

Dr. Khawla A. Alnajjar

Associate Professor & Director of
the Academic Emiratization Office
Dept. of Electrical Engineering
University of Sharjah, W9-214
University City, Sharjah, UAE.

Phone: +971-6-50503978.
Email: kalnajjar@sharjah.ac.ae

Nationality: UAE

Research Profile:

University of Sharjah: <http://www.sharjah.ac.ae/en/academics/Colleges/eng/dept/ecep/Pages>

Google Sites: <https://sites.google.com/site/khawlaalnajjar/>

Google Scholar:

http://scholar.google.com/citations?user=uZvz_esAAAAJ&hl=en

Scopus ID:

<https://www.scopus.com/authid/detail.uri?authorId=54894294500>

Research Gate:

https://www.researchgate.net/profile/Khawla_Alnajjar

ORCID number: 0000 – 0002 – 4218 – 9687

Education

Jun 2015. **Ph.D.** in Electrical and Electronic Engineering,
University of Canterbury, New Zealand.
Dissertation: *Receiver Design for Massive MIMO*.
Advisor: Prof. Peter J. Smith.
Co-advisor: Dr. Graeme K. Woodward.
Thesis Examiners Committee: Dr. Michal Maithaiou and Dr. Kevin W Sowerby.
Oral Examination Chair: Prof. Maan Alkaisi.

Feb 2013 **P.D.** in Electrical Engineering.
Columbia University in the City of New York, USA.
Supervisors: Prof. Xiaodong Wang
and Prof. Richard W. Longman.

Feb 2011 **MSc** in Electrical Engineering.
Columbia University in the City of New York, USA.
Supervisor: Prof. Xiaodong Wang.

Jan 2008 **BSc** in Electrical Engineering, Communication Engineering track.
United Arab Emirates University, Al Ain, UAE.
Senior Thesis Advisor: Dr. Mohammed Abdel Hafez.

Work Experience

Feb 2025 - current	Director of the Academic Emiratization office, University of Sharjah, Sharjah, UAE.
Feb 2025 - current	Director and Dean of the National Scientist Program, University of Sharjah, Sharjah, UAE.
March 2024 - current	Associate Professor, Dept. of Electrical Engineering, University of Sharjah, Sharjah, UAE.
Sept. 2016 - March 2024	Assistant Professor, Dept. of Electrical Engineering, University of Sharjah, Sharjah, UAE.
Sept. 2015 - Aug. 2016	Visiting academic (Assistant Prof.), Dept. of Electrical and Computer Engineering, University of Sharjah, Sharjah, UAE.
Nov. 2014	Visiting Scholar, Macquarie University, Sydney, Australia, Project: <i>Array design for massive MIMO</i> .
May 2012 - Aug. 2012	Internship at Wireless Research Center, University of Canterbury Christchurch, New Zealand, Project: <i>LTE Interference Management using MIMO and SISO</i> .
Feb. 2012 - May 2012	LMT Arabic Tutorials, Columbia University, New York, US.
Aug. 2010 – Dec. 2012	Lab Assistant and Grader, Columbia University, New York, US, <i>Signal and Systems, Commun. Theory, and MIMO Wireless Commun.</i>
Jun 2011 - April 2012	Internship at AT&T Shannon lab, New Jersey, US, Project: <i>Interference Alignment</i> .
May 2010 - Aug. 2010	Internship at Total, Pau, France, Project: <i>Optimization Green Energy</i> .
Jan. 2009 Jan. 2013	National TA, United Arab Emirates University, Al Ain, UAE.
Jan. 2008 Aug. 2008	Academic Assistant, United Arab Emirates University, Al Ain, UAE,

Professional Experience at University of Sharjah (UoS)

Courses taught at UoS (Sept. 2015-present):

- 0402540: Digital Communication System (**Graduate Level**).
- 0402543: Information Theory (**Graduate Level**).
- 0402540: Communication System Engineering (**Graduate Level**).
- 0402441: Information Theory and Coding (**Undergraduate Elective**).
- 0402462: Special Topics in Communications (**Undergraduate Elective**).
- 0402444: Digital Signal Processing (**Undergraduate Elective**)
- 0402346: Telecommunication Systems I
- 04023471: Telecommunication Systems I Lab
- 0402343: Random Signal & Systems.
- 0402241: Random Signal Theory.
- 0402240: Signals and Systems.
- 0402341: Multimedia Technology Lab.
- 0402340: Engineering Computer and Linear Algebra.
- 0402348: Signals & Control Systems
- 0402493: Senior Seminar in Electrical and Electronics Engineering.
- 0403300: Professional & Social Issues in Engineering.

Selected Administrative Experience at UoS

– Member of Academic and Research Committee under the National scientists Program Council	2025-current.
– Member of University Council named the National Scientists Program	2025-current.
– Director of the Academic Emiratization Office	2025-current
– Student Affairs and Club Advisor Committee, EE Department,	2023-current.
– Coordinator in Media, Outreach and Publicity, Community, EE Department,	2023-current.
– Women in Research Jury Committee,	2022-current.
– Supervisor for Study Abroad Students for the Engineering, Sciences, and Computing & Informatics	2022- 2024.
– Coordinator of DNS research group,	2022- 2023.
– CAA Accreditation Committee, EE Department,	2021-2024.
– Women in Research Organizing Committee,	2021-2022.
– Women in Research Committee,	2020-2021.
– Media Committee, COE Department,	2019-current.
– Social Affairs Committee, COE,	2019-2020.
– Innovation Committee, EE Department,	2019-current.
– New Program Committee, COE & COCI	2019-2020.
– Achievement & Publicity, Community Service, and Exhibitions Committee, EE Department,	2017-2023.
– Liaison officer for in Peer Education Program for CoE,	2017- 2023.
– Engineering Innovation and Entrepreneurship Committee, CoE,	2017-2020.
– Graduate Research & Research Committee, EE Department,	2017-2019.
– Student Disciplinary Committee, CoE,	2017-2019.
– Coordinator of Innovation and Entrepreneurship Course,	2017 - 2018.
– Student Activities Committee (IEEE-WIE), EE Department,	2015-2023.
– Chair and examiner of Senior Design Projects, EE Department,	2015-current.
– Specialty group of communications and applied EM, EE Department,	2015-current.
– Specialty group of signals and image processing, EE Department,	2015-current.

Selected Funded Research Projects at UoS

- Competitive Grant project ‘Optimizing 3D Networking: UAV-Enhanced Air-Ground Integrated Sensing and Communication.’ No. 25020403357, May. 2025 – current, Amount: AED 96,000.
- Competitive Grant project ‘6G Wireless Revolution: Unifying Sensing, Communication, and Computation for Ubiquitous connectivity,’ No. 25020403356, May. 2025 – current, Amount: AED 60,000.
- Operational Grant for Distributed and Networked Systems Research Group, No. 150410., 2023-current
- Competitive Grant project “Toward Optimizing Evolving Spectrum Utilization of 6G Networks: RIS-Assisted Integrated Sensing and Communication,” No. 24020403334, July. 2024 - current, Amount: AED 76,000.

