

MELIKE EROL-KANTARCI, *PhD, P.Eng., IEEE Fellow*

Canada Research Chair in AI-Enabled Next-Generation Wireless Networks, Full Professor at uOttawa
Strategic Product Manager for AI in RAN at Ericsson
Faculty Affiliate at Vector Institute

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PROFILE

- An innovative industry leader and an influential academic with a good understanding of emerging technologies, incubation of ideas and technology transfer in high-risk high-value domains
- IEEE Fellow “for contributions to AI-enabled wireless networks and smart grid”
- Founding director of Networked Systems and Communications Research (NETCORE) laboratory at uOttawa
- Board Member for Kanata North Business Association, R&D Council
- Over 10,000 citations and an h-index of 50 with 250+ refereed publications and 20 granted\filed patents
- 80+ keynotes, talks and panels
- \$25M+ funding in-cash as a PI/co-PI
- 10+ awards and recognitions from IEEE; including the 2023 Technical Achievement Award of the IEEE Technical Committee on Smart Grid Communications, 2 Best Paper Awards from IEEE ICC 2023, Women in AI North America Award 2023
- Ericsson key contributor award in 2022 and 2025
- IEEE ComSoc Distinguished Lecturer (2020-2023)
- Vice-chair for IEEE ComSoc emerging technologies initiative on Machine Learning for Communications
- Chair for SIG on Machine Learning and AI in Networking
- Steering Committee Member for IEEE Sustainable ICT Initiative
- Senior Member of ACM
- Professional Engineer of Ontario

Expertise: wireless networks, AI\ML, 5G, 6G, ORAN, smart grid communications, cybersecurity, Internet of Things (IoT) and wireless energy harvesting.

WORK EXPERIENCE

Strategic Product Manager for AI in RAN Ericsson, Canada	May 2024 - Present
Full Professor (Tenured) University of Ottawa, School of Electrical Engineering and Computer Science, Canada	May 2023 - Present
Faculty Affiliate Vector Institute, Toronto, Canada	December 2020 - Present
Faculty Affiliate Institute for Science, Society and Policy, University of Ottawa, Canada	August 2019 - Present
Chief Cloud RAN AI\ML Data Scientist Ericsson, Canada	January 2022 – April 2024
Associate Professor (Tenured) University of Ottawa, School of Electrical Engineering and Computer Science, Canada	May 2019-May 2023

Courtesy Faculty Clarkson University, Department of Electrical and Computer Engineering, New York, USA	August 2016 – June 2023
Assistant Professor (Tenure-track) University of Ottawa, Canada, School of Electrical Engineering and Computer Science, Canada	August 2016 - April 2019
Assistant Professor (Tenure-track) Clarkson University (USA), Department of Electrical and Computer Engineering, New York, USA	2014-2016
Affiliated Faculty Clarkson University, Institute for a Sustainable Environment (ISE), New York, USA	2015-2016
Coordinator of the Smart Grid Communications Lab University of Ottawa, Canada	2013 - 2014
Postdoctoral Fellow University of Ottawa, School of Electrical Engineering and Computer Science, Canada	2009 - 2014
Lecturer Istanbul Technical University, Information Technologies Program, Turkiye	2008 - 2009
Teaching and Research Assistant Istanbul Technical University, Department of Computer Engineering, Turkiye	2001 - 2009
Researcher University of California, Los Angeles (UCLA), Department of Computer Science Funded by Fulbright PhD. Scholarship, California, USA	2006 - 2007

EDUCATION

Istanbul Technical University PhD, Computer Engineering (advisor: Dr. Sema Oktug)	2004 - 2009
University of California, Los Angeles (UCLA) PhD Thesis Study, Computer Science (supervisor: Dr. Mario Gerla) Thesis: Localization and Its Effects on Data Delivery in Underwater Sensor Networks	2006-2007
Istanbul Technical University MSc, Computer Engineering (advisor: Dr. Sema Oktug) Thesis: The Impact of Queue Management Policies on the Self-Similarity of Network Traffic	2001- 2004
Istanbul Technical University BSc, Control and Computer Engineering	1997 – 2001

GRANTS

- **NSERC Canada Research Chairs Program, CRC (Tier II) in AI-Enabled Next Generation Wireless Networks (PI, Awarded \$500,000, 5 years)** 2024-2029
- **NSERC Discovery (PI, Awarded \$450,000, 5 years)** 2025 - 2030
Project Title: Highly Optimized AI-Native 6G Networks in the Age of Machine Learning and Generative AI
- **MITACS Accelerate (PI, Awarded \$225,000, 2 years)** 2025
Project title: Distributed and Federated Learning for Network Optimization

- **CFI-IF: Canada Foundation for Innovation – Innovation Fund (Co-PI, Awarded \$5M, 5 years)** 2024

Project Title: Canadian Advanced Research Infrastructure for Aerial Robotic Manipulation: CANARI-ARM
- **CFI-IF: Canada Foundation for Innovation – Innovation Fund (Co-PI, Awarded \$11M, 5 years)** 2024

Project Title: MULTI Complex – Optimizing Human Movement
- **Ontario Research Fund: Research Excellence (Co-PI, Awarded \$999,985, 4 years)** 2024

Project Title: “Secure and Trustworthy Ecosystems for Connected and Autonomous Vehicles (SITE-CAV)”
- **NSERC Canada Research Chairs Program, CRC (Tier II) in AI-Enabled Next Generation Wireless Networks (PI, Awarded \$600,000, 5 years)** 2019-2024
- **NSERC CREATE (Co-PI, Awarded \$ 1.650.000, 6 years)** 2023

Project Title: Training and Research in AVs for Reliable Services in the Air and on Land (TRAVERSAL)
- **MITACS Accelerate (PI, Awarded \$200,000, 2 years)** 2023

Project title: AI-enabled Network Slicing and Orchestration for 5G and 6G
- **Department of National Defence (co-PI, Awarded \$1.5M, 3 years)** 2022

Project title: Autonomous, Reliable, Scalable and Secure Resource Management in Multi-level 5G edge
- **Department of National Defence (co-PI, Awarded \$1.5M, 3 years)** 2022

Project title: AI-Driven Situational-Aware Security and Perf. Assurance for 5G-Enabled Critical Infrastructures
- **Norwegian Directorate for Higher Education and Skills (co-PI, Awarded 3MNOK (\$400K), 3 years)** 2022

Project Title: Elevating the Quality of Education in ICT towards 2030 through Multilateral Collaborations (EQEI)
- **MITACS Accelerate (PI, Awarded \$510,000, 2 years)** 2021

Project title: AI-enabled Performance Enhancement for the Reconfigurable Multi-Player RAN
- **MITACS Accelerate (PI, Awarded \$544,000, 5 years)** 2021

Project title: Traffic Estimation and Stable Resource Allocation Using Distributed Machine Learning
- **MITACS Accelerate (PI, Awarded \$255,000, 2 years)** 2021

Project title: Machine Learning-Enhanced Anomaly Detection and Perf. Optimization for Enterprise WiFi Networks
- **Academia Sinica (Taiwan)-uOttawa Mobility Program (PI, Awarded \$67,500, 2 years)** 2020

Project Title: Exploring Machine Learning Techniques for Localization of 5G-enabled Indoor Sensor Networks
- **Ontario Centers of Excellence – 5G ENCQOR Program (PI, Awarded \$148,500, 2 years)** 2019

Project Title: Self-optimized edge caching and computing fabric in 5G
- **Ontario Centers of Excellence – 5G ENCQOR Program (PI, Awarded \$148,500, 2 years)** 2019

Project Title: Enhanced Mobility Solutions for Ultra Reliable Low Latency Edge Computing Services
- **Ontario Centers of Excellence – 5G ENCQOR Program (PI, Awarded \$150,000, 2 years)** 2019

Project Title: AI-enabled Radio Resource Management in LTE-NR Dual Connectivity

- **ERASMUS+ International Mobility Grant (PI, Awarded \$3,000, one-time)** 2019
- **NSERC Engage (PI, Awarded \$25,000, 6 months)** 2018

Project Title: Smart enterprise-centric context-based fine-grained access control

