

# Zied Bouida

PhD, Canadian PEng, SMIEEE

2026 IEEE Laureate Forum

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\* 19 February 1982

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## Education

- Sep11-Jan15 **Ph.D. Electrical and Computer Engineering**, ECE Department, Concordia University, Montreal, Quebec, Canada
- Ph.D. Thesis: “*Adaptive Transmission Schemes for Spectrum Sharing Systems*”
  - Supervised By: A. Ghrayeb and K. Qaraqe
  - Thesis Nominated for: “Concordia University Doctoral Dissertation Prizes”
- Sep09-Aug11 **M.Sc. Electrical and Computer Engineering**, ECE Department, Texas A&M University, College Station, TX, USA
- M.Sc. Thesis: “*Performance Analysis of Fully Joint Diversity Combining, Adaptive Modulation, and Power Control Schemes*”
  - Supervised By: K. Qaraqe, J.-F. Chamberland, and M.-S. Alouini
- Sep03-Jun07 **Ingénieur Télécoms**, École Supérieure des Communications (Sup’Com), Tunisia
- Thesis: “*Minimum Generalized Selection Combining with Power Control*”
  - Senior Project at: Texas A&M University at Qatar and Qatar Telecom
  - Supervised By: M-S. Alouini, K. Qaraqe, and M. Siala
- Sep01-Jun03 **Admission to Engineering Institutions**, Institut Préparatoire aux Études D’Ingénieurs de Tunis (IPEIT), Tunis, Tunisia
- Two-years French program with Math-Physics Major
  - Admission to Sup’Com through a National Exam (Ranked Top 1%)

## Experience

- Jan24-Oct25 **Assistant Professor**, Electronics and Communications Engineering Department, Kuwait College of Science and Technology
- Teaching and conducting research on Next-Generation Networks.
  - Organizing events and conferences on IoT, 6G, and Assistive Technologies.
- Oct23-Dec23 **Visiting Research Associate**, Electrical Engineering Department, Qatar University
- Designing and Implementing a Secure UAV-aided System for Communication and Surveillance for Mega Events Project
- Jan23-Sep23 **Senior Research Associate**, Ericsson-Carleton Mobile Wireless Lab, Carleton
- R&D on Targeted Transmission, Propagation, and System Coexistence
  - ML & AI for Integrated Terrestrial & Non-Terrestrial Radio Access Network in 6G

- Sep16-Dec22 **Senior Researcher & Technical Manager**, Internet of Things (IoT) Lab, Carleton
- Resource management for IoT systems including the optimization of energy, spectrum, and delay in wireless systems using channel modeling and networking algorithms. Great expertise in the design, development, and deployment of IoT systems including Sensor Integration, Communication, and Data Analytics.
  - Manager of the MiGen Project from four years. Responsible for the communication and cybersecurity of the deployed Smart Grid. Led by Hydro-Ottawa, MiGen involves multiple partners from the government, industry, and academia.
  - Supervision of undergraduate, graduate, and visiting students and researchers.
  - Preparing funding proposals and publications.
- Apr20-Dec22 **Cisco Chair Technical Manager**, IoT Lab, Carleton University, Canada
- Manage the Cisco Chair project and team members through presentations, reports, and publications. Resource management and deployment of the IoT Lab Testbed at different layers with a focus on Sensing, Communication, and Data Analytics.
- Feb15-Aug16 **Post-Doctoral Research Associate**, Texas A&M University at Qatar, Doha, Qatar
- Study of Energy-Efficient and Low-Complexity Communications and propose communication and networking algorithms improving the physical layer security of wireless systems (in collaboration with Qatar Computing Research Institute).
- Sep11-Jan15 **Graduate Research Assistant**, Concordia University, Montreal, Quebec, Canada
- Propose adaptive transmission solutions for spectrum sharing systems using index modulation and reconfigurable antennas.
  - Contribute to the development of research funding proposals and publications.
- Oct10-Aug11 **Research Assistant**, Texas A&M University at Qatar, Education City, Doha, Qatar
- Supervision of students and tutor mobile communication courses. Propose Joint Adaptive Modulation and Diversity Schemes for Spectrum Sharing Systems.
- Sep09-Aug10 **Visiting Researcher**, Qatar Telecom (now Ooredoo), Doha, Qatar
- Definition and scope of HSPA+ vs. LTE and deployment scenario comparison project to help Qatar Telecom decide on the transition from 3G to 4G.
- Sep07-Aug09 **Graduate Research Assistant**, Texas A&M University, College Station, TX, USA
- Work on the Development and the Performance Analysis of Adaptive Modulation and Power Control Techniques.
- Sum05&Sum08 **Summer Intern**, Ericsson Tunisia, Tunis, Tunisia
- Summer 2005: BSC Dimensioning in a GPRS Network using Ericsson's CMEX tool. Site visits and installing radio equipment. Summer 2008: Study the feasibility of implementing the proposed joint adaptive modulation and power control schemes.
- Jan05-Jun05 **Network Security Course Project**, École Supérieure des Communications de Tunis
- Implementation of a tool for faults detection in cryptographic protocols.
- Jun04-Aug04 **Summer Intern**, Tunisie Télécom, Monastir, Tunisia
- Remote-operation of digital data networks. Geographic Information System (GIS) with MGE. Participate in site visits and deployment of Network Towers.