- Competitive Research Grant, “Ambient Backscatter Communication: Receiver Design and Performance Analysis,” Dec. 2023-Nov. 2025, Amount: AED 76,000.
- Seed Research Grant, “Data detection based on deep learning (DL) for beyond fifth generation (B5G) communication networks,” 2022 - current, Amount: AED 33,000.
- Operational Grant of the Cyber Security and Data Analytics Research center, Distributed and Networked Systems Research Group, Oct. 2021-2022, Amount: AED 90,000.
- Targeted project, “Road Safety and Traffic Accidents Management System in the Internet of Vehicles Paradigm,” 2020 - 2023.
- Competitive Grant project “Advanced Signal Processing Algorithms and Performance Analysis for Next Generation Wireless Systems,” No. 18020403109, Oct. 2018 - 2021, Amount: AED 50,000.
- Funded Targeted Project “Optimal Resource Management for Cloud-Based Fifth Generation Wireless Networks,” 2016-2019, Amount: AED 130,000.
- Distributed and Networked Systems Research Group Operating Grant number 150410, 2015-2021, Amount: AED 100,000 per year.
- Seed Research Grant No. 1602040224-P., “Massive MIMO Transceiver Design.” 2016 - 2020, Amount: AED 25,000.

List of Examined/ Supervised Graduate Students at UoS

- Shaikha Ali Alobeidli, graduated Msc student, *Thesis Examiner*, Thesis entitled: “Data Detectors for Massive MIMO Systems Using Enhanced Acceleration Overrelaxation and Special Matrices Structures,” 2025.
- Mohamed Ali Abdalla Ali, graduated Msc student, *Thesis Examiner*, Thesis entitled: “A Reconfigurable Wideband GaN LNA for C/X-bands,” 2024.
- Nagy Faroug Mirghani Osman, current PhD student, *Supervisor*.
- Ali Jamal Nayef Almasad’deh, graduated MSc Student, *Supervisor*, Thesis entitled: “Data Detection for Massive MIMO Systems Using Deep Neural Networks and Approximate Matrix Inversion Methods,” 2021-2023.
- Sam Ansari, graduated PhD student, *Co-Supervisor*, Thesis entitled: “Blind Source Separation of Mixed Audio Signals Using Deep Learning,” 2020-2023.
- Hassan Vakani, graduated Msc student, *Thesis Examiner*, Thesis entitled: “Towards Improving the Imperceptibility of Steganography Schemes: Adaptive Scaling Approach,” 2021.
- Nour Abdelrahman Suliman Mohamed, graduated Msc student, *Co-supervisor*, Thesis entitled: “Detecting Secret Messages in Images using Neural Networks (NN),” 2020-2021.

- Oruba Mazen Abdelkarim Alfawaz, graduated Msc student, *Supervisor*, Thesis entitled: “Parallel Implementation of Receivers and Channel Estimation Using Multithreading for MIMO Systems and AF-TWRNs,” 2019-2020.
- Ahmed I. Salameh, graduated Msc, *Thesis Examiner*, Thesis entitled: “Spectrally Efficient Channel and Carrier Frequency Offset Estimation for Two-way Relay Networks,” 2019.

List of Supervised Undergraduate Senior Design Projects at UoS

Firefighting And Rescue Robot Using Water Jet And Fire Distinguish Balls	Fall 2024- Spring 2025.
Patient monitoring system using Internet of Things technology	Fall 2023 - Spring 2024.
Advanced medical pill and syrup dispenser using Iot	Fall 2023 - Spring 2024.
Smart Charcoal Grill with full control	Fall 2022 - Spring 2023.
Interactive smart library entry system with GSM	Fall 2022 - Spring 2023.
Smart Medical Pills Dispenser	Fall 2022 - Spring 2023.
Data acquisition system for water quality monitoring based on IoT framework	Fall 2021 - Spring 2022.
Portable sanitation robot	Fall 2021 - Spring 2022.
Aviary monitoring and control system	Fall 2021 - Spring 2022.
Smart system for improving agricultural crops	Spring 2020 - Fall 2020.
Smart device for bank note detection	Spring 2020 - Fall 2020.
Smart speech-generating device for medical purposes	Spring 2018 - Fall 2018.
Smart device for the blind	Spring 2017 - Fall 2017.
Attendance system based on biometrics and RFID	Fall 2016 - Spring 2017.
Mini smart airport trolley	Fall 2016 - Spring 2017.
Vehicle collision avoidance	Fall 2015 - Spring 2016.
Portable attendance system using smart card	Fall 2015 - Spring 2016.
Queuing application	Fall 2015 - Spring 2016.

Professional Activities

Reviewer for Journals:

- Elsevier Measurement
- IEEE Communications Letters
- The International Journal of Computing and Digital Systems
- IEEE Access.
- IEEE Transactions on Signal Processing
- IEEE Signal Processing Letters
- IEEE Transactions on Wireless Communications
- IEEE Transactions on Wireless Communications Letters
- IEEE Transactions on Communications
- IEEE Transactions on Wireless Communications Letters
- IEEE Wireless Communications Letters IEEE Communications Letters

- IEEE Transactions on Vehicular Technology
- EURASIP Journal on Advances in Signal Processing
- Physical Communications (Elsevier)
- Journal of Circuits, Systems, and Computers

Reviewer

- IEEE DeSE 2025
- IEEE ICCSPA26
- IEEE DeSE' 17
- IEEE SSD 2025
- Fifth Forum for Women in Research
- IEEE ICETSSIS 2024
- IEEE DeSE' 16
- Fourth Forum for Women in Research
- 17 IEEE Student Day
- 3ICT2022
- Third Forum for Women in Research
- 15 IEEE Student Day
- CCIOT
- 3ICT2021
- Second Forum for Women in Research
- ECONF' 20
- First Forum for Women in Research
- ISSPIT
- IEEE ICCSPA 2020
- IEEE ICECTA' 2019
- IEEE 3ICT' 19
- 2019 IEEE Student Day Competition/ AURAK
- IEEE ICCSPA19
- IEEE MENACOMM
- IEEE PIMRC 2018
- 2018 ICSigSys
- 2018 IEEE Student Day Competition
- ICMSAO' 17
- IEEE WCNC 2017
- UAEGSRC 2017
- UAEGSRC 2016
- IEEE ICC 2014 WCS

Technical/Organizing Program Committee:

