

**EAI INISCOM 2024 - 10th EAI International Conference on
Industrial Networks and Intelligent Systems Programs**

Day 1	Tuesday, Feb. 20, 2024	
Time	Room A (Main hall)	Room B
07:30 am-08:30 am	Registration	
08:30 am-08:45 am	Opening Ceremony	
08:45 am-09:30 am	Keynote: Quantum Horizons: Revolutionizing 6G Computing-Intensive Communication and Networking	
09:30 am-09:50 am	Coffee break	
09:50 am-11:10 am	S1-INIS: Industrial Networks and Intelligent Systems (4 papers)	
11:10 am-01:30 pm	Lunch	
01:30 pm-02:50 pm	S2-TCSN: Telecommunications Systems and Networks (4 papers)	S3-IPDA: Information Processing and Data Analysis (4 papers)
02:50 pm-03:10 pm	Coffee break	
03:10 pm-04:30 pm	S4-TCSN: Telecommunications Systems and Networks (4 papers)	S5-SECP: Security and Privacy (4 papers)
04:30 pm-04:40 pm	Closing Address	

Tuesday, Feb. 20, 07:30 am-08:30 am

Registration

Tuesday, Feb. 20, 08:30 am-08:45 am

Opening Ceremony

Tuesday, Feb. 20, 08:45 am-09:30 am

Keynote: Quantum Horizons: Revolutionizing 6G Computing-Intensive Communication and Networking

Prof. Trung Q. Duong, Canada Excellence Research Chair and Full Professor at Memorial University, Canada

Chair Professor in Telecommunications at Queen's University Belfast, UK

Fellow of IEEE

Prof. Hyundong Shin, Department of Electronic Engineering, Kyung Hee University, Korea

Room A

Chair: Dac-Binh Ha, Duy Tan University, Vietnam

Biography:

Dr. Trung Q. Duong (IEEE Fellow and AAIA Fellow) is a Canada Excellence Research Chair and Full Professor at Memorial University of Newfoundland, Canada. He is also an adjunct Chair Professor in Telecommunications at Queen's University Belfast, UK. His current research interests include quantum optimisation and machine learning in wireless communications. He has published 500+ books/bookchapters/papers with 18,000+ citations and h-index 72. He has served as an Editor for many reputable IEEE journals (IEEE Trans on Wireless Communications, IEEE Trans on Communications, IEEE Trans on Vehicular Technology, IEEE Communications Surveys & Tutorials, IEEE Communications Letters, and IEEE Wireless Communications Letters) and has been awarded best paper awards in many flagship conferences including IEEE ICC 2014, IEEE GLOBECOM 2016, 2019, and 2022. He is the recipient of the Research Fellowship (2015-2020) and Research Chair (2020-2025) of the Royal Academy of Engineering. In 2017, he was awarded the Newton Prize from the UK government. He is a Fellow of IEEE and a Fellow of Asia-Pacific Artificial Intelligence Association (AAIA).

Dr. Hyundong Shin (Fellow, IEEE) received the B.S. degree in Electronics Engineering from Kyung Hee University (KHU), Yongin-si, Korea, in 1999, and M.S. and Ph.D. degrees in Electrical Engineering from Seoul National University, Seoul, Korea, in 2001 and 2004, respectively. During his postdoctoral research at the Massachusetts Institute of Technology (MIT) from 2004 to 2006, he was with the Laboratory for Information Decision Systems (LIDS). In 2006, he joined the KHU, where he is currently a Professor in the Department of Electronic Engineering. His research interests include quantum information engineering, wireless communication, and machine intelligence. Dr. Shin received the IEEE Communications Society's Guglielmo Marconi Prize Paper Award and William R. Bennett Prize Paper Award. He served as the Publicity Co-Chair for the IEEE PIMRC and the Technical Program Co-Chair for the IEEE WCNC and the IEEE GLOBECOM. He was an Editor of IEEE Transactions on Wireless Communications and IEEE Communications Letters.