## Awards and Certifications

- IEEE Entrepreneurship 101 Workshop Certification Aug 2025
- 1<sup>st</sup> prize, video competition contest, *"IoT for Smart Urban Gardening and Farming,"* 2022 IEEE International Humanitarian Technology Conference (IHTC) Dec 2022
- 2<sup>nd</sup> prize, video competition contest, *"Security Threat Modeling for IoT-enabled e-Health Devices,"* 2022 IEEE IHTC Dec 2022
- The 2022 IEEE Sensors Concil YP Award, For his exemplary leadership and distinguished contributions in promoting the IEEE YP program and for his outstanding research in the design, deployment, and performance analysis of WSNs Jun 2022
- Best Paper Award, *"Carleton-Cisco IoT Testbed: Architecture, Features, and Applications,"*, IEEE GlobeCom Workshop on Experimental wireless platforms and testbeds for computing, and networking research, Madrid, Spain, Dec 2021
- Professional Member Induction to the IEEE Honor Society (IEEE-Eta Kappa Nu), *"in recognition of Excellent scholarship and attainments with achievements in the profession of Electrical and Computer Engineering"*, Dec 2021
- IEEE MGA Young Professionals Achievement Global Award, *"For exemplary leadership & distinguished contributions in promoting YP activities,"* Nov 2021
- Best Poster Award, *"ML-based Textual & Sentiment Analysis of COVID-19 Social Media Data: City of Ottawa Case,"* Carleton Data Day 7.1, Mar 2021
- Award of Excellence, 2021 IEEE Region 6 Rising Stars Conference: Jan 2021
  - Exceptional Leadership of the Poster Competition and Conference Program
  - Contributions with incredible value and positive impact on attendees
- Certificate of appreciation, IEEE MGA: 2019-2021
  - Serving as IEEE Canada (Region 7) YP coordinator
  - Addressing the needs and interests of YPs in the technology field worldwide
- Outstanding Contributions Certificates, IEEE Ottawa Section, 2019 and 2020
- 2020 IEEE Young Professional Hall of Fame Global Award, Mar 2020
- Chair of the 2019 Outstanding IEEE Canada YPAG, Dec 2019
- Best Poster Award, *"Diabetes Analytics and Recommendation Engine (DARE),"* Carleton University Data Day 6.0, Mar 2019
- Chair of the 2018 Outstanding IEEE Ottawa Affinity Group Oct 2018
- Teaching Certificate, Carleton Educational and Development Center, Nov 2018
- Best Poster Award, *"IoT for Enhanced Campus Safety,"* Data Day 5.0, Jun 2018
- "Research Excellence Award" Texas A&M University at Qatar 2015-2016
- IEEE Transactions on Communications "Exemplary Reviewer" Dec 2015
- PhD Defence with "Outstanding Ranking" nominated to *"Concordia University Doctoral Dissertation Prizes,"* Jan 2015
- Research Excellence Travel Grant, Texas A&M Qatar (\$1500), Spring 2015
- Certificate of Achievement, for taking the 32-Hours Graduate Seminar in University Teaching, Center of Teaching and Learning, Concordia University, Dec 2014
- Concordia Scholarship Graduate Student Support Program (GSSP) 2011-2014

- Quebec-Tunisia Scholarship for Tuition and Fees Exemption, 2011-2014
- Concordia's Accelerator Award (\$5000) Fall 2014
- Concordia's Conference and Exposition Travel Award (\$1000) Fall 2014
- Research Excellence Travel Grant, Texas A&M Qatar (\$1500) Fall 2013
- Grant from the German Academic Exchange Service (DAAD) July 2011
- Best Paper Award in ComNet'10, "*Outage Capacity of Bidirectional Relaying in Cognitive Relay Networks,*" Nov 2010
- Second Place Research Prize, 12th Annual Texas A&M Research Week Mar 2009
- Best Paper Award in ICSPC'07, "*Improving the Processing Power Efficiency of Minimum Selection GSC with Adaptive Modulation & Power Control,*" Nov 2007