- A session chair in IEEE Conf. on Developments in eSystems Engineering (DeSE), Nov. 2025.
- A TPC member, International Conference on Electrical and Computing Techno. and Applications, (ICCSPA2026), 2026.
- A member of Engineering, Computing and Sciences Jury Committee for Women in Research (WIRC), University of Sharjah, August 2025.
- Contributing to the 5th Forum for Women in Research, "QUWA: Together Innovating to Shape the Future, University of Sharjah, Feb 2025.
- A session chair in IEEE Conf. on Developments in eSystems Engineering (DeSE), UAE, Nov. 2024.
- A member of organizing committee in the IEEE Middle East on Communication and Networking (MECOM) 2024, Abu Dhabi, UAE, 2024.
- A member of organizing committee and reviewer committee in the 5th Forum for Women in Research, University of Sharjah, August 2024.
- A member of participants in Assessor Accreditation Project organized by Commission for Academic Accreditation Workshops, 2023 – 2024.
- A session chair in IEEE Conf. on Developments in eSystems Engineering (DeSE), Turkey, Dec. 2023.
- A member of organizing committee and reviewer committee in the 4th Forum for Women in Research, University of Sharjah, August 2023.
- A member of judging committee in the 17th IEEE student Day, American University of Sharjah, April. 2023.
- A member of organizing committee and reviewer committee in the 3rd Forum for Women in Research, University of Sharjah, August 2022.
- A member of Technical Committee in 3ICT2022, Bahrain, Nov. 2022.
- A member of judging committee in the IEEE student Day, (**Virtual**), Nov. 2021.
- A member of Technical Committee in CCIOT, University of Ryukyu, Okinawa, Japan, Sep 2021.
- A member of organizing committee and reviewer committee in the 2nd Forum for Women in Research, University of Sharjah, August 2021.
- A member of Technical Committee in 3ICT2021, Bahrain, Sep. 2021.

- A member of organizing committee in the 1st Forum for Women in Research Empowering Women in Scientific Research: Challenges, Opportunities and Recommendations, University of Sharjah, August 2020.
- A member of organizing committee in the 5th International Forum on Innovation and Entrepreneurship, University of Sharjah, Feb 2020.
- A member of organizing committee for Etihad Aviation Group Fikra University competition, University of Sharjah, Sep 2019.
- A member of judging committee in the 2nd Engineering undergraduate senior design project exhibition, University of Sharjah, May 2019.
- A session chair, International Conference on Electrical and Computing Techno. and Applications, (ICCSPA2019), American University of Sharjah, Sharjah, March 2019.
- A session chair, International Conference on Electrical and Computing Techno. and Applications (ICECTA2017), American University of Ras Al Khaimah, Ras Al Khaimah, 2017.

Selected Honors, Awards and Fundings

- Recipient the best paper award (2nd) from the IEEE International Multi-Conference on Systems, Signals and Devices (SSD'25), Monastir, Tunisia, in Feb. 2025.
- Selected part of Sharjah Government Delegation to China, Jun 2024.
- Selected one of the Best UAE National Faculty Honor in Scientific Research, Teaching and Community services, University of Sharjah, UAE, April 2024.
- Recipient of Best UAE National Faculty Member in Scientific Research Award, University of Sharjah, UAE, in May 2023.
- Recipient of Young Emirati Researchers Prize (YERP) award, Ministry of Higher Education and National Research Foundation in UAE, in Jan. 2017, Amount: AED 30,000.
- Recipient the second best paper award from the IEEE International Symposium on Telecommunication technologies (ISTT), Malaysia, in Nov. 2016.
- Recipient of Rashid Award for Scientific Excellence, UAE, in Nov. 2015, Amount: AED 30,000.
- Recipient the best paper award from the IEEE Conf. on Information and Communication Technology Research (ICTRC), UAE, in May 2015.
- Recipient Young Emirati Postgraduate Research Students Mobility Award (YEPRSMA), National Research Foundation in UAE, in Jun 2014, Amount: AED 27,000
- Recipient UAE Ministry of Higher Education (MOHE) Award, UAE, in July 2013.

- Recipient of a Intel Award, New Zealand, in May 2013.
- Recipient of a UC Doctoral Scholarship Award, New Zealand, in Feb 2013.
- Received UAEU grants for graduate studies from 2009-2012.
- Selected to study the French language in Fall 2008 at INSA de Lyon, France in Fall 2008-2009.
- Selected to study English and US culture at the English Language Institute in the University Of Alabama US in Summer 2008.
- Selected to contribute to engineering projects in the Third Engineering Students Gathering in Sultan Qaboos University in Oman in Spring 2008.
- Selected by the Electrical Engineering Collage at UAE University to take industrial training at Dassault Aviation, France in 2006.
- Recipient of Sheikha Fatima Bint Mubarak award in 2008.
- Recipient of CNNA1 certificate in Dec 2007.
- Electrical Engineering High Honour List almost every semester.
- Ranked fifteenth among local students in the UAE (Abu Dhabi) in High School Stage.
- Selected to attend the Olympic mathematical competition during secondary school.

Selected Current Research Interests

- Next Generation Communication and Networking
- Telecommunications and signal processing
- Stochastic Models in Information
- Massive multiple-input multiple-output (MIMO)
- Channel Estimation, Detection, and Precoding Techniques
- Artificial intelligent (AI) applications

Selected Publications

Journal Articles (published/accepted)

1. **K. A. Alnajjar**, H. Idries, M. A. Albreem, S. Abdallah, “A Novel Hybrid Framework for Channel Estimation Interference Management and Spectrum Sensing in 5G OFDM Systems”, *Accepted in Wireless Personal Communications*, 2026.