- **Mitacs Globalink Research Award - National Research Foundation of Korea (Host Supervisor, \$3,000)** 2018
Project Title: Mobile Beacon-based Localization with Motion Compensation for Underwater Sensor Networks
- **NSERC CREATE (Co-PI, Awarded \$ 1.650.000, 6 years)** 2017

Project Title: Training in Optoelectronics for Power: from Science and Engineering to Technology (TOP-SET)

- **NSERC Discovery (PI, Awarded \$145,000, 5 years)** 2017

Project Title: Peer-to-peer Energy Trading over Reliable Small Cell Networks

- **NSF (PI at University of Ottawa, Awarded \$290,000, 3 years)** 2017
Project Title: An Integrated Reconfigurable Control and Self-Organizing Communication Framework for Advanced Community Resilience Microgrids

- **Natural Resources Canada (NRCAN), Sci. and Tech. Intern. Program (PI, Awarded \$10,000, one-time)** 2017

Project Title: Energy-Efficient Ultra-Dense Wireless Networks

- **uOttawa Office of the VP Research, Visiting Researchers Program (PI, Awarded \$4,000, one-time)** 2017
- **Canada-Italy Innovation Award, (Co-PI, Awarded \$4,500, one-time)** 2017

Project Title: Privacy-Utility Trade off in Big Data for Green Smart Cities

- **QUALCOMM Inc. (Co-PI, funded \$20,0000(USD))** 2015 - 2016

Project Title: Wireless Internet of Things Lab for Sensor Networks, Localization, and Mobile Computing at Clarkson University

- **NSF Industry/University Cooperative Research Center (Co-PI, funded \$40,000(USD))** 2015

Project Title: Context-aware Anomaly Detection in Internet of Biometric Things

- **Visiting Scientist Fellowship, Scientific And Technological Research Council of Turkey (TUBITAK)** 2014

AWARDS AND SCHOLARSHIPS

- IEEE Fellow for contributions to AI-enabled wireless networks and smart grid communications 2025
- Ericsson Key Contributor Award 2022 - 2025
- Technical Achievement Award of the IEEE Technical Committee on Smart Grid Communications 2023
- Supervised PhD Thesis received the Best Thesis Award of the Faculty of Engineering at uOttawa 2023
- Featured in IEEE ComSoc collection of videos with a citation “celebrating the achievements of female members highlighting the incredible talent and technical achievements of these women from the ComSoc community”
https://www.youtube.com/watch?v=bsatW_IuXKI 2023

- Special Jury Recognition Award, Women in AI North America (Women in AI NA awards recognize and celebrate the outstanding contributions of women in the field of Artificial Intelligence across Canada, USA, and Mexico) 2023
- Best Journal Paper Award of the IEEE ComSoc CSIM TC 2023
- Best Paper Award of the IEEE ICC - Communication Software & Multimedia Symposium 2023
- Best Paper Award of the IEEE ICC – Next generation Networking and Internet Symposium 2023
- Distinguished Service Award of the International Conference on Computer, Information and Telecommunication Systems 2021
- Distinguished Service Award of the IEEE Communications Society, Technical Committee on Green Communications and Computing 2020
- Elevated to ACM Senior Member Grade 2020
- N2Women Award: 2019 Stars in Networking and Communications 2019
- Article selected to IEEE ComSoc “Best Readings in Green Communications” 2018
- IEEE Multimedia Communications Technical Committee (MMTC) Best Editor Award 2017
- IEEE ComSoc Best Tutorial Paper Award 2017
- Best Paper Award of the IEEE ComSoc Technical Committee on Communications Systems Integration and Modeling 2017
- NSF CISE CAREER workshop travel grant 2015
- Elevated to IEEE Senior Member Grade 2015
- Article selected to IEEE ComSoc “Best Readings in Smart Grid Communications” 2014
- Article selected to IEEE ComSoc Technology News (CTN) 2013
- Joint holder of the Paper Award at the IEEE Electrical Power and Energy Conference (EPEC) 2010
- Joint holder of the Best Paper Award for at the Fifth Advanced Int. Conference on Telecommunications 2009
- INFOCOM Conference Student Travel Grant, IEEE Communications Society 2008
- Fulbright Ph.D. Research Scholarship, (granted to one PhD student in the Computer Science and Engineering field among over 400 applicants), FULBRIGHT Foundation 2006-2007
- Siemens Excellence Award 2004
- ACM/SIGCOMM Conference Student Travel Grant 2004
- National University Entrance Exam Merit Grant, Istanbul Technical University 1997- 2001

SERVICE TO UNIVERSITY & OUTREACH

- University of Ottawa, ISSP Steering Committee Member 2021- Present
 - University of Ottawa, Internal Reviewer for NSERC Programs 2021 - 2024
 - University of Ottawa, Admission Committee 2020 - 2024
 - University of Ottawa, the Canada Excellence Research Chairs Selection committee 2022
 - University of Ottawa, EECS, Teaching Assistantship Committee 2018-2019
 - University of Ottawa, EECS, Library Committee 2018-2019
 - University of Ottawa, EECS, CEG Curriculum Committee 2017-2018
 - University of Ottawa, EECS, ELG Curriculum Committee 2016 - 2017
 - University of Ottawa, EECS, Co-op Coordinator, CEG 2016-2017
 - University of Ottawa, EECS, Co-op Coordinator, MEBT 2016
 - University of Ottawa, EECS, Co-op Marking, ELG/CEG 2016-2017
 - Clarkson University, ECE Graduate Committee 2015 - 2016
 - Clarkson University, ECE Computer Engineering Curriculum Committee 2015 - 2016
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- Clarkson University, ECE Awards Committee
- Science Café Seminar

2016
February 2016

SERVICE TO FUNDING AGENCIES

• NSERC Discovery Evaluation Group committee member	2021 - 2029
• NSERC Discovery Evaluation Group Co-chair	2022 - 2024
• Academy of Finland	2021
• European Science Foundation	2021
• Science Foundation of Ireland -Reviewer	2019-2021
• Canada Foundation for Innovation – Expert Panelist	2020
• NSERC Discovery - Reviewer	2016, 2018, 2019
• NSERC CRD - Reviewer	2017
• MITACS Accelerate and Elevate - Reviewer	2017,2018
• Netherlands Organisation for Scientific Research - Reviewer	2016
• Israel Science Foundation - Reviewer	2015

SUPERVISED STUDENTS

Current Supervised Students and Researchers (10):

1. Tingnan Bao (PDF) Research topic: AI-enabled reconfigurable surfaces and edge computing in 6G
2. Simin Keykhosravi (PDF) Research topic: AI-enabled software defined MIMO optimization
3. Mohammadreza Amini (Research Associate - co-supervised w\ Dr. B. Kantarci) Research topic: Secure and Trusted 5G Network
4. Hind Mukhtar (PhD Student) Thesis topic: Machine Learning-Based Localization
5. Han Zhang (PhD Student - Vector Institute Scholarship Winner) Thesis topic: AI-enabled Open Virtualized RAN and Large Language Models
6. Arafat Habib (PhD Student) Thesis Topic: AI-enabled traffic steering and energy-efficient network optimization
7. Shavbo Salehi (PhD Student) Thesis Topic: Reinforcement learning in ORAN
8. Mohammad Farzanullah (PhD Student) Thesis Topic: Gen AI-based network optimization
9. Mohammad Ghassemi (PhD Student) Thesis Topic: Generative AI-based O-RAN rApps and xApps
10. Mafuzal Hoque (MAsc Student, co-supervised with Dr. Medhat Elsayed) Thesis topic: AI-enabled Beam Management

Past supervised students (44):