## Professional Affiliations and Memberships

- IEEE Microwave Technology Society (MTT-S), Since 2024
- IEEE Photonics Society (IPS), Since 2023
- IEEE Future Directions Initiative Member, Since 2023
- IEEE Antennas & Propagation Society (APS), Since 2022
- IEEE Industrial Applications Society (IAS), Since 2022
- IEEE Geoscience & Remote Sensing Society (GRSS), Since 2022
- IEEE Sensors Council, Since 2021
- Professional Member in the IEEE Honor Society (HKN), Since 2021
- IEEE IoT, Big Data, Smart Cities, Future Directions Since 2020
- Professional Engineer (PEng) in the Province of Ontario, Canada, Since 2020
- IEEE Senior Member, Since 2020
- IEEE Young Professional for 12 Years, Since 2014
- IEEE Power & Energy Society (PES), Since 2014
- IEEE Computer Society (CS), Since 2013
- IEEE Signal Processing (SPS), Since 2010
- IEEE Communication Society (ComSoc), Since 2010
- Institute of Electrical and Electronics Engineers (IEEE), Since 2008

## Technical Reviewer

- IEEE Transactions on Communications (2015 Exemplary Reviewer)
- IEEE Transactions on Wireless Communications
- IEEE Transactions on Vehicular Technology
- IEEE Transactions on Consumer Electronics
- Canadian Journal of Electrical and Computer Engineering
- IEEE Communications and IEEE Wireless Communications Letters
- Wireless Communications and Mobile Computing Journal
- Reviewer for several conferences including IEEE ICC, WISEE, WCNC, PIMRC...

## Member, Technical Program Committee

- Co-Founder and Co-Organizer of the S4IoT Conference, Kuwait, since Apr 2024
- Co-organizer and Special Session (SS) Chair, IoT World Forum, Nov 2024
- Topic Editor at Frontiers in Communications and Networks, Research Topic: "ICT accessibility at the artificial intelligence Edge," since Sep 2022
- Member of the IEEE Tunisian Students and YP (TSYP) Congress since 2021
- In the organizing Committee of IEEE HKN Pathways to Industry, Xperience, and Student Leadership Conference (SLC) since 2021
- In the organizing Committee and TPC of IEEE WISEE 2019
- In the organizing Committee of IEEE Rising Stars Since 2019
- In the organizing Committee of IEEE WCNC 2016
- TPC in IEEE WCNC, PIMRC, IEEE IWCMC, and IEEE since 2014

## Professional Training

- Ericsson 5G Course (Audit at Carleton University) Winter 2023
- Cisco Net Academy: Introduction to Cybersecurity course Mar 2019
- Cisco Net Academy: Internet of Things course Certificate Dec 2018
- IEEE course on Problems in Big Data Nov 2017
- IEEE course on 5G Massive MIMO: Achieving Spectrum Efficiency Aug 2017
- IEEE course on Prototyping mmWave 28GHz Systems for 5G Network Jul 2017
- IEEE 2030.5 Smart Grid Systems Training on Smart Energy Profile 2.0. Jun 2017
- NEMO Network Drive Test Tools by ANITE Inc. Jan 2015
- CST Software Training by CST Inc. Nov 2013
- PXB & PXT Training by Agilent Technologies Jan 2013
- DDF007 Operation Training by Rohde&Schwarz Dec 2012
- Parallel Computing with MATLAB by MathWorks Training Services Mar 2011
- NI LabVIEW Certificates of Training Spring 2007
  - LabVIEW Intermediate I
  - LabVIEW Basics II
  - LabVIEW RF Application Development
- Cisco CCNA Course Completion Certificates Spring - Summer 2006
  - WAN Technologies
  - Networking Basics
  - Router and Routing Basics
  - Switching Basics and Intermediate Routing

## Languages

- **English:** Fluent: Writing/Reading/Speaking
- **Français:** Fluent: Writing/Reading/Speaking
- **Arabic:** Fluent: Mother tongue