2. A. ElMoursy, O. Alfawaz, **K. A. Alnajjar**, S. Abdallah, M. Saad, F. Sibai, "Hybrid Parallel Model of Semi-blind Joint Timing-Offset and Channel Estimation for AF-TWRNs", *Accepted in IEEE Access*, 2026.
3. **K. A. Alnajjar**, A. Aslam, S. Ansari and M. El-Tarhuni, "Enhanced Hybrid HAP-Assisted NOMA-RIS Systems for Next-Generation Wireless Networks", *Accepted in IEEE Open Journal of the Communications Society*, 2025.
4. **K. A. Alnajjar**, A. Al Ali, F. Alarif, J. Maroan, "Integrating MIMO innovations and AI for 6G sub-terahertz communication: A comparative study," *Accepted in International Journal on Communications Antenna and Propagation (IRECAP), Praise Worthy Prize*, 2025.
5. N. Osman, **K. A. Alnajjar**, R. C. Bansal, "A review of the cognitive radio IoT enabled radio frequency energy harvesting system," *Telecommunication Systems, Springer Nature*,(88) No. 4, 2025.
6. D. Abueida, M. Albreem, S. Abdallah, **K. A. Alnajjar**, A. Aslam, "Data Detection Techniques for Scalable Cell-free Massive MIMO Systems," *Accepted in Journal of Communications and Networks* , 2025.
7. A. Aslam, M. Saad, S. Abdallah, M. Albreem, **K. A. Alnajjar**, H. Dahrouj, H. Elsawy, et.,al., " Movable-Antenna-Aided Covert ISAC-NOMA Networks: Joint Antenna Positioning and Resource Allocation," *Accepted in IEEE Open Journal of the Communication Society*, 2025.
8. D. Abueida, M. Albreem, S. Abdallah, A. Aslam, **K. A. Alnajjar**, M. Saad, et.,al., "Signal Processing for Cell-Free Massive MIMO: Techniques and Trends in Estimation, Detection, and Precoding," *IEEE Open Journal of the Communication Society*, 2025, DOI: 10.1109/OJCOMS.2025.3625823.
9. N. Osman, **K. A. Alnajjar**, R. C. Bansal, "3B5G Network-enabled Radio Frequency Energy Harvesting System," *Accepted in Telecommunication Systems*, 2025.
10. A. A. Salem, S. Abdallah, M. Saad, **K. A. Alnajjar**, M. A. Albreem, " How RSMA and Active RIS Manage Eavesdroppers Spatial Uncertainty " *IEEE Transactions on Vehicular Technology*, Sep. 2025., doi: 10.1109/TVT.2025.3610863
11. A. A. Salem, M. Saad, S. Abdallah, M. A. Albreem, **K. A. Alnajjar**, H. Dahrouj, H. Alsawy " Movable-Antenna-Aided Covert ISAC-NOMA Networks: Joint Antenna Positioning and Resource Allocation " *Accepted in IEEE Open Journal of the Communications Society*, Sep. 2025.
12. A. A. Salem, **K. A. Alnajjar**, M. A. Albreem, M. Saad, S. Abdallah, "Active RIS Enabled RSMA Integrated Sensing, Communication, and Power Transfer," *IEEE Transactions on Communications*, Aug. 2025, DOI 10.1109/TCOMM.2025.3597647.
13. M. A. Albreem, S. Abdallah, M. Saad, **K. A. Alnajjar**, "Low Complexity Detectors for Uplink Massive MIMO Based on a Refinement of Linear Algorithms and Efficient Initialization," *Journal of Communications and Networks*, July. 2025.

14. N. Osman, **K. A. Alnajjar**, R. Bansal, “Energy-Efficient Resource Management in CIoT for B5G Networks,” *International Journal of Communication Systems*, July. 2025.
15. A. A. Salem, M. A. Albreem, **K. A. Alnajjar**, S. Abdallah, M. Saad, “Integrated Cooperative Sensing and Communication for RIS-Enabled Full-Duplex Cell-Free MIMO Systems,” *IEEE Transactions on Communications*, vol. 73, No. 6 Jun. 2025, doi:10.1109/TCOMM.2024.3493795.
16. S. Ansari, **K. A. Alnajjar**, S. Majzoub, E. Almajali, A. Jarndal, T. Bonny, A. Hussain, S. Mahmoud, “Attention-Enhanced Hybrid Automatic Modulation Classification for Advanced Wireless Communication Systems: A Deep Learning-Transformer Framework,” *IEEE Access*, Jun. 2025.
17. **K. A. Alnajjar**, S. A. Almulla, “Information Theory Approaches for Cyberattack Detection and Fault Identification in Power Systems,” *Accepted in International Journal on Communications Antenna and Propagation (IRECAP), Praise Worthy Prize*, 2025.
18. N. Osman, **K. A. Alnajjar**, R. C. Bansal, “3B5G Network-enabled Radio Frequency Energy Harvesting System,” *Accepted in International Journal of Modelling and Simulation*, 2024.
19. A. Salem, M. Albreem, **K. A. Alnajjar**, S. Abdallah, and M. Saad, “Integrated Cooperative Sensing and Communication for RIS-Enabled Full-Duplex Cell-Free MIMO Systems,” *IEEE Transactions on Communications*, Nov. 2024, doi: 10.1109/TCOMM.2024.3493795.
20. M. Albreem, S. Abdallah, **K. A. Alnajjar** and M. Aldababsa, “Efficient detectors for uplink massive MIMO systems,” *Journal of Communications and Networks*, vol. 26, no. 1, pp. 35-48, Feb. 2024, doi: 10.23919/JCN.2023.000053.
21. S. Ansari, A. S. Alatranyb, **K. A. Alnajjar**, T. Khater, S. Mahmoud, D. Al-Jumeilyb and A. J. Hussain, “A survey of artificial intelligence approaches in blind source separation,” *Neurocomputing*, vol. 561, 126895, ISSN 0925-2312, Oct. 2023.
22. S. Ansari, **K. A. Alnajjar**, T. Khater, S. Mahmoud and A. Hussain, “A robust hybrid neural network architecture for blind source separation of speech signals exploiting deep learning,” *IEEE Access*, vol. 11, pp. 100414-100437, Sep. 2023, doi: 10.1109/ACCESS.2023.3313972.
23. M. A. Albreem, **K. A. Alnajjar** and A. Almasadeh, “Massive MIMO detectors based on deep learning, stair matrix, and approximate matrix inversion methods,” *IEEE Access*, vol. 11, pp. 100268-100283, Aug. 2023, doi: 10.1109/ACCESS.2023.3310238.
24. S. Ansari and **K. A. Alnajjar**, “Adaptive modulation and coding: A review of the literature,” *International Journal on Communications Antenna and Propagation (IRECAP)*, Praise Worthy Prize, vol. 13, No. 1, 2023, doi: 10.15866/irecap.v13i1.23033.
25. P. J. Smith, P. A. Dmochowski and **K. A. Alnajjar**, “On the fine resolution of antenna topologies,” *IEEE Antennas and Wireless Propagation Letters*, vol. 22, no. 7, pp. 1503-1507, July 2023, doi: 10.1109/LAWP.2022.3206820.

