a) **KANTARCI, Burak,** Full Professor (tenured)

School of Electrical Engineering and Computer Science University of Ottawa

b) **SUMMARY:**

- Full Professor at University of Ottawa, ON, Canada
- University Research Chair in AI-Enabled Secure Networking for Smart Critical Infrastructures
- Secured PI / co-PI roles in multiple funded grants since 2015, totaling over $9.5M
- Co-authored 122 journal articles, 183 conference papers, and 15 book chapters
- Ranked in the top 1.15% of most cited researchers in networking, telecommunications, and applied AI since 2020 according to Stanford Univ. citation indicators study
- Highly Ranked Scholar, (ScholarGPS) since 2022.
- Recognized among Canada's leading Computer Scientists since 2021 based on Microsoft Academic Graph data
- Recipient of King Charles III Coronation Medal
- Winner of the Minister's Award of Excellence (Innovation and Entrepreneurship) in 2021
- Winner of the 2023 IEEE Communications Software TC Technical Achievement Award
- IEEE Communications Society Distinguished Lecturer (Class of 2025) and IEEE Systems Council Distinguished Lecturer (2022-2027)
- Designated ACM Distinguished Speaker (2019-2021)
- Established the CFI-JELF-sponsored Smart Connected Vehicles Innovation Centre as Founding Director
- Chaired the IEEE Communication Systems Integration and Modeling Technical Committee (2019-20)
- Currently serves as Vice-Chair of the IEEE Technical Committee on Social Networks
- Holds Senior Membership status in IEEE and ACM
- Program Director of NSERC CREATE TRAVERSAL (2023-2029)
- Principal Investigator, ORF-RE SITE-CAV (2024-2028)
- Founded the Applied AI in Electrical Engineering (Grad) program at uOttawa

c) **DEGREES**:

Ph.D., Computer Engineering, Istanbul Technical University, 2009
M.Sc., Computer Engineering, Istanbul Technical University, 2005
B.Sc., Computer Engineering, Istanbul Technical University, 2002

d) **EMPLOYMENT HISTORY**: (begins with postdoctoral employment)

2023-Present	Full Professor, School of Electrical Engineering and Computer Science, University of Ottawa
2019-2023	Associate Professor, School of Electrical Engineering and Computer Science, University of Ottawa
2016-2019	Assistant Professor, School of Electrical Engineering and Computer Science, University of Ottawa
2014-2016	Assistant Professor, Department of Electrical and Computer Engineering,

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Clarkson University, NY, USA
2009-2014   Postdoctoral Fellow, School of Electrical Engineering and Computer Science, University of Ottawa

e)   OTHER APPOINTMENTS
2021-2022   Affiliate Graduate Faculty, Virginia Commonwealth Univ.-Grad. School
2020-2022   Research Committee Member, LIFE Research Institute, uOttawa
2016-2022   Courtesy Faculty, Clarkson University, NY

f)   ACADEMIC HONOURS AND AWARDS [limited to past 8 years]
Awards and Recognitions:

- **King Charles III Coronation Medal** (2025)

- **2024-2025 George S. Glinski Award for Excellence in Research**, Faculty of Engineering, University of Ottawa

- **2024 Best Journal Paper Award by IEEE ComSoc Communications Systems Integration and Modeling (CSIM) TC**, M. A. Ferrag, O. Friha, B. Kantarci, N. Tihanyi, L. Cordeiro, M. Debbah, D. Hamouda, M. Al-Hawawreh, K-K. Raymond Choo, "Edge Learning for 6G-enabled Internet of Things: A Comprehensive Survey of Vulnerabilities, Datasets, and Defenses," IEEE Communications Surveys and Tutorials, vol, 25, issue 4, pp. 2654 2713, Fourth Quarter 2023

- **Best Paper Award**, M. A. Onsu, P. Lohan, B. Kantarci, E. Janulewicz, S. Slobodrian, "A New Realistic Platform for Benchmarking and Performance Evaluation of DRL-Driven and Reconfigurable SFC Provisioning Solutions," IEEE Globecom 2024

- **University Research Chair** in AI-Enabled Secure Networking for Smart Critical Infrastructures, University of Ottawa (2024-2029)

- Highly Ranked Scholar, Scholar GPS (by Meta)

- IEEE ComSoc Communications Software Technical Committee 2023 Technical Achievement Award

    "*For contributions to AI/ML-enabled communication network security and trustworthy sensing systems for the Internet of Things*"

- Best Student Paper Award, A. Omara, B. Kantarci, "Generative Adversarial Networks to Secure Vehicle-to-Microgrid Services," IEEE Virtual Communications Conference (VCC), Nov. 2023

- Distinguished Lecturer, IEEE Communications Society, Class of 2025

- Best Paper Award, P. E. Itturria Rivera, M. Chenier, B. Herscovici, B. Kantarci, M. Erol-Kantarci, "RL meets Multi-Link Operation in IEEE 802.11be: Multi-Headed Recurrent Soft-Actor Critic-based Traffic Allocation," IEEE International Conference on Communications (ICC), 2023 [A flagship event of IEEE Communications Society]

- Best Paper Award, O. M. Gul, M. Kulhandjian, B. Kantarci, A. Touazi, C. D'Amours, C. Ellement, "On the Impact of CDL and TDL Augmentation for RF Fingerprinting under

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Impaired Channels" 48th Wireless World Research Forum, November 2022

- Minister's Award of Excellence –from Ontario Ministry of Colleges and Universities, in the area of Innovation and Entrepreneurship, January 2022
- Distinguished Lecturer, IEEE Systems Council, Class of 2022
- Exemplary Editor, IEEE Communications Surveys and Tutorials, 2021
- Member (nomination-based); Sigma Xi, The Scientific Research Honor Society (ΣΞ), 2022
- Best Paper Award, Institute of Electrical and Electronics Engineers (IEEE) Global Communications Conference (Globecom 2021) –Communication QoS and Reliability Modeling Symp.; Dec. 2021 [A flagship event of IEEE Communications Society]
- Senior Member, Association for Computing Machinery; 2020
- Outstanding Leadership Award, IEEE ComSoc Intl. Conference on Network International Conference on Computing, Networking and Communication, 2020
- ACM Distinguished Speaker (2019-2021)
- Appreciation for Service and Leadership, IEEE Communications Society, 2016 [CAMAD]
- Appreciation for Service and Leadership, IEEE Communications Society, 2016 [ISCC]

Awards and Honours Received by supervised students/researchers:

• Outstanding Ph.D thesis prize nominated PhD student: Grad Student Zhiyan Chen, 2023 Thesis/Project Title: Machine Learning-Based Decision Support to Secure Internet of Things Sensing

• Outstanding Ph.D thesis prize nominated PhD student: Grad Student Jinxin Liu, 2023 Thesis/Project Title: Machine Learning-Enabled Security in Internet of Things and Cyber- Physical Systems

• IEEE Member and Geographic Activities Young Professionals Achievement Award (2002): Postdoctoral Fellow: Omer Melih Gul

• Outstanding Master Thesis Prize Nomination: Graduate student Johan Fernandes, 2022 Thesis/Project Title: Real time intelligent solutions for identification of e-Component Data

• Networking-Networking Women (N2Women) Fellowship (2021) PhD student Zhiyan Chen. She was awarded the fellowship in IEEE ICC 2021.