## Publications

### Invited Talks and Panels

- **Inv21**– **Z. Boudia**, “Promoting IEEE MTT-S Initiatives and Present the Role of Wireless Communications for Disaster Response,” *Invited speaker at IEEE Young Professionals in Space*, Nairobi, Kenya, 13-15 Aug 2025.
- **Inv20**– **Z. Boudia**, “Post-Disaster Communications: Focus on Space-Enabled Technologies,” *Invited speaker at the IEEE AESS Tunisia Chapter’s TecWeek 2.0*, Tunis, Tunisia, Aug 2025.
- **Inv19**– **Z. Boudia**, “Integrating Non-Terrestrial Networks to Connect the Unconnected,” *Invited speaker at the IEEE Tunisian Students and Young Professionals (TSYP) Congress*, Hammamet, Tunisia, Dec 2024.
- **Inv18**– **Z. Boudia**, “Integration of Terrestrial and Non Terrestrial Networks for 6G,” *Invited speaker at Gabes Engineering School*, Gabes, Tunisia, 15 Aug 2023.
- **Inv17**– **Z. Boudia**, “Integration of Terrestrial and Non Terrestrial Networks for 6G,” *Invited speaker at Gabes Engineering School*, Gabes, Tunisia, 15 Aug 2023.
- **Inv16**– **Z. Boudia**, “Enabling Communication for Remote and Unconnected Areas: Focus on the Internet of Things,” *Invited speaker and panelist at the 2022 IEEE Young Professional in Space*, Sousse, Tunisia, 19-21 Dec. 2022
- **Inv15**– **Z. Boudia**, “IEEE Canada Volunteering Experience,” *Invited panelist at the IEEE R7 Multigeneration Congress*, Toronto, ON, Canada, 23-25 Sep 2022.
- **Inv14**– **Z. Boudia**, “Carleton-Cisco IoT Testbed: Architecture and Applications,” *Canada’s IoT Conversation (ThinkFest 5.0)*, Ottawa, ON, Canada, 9 Feb 2022.
- **Inv13**– **Z. Boudia**, “Technical and Professional Success with the IEEE,” *Invited speaker at IEEE R8 SYP Congress*, Gammarth, Tunisia, August 2022.
- **Inv12**– **Z. Boudia**, “Machine Learning and IoT for ICT Accessibility,” *Invited speaker at Mada Center*, Doha, Qatar, Jun 2022.
- **Inv11**– **Z. Boudia**, “Tunisian Students and Young Professionals Congress Challenge,” *Invited speaker and Jury*, Hammamet, Tunisia, Dec 2021.
- **Inv10**– **Z. Boudia**, “Machine Learning and Data Analytics Solutions for the Pandemic,” *Invited speaker at ESPRIT Engineering School*, Tunisia, Jun 2021.
- **Inv9**– **Z. Boudia**, “Carleton-Cisco IoT Testbed,” *Inter Conf on Communications, Signal Processing, & Applications (ICCSPA’20)*, Sharjah, UAE, Mar 2021
- **Inv8**– **Z. Boudia**, “5G Verticals and the COVID-19 Pandemic: Presentation and Open Discussion,” *8th IEEE Tunisia Students and YPs Congress (TSYP)*, online, Mar 2021.
- **Inv7**– **Z. Boudia**, “Comment la Communication Sans-Fil Fait-Elle Face à la Pandémie COVID-19: 5G et l’IoT,” *Invited Lecture in French by Institut Supérieur de Transport et de la Logistique de Sousse*, Apr 15 2020.

- **Inv6**– **Z. Boudia**, “Challenges Facing Women in Engineering. Solutions for Equity, Diversity and Inclusion at the Workplace,” *Panelist at the IEEE Women in Communications Engineering (WICE) Workshop On Communications and Professional Development, GlobeCom 2019, Hawaii, USA, Dec 2019*
- **Inv5**– **Z. Boudia**, “The Technical and Professional Importance of Volunteering for IEEE Young Professionals,” *Invited speaker at the IEEE Ottawa Section 2019 Annual General Meeting (AGM), Nov 16, 2019, Ottawa, ON, Canada.*
- **Inv4**– **Z. Boudia** and M. Ibnkahla, “5G Verticals and the COVID-19 Pandemic: Presentation and Open Discussion,” *Invited Seminar Series in Monastir, Sfax, and Sousse Engineering Universities in Tunisia, May 2019.*
- **Inv3**– **Z. Boudia** and M. Ibnkahla, “Scalable and Personalized IoT,” *Invited Seminars in Monastir, Sfax, and Sousse Engineering Universities in Tunisia, May 2019.*
- **Inv2**– **Z. Boudia**, “Diabetes Analytics and Recommendation Engine (DARE),” *2019 IndabaX Tunisia Deep Learning Conference, SupCom, Tunisia, Apr 14, 2019.*
- **Inv1**– **Z. Boudia**, A. Ahmed, J. Fattahi, and R. Abdallah “The GREAT-DR: An Elegant IEEE 2030.5 Based Decentralized Open Architecture Platform for Transactive DR and Smart Grid Advancement,” *Demand Response (DR) Workshop at Canmet ENERGY-Varenes, in collaboration with Hydro-Ottawa, Apr 2018.*