26. S. Ansari and **K. A. Alnajjar**, “Multi–Hop genetic–algorithm–optimized routing technique in diffusion–based molecular communication,” *IEEE Access*, IEEE Access, vol. 11, pp. 22689-22704, Feb. 2023, doi: 10.1109/ACCESS.2023.3244556.
27. M. Saad, A. A. El-Moursey, O. Alfawaz, **K. A. Alnajjar** and S. Abdallah, “Wireless link scheduling via parallel genetic algorithm, *Concurrency and Computation Practice and Experience*, Wiley, vol. 34, No. 6, e6783, Dec. 2022, doi: 10.1002/cpe.6783.
28. P. J. Smith, R. Senanayake, P. A. Dmochowski, **K. A. Alnajjar**, and A. Giorgetti, “The impact of channel type on spectrum sensing,” *IEEE Wireless Communications Letters*, IEEE, vol. 11, No. 2, pp. 230-234, Feb. 2022, doi: 10.1109/LWC.2021.3124506.
29. **K. A. Alnajjar**, A. Jarndal and M. El-Tarhuni, P. J. Smith and S. Abdallah, “Performance evaluation of linear detectors for mmWave MIMO systems using ray-tracing channel model,” *International Journal on Communications Antenna and Propagation (IRECAP)*, Praise Worthy Prize, vol. 12, No. 2, pp 139–150, May 2022, doi: 10.15866/irecap.v12i2.22028.
30. S. Ansari, **K. A. Alnajjar**, M. Saad, S. Abdallah, and A. A. ElMoursy, “Automatic digital modulation recognition based on genetic-algorithm-optimized machine learning models,” *IEEE Access*, IEEE, vol. 10, pp 50265 – 50277, May 2022, doi: 10.1109/ACCESS.2022.3171909.
31. O. Abu Ella and **K. A. Alnajjar**, “Mitigation measures for windfarm effects on radar systems,” *International Journal of Aerospace Engineering*, Hindawi, vol. 2022, April 2022, doi: 10.1155/2022/1083717
32. S. Abdallah, M. Saad, **K. A. Alnajjar** and A. A. El-Moursey, “Joint timing-offset and channel estimation for physical layer network coding in frequency selective environments,” *IET Communications*, IET, vol. 15, pp. 1917-1929, May 2021, doi: 10.1049/cmu2.12203.
33. S. Abdallah, M. Saad, **K. A. Alnajjar** and M. Masood, “Semi-blind joint timing-offset and channel estimation for amplify-and-forward two-way relaying,” *IEEE Transactions on Wireless Communications*, vol. 19, no. 4, pp. 2613–2627, April 2020, doi: 10.1109/TWC.2020.2966968.
34. A. A. El-Moursy, S. Abdallah, M. Saad and **K. A. Alnajjar**, “Parallel two-way relay channel estimation in cloud-based 5G radio access networks,” *IEEE Access*, vol. 8, pp. 144077-144091, Aug. 2020, doi: 10.1109/ACCESS.2020.3014507.
35. **K. A. Alnajjar**, N. Abdulrahman, F. Mahdi and M. Alramsi “Vehicle collision avoidance,” *part of the Communications in Comp. and Inform. Science book series (CCIS, vol. 1264)*, Springer, Cham., Nov. 2019.
36. A. Tajer, S. Sihag and **K. A. Alnajjar**, “ Non-linear state recovery in power system under bad data and cyber attack,” *Journal of Modern Power Systems and Clean Energy*, Springer, vol. 7, No. 5, pp 1071-1080, Sep. 2019. doi: 10.1007/s40565-019-0561-2

37. **K. A. Alnajjar** and M. El-Tarhuni, “A C-V-BLAST spread spectrum massive MIMO NOMA Scheme for 5G Systems with channel imperfections,” *Physical Communication*, Elsevier, vol. 35, No. 100720, Aug. 2019, doi: 10.1016/j.phycom.2019.100720.
38. A. Jarndal and **K. A. Alnajjar**, “MM-Wave wideband propagation model for wireless Communications in built-up environments,” *Physical Communication*, Elsevier, vol. 28, pp 97–107, Jun 2018, doi: 10.1016/j.phycom.2018.03.011.
39. **K. A. Alnajjar** and M. El-Tarhuni, “Joint C-V-BLAST and DS-NOMA for massive MIMO,” in *Lecture Notes of the Institute for Computer Sciences, Social Informatics and Telecommunications Engineering (LNICST)*, Springer, Vol. 211, pp. 484-492, 2018.
40. **K. A. Alnajjar**, P. J. Smith, P. Whiting and G. K. Woodward, “Size and array shape for massive MIMO,” *IEEE Wireless Communications Letters*, vol. 4, no. 6, pp. 653-656, Dec. 2015, doi: 10.1109/LWC.2015.2477513.
41. **K. A. Alnajjar**, P. J. Smith and G. K. Woodward, “Co-located and distributed antenna systems: Deployment options for massive MIMO,” *IET Microwave, Antenna & Propagation*, 7pp, Oct. 2015, doi: 10.1049/iet-map.2014.0714.
42. R. W. Longman, **K. A. Alnajjar** and X. Ji, “Comments on how a new engineering field develops: A case study from iterative learning and repetitive control,” in *Lecture Notes in Electrical Engineering*, 293, pp. 1273-1279, 2014.

Conference Peer-Reviewed and Proceeding Papers:

1. **K. A. Alnajjar**, S. Ansari, A. Mahmoud, A. Hussain and S. Mahmoud, “Machine LearningDriven Interference Detection and Mitigation for Next-Generation Digital Communication Systems,” *Accepted in Proc. IEEE Conf. on 23rd International Multi-Conference on Systems, Signals and Devices (SSD’26)*, Italy April. 2026.
2. S. Ansari, M. A. Alzarouni, H. Almheiri, S. Al-Ali, S. Mahmoud, **K. A. Alnajjar**, E. Almajali, S. Majzoub, A. H. Jarndal, A. Kaissar and A. Hussain, “Non-Invasive BCI for Speech-Impaired Parkinson’s Patients: A Signals-to-Words Translation Approach,” *Accepted in Proc. IEEE Conf. on 23rd International Multi-Conference on Systems, Signals and Devices (SSD’26)*, Italy April. 2026.
3. **K. A. Alnajjar**, S. Ansari, S. Almansouri, M. S. Alshehhi, M. J. Alshehhi, A. Alhamoudi, A. Hussain and S. Mahmoud, “A LoRaWAN-Based Smart Home Energy Management System Empowered by Artificial General Intelligence,” *Accepted in Proc. IEEE Conf. DeSE 2025*, 2025.
4. S. Ansari, A. S. Kaissar, S. Mahmoud, **K. A. Alnajjar**, E. Almajali, A. Jarndal, A. Bou Nassif, Y. Mohamed and A. Hussain, “RealTime LowCost Automatic Collision Detection with Owner Notification for Parked Vehicles,” *Accepted in Proc. IEEE Conf. DeSE 2025*, 2025.
5. A. Alshamsi, **K. A. Alnajjar** and A. Jarndal, “An SPI-Driven FPGA Platform for Multi-Parameter Data Acquisition and Logging in Satellite Applications,” *Accepted in Proc. IEEE Conf. on 9th International Conference on Recent Advances and Innovations in Engineering (ICRAIE 2025)*, Kuala Lumpur, Malaysia, August 2025. **(Virtual)**