• Outstanding Master Thesis Prize Nomination: Graduate student Ji Chu Jiang, 2021 Thesis/Project Title: High Precision Deep Learning-based Tabular Data Extraction

• Fall Cognos Prize (2nd Place) won by Student: Xuankai Chen, 2019 Supervised Project: Artificial Neural Networks-assisted Data Acquisition in Mobile Crowdsensing Systems

• Winter Cognos Prize won by Student: Mark Traquair , 2019 Supervised Project: Feasibility Study of Methods in Content Extraction From Tabular Data in Digitized Documents

• Outstanding Master Thesis Prize Nomination: Graduate student Cem Kaptan, 2018 Thesis/Project Title: Data Analytics-backed Vehicular Crowd-sensing for GPS-less Tracking in Public Transportation

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g) SCHOLARLY AND PROFESSIONAL ACADEMIC ACTIVITIES:

Editorial activities:

2023-2024	*Guest Editor*	ACM Transactions on Autonomous and Adaptive Systems, Special Issue: Intelligent Applications of Web 3.0 and Metaverse for Connected Autonomous Vehicles
2022-2023	*Guest Editor*	IEEE Networking Letters, Special Issue: Networking Enablers for 6G Use Cases
2021-2022	*Guest Editor*	IEEE Communications Magazine, Special Issue: Wireless Energy Transfer in Future Networks
2020-Present	*Associate Editor*	IEEE Internet of Things Journal
2019-Present	*Associate Editor*	Elsevier Vehicular Communications
2018-Present	*Associate Editor*	IEEE Networking Letters
2018	*Guest Editor*	Sensors Journal, Special Issue on Realization of Large-Scale Mobile Crowd Sensing Experiments
2018	*Guest Editor*	Elsevier Sustainable Cities and Society, Special Issue on Smart Embedded Devices
2018	*Guest Editor*	Sensors Journal, Sensors Journal, Special Issue on Emerging Algorithms and Applications in Vision Sensors System based on Artificial Intelligence
2017-2018	*Steering Committee Member*	IEEE Transactions on Cloud Computing
2017-2018	*Guest editor*	Elsevier Computer Communications, Special Issue on Energy-aware Design for Sustainable 5G Networks
2017-Present	*Associate Editor*	IEEE Access
2016-2021	*Area Editor*	IEEE Transactions on Green Communications and Networking
2015-Present	*Editor*	IEEE Communications Surveys and Tutorials
2015-2016	*Guest Editor*	IEEE Access Special Issue on Advances in Vehicular Clouds
2015-2016	*Guest Editor*	IEEE Transactions on Cloud Computing - Special Issue on Mobile Clouds
2013-2020	*Area Editor*	IEEE Ad Hoc and Sensor Networks Technical Committee Newsletter

Technical Committee Officer

2023-Present	*Vice Chair*	IEEE Communications Society (ComSoc) Social Networks Technical Committee
2021-2023	*Secretary*	IEEE ComSoc Social Networks Technical Committee
2019-2020	*Chair*	IEEE ComSoc Communication Systems Integration and Modelling Technical Committee

2015-2017	*Secretary*	IEEE ComSoc Communication Systems Integration and Modelling Technical Committee

Conference / Workshop / Track Chair [limited to past 8 years]

2025	*Workshop Chair*	IEEE ICC 2025 Workshop on Machine Learning and Deep Learning for Wireless Security
2025	*Workshop Chair*	IEEE ICC 2025 Workshop on 6G-empowered Robotic Vehicles for Sustainable Development (VeSUS)
2025	*Symposium Chair*	International Conference on Computing, Networking and Communications (ICNC): AI and Machine Learning for Communications and Networking (AMCN)
2024	*General Chair*	IEEE Globecom 2024 Workshop on Machine Learning and Deep Learning for Wireless Security
2024	*General Chair*	IEEE World Forum on Internet of Things (WF-IoT)
2024	*General Chair*	IEEE ICC 2024 Workshop on Machine Learning and Deep Learning for Wireless Security
2024	*Technical Program Chair*	IEEE Canadian Conference on Electrical and Computer Engineering (CCECE)
2024	*Symposium Co-Chair*	International Conference on Computing, Networking and Communications (ICNC): Social Computing and Data Mining
2023	*Track Chair*	IEEE Vehicular Technology Conference (VTC)-Fall: Spectrum Management, Green Communications, Services and Security Track
2023	*Workshop Chair*	ACM Multimedia (MM) Workshop on Advanced Multimedia Computing for Smart Manufacturing and Engineering
2023	*General Co-Chair*	IEEE International Black Sea Conference on Communications and Networking (BlackSeaCom)
2023	*Symposium Co-Chair*	IEEE Global Communications Conference (Globecom)-Selected Areas in Communications Social Networks
2023	*Symposium Co-Chair*	International Conference on Computing, Networking and Communications (ICNC): Social Computing and Data Mining
2022-Present	*Steering Committee Member*	IEEE International Black Sea Conference on Communications and Networking (BlackSeaCom)

2022-Present	*Steering Committee Member*	IEEE International Workshop on Computer-Aided Modeling, Analysis, and Design of Communication Links and Networks (CAMAD)
2022	*Symposium Co-Chair*	IEEE/CIC International Conference on Communications in China (ICCC)-Wireless Networking and Multimedia Symposium
2022	*Technical Program Co-Chair*	ACM Workshop on Wireless Security and Machine Learning (WiseML)
2022	*Symposium Co-Chair*	IEEE International Conference on Communications (ICC)-Communication Reliability and Quality of Service Symposium
2021	*Track Chair*	Security and Privacy Track, IEEE International Smart Cities Conference (ISC2)
2021	*Track Chair*	IEEE Canadian Conference on Electrical and Computer Engineering- Cybersecurity in Systems Track
2021	*Track Chair*	IEEE Wireless Days Conference (WD)-Track on Wireless and mobile networking technologies for fighting pandemics
2021	*General Co-Chair*	IEEE International BlackSea Communications Conference (BlackSeaCom), Bucharest, Romania
2021	*General Co-Chair*	IEEE International Workshop on Computer-Aided Modeling, Analysis, and Design of Communication Links and Networks (CAMAD), Porto, Portugal
2020	*Technical Program Co-Chair*	IEEE International BlackSea Conference on Communications and Networking (BlackSeaCom)
2019	*Track Chair*	IEEE Vehicular Technology Conference (VTC -Fall): IoT, M2M, Sensor Networks, and Ad-Hoc Networking
2019	*Symposium Co-Chair*	IEEE International Conference on Computing, Networking and Communications (ICNC): Machine Learning for Communication and Networking
2019	*Track Chair*	IEEE International Conference on Cloud and Big Data Computing-Data Science Track
2018	*Symposium Co-Chair*	IEEE Global Communications Conference (Globecom)-Communication Sys. QoS, Reliability and Modeling Symp.
2018	*Program Co-Chair*	IEEE Mobile Cloud'18
2018	*Program Co-Chair*	IEEE International Conference on Scalable Computing and Communications

2018-Present	*Steering Committee Member*	IEEE ISCC Workshop on Management of Cloud and Smart City Systems (MoCS)
2012-2017	*Workshop Co-Chair*	IEEE ISCC Workshop on Management of Cloud and Smart City Systems (MoCS)
2014-2016	*Publicity Chair*	IEEE Reliable Networks Design and Modelling (RNDM) Workshop
2016	*Technical Program Co-Chair*	ACM International Symposium on QoS and Security for Wireless and Mobile Networks (Q2SWinet)
2016	*General Co-Chair*	IEEE International Workshop on Computer-Aided Modeling Analysis and Design of Communication Links and Networks (CAMAD)
2016	*Technical Program Co-Chair*	IEEE Int. Symposium on Computers and Communications (ISCC)
2016	*Technical Program Co-Chair*	The International Workshop on Big Data Analytics for Smart and Connected Health (BIGDATA4HEALTH)

Keynotes, Panel and Invited Talks:

Year	Type	Title	Event
2024	Invited Speaker	AI-Enabled Security and Safety of Critical Infrastructures for Beyond 5G	15th International Conference on ICT Convergence
2024	Distinguished Lecture	What's next for AI-Enabled Security / Safety of Critical Infrastructures? Beyond 5G and at the Dawn of 6G	IEEE Systems Council Online Distinguished Lecture
2024	Invited Speaker	AI-Driven Security of Connected and Autonomous Vehicles in Challenged Settings: B5G and at the dawn of 6G	Wireless World Research Forum (WWRF) Huddle 2024 Workshop on CAVs
2023	Panelist	"Machine Learning in Future Wireless Networks: A Major Revolution or a Small Evolution?"	IEEE Intl. Conf. on Advanced Networks and Telecommunications Systems (ANTS), Jaipur, India
2023	Panelist	"AI/ML-Enabled Connected Vehicles in the Era of 6G"	IEEE International Conference on Advanced Networks and Telecommunications Systems (ANTS), Jaipur, India, Dec. 2023