#### Books

- **B4**– M. Ghalib, **Z. Boudia**, and M. Ibnkahla, “Enhanced Federated and Multi-Task Learning Techniques for Electric Load Forecasting,” *LAMBERT Academic Publishing, Under Production, October 2025.*
- **B3**– A. Ahmed, **Z. Boudia**, and M. Ibnkahla, “Data Communication and Analytics for Smart Grid Systems: Diverse Forecasting Models,” *LAMBERT Academic Publishing, ISBN: 978-620-2-92426-9, November 2020.*
- **B2**– **Z. Boudia**, A. Ghayeb, and K. A. Qaraqe, “Spatial Modulation for Cognitive Radio Systems,” *LAMBERT Academic Publishing, ISBN-10: 3659780073, ISBN-13: 978-3659780073, January 2016.*
- **B1**– **Z. Boudia**, M.-S. Alouini, and K. A. Qaraqe, “Joint Diversity Combining, Adaptive Modulation, & Power Control: Performance Analysis,” *LAMBERT Academic Publish, ISBN-10: 3844397477, ISBN-13: 978-3844397475, Mar 2011.*

#### Book Chapters

- **BC2**– **Z. Boudia**, J. Fattahi, A. Ahmed, M. Ibnkahla, H. Schriemer, and R. Abdallah, “Smart Grid Communication Based on IEEE 2030 Standard,” *Encyclopedia of Wireless Networks, Springer International Publishing, October 2018.*
- **BC1**– M. Di Renzo *et. Al.*: **Z. Boudia** Contributor to Section II, “Spatial Modulation for Multiple-Antenna Communication,” *Wiley Encyclopedia of Electrical and Electronics Engineering, John Wiley & Sons, Nov. 2016.*

## Journals

- **J13**– M. Ghalib, **Z. Boudia**, and M. Ibnkahla, “Federated Learning-Based Short Term Electric Load Forecasting Using Temporal Fusion Transformer: An Empirical Analysis of Hyperparameters,” *Submitted IEEE Transactions on Smart Grids*, pp. 1-10, Aug 2023.
- **J12**–**Z. Boudia**, Y. Rafique, Dana Haj Hussein, I. AlShiab, and M. Ibnkahla, “Carleton-Cisco IoT Testbed for Smart Cities: Architecture, Features, and Applications,” *Submitted to the IEEE IoT Journal, Special Issue on Current Research Trend and Open Challenge for Industrial Internet-of-Things*, Sep 2023.
- **J11**– M. Azzam, **Z. Boudia**, and M. Ibnkahla, “Ambient Source and Energy Prediction for Energy-Aware Task Scheduling in IoT,” *Submitted to the IEEE Internet of Things Journal*, pp. 1-11, Jun 2023.
- **J10**– **Z. Boudia**, A. Ahmed, and M. Ibnkahla, “Predictive Data Analytics for Smart Grid Systems,” *Submitted to IEEE Trans. on Smart Grids*, Jul 2023.
- **J9**– **Z. Boudia**, A. Stavridis, A. Ghayeb, H. Haas, M. Hasna, and M. Ibnkahla, “Precoding-Aided Spatial Modulation for the Wiretap Channel with Relay Selection and Cooperative Jamming,” *Proc. Wireless Communications and Mobile Computing Volume 2018, Article ID 8407297, 11 pages*, Dec 2018.
- **J8**– **Z. Boudia**, H. El-Sallabi, M. Abdallah, A. Ghayeb, and K. A. Qaraqe, “Reconfigurable Antenna-Based Space-Shift Keying for Spectrum Sharing Systems under Rician Fading,” *IEEE Transactions on Wireless Communications*, vol. 64, no. 9, pp. 3970-3980, Sep 2016.
- **J7**– **Z. Boudia**, H. El-Sallabi, A. Ghayeb, and K. A. Qaraqe, “Reconfigurable Antenna-based Space-Shift Keying (SSK) for MIMO Channels,” *IEEE Transactions on Wireless Communications*, vol. 15, no. 1, pp. 446-457, Jan 2016.
- **J6**– **Z. Boudia**, A. Ghayeb, and K. A. Qaraqe, “Adaptive Spatial Modulation for Spectrum Sharing Systems with Limited Feedback,” *IEEE Transactions on Communications*, vol. 63, no. 6, pp. 2001-2014, Jun 2015.
- **J5**– **Z. Boudia**, A. Ghayeb, K. A. Qaraqe, and M.-S. Alouini, “Adaptive Transmission Schemes for MISO Spectrum Sharing Systems: Tradeoffs and Performance Analysis,” *IEEE Trans on Wireless Communications*, vol. 13, no. 10, pp. 5352-5365, October 2014.
- **J4**– **Z. Boudia**, K. Tourki, A. Ghayeb, K. A. Qaraqe, and M.-S. Alouini, “Power Adaptation for Joint Switched Diversity and Adaptive Modulation Schemes in Spectrum Sharing Systems,” *IEEE Communication Letters*, vol. 16, no. 9, pp. 1482-1485, September 2012.
- **J3**– **Z. Boudia**, K. A. Qaraqe, M. Abdallah, and M.-S. Alouini, “Performance Analysis of Joint Multi-Branch Switched Diversity and Adaptive Modulation Schemes for Spectrum Sharing Systems,” *IEEE Transactions on Communications*, vol. 60, no. 12, pp. 3609-3619, December 2012.