1. Sara Mobarak (PDF) Research topic: Integrated Sensing and Communications (ISAC) and RIS optimization using machine learning (May 2025)
2. Luciana Nobrega (MAsc Student - AAI concentration) Thesis title: Task Offloading with Safe and Stable Machine Learning in Next Generation Wireless Networks (October 2024)
3. Pedro Iturria Rivera (PhD Student) Thesis Title: Advanced Reinforcement Learning-based Optimization Techniques for Wireless Access Networks (May 2024)
4. Anne Catherine Nguyen (MSc Student) Thesis title: Resource Management in Next Generation MEC-Enabled Wireless Networks Using Machine Learning (April 2024)
5. Atefeh Termehchi (PDF) Research topic: Risk-aware and stable reinforcement learning for 6G (April 2024)
6. Hao Zhou (PhD Student – Winner of the 2023 Faculty of Engineering, University of Ottawa PhD Thesis Prize and winner of a Chinese Government Award) Thesis title: ML-based Optimization of Large-scale Systems: Case Study in Smart Microgrids and 5G RAN (August 2023)
7. Ycaro Dantas (MAsc Student - AAI concentration Vector Institute Scholarship Winner) Thesis title: AI-

- Enabled and Integrated Sensing-Based Beam Management Strategies in Open RAN (August 2023)
8. Turgay Pamuklu (PDF) Research topic: Advanced Architectures in 6G (May 2023)
 9. Tiffany Cheng (MSc Student) Thesis title: Reinforcement Learning Based Resource Allocation for Network Slicing in O-RAN (May 2023)
 10. Fahimeh Khoramnejad (PhD Student) Thesis title: AI-enabled System Optimization with Carrier Aggregation and Task Offloading in 5G and 6G (March 2023)
 11. Xiaoyang (Owen) Wang (BSc student) Research Topic: Access Point coordination in OpenWiFi (January-April 2023)
 12. Marco Skocaj (Visiting PhD Student from University of Bologna) Research topic: Federated learning in wireless networks (June - December 2022)
 13. Mohammad Akbari (PDF) Research topic: Stable learning in wireless networks (October 2022)
 14. Omer Melih Gul (PDF – co-supervised) Research topic: OpenWiFi and Physical Layer Security (December 2022)
 15. Roghayeh Joda (Researcher) Research topic: Multi-RAT environments (September 2022)
 16. Yujie Yao (MAsc Student) Thesis title: Radio Resource Allocation and Beam Management under Location Uncertainty in 5G mmWave Networks (April 2022)
 17. Mohammad Sadeghi (PhD student) Thesis title: Cost and Power Loss Aware Coalitions under Uncertainty in Transactive Energy Systems (May 2022)
 18. Mikhak Samadi (PhD student – co-supervised with Dr. Henry Schriemer) Thesis title: Data-driven demand management in smart grid (May 2022)
 19. Long Kong (PDF) Research topic: AI and multi vendor environments (September 2021- April 2022)
 20. David Chan (Undergraduate Intern) Project topic: Carrier Aggregation in 5G (April 2021 – December 2021)
 21. Kareem Dabbour, (Undergraduate Honors project team): Project title: Optimized Open WiFi Performance through Anonymized Data (December 2021- May 2022)
 22. Irtiza Hasan (Undergraduate Honors project team): Project title: Optimized Open WiFi Performance through Anonymized Data (December 2021- May 2022)
 23. Andrea Herscovich (Undergraduate Honors project team): Project title: Optimized Open WiFi Performance through Anonymized Data (December 2021- May 2022)
 24. Shahram Mollahasani (PDF) Research topic: 6G and AI-enabled Networks (November 2021)
 25. Medhat Elsayed (PhD Student - Nominated to the 2021 University of Ottawa PhD Thesis Prize and Recipient of the NSERC CREATE TOPSET Graduate Research Training Scholarship) Thesis title: Machine Learning-Enabled Radio Resource Management for Next-Generation Wireless Networks (June 2021)
 26. Hind Mukhtar (MAsc Student - Nominated to the 2021 Faculty of Engineering Thesis Prize) Thesis topic: Machine Learning Enabled-Localization in 5G and LTE using Image Classification and Deep Learning (June 2021).
 27. Kyle Quintal (MSc Student – co-supervised with Dr. Burak Kantarci) Thesis title: Context-Awareness for Adversarial and Defensive Machine Learning Methods in Cybersecurity (July 2020)
 28. Kevin Shimotakahara (MAsc Student – co-supervised with Dr. Karin Hinzer - Recipient of NSERC Alexander Graham Bell Scholarship and the NSERC Canada Graduate Scholarship - Nominated to the 2020 Faculty of Engineering Thesis Prize) Thesis title: Device-to-device communications for smart grid (June 2020).
 29. Anne Catherine Nguyen (Undergraduate student – winner of Cognos Prize with her project) Honors project topic: Load Balancing in 5G with Reinforcement Learning (April 2020)
 30. Riqiang (Richard) Liu (MAsc. Student) Thesis title: Dynamic Routing with Online Traffic Estimation for Video Streaming over Software Defined Networks (March 2020)
 31. Muhammad Usama (Master's) MEng - Project topic: Energy-efficiency in 5G (September 2019)
 32. Mahdi Sharara (Visiting PhD student from Université Paris-Saclay, February-May 2022) Research Topic: Machine learning for optimal resource allocation
 33. Inayat Irfan (Undergraduate Summer Intern – BSc at McGill) Project topic: NS3-based 5G Simulation Environment Enhancement (July 2020-August 2020)
 34. Yonghun Kim (PhD Student at Gwangju Institute of Science and Technology, South Korea) – Visiting student supported by National Research Foundation of Korea and Globalink Research Award by Mitacs (October 2018-March 2019) Project Topic: Mobile Beacon-based Localization with Motion Compensation

- for Underwater Acoustic Sensor Networks
35. Navjot Singh (MAsc Student) Thesis Title: Planning of Mobile Edge Computing Resources in 5G Based on Uplink Energy Efficiency (November 2018)
 36. Ting-Hui (Jerry) Chiang (PhD Student at National Chiao Tung University, Taiwan) – Visiting student (March-May 2018) Project Topic: Advanced Indoor Localization Techniques
 37. Sukhmani Sukhmani (Master's) MEng - Project topic: Caching and computing in 5G (December 2017)
 38. Sukhman Kaur (Master's) MEng - Project topic: Directional cells in 5G networks (June 2017)
 39. Hazal Saygili (Undergraduate) Summer Intern – 3rd year UG at Bilkent University (July 2017)
 40. Meesam Haider (Undergraduate) NSERC CREATE - TOPSET Trainee (January 2018) Project Title: Enhanced LBT Mechanism for LTE-Unlicensed using Reinforcement Learning
 41. Keivan Bahmani (PhD) at Clarkson University
 42. Anwar Parvej (MS) at Clarkson University
 43. Jayesh Bokhira (Undergraduate) at Clarkson University
 44. Andy Hoang (Undergraduate) at Clarkson University