6. M. Hussain, A. Mohsin, A. Abdalla, M. Badar and **K. A. Alnajjar**, “Machine Learning for 5G Massive MIMO Systems and Beyond: Integrating Artificial General Intelligence (AGI),” *Accepted in Proc. IEEE Conf. on 9th International Conference on Recent Advances and Innovations in Engineering (ICRAIE 2025)*, Kuala Lumpur, Malaysia, August 2025. **(Virtual)**
7. N. Mohamed, S. Ansari, S. Mahmoud, **K. A. Alnajjar**, L. Topham and A. Hussain, “An intelligent movie recommender system based on deep reinforcement learning,” *Accepted in Proc. IEEE Conf. on 19th International Conference on Cloud and Big Data Computing (ICCBDC 2025)*, Manchester, Uk, August 2025.
8. L. Jaweli, M. Safar, M. AL-Hammadi, **K. A. Alnajjar**, S. Ansari, S. Mahmoud and A. Hussain, “Artificial intelligence-powered automated attendance monitoring system for smart classrooms” *Accepted in the Second Sharjah International Conference in Education (SHJEDU25)*, Sharjah, May 2025.
9. M. A. Elhaj, S. Ansari, N. Kleanthous, A. M. Alawadhi, A. S. Alsuwaidi, **K. A. Alnajjar**, S. Mahmoud, H. Dahrouj and A. Hussain, “AI-Enhanced IoT-Integrated Virtual Fencing: A Proof-of-Concept for Camel Monitoring and Collision Mitigation,” *Accepted in Proc. IEEE Conf. on International Wireless Communications & Mobile Computing Conference 2025 (IWCMC) Edge Intelligence Workshop*, Abu Dhabi, May 2025.
10. S. Ansari, **K. A. Alnajjar**, M. Albreem, S. Mahmoud, A. Hussain and N. Faraji, “Leveraging Generative Artificial Intelligence for Enhanced Detection and Classification of Diabetic Retinopathy,” *Accepted in Proc. IEEE Conf. on 22nd International Multi-Conference on Systems, Signals and Devices (SSD’25)*, Monastir, Tunisia, Feb. 2025. **(Best Paper Award (2nd))**
11. **K. A. Alnajjar**, S. Ansari, M. Mahmoud, M. Alraeesi, M. Alhmoudi, S. Alaskar, D. Abueida, M. A. M. Albreem, S. Mahmoud, and A. Hussain, “Adaptive Modulation and Coding Techniques for Next-Generation Wireless Networks,” *Accepted in Proc. IEEE Conf. on 22nd International Multi-Conference on Systems, Signals and Devices (SSD’25)*, Monastir, Tunisia, Feb. 2025.
12. S. Ansari, A. Bou Nassif, S. Mahmoud, S. Majzoub, E. Almajali, A. H. Jarndal, T. Bonny, **K. A. Alnajjar**, and A. Hussain, “Impact of outliers on regression and classification models: an empirical analysis,” *Accepted in Proc. IEEE Conf. on Developments in eSystems Engineering (DeSE)*, Sharjah, UAE, Nov. 2024.
13. **K. A. Alnajjar**, S. Ansari, Y. S. Alhmoudi, R. Ibrahim, A. A. Alblooshi, Y. Bohamad, S. Mahmoud, and A. Hussain, “Pioneering MIMO Technologies: Enabling the Next Generation of 5G Networks and Beyond,” *Accepted in Proc. IEEE Conf. on Developments in eSystems Engineering (DeSE)*, Sharjah, UAE, Nov. 2024.
14. **K. A. Alnajjar**, S. Ansari, A. Alhammadi, A. Almahal, F. Rahman, A. Alsuwaidi, K. Alzarooni, S. Mahmoud, and A. Hussain, “Advanced techniques in channel estimation, precoding, and detection for massive MIMO systems in 5G and beyond,” *Accepted in Proc. IEEE Conf. on Developments in eSystems Engineering (DeSE)*, Sharjah, UAE, Nov. 2024.

15. **K. A. Alnajjar** and A. Shaman, "Network information theory: introduction and recent advances in network coding," *Accepted in Proc. AIP on Information Technology, Advanced Mechanical and Electrical Engineering (ICITAMEE), Indonesia, August 2024. (Virtual)*
16. **K. A. Alnajjar** and N. Lootah, "Advanced channel coding techniques: LDPC and polar codes," *Accepted in Proc. AIP on Information Technology, Advanced Mechanical and Electrical Engineering (ICITAMEE), Indonesia, August 2024. (Virtual)*
17. **K. A. Alnajjar** and O. Ramadan, "AI-enhanced drowned-detection system using information theory for rapid rescue operations," *Accepted in Proc. AIP on Information Technology, Advanced Mechanical and Electrical Engineering (ICITAMEE), Indonesia, August 2024. (Virtual)*
18. K. Almazrouei and **K. A. Alnajjar**, "Error-correcting codes in communication systems," *Proc. IEEE 2024 International Wireless Communications and Mobile Computing (IWCMC), Ayia Napa, Cyprus, 2024, pp. 1-6, doi: 10.1109/IWCMC61514.2024.10592361. (Virtual)*
19. **K. A. Alnajjar**, S. AlAli, H. Albanna, H. Aljasmii, S. Almaazmi, S. Alduhoori, S. Ansari, A. Hussain and S. Mahmoud, "Channel coding technologies in next-generation wireless systems," *Proc. IEEE 2024 21st International Multi-Conference on Systems, Signals & Devices (SSD), Erbil, Iraq, 2024, pp. 27-32, doi: 10.1109/SSD61670.2024.10549402.(Virtual)*
20. N. Osman, **K. A. Alnajjar** and R. Bansal, "D2D Underlay Cellular Network Optimization Using GA Considering OFDMA-ICI," *Proc. IEEE 2024 3rd International conference on Power Electronics and IoT Applications in Renewable Energy and its Control (PARC), Mathura, India, 2024, pp. 567-572, doi: 10.1109/PARC59193.2024.10486688.(Virtual)*
21. S. Ansari, A. Kaissar, T. Khater, **K. A. Alnajjar**, S. Mahmoud and A. Hussain, "Optimizing spectrum prediction in cognitive radio: genetic algorithm-enhanced neural networks and radial basis functions," *Proc. IEEE 2023 16th International Conference on Developments in eSystems Engineering (DeSE), Istanbul, Turkiye, 2023, pp. 337-343, doi: 10.1109/DeSE60595.2023.10469324. (Virtual)*
22. **K. A. Alnajjar**, A. Altamimi, K. Altamimi, A. Alshehhi, S. Ansari, S. Mahmoud and A. Hussain, "Smart medical pills dispenser," *Proc. IEEE 2023 16th International Conference on Developments in eSystems Engineering (DeSE), Istanbul, Turkiye, 2023, pp. 79-86, doi: 10.1109/DeSE60595.2023.10468851.*
23. **K. A. Alnajjar**, M. Ahmed, Y. Mohamed and S. Ansari, "Water quality monitoring system based on the Internet of things," *Proc. IEEE 2023 IEEE 6th International Conference on Electrical, Electronics and System Engineering (ICEESE), Shah Alam, Malaysia, 2023, pp. 32-37, doi: 10.1109/ICEESE56169.2023.10278187., Kuala Lumpur, Malaysia, Aug. 2023. (Virtual)*
24. **K. A. Alnajjar**, A. Y. Abushawish, and S. Ansari, "Hardware Based error correction systems for Hamming codes: A review of the literature'," *Proc. IEEE 2023 International*

Conference on Smart Applications, Communications and Networking (SmartNets), Istanbul, Turkiye, 2023, pp. 1-8, doi: 10.1109/SmartNets58706.2023.10215549.

