Welcome

Dear colleagues, researchers, and industry leaders,

On behalf of the organizing committee, I am delighted to welcome you to the 2024 edition of the International Conference on Security of Information, and Networks (SIN'24). We are excited to bring together a diverse community of experts, practitioners, and innovators to share knowledge, exchange ideas, and drive forward the future of cybersecurity, information systems, and network technologies.

The SIN conference has always been a platform for presenting cutting-edge research and fostering collaboration across various fields. This year's conference promises to be no exception, featuring an inspiring program of keynote talks, technical sessions, and workshops that explore the latest advancements and challenges in our rapidly evolving digital landscape. We are particularly excited about the interdisciplinary nature of the conference, where cybersecurity intersects with emerging technologies like AI, IoT, and blockchain.

As we navigate complex global security challenges, SIN'24 aims to provide insights and foster dialogue that will help shape the next generation of secure and resilient systems. We look forward to the rich discussions, new partnerships, and innovative ideas that will emerge from this event.

Thank you for being part of this important gathering. I hope you enjoy the conference and find it a valuable experience, both professionally and personally. Together, we can continue to make progress in ensuring a secure, connected world.

Welcome to SIN'24!

Priyadarsi Nanda
General Chair, SIN'24
University of Technology Sydney, Australia

Atilla Elci
General Chair, SIN'24
Hasan Kalyoncu University, Gaziantep, Türkiye

Message from the Program Chair

Welcome to the 17th IEEE International Conference on Security of Information and Networks, SIN'24.

On behalf of the Program Committee of SIN'24, I would like to express our sincere thanks and warm welcome to all our conference attendees and delegates.

SIN'24 provides an excellent international forum for sharing knowledge and results in theory, methodology, and applications of Security in information and networks. Papers, special sessions, tutorials, and workshops addressing all aspects and issues of security in information and networks are being pursued. The conference received significant contributions from researchers and industrial working on developing cryptographic algorithms, security schemes, cryptanalysis, application security, system security, cloud security, IoT security, and network security. The conference aims to provide a platform for researchers and practitioners from academia and industry to meet and share cutting-edge

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information- security and network-security advancements.

SIN'24 follows the success of SIN 2023 in Rajasthan, India, SIN 2022 in Tunisia, SIN 2021 in Scotland, and many others in the series. SIN'24 consists of the main conference and one workshop. A total of 50 high-quality peer-reviewed papers were selected from a total of 105 submissions. We received these papers from multiple countries, including Australia, Turkey, the United Kingdom, Germany, Tunisia, Russia, India, Singapore, Japan, China, Pakistan, and Malaysia. The final acceptance decisions on the submitted papers were made after the Technical Program Committee (TPC) conducted a thorough review.

I want to express our sincere gratitude to the Conference Co-Chairs, Program Co-Chairs, Technical Program Committee Members, and Reviewers for their hard work and great effort in making this conference successful. We also greatly appreciate the cooperation, guidance, and help from the General Chairs, Local Arrangement Chair, Publicity Chairs, and Advisory Committee. The support from IEEE Meetings, Conferences & Events (MCE) and IEEE Region-10 is greatly appreciated. Finally, and most importantly, I would like to thank you all for participating in SIN'24. I hope you will find the conference stimulating and exciting for your research and professional activities. Enjoy it!!

Arun K. Somani
Program Chair, SIN'24
Distinguished Professor and Senior Associate Dean
College of Engineering, Iowa State University, USA

DroneSense-AI 2024

1st Workshop on Artificial Intelligence for Networked Drone and Sensor Applications

Overview

The integration of machine learning (ML) with networked drone and sensor technologies has been revolutionizing multiple sectors. This convergence allows drones and sensors equipped with ML algorithms to process vast amounts of data, enhancing autonomous and intelligent operations within interconnected systems. Although this integration drives innovation and efficiency in fields such as agriculture, environmental monitoring, and disaster response, challenges remain, including longer processing times and a lack of standardized integration. These issues, along with the need for distributed processing and coordinated decision-making, highlighted the necessity for further advancements to fully unlock the potential of these technologies. The DroneSense-AI workshop explored and inspired novel ways in which ML can optimize and expand the capabilities of networked drones and sensors. The workshop addressed innovations, challenges, and future directions in ML-driven networked drone and sensor systems. DroneSense-AI featured original contributions on aspects of AI applications within this rapidly evolving field. We are grateful to all participants who contributed to the success of DroneSense-AI, including the invited speaker, authors and reviewers, fostering valuable insights and collaborations that will undoubtedly shape the future of this exciting field.

Accepted Papers

After a careful peer review process, the following papers were accepted for presentation and publication in the proceedings:

- *Land Cover Classification and Mapping of Philippine Satellite Images Using RAU-Net*
- *Spatial Prediction of UAV Position Using Deep Learning*
- *Bushfire Severity Prediction Optimization: Feature Combination Study With XGBoost Regression and Satellite-Derived Data*
- *Implementation of Natural Language UAV Control Using OpenAI's ChatGPT in a Simulated University Environment*

Invited speech

The workshop also featured an invited speech titled "*Autonomous UAVs for Wildfire Management: AI-Driven Solutions for Next-Generation Emergency Response*" by A/Prof. Fatemeh Afghah, Associate Professor in the Department of Electrical and Computer Engineering and Director of the Intelligent Systems and Wireless Networking (IS-WiN) Laboratory at Clemson University.

Workshop Chairs

- Dr Jahan Hassan (Central Queensland University, Australia)
- A/Prof. Biplob Ray (Central Queensland University, Australia)
- Dr Hailong Huang (Hong Kong Polytechnic University, Hong Kong)
- Dr Jaime Galán-Jiménez (University of Extremadura, Spain)

Program Committee

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