T H E S I S E X A M I N A T I O N C O M M I T T E E S

- Ahmad Nagib Abdalla, PhD, “A Trustworthy Deep Reinforcement Learning Framework for Slicing in Next-Generation Open Radio Access Networks” Queens University (supervisors: Hossam Hassanein, Hatem Abou-Zeid), 2024.
- Daniel Sousa – Dias, MSc, “Data Security and Privacy in Transactive Energy Markets,” University of Ottawa (supervisor: D. Amyot), 2024.
- Ola Mohammed, PhD, “Adaptive Multicast Routing Protocol Based on Reinforcement Learning,” Carleton University (supervisor: T. Kunz), 2023.
- Abdul Mutakabbir, MAsc, “Multi-Modality Federated Learning with Multi-Source Data for Forest Fire Prediction,” Carleton University (supervisor: C.-H. Lung), 2023.
- Arda Onsu, MAsc, “Malicious & Cooperative Client Behavior Under Federated Learning with Score-Based Aggregation and Cluster Elimination”(supervisor: B. Kantarci), 2023.
- Jinxin Liu, PhD, “Machine Learning-Enabled Security in Internet of Things and Cyber-Physical Systems” (supervisor: B. Kantarci), 2023.
- Mohsen Shahbazi Dastjerdi, MAsc, “AI-Enabled Planning and Control for Aeronautical Ad-Hoc Networks,” University of Ottawa (supervisor: B. Kantarci), 2023.
- Elie El Haber, PhD, “Latency and Reliability Aware Edge Computation Offloading in 5G Networks,” Concordia University (supervisor: Chadi Assi), 2022.
- Nhat Hieu Le, MAsc, “Performance Analysis for Supporting Ultra-Reliable Low-Latency Communications in Advanced Wireless Networks,” Carleton University (supervisor: C. Huang), 2022.
- Palwasha Waheed Shaikh, MAsc, “Intelligent Infrastructures for Charging Reservation and Trip Planning of Connected Autonomous Electric Vehicles,” University of Ottawa (supervisor: H. Mouftah), 2021.
- Shady Elkamhawy, MAsc, “Power Gain Optimization for Multiple Active Multiple Passive Dipole Antenna Arrays, Carleton University (supervisor: R. Gohary), 2021.
- Yonghun Kim, PhD, “Acoustic Ranging Issues Based on Time-of-Arrival for Underwater Localization,” Gwangju Institute of Science and Technology (supervisor: Kiseon Kim), 2020.
- Rawan Alkurd, PhD, “Big Data-Driven AI-based Wireless Network Personalization,” Carleton University (supervisors: H. Yanikomeroglu and I. Abualhaol), 2020.
- Rachel Beverly Belcher, MAsc. “Fuzzy Logic Based Module-Level Power Electronics for Mitigation of Rapid Cloud Shading in Photovoltaic Systems,” University of Ottawa (supervisors: K. Hinzer and H. Schriemer), 2020.
- Alan Zhang, MAsc. “Urban and Indoor Vehicular Navigation using IMU, GNSS, LiDAR, and Radar,” Department of Systems and Computer Engineering, Carleton University (supervisor: M. Atia), 2020.
- Yanan Sun, PhD. “Application of Behind-the-Meter Energy Storage Systems for Household Load Hiding and Frequency Regulation Service” Department of Electrical and Computer Engineering, University of British

Columbia (Supervisors: L. Lampe and V. Wong), 2020.

- Elham Kalantari, PhD, “Placement of Air and Ground Base Stations in Integrated Aerial and Terrestrial Wireless Cellular Networks,” School of Electrical Engineering and Computer Science, University of Ottawa (supervisor: A. Yongacoglu), 2020.
- Isam Mashhour Hasan Al Jawarneh, PhD, “Quality of Service Aware Data Stream Processing for Highly Dynamic and Scalable Applications,” Department of Computer Science and Engineering, University of Bologna (supervisor: R. Montanari), 2019.
- Mitchell Fantuz, MSc, “Multi-User Detection of Overloaded Systems with Low Density Spreading,” School of Electrical Engineering and Computer Science, University of Ottawa (supervisor: C. D’Amours), 2019.
- Maryam Hezaveh, PhD, “Privacy Preservation for Nearby-Friend and Nearby-Places Location-Based Services,” School of Electrical Engineering and Computer Science, University of Ottawa (supervisor: C. Adams), 2019.
- Riccardo Venanzi, PhD, “Device as a Service and Fog Computing Middleware for the Internet of Things,” Engineering Sciences, University of Ferrara, 2018.
- Faraj Lagum, PhD, “Stochastic Geometry-Based Tools for Spatial Modeling and Planning of Future Cellular Networks: Opportunistic Cell Switch-off and Strategic Deployment of Flying Base Stations,” Department of Systems and Computer Engineering, Carleton University (supervisor: H. Yanikomeroglu), 2018.
- He Li, MSc, “A Resilience-oriented and NFV-supported Scheme for Failure Detection in Software-Dened Networking,” School of Electrical Engineering and Computer Science, University of Ottawa (supervisor: A. Boukerche), 2018.
- Xiangshen Yu, MSc, “Efficient Interest Forwarding for Vehicular Information-Centric Networks,” School of Electrical Engineering and Computer Science, University of Ottawa (supervisor: A. Boukerche), 2018.
- Meron Gessesse, MSc, “Multi-sensor Attitude and Heading Reference System Design using Genetically Optimized Kalman Filter,” Carleton University (supervisor: M Atia), 2018.
- Ioannis Zengin, PhD, “Optimal sizing and operation planning of microgrids and operation analysis of charging stations for electric vehicles,” Universitat Politècnica de Catalunya (supervisor: C. Verikoukis), 2018 (external referee).
- Fazel Anjomshoa, PhD, “Behavioral User Profiling and Energy Efficient Incentives in Mobile Crowd-sensing,” Department of Electrical and Computer Engineering (supervisor: B. Kantarci), Clarkson University, 2018.
- Maryam Pouryazdanpanah Kermani, PhD, “Effective incentives to maximize trustworthy participation in mobile crowd-sensing,” Department of Electrical and Computer Engineering, Clarkson University (supervisor: B. Kantarci), 2018.
- Yamen Nasrallah, PhD, “Enhanced IEEE 802.11p-Based Mac Protocols For Vehicular Ad Hoc Networks,” School of Electrical Engineering and Computer Science, University of Ottawa (supervisor: H. Mouftah), 2017.
- Suzan Ureten, PhD, “Single and Multiple Emitter Localization in Cognitive Radio Networks,” School of Electrical Engineering and Computer Science, University of Ottawa (supervisor: A. Yongacoglu), 2017.
- Maryam M. Alotaibi, PhD, “Relay Selection for Heterogeneous Transmission Powers in Connected Vehicles,” School of Electrical Engineering and Computer Science, University of Ottawa (supervisors: H. Mouftah and A. Boukerche), 2017.
- Anastassia Gharib, MSc, “Distributed Learning-based Cooperative Spectrum Sensing for Cognitive Internet of Things Systems,” Department of Systems and Computer Engineering, Carleton University (supervisor: M. Ibnkhala), 2017.
- Fayzah Alshammari, MSc, “Towards an Evaluation of a Recommended Tor Browser Configuration in Light of Website Fingerprinting Attacks,” School of Electrical Engineering and Computer Science, University of Ottawa (supervisor: C. Adams), 2017.
- Ziwen Zhao, MSc, “Spatial in Slotted ALOHA Two-Hop Random Access for Machine Type Communications,” Department of Systems and Computer Engineering, Carleton University (supervisor: H. Yanikomeroglu), 2017.

TEACHING

UNIVERSITY OF OTTAWA (2016 - Present)

- AI-enabled Wireless Networks (CSI 5140/ELG5143 – Falls in 2019 - 2021)
- Wireless Networks (CEG 4186 – Winters in 2017 - 2021)
- ComNet-IPS: Communications and Networking for Intelligent Physical Systems (CSI 5140 – Fall 2018)
- Introduction to Data Communications and Networking (CEG3185 – Summer 2017)
- Computer Communications (ELG 5374 - Fall 2016)

CLARKSON UNIVERSITY (2014-2016)

- Database Systems (EE 468)
- Wireless Sensor Networks (EE 511) - Developed this course for the first time for Clarkson University

INDUSTRY WHITEPAPERS

[WP03] K. Johansson, C. Stuart, Melike Erol-Kantarci, “AI value in RAN: Actionable Insights,” June 2024 [Online]: <https://www.ericsson.com/en/reports-and-papers/further-insights/ai-in-ran>

[WP02] R. Britto, T. Murphy, M. Iovene, L. Jonsson, Melike Erol-Kantarci, B. Kovács, “Telecom AI Native Systems in the Age of Generative AI - An Engineering Perspective,” December 2023 [Online]: <https://arxiv.org/ftp/arxiv/papers/2310/2310.11770.pdf>

[WP01] M. Iovene, L. Jonsson, D. Roeland, M. D'Angelo, G. Hall, Melike Erol-Kantarci, J. Manocha, “Defining AI native: A key enabler for advanced intelligent telecom networks”, February 2023 [Online]: <https://www.ericsson.com/49341a/assets/local/reports-papers/white-papers/ai-native.pdf>

PATENTS AND INVENTION DISCLOSURES

[P23] M. Ghassemi, S. Mobarak, H. Zhang, M. Erol-Kantarci, A. Bin Sediq, A. Afana, “Foundational Model-aided deep reinforcement learning for RIS-assisted wireless communication,” US provisional patent filed on 11 April 2025.