- **J2**– K. A. Qaraqe, **Z. Boudia**, and M.-S. Alouini, “Performance Analysis of Joint Diversity Combining, Adaptive Modulation, and Power Control Schemes,” *IEEE Transactions on Communications*, vol. 59, no. 1, pp. 106-115, January 2011.
- **J1**– **Z. Boudia**, N. Belhaj, M.-S. Alouini, and K. A. Qaraqe, “Minimum Selection GSC with Down-Link Power Control” *IEEE Trans. on Wireless Commun.*, vol. 7, no. 7, pp. 2492-2501, July 2008.

#### Conferences

- **C31**– M. Ghalib, **Z. Boudia**, and M. Ibnkahla, “Federated Temporal Fusion Transformer for Privacy-Preserving Short-Term Electric Load Forecasting,” in *Proc IEEE International Conference on Communications, Control, and Computing Technologies for Smart Grids (SmartGridComm’23)*, Glasgow, Scotland, pp. 1-6, Nov 2023.
- **C30**– M. Ghalib, **Z. Boudia**, and M. Ibnkahla, “Analyzing Federated Learning Aggregation and Distributed Personalization Algorithms Towards Understanding Users’ Residential Electric Load Patterns,” *2023 IEEE International Symp. on Personal, Indoor and Mobile Radio Communications (PIMRC’23)*, Toronto, Canada, pp. 1-6, Sep 2023.
- **C29**– O. AlAidaros, Y. Kardjaja, **Z. Boudia**, and M. Ibnkahla, “Energy and Time-Effective Computation Offloading for Edge Computing-Enabled IoT Networks,” *Proc. 2023 IEEE Sensors Applications Symposium (SAS’23)*, Ottawa, Canada, pp. 1-6, Jul 2023.
- **C28**– O. AlAidaros, **Z. Boudia**, and M. Ibnkahla, “Adaptive Computation Offloading for Heterogeneous IoT Applications: An Experimental Study,” *Proc. 2023 20th International Conference on Systems, Signals & Devices (SSD’23)*, Mahdia, Tunisia, pp. 1-6, Mar 2023.
- **C27**– M. Ghalib, **Z. Boudia**, and M. Ibnkahla, “Pandemic-Aware Load Forecasting using Multi-Task Learning,” *Proc. 2022 IEEE International Conf. on Communications (ICC’22)*, Seoul, South Korea, pp. 1-6, May 2022.
- **C26**– M. Azzam, **Z. Boudia**, and M. Ibnkahla, “Irradiance and Temperature Forecasting for Energy Harvesting Units in IoT Sensors using SARIMA-KF,” *Proc. 2022 IEEE Wireless Comm. & Networking Conf (WCNC’22)*, Austin, TX, pp. 1-6, Apr 2022.
- **C25**–**Z. Boudia**, I. AlShiab, Y. Rafique, A. Jarwan, M. Moorjmalani, S. K. Kuri, and M. Ibnkahla, “Carleton-Cisco IoT Testbed: Architecture, Features, and Applications,” *Proc. 2021 GlobeCom Workshop on Experimental wireless platforms and testbeds for computing, communication and networking research*, pp. 1-6, Madrid, Spain, Dec 2021, **Awarded Workshop Best Paper Award**.
- **C24**– T. Gachovska, M. Moorjmalani, G. Gachovski, M. T. Ranjbar, M. Amiali, C. Pintilei, **Z. Boudia**, and A. Herrera, “Design of a Continuous Flow UVC Lamp for Office Air Germicide Elimination,” *Proc. 2021 IEEE Canadian Conference on Electrical and Computer Engineering (CCECE)*, pp. 1-6, Sep 2021.