Tuesday, Feb. 20, 09:30 am-09:50 am

Coffee break

At the conference venue

Tuesday, Feb. 20, 09:50 am-11:10 am

S1-INIS: Industrial Networks and Intelligent Systems

Room A

Chair: Nguyen-Son Vo, Duy Tan University, Vietnam

09:50 am

Enhancing Energy and Coverage Efficiency of Underground Wireless Sensor Network Using Relay Node in Smart Agriculture

Mai, Thi (University of Science and Education – University of Danang); Tran, Toan Tuan (Thanglong University); Le, Tuan Minh (National Academy of Public Administration); Nguyen, Vinh Tran Quoc (University of Science and Education – University of Danang); Nguyen, Quynh Thi Huong (Department of Science, Technology, and Environment, Ministry of Education and Training, Ha Noi, Vietnam); Le, Son (Information Technology Institute, Vietnam National University, Hanoi, Vietnam)

10:10 am

A Home-based Diabetes Prediction System on Internet of Things, Federated Learning and Edge Computing

Huynh-Phi, Long (University of Information Technology); Nguyen-Khanh, Duy (University of Information Technology); Nguyen-Khanh, Thuat (University of Information Technology); Dang-Le-Bao, Chuong (University of Information Technology); LE-TRUNG, Quan (University of Information Technology – Vietnam National University at HCM City)

Joint Online Adaptive Optimal Tracking Control and Frequency-Response Method for Speed of PMSM and DC-link Voltage Peak Controller Design in Bi-directional Quasi Z-Source Inverter

10:30 am

Cong-Thanh, Pham (Vietnam Aviation Academy, Vietnam)

Variational Quantum Eigensolver for Optimizing Network Scheduling using QUBO Formulation

10:50 am

Rizvi, Syed Muhammad Abuzar (Kyung Hee University); Gondel, Muhammad Mustafa Umar (Kyung Hee University); Paracha, Usama Inam (Kyung Hee University); Shin, Hyundong (Kyung Hee University)

Tuesday, Feb. 20, 11:10 am-01:30 pm

Lunch

Venue: TBA

Tuesday, Feb. 20, 01:30 pm-02:50 pm

S2-TCSN: Telecommunications Systems and Networks

Room A

Chair: Van Nhan Vo, Duy Tan University, Vietnam

01:30 pm

Optimal Task Scheduling in 6G Networks: A Variational Quantum Computing Approach

Khalid, Uman (Kyung hee university); ur Rehman, Junaid (University of Luxembourg); Farooq, Ahmad (Aalto University); Zaman, Fakhar (CSIRO, Australia); Shin, Hyundong (Kyung Hee University)

01:50 pm

Multi-Agent Quantum Reinforcement Learning for Digital Twin Placement in 6G Multi-Tier Systems

Tariq, Shehbaz (Kyung Hee University); Ulum, Muhammad Shohibul (Kyung Hee University); Shaffar, Abdurrahman Wachid (Kyung Hee University); Park, Wook (Kyung Hee University); Kim, Sunghwan (University of Ulsan); Shin, Hyundong (Kyung Hee University)

02:10 pm

A Novel Energy-Efficient Offloading Protocol for UAV NOMA Mobile Edge Computing Networks

Truong, Truong (Duy Tan University); Nayyar, Dr. Anand (Duy Tan University); Nguyen Thanh, Nam (Duy Tan University)

02:30 pm

Multi-user Ambient Backscatter Communication-based and STAR-RIS-aided Mobile Edge Computing Network with Uplink NOMA Scheme: A Joint Design

Ha, Dac-Binh (Duy Tan University); Truong, Truong Van (Duy Tan University); Truong, Tien-Vu (Duy Tan University, Da Nang, Viet Nam); Phan, Thanh-Minh (Vietnam Aviation Academy, Vietnam)

S3-IPDA: Information Processing and Data Analysis

Room B

Chair: Nguyen-Son Vo, Duy Tan University

01:30 pm

Contactless Palmprint Recognition Using Discriminant Multi-Directional Feature Codes

Van Thien, Hoang (Ho Chi Minh City University of Technology (HUTECH), Ho Chi Minh City, Vietnam)

01:50 pm

[A Survey on Wireless Data Aggregation through Over-the-Air Computation](#)

Lee, Yejin (Kyung Hee University); Jung, Haejoon (Kyung Hee University)

02:10 pm

[CLIP-Prefix for Image Captioning and an Experiment on Blind Image Guessing](#)

Huynh, Minh Triet (FTP University); Nguyen, Duy Linh (FPT University); Nguyen, Thanh Tri (FPT University); Vu, Duong Thi Thuy (FPT University); Dang-Ngoc, Hanh (University of Technology Sydney); Dang, Duc Ngoc Minh (FPT University)

02:30 pm

[Features Inspired PM2.5 Prediction: A Belfast City Case Study](#)