[P22] M. Farzanullah, H. Zhang, M. Erol-Kantarci, A. Bin Sediq, A. Afana, “Diffusion model for ISAC-enabled CSI estimation in cell-free mMIMO system,” US provisional patent filed on 31 March 2025.

[P21] A. Habib, P. E. Iturria Rivera, M. Erol-Kantarci, M. Elsayed, M. Bavand, R. Gaigalas, Y. Ozcan, “System and Method for Intent-Guided Hierarchical Decision Transformer for Network Optimization”, US provisional patent filed on 20 February 2025.

[P20] H. Mukhtar, R. Shcaub, M. Erol-Kantarci, “Predictive Management of Bandwidth Consumption and Dynamic Satellite Connectivity Management”, US provisional patent filed on 24 January 2025.

[P19] H. Zhang, M. Erol-Kantarci, A. Bin Sediq, A. Afana, “LLM-enabled mobile traffic prediction with efficient in-context demonstration selection,” US provisional patent filed on 17 December 2024.

[P18] M. Farzanullah, H. Zhang, M. Erol-Kantarci, A. Bin Sediq, A. Afana, “Multimodal transformer-based Integrated Sensing and Communication (ISAC) data enhanced beam selection,” US provisional patent filed on 31 October 2024.

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- [NRC04] I. Al-Anbagi, Melike Erol-Kantarci, H. T. Mouftah, "Delay-Sensitive WSN Design for Wind Farm Monitoring in the Smart Grid", 3rd WiSense Workshop, Ottawa, ON, Canada, September 2, 2011.
- [NRC03] Melike Erol-Kantarci and H.T. Mouftah, "Wireless Sensor Networks (WSNs) in the Smart Grid", NRC-uOttawa WiSense Workshop, Ottawa, March 2, 2011.
- [NRC02] H.T. Mouftah and Melike Erol-Kantarci, "Wireless Sensor Networks for the Smart Power Grid", Poster in Canada Research Chairs Thinking Ahead for a Strong Future Conference, Toronto, Nov. 2010.
- [NRC01] Melike Erol-Kantarci and H.T. Mouftah, "Wireless Sensor Networks for Residential Energy Management in Smart Grids", 2nd WiSense Workshop, Kingston, ON, Canada, May 2010.

KEYNOTES AND PLENARY TALKS

- [KN21] Industry Keynote on "Programmable networks leveraging AI in the 5G Era" IEEE ICC, June 2025.
- [KN20] Industry Keynote on "AI in programmable networks" AI Summit Symposium by Light Reading, June 2025.
- [KN19] Keynote on "The role of Generative AI and Multimodal Data in the Next Generation Wireless Networks," Symposium of 6G Communications (in conj. with 15th International Conference on ICT Convergence), Jeju Island, Korea, October 2024.
- [KN19] Keynote on "Towards an AI-native 6G – Is G for Generative?," IEEE ICC, Denver, June 2024.
- [KN18] Keynote on "Paving the AI-Native Way in 6G," Ericsson Autumn Hackathon, talk displayed in Sweden,

Spain, China and Italy Ericsson sites in October- November 2023.

[KN17] Keynote on “Paving the AI-Native Way in B5G and 6G,” IEEE International Black Sea Conference on Communications and Networking (BlackSeaCom), Istanbul, Turkey, July 7th 2023.

[KN16] Keynote on “Paving the Road To 6G – The Role of Automation & AI,” Fierce Wireless, November 1st 2022.

[KN15] Keynote on “AI-Enabled Smart Grid Communications and Transactive Energy Systems,” IEEE SmartGridComm, October 26th 2022.

[KN14] Plenary Keynote on “Deep and Reinforcement Learning in 5G and 6G: New Horizons with Transfer Learning,” IEEE Future Networks World Forum, Montreal, October 12th, 2022.

[KN13] Keynote on “The Nexus of AI and Wireless: A Sneak Peek into 6G,” Ericsson Research Day in Turkey, December 2021.

[KN12] Keynote on “AI-Enabled Wireless Networks: A Vision for 6G,” 10th IFIP/IEEE International Conference On Performance Evaluation And Modeling In Wired And Wireless Networks, November 2021.

[KN11] Keynote on “The Nexus of AI and Communications: A Frontier for 6G,” IEEE International Conference on Computer Science and Information Technologies (CSIT), November 2021.

[KN10] Keynote on “AI-Enabled Wireless Networks: A Vision for 6G,” IEEE Local Computer Networks (LCN), October 2021.

[KN09] Keynote on “AI-enabled Energy Trading for Microgrids and Transactive Energy Systems,” at IEEE 3rd Global Power, Energy and Communication Conference, October 2021.

[KN08] Keynote on “The Nexus of AI and Communications: The Frontier for 6G,” at Royal Bank of Canada (RBC) Tech Expo Catalyst, September 2021.

[KN07] Keynote on “AI-Enabled Wireless Networks: A Bridge from 5G to 6G,” at IEEE International Conference on INnovations in Intelligent SysTems and Applications (INISTA), August 2021.

[KN06] Keynote on “AI-Enabled Future Wireless Networks and Security,” at IEEE ICC 4th Workshop on 5G and Beyond Wireless Security (IEEE WIRELESS-SEC), June 2021.

[KN05] Distinguished speaker on “Security in the Era of Hyperconnected World,” in Underrepresented Groups in Cybersecurity Panel, Silicon Valley Cybersecurity Conference, December 2020.

[KN04] Keynote on “AI-Enabled Future Wireless Networks,” 16th IFIP International Conference on Network and Service Management (CSNM), November 2020.

[KN03] Keynote on “AI-Enabled Wireless Networks: A Bridge from 5G to 6G,” Global Information Infrastructure Networking Symposium (GIIS), October 2020.

[KN02] Plenary Talk on “AI-enabled Transactive Energy Systems and the Role of Communications,” IEEE International Conference on Advanced Communication Technologies and Networking (CommNet'20), September 2020.

[KN01] Plenary Talk on “AI-enabled Energy Trading for Microgrids and Transactive Energy Systems,” IEEE Smart Energy Grid Engineering, August 2020.

INTERVIEWS AND PRESS

[IN01] Melike Erol-Kantarci, “Transforming Connectivity: Programmable Networks with AI in the 5G Era,” Mobile Europe Interview, Ed. Annie Turner, May 2025. [Online]: <https://www.mobileeurope.co.uk/transforming-connectivity-programmable-networks-with-ai-in-the-5g-era-interview-with-melike-erol-kantarci-ericsson/>

TUTORIALS

[T13] Melike Erol-Kantarci and M. Simsek, “AI-enabled Optimization in Virtualized Wireless Networks: An Open RAN Perspective,” IEEE Globecom, December 2021.

[T12] Melike Erol-Kantarci and M. Simsek, “AI-enabled Optimization in Virtualized Wireless Networks: An Open RAN Perspective,” European Wireless, Verona, Italy, November 2021.

- [T11] Melike Erol-Kantarci and M. Simsek, “AI-enabled Open Virtualized Wireless Networks,” IEEE PIMRC, virtual conference due to COVID-19, September 2021.
- [T10] Melike Erol-Kantarci and M. Simsek, “AI-enabled Open Virtualized Wireless Networks,” IEEE ICC, virtual conference due to COVID-19, June 2021.
- [T09] Melike Erol-Kantarci and M. Simsek, “AI-enabled Future Wireless Networks: Opportunities and Challenges Towards 6G,” IEEE CCNC, virtual conference due to COVID-19, January 2021.
- [T08] Melike Erol-Kantarci and M. Elsayed, “AI-enabled Wireless Networks: Towards 6G,” **Ottawa AI Workshop**, Ottawa, ON, November 2019.
- [T07] H. T. Mouftah and Melike Erol-Kantarci, “Connected Electric Vehicles Vehicle-to-Grid and Grid-to-Vehicle Applications,” **IEEE CCECE**, Windsor, ON, May 2017.
- [T06] H. T. Mouftah and Melike Erol-Kantarci, “Communication Architectures and Networking for Electric Vehicles in the Smart Grid,” **IEEE ICUWB**, Montreal, QC, October 2015.
- [T05] H. T. Mouftah and Melike Erol-Kantarci, “Communication Architectures and Networking for Electric Vehicles in the Smart Grid,” **IEEE ICC**, London, England, June 2015.
- [T04] H. T. Mouftah and Melike Erol-Kantarci, “Communication Architectures and Networks for Electric Vehicles in the Smart Grid,” **IEEE Vehicular Technology Conference (VTC) Spring**, Glasgow, Scotland, May 2015.
- [T03] H. T. Mouftah and Melike Erol-Kantarci, “Communication Architectures and Networking for Electric Vehicles in the Smart Grid,” **IEEE WCNC**, New Orleans, LA, March 2015.
- [T02] H. T. Mouftah and Melike Erol-Kantarci, “Architectures, Models and Networks for Electric Vehicles in the Smart Grid,” **IEEE Vehicular Technology Conference (VTC) Fall**, Vancouver, BC, September 2014.
- [T01] H. T. Mouftah and Melike Erol-Kantarci, “Architectures, Models and Networks for Electric Vehicles in the Smart Grid,” **IEEE Canadian Conference on Electrical and Computer Engineering (CCECE)**, Toronto, ON, May 2014.

