Data Sharing in Cloud
- ✧ Security Data Management in Edge Computing
- ✧ Trustworthy Data-centric Protocols and Applications
- ✧ Authentication and Electronic Voting
- ✧ Confidential Computing
- ✧ Data Publication and Differential Privacy
- ✧ Privacy Preservation in Blockchain
- ✧ Security and Privacy in Federated Learning

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Bio: Chungen Xu is a Professor in the School of Sciences, Nanjing University of Science and Technology, China. He received the M.S. degree from East China Normal University, Shanghai, China, in 1996 and the Ph.D. degree from Nanjing University of Science and Technology in 2003. His current interests are in the areas of



computer and network security, applied cryptography and coding. He has published more than 50 paper in international journals and conferences, such as Information Science, IEEE TETC, KSII, IEEE INFOCOM, ACM ASIACCS, ICICS, etc. His research has been supported by multiple research fund agencies, including National Natural Science Foundation of China, National Key Research and Development Program of China, Natural Science Foundation of Jiangsu Province, and Fundamental Research Funds for the Central Universities, etc.

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Bio: Xingliang Yuan obtained his PhD degree in Computer Science from City University of Hong Kong in 2016. Before that, he received his MS degree and BS degree from Illinois Institute of Technology and Nanjing University of Posts and Telecommunications, respectively, both majored in Electrical Engineering. He is currently a Senior Lecturer (aka US Associate Professor) at the Department of Software Systems and Cybersecurity in the Faculty of Information Technology, Monash University, Australia. His research interests are in the areas of data security and privacy, secure networked system, confidential computing, machine learning security and privacy. His research has been supported by Australian Research Council, CSIRO Data61, and Oceania Cyber Security Centre. In the past few years, his work has appeared in prestigious venues in security, computer networks, and distributed systems, such as ACM CCS, NDSS, ACM ASIACCS, ESORICS, IEEE INFOCOM, IEEE ICDCS, IEEE TDSC, IEEE TIFS, IEEE/ACM TON, IEEE TPDS, etc. He is the only recipient of the Dean's Award for Excellence in Research by an Early Career Researcher at Monash Faculty of IT in 2020. He obtained the best paper award in the IEEE Conference on Dependable and Secure Computing (IDSC) 2019 and the IEEE International Conference on Mobility, Sensing and Networking (MSN) 2015.

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Bio: Jianfeng Wang is currently an associate professor in School of Cyber Engineering, Xidian University, China. He received his PhD degree on cryptography from Xidian University in 2016. His research interests include applied cryptography, searchable encryption, and Blockchain security. He has published more than 50 research papers in refeed international journals and conferences, such as IEEE TC, IEEE TDSC, IEEE TSC, ESORICS, etc. He has served as program committee member /reviewer in over 20 international conferences. He received Chinese Association for Cryptologic Research (CACR) Excellent Doctoral Dissertation Award. He is a member of IEEE and ACM.

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Bio: Lei Xu is currently an Associate Professor at the school of Sciences, Nanjing University of Science and Technology. Before that, he was a Postdoc at the



Department of Computer Science, City University of Hong Kong, Hong Kong. He received his Ph.D. degree in Nanjing University of Science and Technology, 2019. He was also ever a visiting Ph.D. student at Faculty of Information Technology, Monash University during the period from April 2017 to April 2018. His main research interests focus on applied cryptography and information security. His work has been published in many international conferences and journals, including IEEE INFOCOM, ACM ASIACCS, IEEE TDSC, IEEE TETC, Information Science, etc.

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