- **C23**– C. S. Ferdowsy, **Z. Boudia**, and M. Ibnkahla, “Traffic Adaptive Transmission Schemes for the Internet of Things,” *2020 International Conference on Communications, Signal Processing, and their Applications (ICCSPA'20)*, Sharjah, United Arab Emirates, Mar 2021.
- **C22**– C. S. Ferdowsy, **Z. Boudia**, and M. Ibnkahla, “Energy and Spectral Efficient Scheduling for Heterogeneous IoT Sensor Nodes,” *Proc. 2020 IEEE Eighth International Conference on Communications and Networking (ComNet'20)*, Hammamet, Tunisia, March 2020.
- **C21**– J. Samuel, **Z. Boudia**, P. Shafia, M. Hozayen, Le. Kassab, La. Kassab, and M. Ibnkahla, “Diabetes Analytics and Recommendation Engine (DARE),” *Proc. 2020 IEEE Eighth International Conference on Communications and Networking (ComNet'20)*, Hammamet, Tunisia, Mar 2020.
- **C20**– Y. Rafique, **Z. Boudia**, and M. Ibnkahla, “Optimized Channel-Aware Scheduling for Heterogeneous Internet of Things,” *Proc. 2019 IEEE Wireless Comm. & Networking Conf (WCNC'19)*, Marrakech, Morocco, pp. 1-6, April 2019.
- **C19**– K. Arab, **Z. Boudia**, and M. Ibnkahla, “Artificial Intelligence for Diabetes Mellitus Type II: Forecasting and Anomaly Detection,” *Proc. 2019 IEEE Wireless Comm. & Networking Conf (WCNC'19)*, Marrakech, Morocco, pp. 1-6, Apr 2019.
- **C18**– J. Kerkhoven, N. Charlebois, A. Robertson, B. Gibson, A. Ahmed, **Z. Boudia**, and M. Ibnkahla, “IPv6-Based Smart Grid Communication System over 6LoW-PAN,” *Proc. 2019 IEEE Wireless Comm. & Networking Conf (WCNC'19)*, Marrakech, Morocco, pp. 1-6, Apr 2019.
- **C17**– M. Ghalib, A. Ahmed, I. Al-Shiab, **Z. Boudia**, and M. Ibnkahla, “Implementation of a Smart Grid Communication System Compliant with IEEE 2030.5,” *4th ICC International Workshop on Integrating Communications, Control, and Computing Technologies for Smart Grid*, Kansas City, MO, USA, pp. 1-6, May 2018.
- **C16**– A. Ahmed, K. Arab, **Z. Boudia**, and M. Ibnkahla, “Data Communication and Analytics for Smart Grid Systems,” *Proc 2018 IEEE International Conf. on Communications (ICC'18)*, Kansas City, MO, USA, pp. 1-7, May 2018.
- **C15**– **Z. Boudia**, A. Gharib, and M. Ibnkahla, “Secondary System's Scheduling Using Precoding-Aided Space Shift Keying for Overlay Cognitive Radio,” *Proc. 2018 IEEE Wireless Comm. & Networking Conf (WCNC'18)*, Barcelona, Spain, pp. 1-5, Apr 2018.
- **C14**– **Z. Boudia**, A. Stavridis, A. Ghayeb, H. Haas, and M. Hasna, “Precoded spatial modulation for the wiretap channel with relay selection and cooperative jamming,” *Proc. 2017 IEEE Wireless Comm. & Networking Conf (WCNC)*, San Francisco, CA, USA, Mar 2017, pp. 1–6.

- **C13**– **Z. Boudia**, H. El-Sallabi, M. Abdallah, A. Ghayeb, and K. A. Qaraqe, “Reconfigurable Antenna-Based Space-Shift Keying for Spectrum Sharing Systems,” *Proc 2016 IEEE Inter. Conf. on Communications (ICC’16)*, Kuala Lumpur, Malaysia, pp. 2558-2563, May 2016.
- **C12**– **Z. Boudia**, M. Qaraqe, Q. H. Abbasi, M. Abdallah, and E. Serpedin, “Performance of Ultra-wideband Body-centric Wireless Networks,” *Proc. Progress In Electromagnetics Research Symposium (PIERS’15)*, Prague, Czech Republic, pp. 2800-2804, Jul 2015.
- **C11**– **Z. Boudia**, H. El-Sallabi, A. Ghayeb, and K. A. Qaraqe, “Enhanced Space-Shift Keying (SSK) with Reconfigurable Antennas,” *Proc. 2015 IEEE International Conf. on Communications (ICC’15)*, London, U.K, pp. 2393-2398, Jun 2015.
- **C10**– **Z. Boudia**, A. Ghayeb, and K. A. Qaraqe, “Joint Adaptive Spatial Modulation and Power Adaptation for Spectrum Sharing Systems with Limited Feedback,” *Proc. 2015 IEEE Wireless Comm. & Net. Conf (WCNC’15)*, New Orleans, USA, March 2015.
- **C9**– **Z. Boudia**, A. Ghayeb, and K. A. Qaraqe, “Adaptive Spatial Modulation for Spectrally-Efficient MIMO Spectrum Sharing Systems,” *Proc. 2014 IEEE Inter. Symposium on Personal, Indoor and Mobile Radio Communications (PIMRC’14)*, Washington DC, USA, Sep 2014.
- **C8**– **Z. Boudia**, A. Ghayeb, and K. A. Qaraqe, “Adaptive Spatial Modulation for Spectrally-Efficient MIMO Systems,” *Proc. 2014 IEEE Wireless Comm. & Networking Conf (WCNC’14)*, Istanbul, Turkey, Apr 2014.
- **C7**– **Z. Boudia**, A. Ghayeb, K. A. Qaraqe, and M.-S. Alouini, “Adaptive transmission schemes for MISO spectrum sharing systems,” *2013 IEEE 14th Int. Workshop on Signal Process. Advances in Wireless Commun. (SPAWC’13)*, Darmstadt, Germany, Jun 2013.
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#### Posters