IEEE DISTINGUISHED LECTURES

- [DL8] “AI-enabled Smart Grid Communications and Smart Cities,” IEEE Distinguished Lecturer Series – IEEE ComSoc Galveston Bay Section Chapter, 18 December 2023.
- [DL7] “Deep and Reinforcement Learning in 5G and 6G,” IEEE Distinguished Lecturer Series – IEEE ComSoc Atlanta and Virginia Sections, 26 May 2022.
- [DL6] “Deep and Reinforcement Learning in 5G and 6G,” IEEE Distinguished Lecturer Series – IEEE ComSoc Oregon, Santa Clara Valley, Seattle Foothill, San Fernando Valley Chapters, 27 April 2022.
- [DL5] “Deep and Reinforcement Learning in 5G and 6G,” IEEE Distinguished Lecturer Series – IEEE ComSoc Bangalore Chapter, 8 January 2022.
- [DL4] “Recent advances in Smart Grid Communications,” IEEE Distinguished Lecturer Series – IEEE Sacramento Valley Section Chapter, New Orleans Section Chapter, Central Texas Section Chapter, Central Texas Section Joint Chapter, 8 November 2021.
- [DL3] “Deep and Reinforcement Learning in 5G and 6G,” IEEE Distinguished Lecturer Series – IEEE Egypt Chapter, 2 June 2021.
- [DL2] “AI-Enabled Wireless Networks,” IEEE Distinguished Lecturer Series – IEEE Seattle Section Joint Chapter, IEEE Vancouver Joint Chapter and IEEE Victoria Section Joint Chapter, 20 May 2021.
- [DL1] “AI-Enabled Wireless Networks: A Bridge from 5G to 6G,” IEEE Distinguished Lecturer Series - IEEE Sri Lanka Section, 8 April 2021.

INVITED TALKS

- [INV43] “AI-native 6G – Is G for Generative?,” NSERC CREATE workshop, June 2024.
- [INV42] “AI and Automation in B5G and 6G,” Kanata North R&D Council, April 2023.
- [INV41] “Bolstering Enterprise Digitization with AI and 5G Convergence,” NVIDIA GTC Conference, March 23rd 2022. [Co-presented w\ Eric Parsons, Ericsson].
- [INV40] “O-RAN: A Great Playground for AI – Let’s Play,” Northeastern University Open 5G Forum, November 2021.
- [INV39] “Advances in AI-enabled Radio Access,” IEEE 5G World Forum - Systems Optimization for 5G and Beyond Track, 13 October 2021.
- [INV38] “The Role of AI, Communication and Transactive Energy Systems in Sustainability,” IEEE Sustainable ICT Webinar, 14 September 2021.
- [INV37] “AI-Enabled Wireless Networks: A Bridge from 5G to 6G,” IEEE Communications Society, Special Interest Group on Machine Learning for AHSN & IoT Online Webinar, 19 July 2021.
- [INV36] “AI-Enabled Wireless Networks: A Bridge from 5G to 6G,” IEEE Communications Systems Integration and Modeling Technical Committee Online Webinar, 28 June 2021.
- [INV35] “The Nexus of Connected Autonomous Electric Vehicles and AI-enabled Transactive Energy Systems,” Vector Institute Mobility Symposium, 8 June 2021.
- [INV34] “The role of AI in 5G and 6G: Research, Development and Testbeds,” Industry Research and Development - Canadian Perspective on B5G, SCC-NRC Canada Beyond Workshop, 26 May 2021.
- [INV33] “AI-Enabled Wireless Networks: A Bridge from 5G to 6G,” IEEE Montreal Chapter, 10 May 2021.
- [INV32] “Towards Autonomous 6G Networks and the Role of Advanced Machine Learning Techniques,” International Telecommunications Union (ITU) AI for Good Webinar Series, 21 April 2021.
- [INV31] “AI-Enabled Wireless Networks: A Bridge from 5G to 6G,” IEEE Santa Clara Valley Section, 14 April 2021.
- [INV30] “AI-Enabled Wireless Networks: A Bridge from 5G to 6G,” IEEE Training School in Machine Learning for Wireless Communications, 24-26 March 2021.
- [INV29] “Towards Autonomous 6G Networks and the Role of Advanced Machine Learning Techniques,” Lakehead University, Computer Science Speaker Series, January 2021.
- [INV28] “Internet Protocol and IP Addressing” Guest Lecture at International Hellenic University, January 2021.
- [INV27] “Reinforcement Learning and Deep Learning: A holistic landscape for networks,” Ciena Tech Forum, network Intelligence Think Tank, September 2020.
- [INV26] “Machine Learning for Resource Allocation and Scheduling in Device-to-Device (D2D) Microgrid Communications,” IEEE GlobalSIP, November 2019, Ottawa, ON.
- [INV25] “AI-enabled Wireless Networks: Opportunities and Challenges Towards 6G,” IEEE 5G World Forum, Systems Optimization, October 2019, Dresden, Germany.
- [INV24] “AI-enabled Wireless Networks: A Case Study on Resource Allocation using Deep Reinforcement Learning,” Middle East Technical University, June 2019, Ankara, Turkey.
- [INV23] “AI-enabled Wireless Networks: A Case Study on Resource Allocation using Deep Reinforcement Learning,” BlackBerry Innovate Technology Series (BITS), December 2018, Ottawa, ON.
- [INV22] “Resource Allocation in Wireless Networks using Machine Learning” Istanbul Technical University, July 20 2018, Istanbul, Turkey.
- [INV21] “A career in engineering. Engineering your own career!” Keynote in IEEE Electrical Power and Energy Conference- Women in Engineering, Ottawa, Canada, October 2016.
- [INV20] “Cyber-Physical System Monitoring and Security,” École de technologie supérieure (ÉTS)- Montreal, QC, 4 May 2016.
- [INV19] “A Short Course on Communication Systems for Connected Electric Vehicles,” Istanbul Technical University, June 24, 2015, Istanbul, Turkey.
- [INV18] “Enhanced Wireless Sensor Networking for the Smart Grid,” Carleton University, July 9, 2014, Ottawa, ON, Canada.
- [INV17] “Enhanced Wireless Sensor Networking for the Smart Grid,” Ryerson University, May 5, 2014, Toronto, ON, Canada.