25. A. Almasadeh, **K. A. Alnajjar** and M. A. Albreem, “Deep learning applications in MIMO systems,” *Proc.2023 International Conference on Smart Applications, Communications and Networking (SmartNets)*, Istanbul, Turkiye, 2023, pp. 1-6, doi: 10.1109/SmartNets58706.2023.10215957.
26. M. Saloumi, O. Alshaltone, S. Ansari and S. Mahmoud, **K. A. Alnajjar**, E. Almajali, and A. Hussain, “ Blind source separation based on genetic algorithm-optimized multiuser kurtosis,” *2023 46th International Conference on Telecommunications and Signal Processing (TSP)*, Prague, Czech Republic, 2023, pp. 164-171, doi: 10.1109/TSP59544.2023.10197779. **(Virtual)**
27. S. Ansari, **K. A. Alnajjar**, S. Mahmoud, R. Alabdan, H. Alzaabi, M. Alkaabi, and A. Hussain, “ Speech emotion recognition using onedimensional convolutional neural networks,” *Proc. 2023 46th International Conference on Telecommunications and Signal Processing (TSP)*, Prague, Czech Republic, 2023, pp. 212-216, doi: 10.1109/TSP59544.2023.1019776. **(Virtual)**
28. A. M. Darya, **K. A. Alnajjar**, M. Shaikh, S. Suhaila, Y. Faroukha, S. Abdallah, I. Fernini and H. AlNaimiy, “GPS carrier-to-noise density prediction using regression trees,” *Proc. 73rd International Astronautical Congress (IAC)*, vol. 2022-Sep, 0074–1795, Paris, France, Sep. 2022.
29. A. Almasadeh, **K. A. Alnajjar**, M. A. Albreem, “Enhanced deep learning for massive MIMO detection using approximate matrix inversion,” *Proc. IEEE 2022 5th International Conference on Communications, Signal Processing, and their Applications (ICCSPA)*, Cairo, Egypt, 2022, pp. 1-6, doi: 10.1109/ICCSPA55860.2022.10019100. **(Virtual)**
30. **K. A. Alnajjar**, S. Ghunaim and S. Ansari, “Automatic modulation classification in deep learning,” *Proc. IEEE 2022 5th International Conference on Communications, Signal Processing, and their Applications (ICCSPA)*, Cairo, Egypt, 2022, pp. 1-5, doi: 10.1109/ICCSPA55860.2022.10019122. **(Virtual)**
31. **K. A. Alnajjar**, “Low complexity detectors for MIMO molecular communications under channel estimation,” *Proc. IEEE 2022 International Symposium on Networks, Computers and Communications (ISNCC)*, Shenzhen, China, 2022, pp. 1-4, doi: 10.1109/ISNCC55209.2022.9851769. **(Virtual)**
32. S. Ansari, **K. A. Alnajjar**, S. Abdallah, M. Saad and A. A. ElMoursy, “Parameter tuning of MLP, RBF, and ANFIS models using genetic algorithm in modeling and classification applications,” in *Proc. IEEE 2021 International Conference on Information Technology (ICIT)*, Amman, Jordan, 2021, pp. 660-666, doi: 10.1109/ICIT52682.2021.9491682. **(Virtual)**
33. N. Mohamed, T. Rabie, I. Kamel and **K. A. Alnajjar**, “Detecting secret messages in images using neural networks,” *Proc. IEEE 2021 IEEE International IOT, Electronics*

- and Mechatronics Conference (IEMTRONICS), Toronto, ON, Canada, 2021, pp. 1-6, doi: 10.1109/IEMTRONICS52119.2021.9422500.
34. I. Ahmed, K. Shahid, F. Debretsion, H. Khammari and **K. A. Alnajjar**, “Energy efficiency of multiuser sparse massive MIMO System using orthogonalized hybrid beamforming,” *Proc. 2021 IEEE 93rd Vehicular Technology Conference (VTC2021-Spring)*, Helsinki, Finland, 2021, pp. 1-6, doi: 10.1109/VTC2021-Spring51267.2021.9448750.
 35. O. Alfawaz, M. A.Eddin, **K. A. Alnajjar** and A. A. ElMoursy, “Improved parallel ZF-VBLAST detector for MIMO system,” *Proc. IEEE 2020 International Conference on Communications, Signal Processing, and their Applications (ICCSPA)*, Sharjah, United Arab Emirates, 2021, pp. 1-5, doi: 10.1109/ICCSPA49915.2021.9385766.
 36. S. Ansari, **K. A. Alnajjar**, S. Abdallah and M. Saad, “Automatic digital modulation recognition based on machine learning algorithms,” *Proc. IEEE 2020 International Conference on Communications, Computing, Cybersecurity, and Informatics (CCCI)*, Sharjah, United Arab Emirates, 2020, pp. 1-6, doi: 10.1109/CCCI49893.2020.9256809.
 37. O. Alfawaz, A. A. ElMoursy, **K. A. Alnajjar** and S. Abdallah, “Parallel semi-blind joint timing-offset and channel estimation for AF-TWRNs,” *Proc. IEEE 2020 International Conference on Communications, Computing, Cybersecurity, and Informatics (CCCI)*, Sharjah, United Arab Emirates, 2020, pp. 1-6, doi: 10.1109/CCCI49893.2020.9256808.
 38. **K. A. Alnajjar**, N. Abdulrahman, F. Mahdi and M. Alramsi “Vehicle collision avoidance,” In: *Belkasmi, M., Ben-Othman, J., Li, C., Essaaidi, M. (eds) Advanced Communication Systems and Information Security. ACOSIS 2019. Morocco, Communications in Computer and Information Science, vol 1264. Springer, Cham, doi: 10.1007/978 – 3 – 030 – 61143 – 9₅.*
 39. S. Abdallah, M. Saad and **K. A. Alnajjar** , “Joint channel and timing-offset estimation in two-way relays,” *Proc. 2019 IEEE International Symposium on Signal Processing and Information Technology (ISSPIT)*, Ajman, United Arab Emirates, 2019, pp. 1-5, doi: 10.1109/ISSPIT47144.2019.9001863.
 40. **K. A. Alnajjar** and O. Hegy, “Attendance system based on biometrics and RFID,” *Proc. IEEE 2019 Fifth International Conference on Image Information Processing (ICIIP)*, Shimla, India, 2019, pp. 596-599, doi: 10.1109/ICIIP47207.2019.8985745. **(Virtual)**
 41. **K. A. Alnajjar** and M. El-Tarhuni, “Performance of 5GNR with interference alignment,” *Proc. IEEE2019 International Conference on Communications, Signal Processing, and their Applications (ICCSPA)*, Sharjah, United Arab Emirates, 2019, pp. 1-4, doi: 10.1109/ICCSPA.2019.8713752.
 42. **K. A. Alnajjar**, S. Abdallah, M. Saad and A. A. ElMoursy, “Low complexity receivers for massive MIMO cloud radio access systems,” *Proc. 2018 International Conference on Signal Processing and Information Security (ICSPIS)*, DUBAI, United Arab Emirates, 2018, pp. 1-4, doi: 10.1109/CSPIS.2018.8642715.