Naz, Fareena (Queen's University Belfast); Fahim, Muhammad (Queen's University Belfast); Cheema, Adnan Ahmad (Ulster University, Belfast); Viet, Nguyen Trung (Thuyloi University, Hanoi, Vietnam); Cao, Tuan-Vu (Norwegian Institute for Air Research, Oslo, Norway.); Q. Duong, Trung (Queen's University Belfast)

Tuesday, Feb. 20, 02:50 pm-03:10 pm

Coffee break

At the conference venue

Tuesday, Feb. 20, 03:10 pm-04:30 pm

S4-TCSN: Telecommunications Systems and Networks

Room A

Chair: Dac-Binh Ha, Duy Tan University, Vietnam

03:10 pm

[Hybrid Federated and Multi-agent DRL-based Resource Allocation in Digital Twin-IoV Networks](#)

Singh, Keshav (National Sun Yat-sen University); Hazarika, Bishmita (National Sun Yat-sen University, Kaohsiung, Taiwan); Paul, Anal (National Sun Yat-sen University, Kaohsiung, Taiwan)

03:20 pm

[Performance Comparison in Traffic Sign Recognition using Deep Learning](#)

Dang Hai, Binh (FPT University); Nguyen, Huu Duc (FPT University); Vo, Thanh Nam (FPT University); Tran Phuong, Nam (FPT University); Nguyen, Cuong Tuan (Vietnamese-German University); Dang, Duc Ngoc Minh (FPT University)

03:40 pm

[Energy and Distance Aware Clustering-based Routing for Low-power IoT-enabled Wireless Sensor Networks](#)

Le, Viet-Thanh (Ton Duc Thang University); Vo, Nguyen-Son (Duy Tan University); Bui, Minh-Phung (Van Lang University); Le, Lan P. (Vietnam Aviation Academy)

04:10 pm

[Enhancing Energy Harvesting Efficiency for IRS-aided TS-SWIPT Network with Practical Phase Shifts](#)

Pham Viet, Tuan (University of Education, Hue University); Nguyen-Duy-Nhat, Vien (University of Science and Technology, The University of Danang); T. P. Le, Mai (University of Science and Technology, The University of Danang); V. Nguyen, Hieu (University of Science and Technology, The University of Danang); Vinh Anh Nghiem, Quan (University of Education, Hue University); Pham Ngoc, Son (Ho Chi Minh City University of Technology and Education); Insoo, Koo (University of Ulsan)

S5-SECP: Security and Privacy

Room B

Chair: Viet-Hung Dang, Duy Tan University, Vietnam

- 03:10 pm [Understanding the Security Implications in O-RAN with Abusive Adversaries](#)
Megarry, Mark (Queen's University Belfast); Masaracchia, Antonino (Queen's University Belfast, UK); Fahim, Muhammad (Queen's University Belfast); Sharma, Vishal (Queen's University Belfast); Duong, Trung Q. (Queen's University Belfast)
- 03:20 pm [Joint Secrecy and Latency Performance Analysis for UAV-assisted Uplink NOMA-based IoT Network with Mobile Edge Computing](#)
Nguyen, Quoc-Huy Anh (Duy Tan University); Nguyen, Nhat Anh (FPT University); Ha, Dac-Binh (Duy Tan University)
- 03:40 pm [CrossCert: A Privacy-Preserving Cross-chain System for Educational Credential Verification using Zero-Knowledge Proof](#)
Tran, Tuan-Dung (University of Information technology, Vietnam National University Ho Chi Minh City); Khuu, Phong Minh (University of Information technology, Vietnam National University Ho Chi Minh City); Le, Trang Tran Thuy (University of Information technology, Vietnam National University Ho Chi Minh City); Phan The, Duy (University of Information Technology – VNU-HCM); Nguyen, Cam Tan (University of Information technology, Vietnam National University Ho Chi Minh City); Pham, Van-Hau (Faculty of Computer Network and Communication, University of Information Technology, Vietnam National University, Ho Chi Minh City, Vietnam)
- 04:10 pm [The design of the unmanned aerial vehicle trajectory in presence of terrain and threats](#)
NGUYEN, D.A (Academy of Military Science and Technology)

Tuesday, Feb. 20, 04:30 pm-04:40 pm

Closing address

Room A

06:00 pm-08:30 pm BANQUET AND BEST PAPER AWARD

Venue: TBA