- [INV16] “Networks and Architectures for Connected Electric Vehicles in the Smart Grid,” University of Ottawa, April 24, 2014, Ottawa, ON, Canada.
- [INV15] “Towards Enhanced Wireless Sensor Networks for Smart Grid Monitoring,” Istanbul Technical University, April 10, 2014, Istanbul, Turkey.
- [INV14] “Wireless Sensor Networks for the Smart Grid,” Clarkson University, February 12, 2014, Potsdam, NY, US.
- [INV13] “Cyber Physical System Monitoring Using Wireless Sensor Networks,” EPFL, January 31, 2014, Lausanne, Switzerland.
- [INV12] “Wireless Rechargeable Sensor Networks in the Smart Grid,” University of Ottawa, September 8, 2012, Ottawa, ON, Canada.
- [INV11] “How Will the Smart Grid Enable Electrification of Transportation?” University of Ottawa, October 20, 2011, Ottawa, ON, Canada.
- [INV10] “Opportunities for Wireless Technologies in the Smart Grid Communications Arena,” University of Ottawa, September 2, 2011, Ottawa, ON, Canada.
- [INV9] “Localization in Underwater Acoustic Sensor Networks,” University of Ottawa, March 10, 2011, Ottawa, ON, Canada.
- [INV8] “Wireless Sensor Networks in the Smart Grid,” National Research Council of Canada, March 2, 2011, Ottawa, ON, Canada.
- [INV7] “Localization Techniques for Underwater Acoustic Sensor Networks,” Communications Research Center of Canada, February 22, 2011, Ottawa, ON, Canada.
- [INV6] “Wireless Sensor Networks for Smart Demand Response in the Smart Grid,” Carleton University, February 16, 2011, Ottawa, ON, Canada.
- [INV5] “Wireless Sensor Networks (WSN) in the Power Grid,” IEEE Ottawa Chapter, November 22, 2010, Ottawa, ON, Canada.
- [INV4] “Wireless Sensor Networks for In-Home Energy Management in Smart Grids,” University of Ottawa, March 18, 2010, Ottawa, ON, Canada.
- [INV3] “Underwater Wireless Sensor Networks,” Bogazici University, September 17, 2009, Istanbul, Turkey.
- [INV2] “Localization in Underwater Sensor Networks,” Turkish Naval Research Center Command, June 17, 2008, Istanbul, Turkey.
- [INV1] “Underwater Sensor Networks,” Department of Electrical and Electronics Engineering, Bogazici University, December 2007, Istanbul, Turkey.

PANELS AND OUTREACH

- Panelist for Intelligent Transportation Systems (ITS) Canada 2025 Annual Conference & Expo, “What The Future: 6G,” Ottawa, May 2025.
- Panelist for 6G Forum @TU, “Generative AI: Creating New Opportunities for 6G,” Texas, USA, April, 2025.
- Panelist for Ericsson Imagine Live Spain, “AI for Telcos in practice,” Madrid, November 2024.
- Panelist for “Paving the AI-Native Way in B5G and 6G,” IEEE World Forum IoT, WIE Forum, Ottawa, November 2024.
- Panelist for “Is the Penetration of AI in Our Sector, an Ally or an Adversary for Equality and Diversity?” IEEE Women in Communications Engineering (WICE), Denver, June 2024.
- Panelist for “AI/ML in Networking - Challenges and Opportunities,” Talk title: “Towards 6G: G for Generative,” IEEE Virtual Conference on Communications, November 2023.
- Panelist for “How to Harness Generative AI for Innovation and Internal Efficiency?,” Ericsson BCSS Tech Days, November 2023.
- Panelist for “Getting RIS off the ground with AI and ML” Industry panel by Sparring Partners, October 2023.
- Panelist for “Openness and programmability in the RAN,” Wireless World Research Forum (WWRF), March 2023.
- Speaker for “National Engineering Month,” ACM-Women student chapter, March 2023.

- Panelist for “Green Networking in B5G: Challenges & Opportunities,” 6G Flagship Program, April 2022.
- Panelist for “Women Researchers Shaping Future ICT Panel,” Ericsson Research Day Turkey, December 2021.
- Panelist for “Next Generation Wireless Networking and Security for the Internet of Everything,” IEEE ICC 4th Workshop on 5G and Beyond Wireless Security (IEEE WIRELESS-SEC), June 2021.
- Keynote speaker for NETX Event Case Competition, 20 March 2021.
- Speaker for ITU ACM Student Chapter Women in Engineering, 11 March 2021.
- Panelist for “EV-fleet as Virtual Power Plant (VPP) for V2G services to the Grid” at IEEE Conference on Innovative Smart Grid Technologies (ISGT), February 2021.
- Panelist for “Future of Wireless Charging,” Industry Panel by AirFuel Alliance, IEEE CCNC January 2021.
- Career panel for underrepresented groups in cybersecurity, Silicon Valley Cybersecurity Conference, December 2020.
- Panelist for IEEE Toronto Section, IEEE Day, October 2020.
- Panelist for “Urban Analytics for Smart Cities: How to solve urban mobility problems through data sharing from heterogeneous systems”, IEEE International Smart Cities Conference (ISC2), September 2020.
- Co-host of IEEE ComSoc TCGCC Advanced Green Communications and Computing Seminar Series on “AI for Green 6G,” August 2020.
- Panelist for “Moving The Dial, Women in Stem”, IEEE Toronto International Women in Engineering Day Event, June 2020.
- Panelist for “360° View of Innovative Mission Critical Mobile Applications APIs,” IEEE PIMRC, Istanbul, September 2019.
- Speaker on “AI-enabled Future Networks” at uOttawa Innovates, Kanata North, February 2019.
- Panelist for “Charting AV/CV Technology Opportunities and Challenges,” Ottawa AV Summit, April 2018.
- Panelist for “Bridging the skill gap - How can the education system satisfy big data & cybersecurity industry demand?” Big Data and Cybersecurity Conference, Ottawa, February 2018.
- Girl Guides of Canada, Women in Science Night, Forrest Valley Elementary School, February 2018.
- CBC Radio, Quirks and Quarks, Annual Quirks' Question Show, Ottawa, December 2017.
- Panelist for “Developing Smart Canadian Networks,” The Centre of Excellence in Next Generation Networks (CENGN) Summit, Ottawa, December 2016.
- Women in Science and Engineering (WISE) seminar on engineering career, University of Ottawa, November 2016.

PROFESSIONAL ACTIVITIES AND MEMBERSHIPS

Leadership

Board Member for Kanata North Business Association, R&D Council	2023 - Present
Advisory Board member for HORSE (Holistic, Omnipresent, Resilient Services for Future 6G Wireless and Computing Ecosystems) EU Project	2023 - Present
Faculty Sponsor for uOttawa- ACM Women in Computing Student Chapter	2022 - Present
Vice-chair, IEEE ComSoc emerging technologies initiative on Machine Learning for Communications	2021- Present
Co-Chair for SIG on AI and Computational Intelligence in Smart Grid of IEEE Technical Committee on Smart Grid Communications	2021- Present
Chair, SIG on ML and AI in Networking of IEEE Technical Committee on Communications Software	2020-Present
Steering Committee Member for IEEE Sustainable ICT	2018- Present
IEEE ComSoc Distinguished Lecturer	2021- 2023
Chair, SIG on Green Smart Grid Communications of IEEE Technical Committee on Green Communications and Computing (TCGCC)	2019 - 2023
Delegate for Ericsson Leadership Summit	2022
Research Group Leader – IEEE Smart Grid and Big Data Standardization	2016 - 2020

Vice-Chair – SIG on Green Smart Grid Communications of IEEE TCGCC	2014 - 2019
Vice-Chair - IEEE Ottawa Women in Engineering	2012 - 2014

Editorial Boards of Scientific and Scholarly Journals

Associate Editor, IEEE Transactions on Network Science and Engineering	2025 - Present
Associate Editor, IEEE Transactions on Communications	2023 - Present
Associate Editor, IEEE Networking Letters	2020 - Present
Associate Editor, IEEE Transactions on Cognitive Communications and Networking	2020 - 2025
Specialty Chief Editor, Frontiers in Communications and Networks, Smart Grid Communications	2020 - 2023
Associate Editor, IEEE Internet of Things Journal	2020 - 2022
Associate Editor, IEEE Vehicular Technology Magazine	2020 – 2022
Associate Editor, IEEE Access	2017 - 2022
Associate Editor, IEEE Communications Letters	2016 - 2021
Co-director, IEEE MMTC Communication Frontiers	2018 - 2020
Associate Editor, International Journal of Distributed Sensor Networks	2013 - 2019
Associate Editor, IEEE MMTC Communication Frontiers	2015 - 2018