2022	Panelist	"AI/Machine Learning-Enabled (CAV) in the Era of 5G, 6G, and Beyond"	IEEE International Conference on Advanced Networks and Telecommunications Systems (ANTS), Gandhinagar, Guajarat, India, Dec. 2022
2022	Invited Speaker	"ML/DL-Backed Security and Safety of Cyber-Physical Systems and 5G-Enabled Critical Infrastructures"	BSides Ottawa, Nov.2022, Kanata, Ontario, Canada
2022	Invited Speaker	"On the Impact of CDL and TDL Augmentation for RF Fingerprinting under Impaired Channels"	48th Wireless World Research Forum-Connected Vehicles WG, Abu Dhabi, UAE., Nov 2022
2022	Invited Speaker	AI-enabled Autonomous Vehicles-driven Services for Secure, Sustainable and Healthy Communities	47th Wireless World Research Forum (WWRF) Workshop on 'Impact of 5G and Beyond on Connected and Autonomous Vehicles', Ottawa, ON, Canada May 2022
2022	Invited Speaker	"Trustworthiness and Security in IoT Sensing,"	IEEE Canada Technology Leadership Webinar Series XI, 11 January 2022
2021	Panelist	"IoT Security and Privacy in the 6G Era"	IEEE CPSCom Computer Society Young Professionals Meetup, 8 Dec 2021
2021	Invited Speaker	"Artificial Intelligence-Driven Security, Reliability and Dependability of Cyber-Physical System"	KFUPM Institute for Knowledge Exchange (KIKX) Seminar, 8 Dec. 2021
2021	Invited Speaker	"The Role of Artificial Intelligence in Dependable Cyber-physical Systems"	IEEE Computer Society Young Professionals Global Congress, 23 October 2021
2021	Distinguished Speaker	AI-Backed Security and Resilience for Cyber-Physical Systems	ACM Distinguished Speaker Lecture hosted by Ryerson University, 25 October 2021
2021	Panelist	"AI &Security for Smart Critical Infrastructures"	Kanata North, Ottawa. ON, 28 Sep. 2021
2021	Invited Speaker	"Accessible Transportation: Artificial Intelligence-Backed CAVs to Serve and Support Communities at Risk"	Transport Canada Invited Speaker Seminar Series

2021	Invited Speaker	"Adversarial Machine Learning-Driven Fake Task Anticipation in Mobile Crowdsensing Systems"	IEEE Congress on Intelligent and Service-Oriented Systems Engineering (CISOSE), Oxford, United Kingdom
2021	Invited Speaker	"Artificial Intelligence-Backed Security and Resilience for Cyber-Physical Systems"	Computer Science Seminar Series, Sheffield University, U.K
2021	Invited Speaker	"Exploring the Boundaries of Artificial Intelligence-Backed Vehicular Sensing"	Auto Sensors'21, Detroit MI, October 2021
2021	Keynote Speaker	"Machine Learning from Offensive and Defensive Standpoints for Trustworthy IoT Sensing"	Workshop on Wireless Intelligent Secure Trustable Things: bringing IoT and AI together in IEEE 7th World Forum on Internet of Things, June-July 2021
2021	Keynote Speaker	"AI-Backed Threat Modeling and Defense Strategies in IoT Sensing"	IEEE DCOSS - Workshop on Decentralized AI and Computing on IoT, June 2021
2021	Panelist	"Smart, Connected and Secure Communities via AI-Backed IoT Services"	IoT North, ThinkFest 3.0, May 2021.
2021	Distinguished Speaker	"Trustworthiness and Truthfulness Issues of Crowd-Sensed Data"	ACM Distinguished Speaker Lecture hosted by ACM Washington DC, Jan. 2021
2020	Panelist	"How CAVs will impact society?"	CAV20 Canada, Dec 2020
2020	Panelist	"The Role of AI-Driven ICT Strategies in Combating COVID-19 Pandemic"	COVID-19 Panel in IEEE International Workshop on Computer-Aided Design and Modeling of Communication Links and Networks (CAMAD), Oct 2020
2020	Invited Speaker	"On Coalitional and Non-Coalitional Games in the Design of User Incentives for Dependable Mobile Crowdsensing Services"	IEEE Service Oriented Systems Engineering Conference, 2020
2020	Distinguished Speaker	"Trustworthiness and Truthfulness Issues of Crowd-Sensed Data"	ACM Distinguished Speaker Lecture hosted by IEEE Kharagpur Section

2019	Invited Speaker	"Bridging AI and adversarial AI for secure non-dedicated sensing in smart spaces"	2nd Ottawa AI Alliance Workshop, Ottawa, ON, Canada
2019	Keynote Speaker	"AI-backed resiliency for "dedicated" and "non-dedicated" sensor networks against misbehaviour"	11th IEEE International Workshop on Resilient Networks Design and modeling (RNDM), Nicosia, Cyprus
2019	Panelist	"Cybersecurity, Industry Collaborations and Smart Cities"	uOttawa Innovates Series in Kanata North
2019	Distinguished Speaker	"Behavioral biometrics and continuous authentication"	ACM Distinguished Speaker Lecture hosted by Marmara University, Turkey
2020	Distinguished Speaker	"Trustworthiness and Truthfulness Issues of Crowd-Sensed Data"	ACM Distinguished Speaker Lecture hosted by Istanbul Technical University
2019	Distinguished Speaker	"Behavioral biometrics and continuous authentication"	ACM Distinguished Speaker Lecture hosted by Istanbul Technical University
2019	Invited Speaker	"Mobile Crowdsensing for Crowd Management in Disasters: Challenges, Solutions, Opportunities"	Resilient Communication Services Protecting Enduser Applications from Disaster-based Failures" (RECODIS)-European Project Meeting by European Cooperation of Science and Technology), Nicosia, Cyprus
2019	Panelist	"Disaster Resilience of Networks"	11th IEEE International Workshop on Resilient Networks Design and modeling (RNDM), Nicosia, Cyprus
2017	Invited Speaker	"Towards D-Health Solutions on IoT-Data Analytics Ecosystems"	NRC-NSERC-MOST Workshop on Medical Devices Enable by Internet of Things (IoT) Oct 2017, Ottawa, ON, Canada
2016	Invited Speaker	"IoT and Green ICT"	IEEE Talks IoT: IEEE IoT Initiative
2016	Invites Speaker	"Big Data and Green ICT"	IEEE Talks Big Data: IEEE Big Data Initiative

2015	Invited Speaker	"Green Networking and Data" (with Houbing Song and Periklis Chatzimisios)	1st IEEE Big Data Standards Workshop, NIST, Gaithersburg, MD, USA
2015	Invited Lecture	"Foundations, contemporary issues and methodologies in cloud communications"	Summer School, Istanbul Technical University
2014	Invited Speaker	"Energy efficient design of optical inter-datacenter networks" (with H. Mouftah)	56th Canadian Operations Research Society (CORS) Annual Conference, Ottawa, ON, Canada

Media Coverage [limited to past 8 years]

17 June 2024	"Multi-access edge computing accelerated in Kanata North," The Kanata Networker (Link)
01 April 2024	"uOttawa's Kanata North campus marks 5 years in Canada's largest tech park," Ottawa Business Journal (Link)
01 November 2023	"TRAVERSAL: A partnership-driven program to bridge talent gaps in the autonomous technology sector," Tech Talk 2023 (Link. Page: 16)
02 March 2022	uOttawa-Smart Connected Vehicles Innovation Center in "Canada's Innovation Achievements" in Canada's Innovation Leaders 2021, Page 13 (link-pdf) (link-html)
19 February 2022	Things Happen Podcast by AIoT-Canada and IoT-North, "Innovating Smart Connected Vehicles and Cities" (Link
29 October 2021	uOttawa Gazette, "Drones, bots and self-driving cars: How this new Kanata North innovation centre will help drive the future of autonomous vehicles" (Link-EN)(Link-FR)
27 September 2021	Ottawa Business Journal, "Creating 'water cooler moments' to drive connected car innovation in Kanata North" (Link)
18 December 2020	Ottawa Business Journal, "uOttawa Kanata North ramping up Smart Connected Vehicles Innovation Lab" (Link)
9 December 2020	CAV Canada 2020 Panel, "How CAVs will impact society" (Link)
24 June 2019	Ottawa Business Journal, "In search of safer cities, University of Ottawa researchers eye new uses for big data and vehicular crowd-sensing" (Link)
15 June 2016	IEEE Talks IoT Q&A (Link)
14 March 2016	IEEE Talks Big Data (Link)
11 March 2016	Daily Courier Observer, "CU Researchers Write 'Best Paper'"(Link)

h) RESEARCHERS and MS/PHD STUDENTS:

Visiting Scholar: 2, **Research Associates**: 4, **Postdoctoral Fellows**: 3,
PhD Students: 15, **Master's Students**: 40; **Bachelor's Students**: 21

Research Associates [4]

2023/06- Present Principal Supervisor	Mohammadreza Amini (In Progress), University of Ottawa Research Topic: Faster, Secure and more Robust 5G Networks for Critical Infrastructures
2022/01-Present Principal Supervisor	Michel Kulhandjian (In Progress), University of Ottawa Research Topic: AI-Driven Situational-Aware Security and Performance Assurance for 5G-Enabled Critical Infrastructures
2019/02-Present Principal Supervisor	Murat Simsek (In Progress), University of Ottawa Research Topic: Applied Machine Learning
2024/01-2024/04 Co-Supervisor	Binod Vaidya (completed), University of Ottawa Research Topic: ML/DL-based Security of Connected and Automated Vehicles

Postdoctoral Fellows [4]

2025/01 – Present Principal Supervisor	Nilesh Chakraborty (In Progress), University of Ottawa Research Topic: AI-Native Core Networks in 6G
2023/04- Present Principal Supervisor	Poonam Lohan (In Progress), University of Ottawa Research Topic: Secure and resilient 5G/6G-enabled mobile edge computing systems
2021/12-2022/12 Principal Supervisor	Omer Melih Gul (Completed), University of Ottawa Research Topic: Deep Learning Models for Transmitter Fingerprinting and Anomaly Detection Present Position: Assoc. Prof. Istanbul Technical University
2020/11-2022-10 Principal Supervisor	Tuerxun Wali (Completed), University of Ottawa Research Topic: Meta-information Extraction from Large-scale Streaming News for Entity-level Media Intelligence and Reporting Present Position: Software Eng, Gnowit

PhD Students [15]

2023/09- Present Principal Supervisor	Murat Arda Onsu (In Progress), University of Ottawa Thesis/Research Topic: DRL-based VNF Placement in 5G Core

2022/09-Present Principal Supervisor	Ghazal Asemian (In Progress), University of Ottawa Thesis/Research Topic: Machine Learning-driven Interference Mitigation and Geolocation Solutions for 5G-enabled mobile endpoints
2022/09-Present Co-Supervisor	Hanqing Zhou (In Progress), University of Ottawa Thesis/Research Topic: TBD on Large Language Models
2022/09-Present Principal Supervisor	Parisa Fard Moshiri (In Progress), University of Ottawa Thesis/Research Topic: AI-driven multi-access edge computing for 5G core
2021/09-Present Principal Supervisor	Samhita Kuili (In Progress), University of Ottawa Thesis/Project Title: AI/ML-assisted Anomaly Detection in Next Generation Wireless Networks
2021/09-2024/10 Principal Supervisor	Bin Xiao (Completed), University of Ottawa Thesis/Project Title: Semantic recognition on Table Images from Visually Rich Documents (Nominated for Thesis Prize)
2020/01-2024/09 Principal Supervisor	Ahmed Omara (Completed), University of Ottawa Thesis/Project Title: Optimized AI Detection Methods for Countering Adversarial Attacks Against Vehicle-to-Microgrid Services
2020/01-2025/03 Principal Supervisor	Didem Cicek (In Progress), University of Ottawa Thesis/Project Title: Novel Business Models and Optimal Decision Support Systems for Vehicle As a Service
2019/09-2023/11 Principal Supervisor	Zhiyan Chen (Completed), University of Ottawa Thesis/Project Title: Machine Learning-Based Decision Support to Secure Internet of Things Sensing* *Nominated for Thesis Prize* Present Position: Machine Learning Security Engineer, Fortinet
2019/09-2023/04 Principal Supervisor	Jinxin Liu (Completed), University of Ottawa Thesis/Project Title: Machine Learning-Enabled Security in Internet of Things and Cyber-Physical Systems* *Nominated for Thesis Prize* Present Position: Machine Learning Security Engineer, Huawei
2020/01-2022/04 Co-Supervisor (Principal Supervisor: M.Nogueira)	Andressa Vergutz (Completed), Federal University of Parana Thesis/Project Title: Network Data Science as a Support for the Performance and Security Dynamic Management in IoT Present Position: Co-Founder and CTO, Easy360
2017/09-2019/01 Unofficial Co-supervision	Riccardo Venanzi (Completed), University of Ferrara Thesis/Project Title: Smart and sustainable application-layer protocols for IoT and Fog environments [*unofficial co-supervision; student pursued research at uOttawa under my supervision*] Present Position Postdoctoral Fellow, University of Bologna

2017/08-2019-04 Co-Supervisor	Safa Otoum (Completed), University of Ottawa Thesis/Project Title: Machine Learning-driven Intrusion Detection Techniques in Critical Infrastructures Monitored by Sensor Networks Present Position: Asst. Professor, Zayed University
2015/08-2018-05 Principal Supervisor	Fazel Anjomshoa (Completed), Clarkson University Thesis/Project Title: Behavioral User Profiling and Energy Efficient Incentives in Mobile Crowd-sensing Present Position: Senior Research Data Scientist, Roku Inc.
2015/08-2018-08 Principal Supervisor	Maryam Pouryazdan (Completed), Clarkson University Thesis/Project Title: Effective incentives to maximize trustworthy participation in mobile crowd-sensing Present Position: Data Science Manager, Smart Technologies-Boston
2015/08-2018-08 Principal Supervisor	Maryam Pouryazdan (Completed), Clarkson University Thesis/Project Title: Effective incentives to maximize trustworthy participation in mobile crowd-sensing Present Position: Data Science Manager, Smart Technologies-Boston

⇨ **NEXT PAGE CONTINUES WITH MASTER'S STUDENTS**

Master Students [37]

| Thesis-Based Master (26) | Thesis Equivalent Master with a publication outcome (6) | Project-Based Master (8) |

2023/11-Present
Principal
Supervisor

Xinyu Zhu (In Progress), University of Ottawa
Thesis / Project title: Intelligent SFC Provisioning

2024/09-Present
Principal
Supervisor

Yueteng Zhang (In Progress), University of Ottawa
Thesis / Project Title: Metamorphic Testing for AV Safety

2024/09-Present
Principal
Supervisor

Arild Yonkeu Tchana (In Progress), University of Ottawa
Thesis / Project Title: Resilient Edge Learning in B5G Networks

2023/11-Present
Principal
Supervisor

Lansu Dai (In Progress), University of Ottawa
Thesis/Project Title: SOTIF and AV Safety

2023/6-Present
Principal
Supervisor

Xuli Cai (In Progress), University of Ottawa
Thesis/Project Title: AI-enabled positioning for UAV-aided communications

2023/6-Present Co-
Supervisor

Mahsa Paknejad (In Progress), University of Ottawa
Thesis / Project Title: AI-Driven Cybersecurity for Autonomous Vehicles

2021/9-Present
Principal
Supervisor

Oliver Benning (In Progress), University of Ottawa
Thesis/Project Title: Optimization of UAV-Base Station Services

2021/01-Present
Principal
Supervisor

Claire Zhang (In Progress), University of Ottawa
Thesis/Project Title: Framework for Bolstering the Safety of Autonomous Driving in Real-World Adverse Weather conditions via Deep Learning-Based Object Detection