43. **K. A. Alnajjar** and M. El-Tarhuni, "Performance evaluation for synchronous and asynchronous coded C-V-BLAST massive MIMO NOMA system," *Proc. IEEE 2018 27th Wireless and Optical Communication Conference (WOCC)*, Hualien, Taiwan, 2018, pp. 1-5, doi: 10.1109/WOCC.2018.8372722.
44. **K. A. Alnajjar** and M. El-Tarhuni, "Joint C-V-BLAST and DS-NOMA for massive MIMO," In: Long, K., Leung, V., Zhang, H., Feng, Z., Li, Y., Zhang, Z. (eds) *5G for Future Wireless Networks. 5GWN 2017, Beijing, China. Lecture Notes of the Institute for Computer Sciences, Social Informatics and Telecommunications Engineering*, vol 211. Springer, Cham. doi: 10.1007/978 - 3 - 319 - 72823 - 0_45.
45. **K. A. Alnajjar**, "Analysis of PR-V-BLAST receiver for massive MIMO under correlated channel," *Proc. IEEE 2018 27th Wireless and Optical Communication Conference (WOCC)*, Hualien, Taiwan, 2018, pp. 1-5, doi: 10.1109/WOCC.2018.8372722.
46. **K. A. Alnajjar** and S. Abdallah, "Performance of low complexity receivers for massive MIMO with channel estimation and correlation," *Proc. IEEE 2016 IEEE 3rd International Symposium on Telecommunication Technologies (ISTT)*, Kuala Lumpur, Malaysia, 2016, pp. 1-5, doi: 10.1109/ISTT.2016.7918074. (**Second Best Paper Award**)
47. **K. A. Alnajjar**, P. J. Smith, G. K. Woodward and D. A. Basnayaka, "Design and analysis of a reduced complexity MRC V-BLAST receiver for massive MIMO," *Proc. IEEE 2016 IEEE 17th International Workshop on Signal Processing Advances in Wireless Communications (SPAWC)*, Edinburgh, UK, 2016, pp. 1-5, doi: 10.1109/SPAWC.2016.7536905.
48. **K. A. Alnajjar**, "Inverse approximation of linear receivers for massive MIMO," *Proc. IEEE 2015 International Conference on Information and Communication Technology Research (ICTRC)*, Abu Dhabi, United Arab Emirates, 2015, pp. 230-233, doi: 10.1109/ICTRC.2015.7156464.
49. **K. A. Alnajjar**, P. J. Smith and G. K. Woodward, "Low complexity V-BLAST for massive MIMO with adaptive modulation and power control," *Proc. IEEE 2015 International Conference on Information and Communication Technology Research (ICTRC)*, Abu Dhabi, United Arab Emirates, 2015, pp. 1-4, doi: 10.1109/ICTRC.2015.7156406. (**Best Oral Paper Award**)
50. **K. A. Alnajjar**, P. J. Smith and G. K. Woodward, "Performance of massive MIMO V-BLAST with channel correlation and imperfect CSI," in *Proc. IEEE 2014 Australasian Telecommunication Networks and Applications Conference (ATNAC)*, Southbank, VIC, Australia, 2014, pp. 170-175, doi: 10.1109/ATNAC.2014.7020893.
51. R. W. Longman, **K. A. Alnajjar** and X. Ji, "Comments on how a new engineering field develops: A case study from iterative learning and repetitive control," in In: Juang, J., Chen, CY., Yang, CF. (eds) *Proceedings of the 2nd International Conference on Intelligent Technologies and Engineering Systems (ICITES2013)*, 2013, Taiwan. Lecture Notes in Electrical Engineering, vol 293. Springer, Cham, doi: 10.1007/978 - 3 - 319 - 04573 - 3_155.

52. **K. A. Alnajjar**, P. J. Smith and G. K. Woodward, “Low complexity V-BLAST for massive MIMO,” in *Proc. IEEE Conf. on Australian Communications Theory Workshop (AusCTW)*, Sydney , Australia, 2014, doi: 10.1109/AusCTW.2014.6766422.
53. **K. A. Alnajjar**, N. Pau and G. K. Woodward. “ Aligned precoder in Long Term Evolution using SISO and MIMO,” in *Proc. IEEE 2013 47th Annual Conference on Information Sciences and Systems (CISS)*, Baltimore, MD, USA, 2013, pp. 1-6, doi: 10.1109/CISS.2013.6552340.
54. **K. A. Alnajjar**, V. Aggarwal, V. A. Vaishampayan, and Xiaodong Wang. “Aligned precoder designs for interference channels based on chordal distance,” in *Proc. IEEE 2012 46th Annual Conference on Information Sciences and Systems (CISS)*, Princeton, NJ, USA, 2012, pp. 1-5, doi: 10.1109/CISS.2012.6310842.
55. **K. A. Alnajjar**, and I. Kalet. “Phase modulation by a Gaussian random process-the power spectral density,” in *Proc. IEEE International Conference on Microwaves, Communications, Antennas and Electronic Systems (COMCAS 2011)*, 2011, pp. 1-5, doi: 10.1109/COMCAS.2011.6105764.

Languages

Arabic (native) English (fluent)
 French (Intermediate) Turkish (basic)

Membership societies

- IEEE Member (2003- current)
- Member of Cisco Networking Academy Program (2008)
- Member of UAE Society of Engineers (2006-2008)
- Member of Watani (2007-2008)

References

Provided upon Request.