

# IEEE GLOBECOM 2023

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## CALL FOR PAPERS

*Intelligent Communications for Shared Prosperity*

# Communication and Information System Security Symposium

## Co-Chairs

- James Xiaojiang Du, Stevens Institute of Technology, USA. <xdu16@stevens.edu>
- Onur Günlü, Linköping University, Sweden. <onur.gunlu@liu.se>
- Safa Otoum, Zayed University, UAE. <safa.otoum@zu.ac.ae>

## Scope and Motivation

Continuous advances in computation and communication technologies have led to a rapidly expanding cyber- threat landscape. In today's world, communication and information systems are increasingly indispensable to society. Growing reliance on communication infrastructure and information systems has been recognized and exploited by cyber attackers. Security has become more critical and challenging with the extent of content, devices, and users connected to the public internet for almost every aspect of day-to-day living. This trend will inevitably continue in the future.

Motivated by the challenging cyber threat landscape and cyberattacks, this symposium welcomes top-notch results on all aspects of the modeling, design, implementation, deployment, and management of security algorithms, protocols, architectures, and systems. Furthermore, contributions devoted to the evaluation, optimization, or enhancement of security and privacy mechanisms for current technologies, as well as devising efficient security and privacy solutions by leveraging futuristic technologies, are solicited. Top quality papers focusing on applications of communications theory, as well as neighboring fields, in security and privacy from both industry and academia are encouraged.

## Topics of Interest

Topics of interests for the Communication & Information System Security (CISS) Symposium include, but are not limited to, the following areas:

- Adversarial machine learning
- Anonymous communications
- Artificial intelligence and machine learning for security and privacy
- Security and privacy for artificial intelligence and machine learning
- Attack prediction, detection, response, and prevention
- Authentication protocols and key management
- Biometric secrecy systems and physical unclonable functions (PUFs)
- Blockchain security
- Code constructions for information security and privacy

- Cryptology
- Security and privacy for 5G and beyond
- Cloud, data center and distributed systems security
- Connected and autonomous vehicle security
- Cyber Physical System (CPS) security and privacy
- Emerging technologies and methods for information, cyber, and network security
- Formal trust models, security modeling, and the design of secure protocols
- Information theoretic security
- Internet-of-Things (IoT) security and privacy
- Malware detection and damage recovery
- Physical layer security
- Programmable network security
- Security for metaverse
- Security in healthcare systems
- Security in smart grid communications
- Security for wireless medical devices
- Security for software defined network (SDN)-based IoT networks
- Security and privacy methods for communication and information systems
- Trust management in networks through emerging technologies
- Vehicular cloud and vehicular social network security

## Biographies of the Co-Chairs

**James Xiaojiang Du** is the Anson Wood Burchard Endowed-Chair Professor in the Department of Electrical and Computer Engineering at Stevens Institute of Technology. He was a tenured professor at Temple University between August 2009 and August 2021. Dr. Du received his B.S. from Tsinghua University, Beijing, China in 1996. He received his M.S. and Ph.D. degree in Electrical Engineering from the University of Maryland, College Park in 2002 and 2003, respectively. His research interests are security, wireless networks, and systems. He has authored over 500 journal and conference papers in these areas, including the top security conferences IEEE S&P, USENIX Security, and NDSS. Dr. Du has been awarded more than 8 million US Dollars research grants from the US National Science Foundation (NSF), Army Research Office, Air Force Research Lab, the State of Pennsylvania, and Amazon. He won the best paper award at several conferences, such as IEEE ICC 2020, IEEE GLOBECOM 2014 and the best poster runner-up award at the ACM MobiHoc 2014. He serves on the editorial boards of three IEEE journals. He is the General Co-Chair of IEEE/ACM IWQoS 2023, the TPC Co-Chair of IEEE CloudNet 2023, and the Lead Chair of the Security (CISS) Symposium of IEEE Globecom 2023. Dr. Du is an IEEE Fellow, an ACM Distinguished Member, and an ACM Life Member.

**Onur Günlü** received the B.Sc. degree (Highest Distinction) in Electrical and Electronics Engineering from Bilkent University, Turkey in 2011; M.Sc. (Highest Distinction) and Dr.-Ing. (Ph.D. equivalent) degrees in Communications Engineering both from the Technical University of Munich (TUM), Germany in October 2013 and November 2018, respectively. He worked as a Research and Teaching Assistant at TUM Chair of Communications Engineering (LNT) between February 2014 - May 2019. He was a Visiting Researcher, among more than ten Research Stays at Top Universities and Companies, at TU Eindhoven, Netherlands during February 2018 - March 2018 to visit Prof. Frans M. J. Willems, and later at Georgia Institute of Technology, Atlanta, USA during February 2022 - March 2022 to visit Prof. Matthieu Bloch. Onur was a Research Associate and Dozent between June 2019 - September 2020 and was a Research Group Leader and Dozent between October 2020 - March 2021 at TU Berlin, and he held the same academic titles at Chair of Communications Engineering and Security at University of Siegen, Germany from April 2021 until September 2022. Onur has been working as an ELLIIT Assistant Professor at Linköping University, Sweden in the Information Coding Division since October 2022. He has been a Brain City Berlin Ambassador since June 2020, received the prestigious VDE Information Technology Society (ITG) 2021 Johann-Philipp-Reis Award, been selected by the IEEE Communications Society as 2021 Exemplary Reviewer of the IEEE Transactions on Communications (TCOM), and received the 2023 ZENITH Research and Career Development Award. His research interests include information theoretic privacy and security, coding theory, statistical signal processing for biometrics and physical unclonable functions (PUFs), private (federated) learning and function computations, and doubly-exponential (secure) identification via channels.

**Safa Otoum** is an assistant professor of computer engineering in the College of Technological Innovation (CTI), Zayed University, United Arab Emirates and a researcher in the field of communications and networks security as well as the feasibility of AI in different applications. Prior to joining the CTI, she was a postdoctoral fellow at the University of Ottawa and a data scientist in Cheetah Networks Inc. Ottawa. She received her M.A.Sc., and Ph.D. degrees in computer engineering from the University of Ottawa, Canada, in 2015 and 2019, respectively. She is actively working on several reputable events within IEEE and ACM. Her research interests include networks security, Blockchain Applications, Applications of ML and AI, connected healthcare applications, and Intrusion Detection and Prevention Systems. She received several academic and research scholarships, including the prestigious NSERC Canada Graduate Scholarships-Doctoral, the NSERC FSS, RIF-Zayed University, and ASPIRE Visiting Professorship Award (VPC) grant. Currently, she is an IEEE member, Co-Chair of IEEE UAE Young Professionals, and a certified Professional Engineer (P.Eng.) in Ontario.

## How to Submit a Paper

All papers for technical symposia should be submitted via EDAS. Full instructions on how to submit papers and important deadlines are posted at <https://globecom2023.ieee-globecom.org/>