2022/01-2023/08
Principal
Supervisor

Murat Arda Onsu (Completed), University of Ottawa
Thesis/Project Title: Malicious and Cooperative Client Behavior Under Federated Learning with Score-Based Aggregation and Cluster Elimination
Present Position: Ph.D student at University of Ottawa

2021/09-2023/05
Principal
Supervisor

Mohsen Shahbazi (Completed), University of Ottawa
Thesis/Project Title: AI-Enabled Planning and Control for Aeronautical Ad Hoc Networks
Present Position: Network Support, Cisco

2021/01-2022/01 Co-Supervisor	Cem Mumtaz Eris (Completed), Istanbul Technical University Thesis/Project Title: Network Quality of Service Assurance in Federated Learning Settings Present Position: Software Developer, Softtech
2020/1-2022/12 Principal Supervisor	Nahid Parvaresh (Completed), University of Ottawa Thesis/Project Title: Performance Enhancement of Aerial Base Stations via Reinforcement Learning-Based 3DPlacement Techniques Present Position: ML/NLP R&D, Advanced Symbolics Inc.
2020/01-2021/11 Principal Supervisor	Yuwei Wang (Completed), University of Ottawa Thesis/Project Title: Performance Improvement Schemes and Effective Incentives for Federated Learning Present Position: ML/DL Consultant
2020/01-2022/03 Principal Supervisor	Yakup Akkaya (Completed), University of Ottawa Thesis/Project Title: Tabular Information Extraction From Datasheets With Deep Learning for Semantic Modeling Present Position: Data Science Analyst, J. D. Power
2020/01-2022/07 Principal Supervisor	Yu Shen (Completed), University of Ottawa Thesis/Project Title: Machine Learning and Knowledge-Based Integrated Intrusion Detection Schemes Present Position: Jr. Photonics Network Engineer, Nokia
2019/09-2021/02 Principal Supervisor	JiChu Jiang (Completed), University of Ottawa Thesis/Project Title: High Precision Deep Learning-Based Tabular DataExtraction* *Nominated for Thesis Prize* Present Position: AI Specialist - Consultant, Canada Revenue Agency
2019/09-2022/03 Principal Supervisor	Johan Fernandes (Completed), University of Ottawa Thesis/Project Title: Real time intelligent solutions for identification of e-Component Data * *Nominated for Thesis Prize* Present Position: Data Scientist, Statistics Canada
2019/06-2021/06 Principal Supervisor	Nima Taherifard (Completed), University of Ottawa Thesis/Project Title: AI-assisted Anomalous Event Characterization for Connected Vehicles Present Position: Full Stack Developer, Beslogic AI
2020/08-2021/07 Unofficial Co-supervision	Mattia Campestri (Completed), University of Bologna Thesis/Project Title: Performance Improvement of D2D Random Access in 5G Communications [*unofficial co-supervision; student pursued research at uOttawa under my supervision*]
2018/09-2019-07 Principal Supervisor	Ertugrul Kara (Completed), University of Ottawa Thesis/Project Title: Deep Learning-Based Supply Chain Optimization for Electronic Components Present Position: Software Engineer II, Dropbox

2018/09-2019-12 Principal Supervisor	Yueqian Zhang (Completed), University of Ottawa Thesis/Project Title: Resource Clogging Attacks in Mobile Crowd-Sensing: AI-based Modeling, Detection and Mitigation Present Position: Machine Learning Engineer, Qualcomm
2018/09-2020-08 Principal Supervisor	Kyle Quintal (Completed), University of Ottawa Thesis/Project Title: Context-Awareness for Adversarial and Defensive Machine Learning Methods in Cybersecurity Present Position: Data Scientist, AedoAI
2017/11-2019/7 Principal Supervisor	Venkat Surya Dasari (Completed), University of Ottawa Thesis/Project Title: : Task Selective and Comfort-Aware User Recruitment with Incentives in Mobile Crowd-Sensing
2017/11-2019/12 Principal Supervisor	Ahmed Omara (Completed), University of Ottawa Thesis/Project Title: Predictive Operational Strategies for Smart Microgrid Networks Present Position: Machine Learning Eng., Department of National Defence
2017/09-2018/08 Principal Supervisor	Cem Kaptan (Completed), University of Ottawa Thesis/Project Title: Data Analytics-backed Vehicular Crowd-sensing for GPS-less Tracking in Public Transportation* *Nominated for Thesis Prize* Present Position: Software Engineer, Workday
2016/07-2018/04 Principal Supervisor	Zachary Rauen (Completed), Clarkson University Thesis/Project Title: Improving the role of Human-Computer Interaction in Continuous User Verification in Smartphone Sensing Present Position: Firmware/Security Team member, IBM
2024/04-Present Principal Supervisor	Mohammed Sufiyan Ali Banaganapalle Thesis/Project Title: Digital Twins for Autonomous Vehicles
2023/09-2024/04 Principal Supervisor	Vikas Gogia Thesis/Project Title: AI-based Mobile Edge Computing: Task Scheduling and Offloading
2023/10-2023/12 Principal Supervisor	Omkar Pramod Harkare (In Progress), University of Ottawa Thesis/Project Title: Testing and verification of edge computing interfaces
2023/09-2023/12 Principal Supervisor	Garvit Karyal (Completed), University of Ottawa Thesis/Project Title: Reinforcement Learning-based trajectory forming for QCar in Autonomous Vehicle Research Studio

2023/07-2024/02 Principal Supervisor	Eshan Goel (Completed), University of Ottawa Thesis/Project Title: Edge computing as a service
2023/05-2023/09 Principal Supervisor	Harshit Kumawat (Completed), University of Ottawa Thesis/Project Title: Lane detection for QCar in Autonomous Vehicle Research Studio
2023/05-2023/09 Principal Supervisor	Himakar Maddipati (Completed), University of Ottawa Thesis/Project Title: Steering Correction for QCar in Autonomous Vehicle Research Studio
2022/09-2023/06 Principal Supervisor	Pankti Shah (Completed), University of Ottawa Thesis/Project Title: Real-Time Binary Cell Phone Usage Detection and Classification Using Edge Computing Present Position: AI Consultant, LemayAI
2020/09-2021/06 Principal Supervisor	Halil Deniz (Completed), University of Ottawa Thesis/Project Title: Real-Time Binary Cell Phone Usage Detection and Classification Using Edge Computing Thesis/Project Title: On Delay Sensitivity Clusters of Microgrid Data Aggregation Under LTE-A Links Present Position: : Senior Systems Engineer, IC360 Solutions
2019/09-2020/12 Principal Supervisor	Sedevizo Kielienyu (Completed), University of Ottawa Thesis/Project Title: Bridging Predictive Analytics and Mobile Crowdsensing for Future Risk Maps of Communities against COVID-19 Present Position: Data Scientist, Coastal Resource Mapping
2018/06-2019-06 Principal Supervisor	Ankkita Sood (Completed), University of Ottawa Thesis/Project Title: Deep Learning-based detection of malicious tasks/campaigns in mobile crowdsensing Present Position: Data Scientist, Coastal Resource Mapping
2017/09-2018/06 Principal Supervisor	Damanpreet Singh (Completed), University of Ottawa Thesis/Project Title: Empowering Elastic MapReduce to improve Demographic based Analytics Present Position: Technical Program Manager, Amazon Web Services
2017/09-2018-05 Principal Supervisor	Wendong Yuan (Completed) Thesis/Project Title: Machine Learning-Driven Aggregation of Microgrid Data and Integration of Heterogeneous Wireless Network Present Position: Software Engineer, Fortinet
2017/09-2018-05 Principal Supervisor	George Patrick Xavier (Completed) Thesis/Project Title: Mobility –Aware Virtual Network Function Placement on Edge Clouds Under Internet of Things Environment Present Position: Site Reliability Engineer-Cloud Services, Kinaxis

i) **GRADUATE COURSES**: [limited to past 8 years]

ELG7199 Directed Study: "Intelligent Connected and Automated Vehicles"	University of Ottawa	Summer 2024
ELG5142 Ubiquitous Sensing for Smart Cities	University of Ottawa	Winter 2021, Summer 2021, Summer 2022
ELG5255 Applied Machine Learning	University of Ottawa	Fall 2020
CSI5140 Selected Topics in Computer Systems:	University of Ottawa	Fall 2018, Fall
ELG7199: Directed Study: Security in Wired	University of Ottawa	Winter 2020
CSI5901/ELG7199: Directed Studies: Big Data Applications in Wireless Networks	University of Ottawa	Winter 2018, Winter 2019, Winter 2020
CSI5140: Selected Topics in Computer Systems (Information and Communication systems for Smart cities)	University of Ottawa	Fall 2017
EE512 Cloud Systems and Networks	Clarkson University	Spring 2015, Spring 2016

⇨ **NEXT PAGE CONTINUES WITH EXTERNAL RESEARCH FUNDING**

j) EXTERNAL RESEARCH FUNDING:

(Main PI in the funding unless stated otherwise)
*Type: C-Granting councils; G-Government; F-Foundations; O-Other
** Purpose: research, travel, publication, etc.