- **P14**– M. Ghalib, **Z. Boudia**, and M. Ibnkahla, “Federated Temporal Fusion Transformer for Residential Short-Term Electric Load Forecasting,” *Carleton University Data Day 9.0*, Mar 2023.
- **P13**– **Z. Boudia**, Y. Rafique, Dana Haj Hussein, I. AlShiab, and M. Ibnkahla, “Carleton-Cisco IoT Testbed for Smart Cities: Architecture, Features, and Applications,” *Carleton University Data Day 9.0*, Mar 2023.
- **P12**– F. Lagum, J. Singh, S. Barouni, **Z. Boudia**, and M. Ibnkahla, “Machine Learning-based Textual and Sentiment Analysis of COVID-19 Social Media Data: City of Ottawa Case,” **Second place award** at *Carleton University Data Day 7.1*, Mar 2021.
- **P11**– **Z. Boudia**, A. Jarwan, A. Mahmoud, D. Haj Hussein, I. Al-Shiab, M. Moorjmalani, O. AlAidaros, S. Khuri, Y. Rafique, and M. Ibnkahla, “The Carleton-Cisco IoT Testbed: A State-of-the-art Platform for IoT Design, Deployment, and User Experience,” *Carleton University Data Day 7.1*, Mar 2021.
- **P10**– M. Moorjmalani, **Z. Boudia**, and M. Ibnkahla, “Data Generation and Visualization in the Smart Gardening IoT Application,” *Carleton University Data Day 7.1*, Mar 2021.
- **P9**– J. Samuel, **Z. Boudia**, P. Shafia, M. Hozayen, Le. Kassab, La. Kassab, and M. Ibnkahla, “Diabetes Analytics and Recommendation Engine (DARE),” **Second place award** at *Carleton University Data Day 6.0*, Mar 2019.
- **P8**– A. Ahmed, **Z. Boudia**, and M. Ibnkahla, “Electricity Consumption Forecasting using Neural Networks,” *Carleton University Data Day 5.0*, Jun 2018.
- **P7**– H. Yim, K. El-Gaouny, M. Mirza, M. Al-Digs, M. O. Khan, R. Hachem, **Z. Boudia**, and M. Ibnkahla, “IoT for Enhanced Campus Security and Safety,” **First place award** at *Carleton University Data Day 5.0*, Jun 2018.
- **P6**– **Z. Boudia**, H. El-Sallabi, M. Abdallah, A. Ghayeb, and K. A. Qaraqe, “Reconfigurable Antenna-Based Space Shift Keying for Spectrum Sharing Systems,” *The Fifth TAMUQ Research and Industry Forum, QNCC, Doha*, Mar 2016.
- **P5**– **Z. Boudia**, A. Ghayeb, and K. A. Qaraqe, “Adaptive Spatial Modulation for Spectrum Sharing Systems with Limited Feedback,” *The Fourth TAMUQ Research Forum, QNCC, Doha*, Apr 2015.

- **P4**– **Z. Boudia**, A. Ghrayeb, and K. A. Qaraqe, “Energy and Spectrally Efficient Solutions for Spectrum Sharing Systems,” *QF Annual Research Conference (ARC’2014)*, QNCC, Doha, Nov 2014.
- **P3**– **Z. Boudia**, A. Ghrayeb, and K. A. Qaraqe, “Adaptive Spatial Modulation (ASM) for High Data Rates MIMO Systems,” *The Third TAMUQ Annual Research Forum*, QNCC, Doha, Apr 2014.
- **P2**– **Z. Boudia**, A. Ghrayeb, K. A. Qaraqe, and M.-S. Alouini, “Adaptive Data Transmission Schemes for Multiple Antenna Spectrum Sharing Systems,” *Second TAMUQ Forum*, Doha, Apr 2013.
- **P1**– **Z. Boudia**, M. Abdallah, K. A. Qaraqe, and M.-S. Alouini, “Performance Analysis of Multi-Branch Switched Diversity Schemes for Spectrum Sharing Systems,” *2011 IEEE Communication Theory Workshop (CTW’11)*, Sitges, Spain, Jun 2011.