Award Committees

IEEE ComSoc EMEA Region Distinguished Service Award	2020-2023
IEEE Comsoc TC on Green Communications and Computing (early selection committee)	2020, 2021
IEEE Technical Committee on Transmission, Access and Optical Systems (TAOS) awards sub-committee	2021-2023
IEEE Technical Committee on Green Communications and Computing (TCGCC) editor selection committee	2020
IEEE GC'20 Awards Committee	2020

Guest Editorial on Special Issue

Special Issue on “6G local area networks” (IEEE Wireless Communications Magazine)	2025
Special Issue on “AI-native Radio Access Network (RAN)” (IEEE Communications Standards Magazine)	2025
Special Issue on “Data Sets for Machine Learning in Wireless Communications and Networks” (IEEE Communications Magazine)	2023
Special Issue on “Open RAN: a New Paradigm for Open, Virtualized, Programmable, and Intelligent Cellular Networks” (IEEE JSAC)	2023
Special Issue on “AI for Open Programmable Virtualized Networks in 6G,” (IEEE Wireless Communications)	2022
Special Issue on “Integrated and autonomous network management and control for 6G time-critical applications” (ITU Journal)	2022
Special Issue on “AI and 6G Convergence: an Energy-efficiency Perspective” (IEEE Network Magazine)	2021
Special Issue on “Communications and Computing for Green Industrial IoT and Smart Grids” (IEEE Transactions on Green Communications and Networking)	2021
Special Issue on "Edge Learning for the Internet of Vehicles” (Wiley Transactions on Emerging Telecommunications Technologies)	2019
Special section on “Smart Grid Cyber-Physical Security” (IEEE Transaction on Smart Grid)	2017
Special section on “Smart Grid and Renewable Energy Resources: Information and Communication Technologies with Industry Perspective” (IEEE Transactions on Industrial Informatics)	2017
Special Issue on “Cognitive Radio Based Smart Grid: The Future of the Traditional Electrical Grid” (Elsevier Ad Hoc Networks)	2015
Special Section on “Smart Grids: A Hub of Interdisciplinary Research” (IEEE Access)	2015

General Chair:

IEEE Workshop on Transformative Results on Autonomous Vehicles for Reliable Services in the Air and on Land (TRAVERSAL) – in conj. with IEEE WF-IoT	2024
IEEE International Conference on Machine Learning for Communication and Networking (ICMLCN)	2024
Workshop on experimental wireless platforms and testbeds (Testbeds4Wireless) (in conj. with IEEE Globecom)	2021
International Workshop on Communications in Extreme Conditions (in conj. with WCNC)	2016
International Workshop on Internet-of-Things Communications and Networking (in conj. with PIMRC)	2012

TPC Chair:

IEEE Canadian Conference on Electrical and Computer Engineering (CCECE)	2021
IEEE Int. Workshop on Computer Aided Modeling and Design of Communication Links and Networks	2020
IEEE International Conference on Wireless for Space and Extreme Environments (WISEE)	2019
5th IEEE ICC International Workshop on Internet of Things	2017
Wireless Communications and Signal Processing (WCSP), Wireless Networking Symposium	2017
IEEE/IFIP Network Operations and Management Symposium (NOMS)	2016
7th International Conference on Ad Hoc Networks (AdHocNets)	2015
6th International Conference on Ad Hoc Networks (AdHocNets)	2014
3rd IEEE ICC International Workshop on Internet of Things	2015

Track/Symposium Chair:

IEEE PIMRC, Wireless and Mobile Networks	2025
IEEE ICC, Selected Areas in Communications (SAC) - Machine Learning for Communications and Networking	2024
IEEE CCNC, AI/ML in Communications and Networking	2022, 2023, 2024
International Conf. on Future Communications and Networks, AI-Enabled Communications and Networks	2024
IEEE EuCNC & 6G Summit, Radio Access and Softwarisation (RAS)	2023
IEEE GLOBECOM, Wireless Communications	2022
IEEE CCNC, Next Generation Protocols: MAC and above	2021
IEEE GLOBECOM, Communication QoS, Reliability And Modeling	2020
IEEE SmartGridComm, Communications and Networking Symposium	2020
IEEE CCNC, Wireless Communications: MAC And Cross-Layer Design	2020
IEEE PIMRC, MAC and Cross-Layer Design Track	2019
IEEE Vehicular Technology Conference (VTC) Fall, Electric Vehicles, Vehicular Electronics, and Intelligent Transportation Track	2019
IEEE SmartGridComm, Communications and Networking Symposium	2018

Organizing Committee Roles*Workshops Committee Co-Chair:*

IEEE ICC	2025
IEEE Vehicular Technology Conference - VTC2017-Fall	2017
ACM Int. Conference on Modeling, Analysis and Simulation of Wireless and Mobile Systems (MSWIM)	2015

Keynotes and Tutorials Co-Chair:

IEEE World Forum IoT	2024
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Special Sessions Co-Chair

European Conference on Networks and Communications & 6G Summit	2022
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Co-Chair IEEE ComSoc TCGCC Seminar Series - AI for Green 6G (Hosted: T. Quek, W. Saad, R. Yu, J. Thompson – w/ 3000+ attendees) 2020

Chair IEEE ComSoc TCGCC Seminar Series - The Future 6G Paradigms: AI-enabled Networks, Cross-Layering and Wireless Access (Hosted: M. Medard, L. Hanzo, H. Yanikomeroglu – w/ 3163 attendees) 2021

Tutorial and Panel Co-Chair:

IEEE WCNC	2027
IEEE Consumer Communications & Networking Conference	2026
IEEE International Conference on High Performance Switching and Routing (HPSR)	2024
International Conference on Computing, Networking and Communications (ICNC)	2020
IEEE Symposium on Computers and Communications (ISCC)	2017

Poster Co-Chair:

IEEE ICC, 7th N2Women Workshop 2018

Publicity Co-Chair:

IEEE VTC'16 - International Workshop on Connecting All Things for Enabling Smart Cities 2016

The International Workshop on Computer-Aided Modeling Analysis and Design of Communication Links and Networks (CAMAD) 2015

The 27th Biennial Symposium on Communications 2014

Int. Conference on Ad Hoc Networks (ADHOCNETS) 2012, 2013

Int. Conference on Wireless Communications and Signal Processing (WCSP) 2012

IEEE Symposium on Computers and Communications (ISCC) 2012

Local Organizing Committee Member

Int. Sym. on Computer and Information Sciences (ISCIS) 2008

Technical Program Committee Member

IEEE Globecom 2011 - 2022

IEEE ICC 2014 - 2022

IEEE SmartGridComm 2012- 2012

IEEE ICC - International Workshop on Cloud Computing Systems, Networks, and Applications 2015

International Conference on Smart Grids for Smart Cities 2015

IEEE Vehicular Technology Conference (VTC) 2013, 2015

IEEE Consumer Communications & Networking Conference (CCNC) 2013, 2014

IEEE Canadian Conference on Electrical and Computer Engineering 2014

IEEE/SAE International Conference on Connected Vehicles and Expo 2013, 2014

IEEE Local Computer Networks (LCN) 2012 - 2015

IEEE Symposium on Computers and Communications (ISCC) 2012 - 2015

IEEE CloudCom 2013

IEEE International Symposium on Trust, Security and Privacy for Emerging Applications (TSP) 2013

Int. Conference on Cloud Computing 2013

IEEE Int. Workshop on Smart Communication Protocols and Algorithms (in conj. with ICC'13) 2013

Int. Conference on Computing, Networking and Communications (ICNC) 2013

International Conference on Emerging Ubiquitous Systems and Pervasive Networks (EUSPN) 2013

IEEE Workshop on Machine to Machine Communications Interfaces and Platforms (M2MCIP) 2013

IEEE Workshop on Internet-of-Things Networking and Control (IoT-NC) 2013

European Signal Processing Conference (EUSIPCO) 2012

Int. Conference on Ambient Systems, Networks and Technologies (ANTS) 2012

IEEE International Workshop on Integrated Enabling Technology 2012

Networking Networking Women Workshop (in conjunction with INFOCOM) 2012

The Ninth Workshop on Wireless Ad hoc and Sensor Networks 2012

Memberships

IEEE Fellow Since 2025

ACM Senior Member Since 2020

ACM Member Since 2015

IEEE Member Since 2008