Total Research Funding over the last 8 years $9.5M ($9M+ as PI)

Year	Source	Type*	Amount	Purpose**	Title
2025	Mitacs Accelerate	C	$135,000	Research, Training	Integration of Generative AI into AI-native services in next generation networks
2024	Ontario Research Fund-Research Excellence (ORF-RE)	C	$999,985 for **2024-2028**	Research, Training	SITE-CAV: Secure, Intelligent and Trustworthy Ecosystems for Connected and Autonomous Vehicles (SITE-CAV)
2024	Mitacs Accelerate	C	$90,000 for **2024-2025**	Research, Training	Machine Learning-Driven Decision Support for Autonomous Services in Airport Operations
2024	Mitacs Accelerate	C	$176,000 **for 2024-25**	Research, Training	Traffic Estimation and Stable Resource Allocation Using Distributed Machine Learning
2024	Mitacs Accelerate	C	$90,000 for **2024-2025**	Research, Training	Improving Safety of The Intended Functionality (SOTIF) Analysis for Autonomous Vehicles

2024	NSERC Discovery	C	$230,000 for **2024-2029**	Research, Training	Building Reliable and Secure Networks Driven by the Frontiers of Artificial Intelligence for Smart and Connected Critical Infrastructures
2023	NSERC CREATE	C	$1,650,000 for **2023-2029**	Research, Training	Training and Research in Autonomous Vehicles for Reliable Services in the Air and on Land (TRAVERSAL)
2023	UTFORSK-Norway	O	$400,000 for **2023-2026**	Training, Research	Elevating the Quality of Education in ICT towards 2030 through Multilateral Collaborations (EQEI)
2022	NSERC-Mitacs Alliance-Accelerate	C	$135,000 for **2022-2025**	Research	Intelligent Strategies for Optimal Virtual Network Function Placement in 5G Core
2022	Department of National Defence –IDEaS	G	$1,495,062 for **2022-2025**	Research	AI-Driven Situational-Aware Security and Performance Assurance for 5G-Enabled Critical Infrastructures
2022	Department of National Defence –IDEaS	G	$1,488,375 for **2022-2025**	Research	Autonomous, Reliable, Scalable and Secure Resource Management in Multi-level 5G edge
2022	Ontario Centre for Innovation (OCI)	C	$156,666 for **two years**	Research	Deep Learning-Driven Integrated driver distraction detection system from multi-modal vehicular sensor data
2022	Mitacs	C	$40,000	Research	Food and Beverage Golf Course Drone Delivery
2022	Mitacs	C	$30,000	Research	An End User-Centric Study of Autonomous Technology Adoption in Controlled Environments
2022	NSERC	C	$25,000	Research	Mobile social network analytics and mobile edge solutions for trustworthy and reliable urban sensing (1-yr ECR extension for Discovery)
2021 (Sept)	Transport Canada	G	$39,750 [Co-PI]	Research	Canadians D-AIRing to Travel: Air Travel and Passengers Living with Dementia

2021 (June)	NSERC-OCI VIP Alliance	C	$75,000	Research	Security by Design via Radio Fingerprinting for Autonomous Vehicle (AV) Network
2021	Mitacs Accelerate	C	$225,000 over **two years** [Co-PI. Share: 50%]	Research	Machine Learning-Enhanced Anomaly Detection and Performance Optimization for Enterprise WiFi Networks
2021	NSERC	C	$25,000	Research	Mobile social network analytics and mobile edge solutions for trustworthy and reliable urban sensing
2020	NSERC	C	$25,000	Research	Mobile social network analytics and mobile edge solutions for trustworthy and reliable urban sensing
2020	Canada Foundation for Innovation John Evans Leaders' Fund	F	$650,573 over **three years**	Infrastructure	AI-Backed Internet of Vehicles Laboratory: An Open Access Innovation Facility
2020	NSERC Alliance	C	$50,000	Research	Artificial Intelligence-Based Decision Support System for COVID-19 Mobile Assessments and Optimal Supply Services During the Pandemic
2020	Mitacs Research Training Award [to my student O. Benning]	C	$6,000	Research	Federated learning-based spatiotemporal risk modeling for epidemic diseases and COVID-19
2020	Ontario Centres of Excellence (OCE) - 5G ENCQOR Program	C	$150,000 for **two years**	Research	Machine Learning-based Firewall-less Security Automation for the Network Edge
2020	Mitacs Elevate	C	$120,000 for **two years**	Research	Meta-information Extraction from Large-scale Streaming News for Entity-level Media Intelligence and Reporting
2020	SOSCIP	O	$215,650 (leveraged funds for two years)	Infrastructure	Deep Learning for PDF Table Extraction for Electronic Component Supply Chain Digital Twins

2019	Mitacs Accelerate	C	$270,000 over **three years**	Research	AI-Based Automated Methodologies for Supply Chains: High Precision Tabular Detection and Semantic Modeling of Electronic Components from Datasheets
2019	Ontario Centres of Excellence – AVIN TIP	C	$40,000 ($30,000 in-cash, $10,000 in-kind)	Research	Vehicular Sensor Fusion for Detection and Characterization of Significant Events
2019	NSERC	C	$25,000	Research	Mobile social network analytics and mobile edge solutions for trustworthy and reliable urban sensing
2021 2020 2019	NSF-U.S. Ignite (Subcontract), co-PI	C	$164,908	Research	An Integrated Reconfigurable Control and Self-Organizing Communication Framework for Advanced Community Resilience Microgrids
2019	Ontario Centres of Excellence (OCE), Voucher for Innovation and Productivity I, PI	C	$39,999	Research	Fine-grained continuous authentication accounting for multiple risk context factors
2018	Ontario Centres of Excellence (OCE), Voucher for Innovation and Productivity I, PI	C	$39,983	Research	Semantic Modelling and Machine Learning Analysis of a Billion+ Electronic Components Products to Support Supply Chain Optimization
2018	NSERC ENGAGE	C	$25,000	Research	Semantic Modelling and Machine Learning Analysis of a Billion+ Electronic Components Products to Support Supply Chain Optimization
2018	NSERC	C	$25,000	Research	Mobile social network analytics and mobile edge solutions for trustworthy and reliable urban sensing
2018 2017	NSF-U.S. Ignite (Subcontract), co-PI	C	$100,000	Research	An Integrated Reconfigurable Control and Self-Organizing Communication Framework for Advanced Community Resilience Microgrids

2017	NSERC	C	$25,000	Research	Mobile social network analytics and mobile edge solutions for trustworthy and reliable urban sensing
2016 2015	Qualcomm (U.S.A)	O	$24,000	Infrastr.	Wireless Internet of Things Lab – Phase I and Phase II
2018 2017 2016 2015	U.S. National Science Foundation	C	$177,000	Research	Energy efficient participatory data collection and Context-Aware Incentives for Trustworthy Crowdsensing via Mobile Social Networks
2017 2016 2015	U.S. National Science Foundation	C	$48,000	Research	Context-aware Anomaly Detection in Internet of Biometric Things

INTERNAL RESEARCH FUNDING:

University Research Chair: $175,000 2024-2029 (industrial/partnered stream)
Learning Future's Fund: "Digital Learning Experience for Understanding How to Develop Projects Regarding Internet of Vehicles", $15,000, 2023
Academic Leader Stipend, $7,500, 2022
Academic Leader Stipend, $15,000, 2021
Academic Leader Stipend, $15,000, 2020
VRP- OVPR, $6,000 *Empowering Smart Mobile Devices for Real-time Health Analytics*, 2018
Startup Grant, Clarkson University, $330,000 USD, 2014-2016
Startup Grant, University of Ottawa, $15,000, 2016

k) PUBLICATIONS

Life-time summary (count) according to the following categories:

BOOKS EDITED (last 8 years)

B03. A. El Saddik, S. Hossain, B. Kantarci, " Connected Health in Smart Cities", Springer, , ISBN 978-3-030-27844-1, 2020, DOI: 10.1007/978-3-030-27844-1

B02. B. Kantarci and S. Oktug, "Wireless Sensor and Actuator Networks for Smart Cities, MDPI JSAN, ISBN 978-3-03897-423-9, (paperback); ISBN 978-3-03897-424-6 (PDF), Dec. 2018. DOI: 10.3390/books978-3-03897-424-6

B01. H. T. Mouftah and B. Kantarci, "Communication Infrastructures for Cloud Computing", IGI Global, Hershey, Pennsylvania, USA, September 2013, ISBN13: 9781466645226, DOI:10.4018/978-1-4666-4522-6

REFEREED BOOK CHAPTERS (last 8 years)

BC15. D. Cicek, M. Simsek, B. Kantarci, "AI-Driven Attack Modeling and Defense Strategies in Mobile Crowdsensing: A Special Case Study on Fake Tasks," In: Wu, J., Wang, E. (eds) Mobile Crowdsourcing. Wireless Networks. Springer, Cham, April 2023. DOI: 10.1007/978-3-031-32397-3_11

BC14. C. Comert, O. M. Gul, M. Kulhandjian, A. Touazi, C. Ellement, B. Kantarci, C. D'Amours, "Secure Design of Cyber-Physical Systems at the Radio Frequency Level: Machine and Deep Learning-Driven Approaches, Challenges and Opportunities," In: Traore, I., Woungang, I., Saad, S. (eds) Artificial Intelligence for Cyber-Physical Systems Hardening. Engineering Cyber-Physical Systems and Critical Infrastructures, vol 2. Springer, Cham, 2023 DOI: 10.1007/978-3-031-16237-4_6

BC13. M. Simsek, A. Obinikpo, B. Kantarci, "Deep Learning in Smart Health: Methodologies, Applications, Challenges. A. ElSaddik, Hossain S, Kantarci B. Connected Health in Smart Cities, Springer, 2020. DOI: 10.1007/978-3-030-27844-1_3

BC12. X. Qi, B. Kantarci, C. Liu, "GPU-based acceleration of SDN controllers," Network-as-a-Service in Next Generation Internet, edited by. Q. Duan and S. Wang, IET, Chapter-14, 2017. DOI: 10.1049/PBTE073E_ch14

BC11. M. Soyturk, K. N. Muhammad, M. N. Avcil, B. Kantarci, J. Matthews, "From Vehicular Networks to Vehicular Clouds in Smart Cities," Smart Cities and Homes, edited by. P. Nicopoliditis and M. Obaidat, Morgan Kaufmann, pp. 149-171, 2016. DOI: 10.1016/B978-0-12-803454-5.00008-0

BC10 B. Kantarci, H. T. Mouftah, "Sensing as a Service in Cloud-Centric Internet of Things Architecture," Enabling Real-Time Mobile Cloud Computing through Emerging Technologies, edited by T. Soyata, IGI Global, Hershey, PA, pp. 83-115, 2015. DOI: 10.4018/978-1-4666-8662-5.ch003

BC09 A. Page, M. Hassanalieragh, T. Soyata, M. K. Aktas, B. Kantarci, S. Andreescu, "Conceptualizing a Real-time Remote Cardiac Health Monitoring System," in Enabling Real-Time Mobile Cloud Computing through Emerging Technologies, ed. T. Soyata, IGI Global, Hershey, PA, pp. 1-34, 2015. DOI: 10.4018/978-1-5225-0571-6.ch007

BC08 B. Kantarci and H. T. Mouftah, "Inter-data center networks with minimum operational costs," Cloud Services, Networking, and Management, edited by N. Fonseca and R. Boutaba, Wiley-IEEE Press, pp. 105-128, April 2015. DOI: 10.1002/9781119042655.ch5

BC07 B. Kantarci and H. T. Mouftah, "Energy-Efficient Machine-to-Machine Networks," in "Machine-To-Machine Communications: Architectures, Technology, Standards and Applications", edited by, J. Misic and V. Misic, Taylor & Francis, NY, ISBN: 978-1-46-656123-6, pp. 179-225, March 2014. DOI: 10.1201/b17141-11

BC06 B. Kantarci and H. T. Mouftah, "Energy-efficiency in Cloud Data Centers," in "Communication Infrastructures for Cloud Computing," edited by H. T. Mouftah and B. Kantarci, IGI Global, Hershey, PA, pp. 241-263, Sep. 2013. DOI: 10.4018/978-1-4666-4522-6.ch011

BC05 D. Tafani, B. Kantarci, H. T. Mouftah, C. McArdle, L. P. Barry, "Towards Energy-Efficiency for Cloud Computing Services," in "Communication Infrastructures for Cloud Computing," edited by H. T. Mouftah and B. Kantarci, IGI Global, Hershey, PA, pp. 306-328, Sep. 2013. DOI: 10.4018/978-1-4666-4522-6.ch014

BC04. B. Kantarci and H. T. Mouftah, "Energy-efficient Design of a Cloud Computing Backbone," in "Communication Infrastructures for Cloud Computing," edited by H. T. Mouftah and B. Kantarci, IGI Global, Hershey, PA, pp. 283-305, Sep. 2013. DOI: 10.4018/978-1-4666-6539-2.ch012

BC03. H. T. Mouftah and B. Kantarci, "Energy-efficient Cloud Computing: A green migration of the traditional IT", in "Handbook on Green Information and Communication Systems", edited by M. S. Obaidat, A. Anpalagan and I. Woungang, Elsevier, 2012, pp.295-330.

BC02. H. T. Mouftah and B. Kantarci, "Greening the Survivable Optical Networks: Solutions and Challenges for the Backbone and Access", "Energy-Aware Systems and Networking for Sustainable Initiatives", edited by W.C. Hu and N. Kaabouch, PA: IGI Global, 2012, pp. 256-286. DOI:10.4018/978-1-4666-1842-8.ch012

BC01. H. T. Mouftah and B. Kantarci, "Robust Design and Management of Optical Networks: Incorporating Availability-Awareness", in Resilient Optical Network Design: Advances in Fault-Tolerant Methodologies, edited by Y. S. Kavian and M. S. Leeson, PA: IGI Global, pp. 195-226, Dec. 2011. DOI: 10.4018/978-1-61350-426-0.ch009

REFEREED JOURNAL ARTICLES

J122. G. Asemian, M. Amini, B. Kantarci, "Active RIS-NOMA Uplink in URLLC, Jamming Mitigation via Surrogate and Deep Learning," IEEE Open Journal of the Communications Society, 2025 (accepted). DOI: 10.1109/OJCOMS.2025.3526759

J121. M. Amini, G. Asemian, B. Kantarci, C. Ellement, M. Erol-Kantarci, "Deep Fusion Intelligence: Enhancing 5G Security Against Over-the-Air Attacks," IEEE Transactions on Machine Learning in Communications and Networking, 2025 (Accepted), DOI: 10.1109/TMLCN.2025.3533427

J120. P. F. Moshiri, M. Simsek, B. Kantarci, "Joint Optimization of Completion Ratio and Latency of Offloaded Tasks with Multiple Priority Levels in 5G Edge," IEEE Transactions on Network and Service Management, 2025 (accepted). DOI: 10.1109/TNSM.2024.3525004,

J119. B. Xiao, B. Kantarci, J. Kang, D. Niyato, M. Guizani, "Efficient Prompting for LLM-Based Generative Internet of Things," IEEE Internet of Things Journal, vol. 12, issue 1, pp. 778--791, January 2025. DOI: 10.1109/JIOT.2024.3470210

J118. H. Zhou, D. Inkpen, B. Kantarci, "Evaluating and Mitigating Gender Bias in Generative Large Language Models," Intl. J. Computers, Communications and Control, vol. 19/6, p. 1-18, Dec. 2024, DOI: 10.15837/ijccc.2024.6.6853

J117. O. Friha, M. Ferrag, B. Kantarci, B. Cakmak, A. Ozgun, N. Ghoualmi-Zine, "LLM-based Edge Intelligence: A Comprehensive Survey on Architectures, Applications, Security and Trustworthiness," IEEE Open Journal of the Communications Society, pp. 5799 – 5856, Sep. 2024, DOI: 10.1109/OJCOMS.2024.3456549 (3rd Most Popular Article of the journal, Oct. 2024)

J116. P. Lohan, B. Kantarci, M. Ferrag, N. Tihanyi, Y. Shi, "From 5G to 6G Networks, a Survey on AI-Based Jamming and Interference Detection and Mitigation," IEEE Open Journal of the Communications Society, pp. 3920 – 3974, 2024, DOI: 10.1109/OJCOMS.2024.3416808.

J115. A. Omara, B. Kantarci, "An AI-Driven Solution to Prevent Adversarial Attacks on Mobile Vehicle-to-Microgrid services," Elsevier Simulation Modelling Practice and Theory, vol. 137, p. 103016, Dec. 2024, DOI: 10.1016/j.simpat.2024.103016

J114. G. Asemian, M. Kulhandjian, M. Amini, B. Kantarci, C. D'Amours, M. Erol-Kantarci, "The Impact of Mobility, Beam Sweeping and Smart Jammers on Security Vulnerabilities of 5G Cells," Wireless World: Research and Trends (River Publishers), vol. 1/2, pp. 71--78, Dec. 2024. DOI: 10.13052/2794-7254.009

J113. Z. Chen, M. Simsek, B. Kantarci, M. Bagheri, P. Djukic, "Machine Learning-Enabled Hybrid Intrusion Detection System with Host Data Transformation and an Advanced Two-Stage Classifier ," Elsevier Computer Networks, vol. 250, p. 110576, August 2024 DOI: 10.1016/j.comnet.2024.110576

J112. M. A. Onsu, P. Lohan, B. Kantarci, E. Janulewicz, S. Slobodrian, "Unlocking Reconfigurability for Deep Reinforcement Learning in SFC Provisioning," IEEE Networking Letters, vol. 6, issue, 3, 193—197, Sep. 2024 DOI: 10.1109/LNET.2024.3400764

J111. M. N. Avcil, M. Soyturk, B. Kantarci, "Fair and Efficient Resource Allocation via Vehicle-Edge Cooperation in 5G-V2X Networks," Elsevier Vehicular Communications, vol. 48, p.100773, August 2024. DOI: 10.1016/j.vehcom.2024.100773

J110. O. M. Gul, A. M. Erkmen, B. Kantarci "NTN-aided Quality and Energy-aware Data Collection in Time-critical Robotic Wireless Sensor Networks", IEEE Internet of Things Magazine, vol. 7, issue 3, pp. 114—120, May 2024. DOI: 10.1109/IOTM.001.2300200

J109. M. Simsek, A. Boukerche, B. Kantarci, M. Hancer, R. Bitirgen, I. Bayezit, "Dynamic Artificial Neural Network-Assisted GPS-less Navigation for IoT-Enabled Drones," IEEE Internet of Things Magazine, vol. 7, issue 3, pp. 92—99, May 2024. DOI: 10.1109/IOTM.001.2200276

J108. B. Zhang, M. Simsek, M. Kulhandjian, B. Kantarci, "Enhancing the Safety of Autonomous vehicles in Adverse Weather by Deep Learning-Based Object Detection," Electronics, May 2024. DOI: 10.3390/electronics13091765

J107. P. E. Iturria-Rivera, M. Chenier, B. Herscovici, B. Kantarci, M. Erol-Kantarci, "Cooperate or not Cooperate: Transfer Learning with Multi-Armed Bandit for Spatial Reuse in Wi-Fi," IEEE

Transactions on Machine Learning in Communications and Networking, vol.2 , pp. 351—369, Feb 2024. DOI: 10.1109/TMLCN.2024.3371929

J106. S. Kuili, K. Dabbour, I. Hasan, A.Hersovich, B. Kantarci, M. Chenier, M. Erol-Kantarci, "Adversarial Machine Learning-Enabled Anonymization of OpenWiFi Data", Wireless World: Research and Trends (River Publishers), vol. 1, issue 1, pp. 33—42, March 2024, DOI: 10.13052/2794-7254.005.

J105. O. M. Gul, M. Kulhandjian, B. Kantarci, A. Touazi, C. Ellement, C. D'Amours, "The Impact of CDL and TDL Augmentation for RF Fingerprinting under Impaired Channels," Wireless World: Research Trends, vol. 1, issue 1, pp. 43—52, March 2024, DOI: 10.13052/2794-7254.006.

J104. M. A. Ferrag, O. Friha, B. Kantarci, N. Tihanyi, L. Cordeiro, M. Debbah, D. Hamouda, M. Al-Hawawreh, K-K. Raymond Choo, "Edge Learning for 6G-enabled Internet of Things: A Comprehensive Survey of Vulnerabilities, Datasets, and Defenses," IEEE Communications Surveys and Tutorials, vol 25/4, pp. 2654 – 2713, Fourth Quarter 2023, DOI: 10.1109/COMST.2023.3317242

J103. B. Xiao, M. Simsek, B. Kantarci, A. A. Alkheir, "Table Detection for Visually Rich Document Images," Elsevier Knowledge-Based Systems, vol. 282, p.11080, Dec. 2023. DOI: 10.1016/j.knosys.2023.111080.

J102. M. A. Onsu, B. Kantarci, A. Boukerche, "How to cope with malicious federated learning clients: An unsupervised learning-based approach," in Elsevier Computer Networks, vol. 234, p. 109938, October 2023. . DOI: 10.1016/j.comnet.2023.109938

J101. P. E. Iturria-Rivera, M. Chenier, B. Herscovici, B. Kantarci and M. Erol-Kantarci, "Meta-Bandit: Spatial Reuse Adaptation via Meta-Learning in Distributed Wi-Fi 802.11ax," in IEEE Networking Letters, DOI: 10.1109/LNET.2023.3268648.

J100. Johan Fernandes, Bin Xiao, Murat Simsek, Burak Kantarci, Shahzad Khan, PhD, Ala Abu Alkheir , TableStrRec: framework for table structure recognition in data sheet images . Springer International Journal on Document Analysis and Recognition (IJDAR), September 2023. DOI: 10.1007/s10032-023-00453-8

J99. O. M. Gul, M. Kulhandjian, B. Kantarci, A. Touazi, C. Ellement, C. D'Amours "Secure Industrial IoT Systems via RF Fingerprinting under Impaired Channels with Interference and Noise," IEEE Access, vol. 11, pp. 26289-26307, 2023. DOI: 10.1109/ACCESS.2023.3257266

J98. M. Shahbazi, M. Simsek, B. Kantarci, "AI-enabled cluster head selection through modified density based clustering in Aeronautical Ad Hoc Networks," Elsevier Ad Hoc Networks, vol. 148, p. 103209, Sep. 2023. DOI: 10.1016/j.adhoc.2023.103209

J97. N. Parvaresh and B. Kantarci "A continuous actor-critic deep Q-learning-enabled deployment of UAV base stations: Toward 6G small cells in the skies of smart cities," IEEE Open Journal of the Communications Society, vol. 4, pp. 700-712, 2023. DOI: 10.1109/OJCOMS.2023.3251297

J96. D. Cicek and B. Kantarci "Use of Mobile Crowdsensing in Disaster Management: A Systematic Review, Challenges, and Open Issues," Sensors, 23(3):1699, Jan 2023. DOI: 10.3390/s23031699

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