Prof. Daniel Benevides da Costa

Curriculum Vitae

Distinguished University Professor - From January 2024 - Present
King Fahd University of Petroleum & Minerals (KFUPM)
Department of Electrical Engineering, Dhahran 31261, Saudi Arabia

Acting Director - Interdisciplinary Research Center for Communication Systems and Sensing (IRC-CSS), KFUPM - From August 2025 - Present

Editor-in-Chief - IEEE Communications Letters
Specialty Chief Editor, Frontiers in Communications and Networks
Distinguished Speaker - IEEE Vehicular Technology Society
Top 1% Scientists in The World by Research.com (2022-2025) - Electronics and Electrical Engineering Field
World Top 2% Scientists By Stanford-Elsevier (2021-2005) - Two Categories: Single-Year Impact and Career-Long Impact

Personal Information

Birthdate: April 21, 1981
Birthplace: Fortaleza, Ceará, Brazil
Marital Status: Married
Email: daniel.costa@kfupm.edu.sa, danielbcosta@ieee.org, danielbcosta@gmail.com
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Education

State University of Campinas Campinas, SP, Brazil
Mar. 2006 – Jun. 2008:
Ph.D. Degree in Electrical Engineering.
Thesis title: "Theoretical Contributions for Generalized Fading Scenarios in Wireless Systems".
Advisor: Prof. Dr. Michel Daoud Yacoub.

State University of Campinas Campinas, SP, Brazil
Mar. 2004 – Apr. 2006:
MSc. Degree in Electrical Engineering.
Dissertation title: "Higher Order Statistics of Weibull and Nakagami-m Fading Channels".
Advisor: Prof. Dr. Michel Daoud Yacoub.

Military Institute of Engineering Rio de Janeiro, RJ, Brazil
Feb. 1999 – Nov. 2003:
BSc. Degree in Telecommunications Engineering.

Academic/Industry Experience

Technology Innovation Institute Abu Dhabi, UAE
Mar. 2022 – Jan. 2024
Principal Researcher

National Yunlin University of Science and Technology Douliu, Taiwan
Mar. 2021 – Mar. 2022
Full Professor

Federal University of Ceará (UFC) Sobral, CE, Brazil
Feb. 2018 – Feb. 2022
Associate Professor

Istanbul Medipol University Turkey
Sep. 2019 – Dec. 2019
Visiting Researcher

King Abdullah University of Science and Technology Saudi Arabia
May 2019 – Aug. 2019
Visiting Academic Member

Lappeenranta University of Technology (LUT) Finland
Jan. 2019 – Apr. 2019
Nokia Visiting Professor

Federal University of Ceará (UFC) Sobral, CE, Brazil
Feb. 2010 – Feb. 2018
Assistant Professor (*Obs: In Brazil, regardless the academic performance, it is required 8 years for being promoted from Assistant Professor to Associate Professor*).

Federal University of Ceará (UFC) Fortaleza, CE, Brazil
Sep. 2009 – Jan. 2010
Post-Doctoral Fellow in the wireless research group of telecommunications (GTEL).
Supervisor: Prof. Dr. Charles Casimiro Cavalcante.

INRS, Université du Quebec Montreal, QC, Canada
Aug. 2008 – Aug. 2009
Post-Doctoral Fellow in the wireless communications research group at INRS-EMT.
Supervisor: Prof. Dr. Sonia Aissa

Research Interests

- Channel Modeling and Characterization
- Multiple-Input Multiple-Output (MIMO) Systems
- Cognitive Radio
- Cooperative and Relay Communications
- Energy Harvesting
- Physical Layer Security

- Green Communications
- Fluid Antenna Systems
- Millimeter Wave (mmWave) and Terahertz (THz) Communications
- Non-Orthogonal Multiple Access (NOMA) Schemes
- Rate-Splitting Multiple Access (RSMA) Schemes
- Massive Machine-Type Communications (mMTC)
- Ultra-Reliable Low-Latency Communications (URLLC)
- Cell-Free Massive MIMO Systems
- Reconfigurable Intelligent Surfaces and Holographic MIMO
- Integrated Sensing and Communication
- Machine Learning and Artificial Intelligence
- Free-Space Optical Wireless Communications
- Visible Light Communications
- Unmanned Aerial Vehicle (UAV) Networks
- Molecular Communications Networks
- Blockchain
- Metaverse/Digital Twin
- Open RAN
- Other Topics Related to Beyond 5G Networks

Only Journal Publications; Most in Q1 Journals - For All Publications, see personal homepage

1. A. Lawal, A. Zerguine, K. A.-Meraim, and D. B. da Costa, "Deep Learning-Based Composite Channel Estimation for Reconfigurable Intelligent Surfaces-Aided Systems", *Accepted for publication, IEEE Wireless Commun. Lett.*, 2025.

2. Z. Xiao, Z. Li, L. Zhu, B. Ning, D. B. da Costa, X.-G. Xia, and R. Zhang, "Movable Antenna Aided NOMA: Joint Antenna Positioning, Precoding, and Decoding Design", *Accepted for publication, IEEE Trans. Wireless Commun.*, 2025.

3. J. Shen, H. Yuan, Z. Zhang, X. Gao, D. B. da Costa, and K. Yang, "Mitigating Group Delay Mismatch in Terahertz Hybrid Beamforming Systems: A Frequency-Selective Joint Analog-Digital Framework", *Accepted for publication, IEEE Trans. Commun.*, 2025.

4. T. H.-The, H.-T. Nguyen, T.-H. Vu, D. B. da Costa, and Q.-V. Pham "D2SNet: A Denoising-to-Segmentation Network for Enhanced 5G-LTE Spectrum Awareness", *Accepted for publication, IEEE Wireless Commun. Lett.*, 2025.

5. X. Zhu, Q. Wu, W. Chen, Y. Liu, M. Jian, and D. B. da Costa, "Spatial Scattering Shift Keying for mmWave MIMO Systems", *Accepted for publication, IEEE Trans. Commun.*, 2025.

6. F. H. Kumbhar, W. Mesbah, and D. B. da Costa, "Ensuring QoS in GF-NOMA Networks: Light-Weight Resource Allocation Strategy for IoTs", *Accepted for publication, IEEE Wireless Commun. Magazine*, 2025.

7. X. Ma, A. A. Nasir, and D. B. da Costa, "Beamfocusing and Power Allocation for AN-Based PLS in Multiuser XL-MIMO with Multiple Eavesdroppers", *Accepted for publication, IEEE Wireless Commun. Lett.*, 2025.

8. F. Wen, X. Li, S. Dang, D. B. da Costa, A. Nallanathan, and C. Yuen, "Fast-2D-DOA Estimation for Polarized Massive MIMO Systems with Irregularly Spaced Sensors", *Accepted for publication, IEEE Trans. Commun.*, 2025.

9. O. S. Badarneh, F. Almehmadi, and D. B. da Costa, "The Nakagami-Lomax Distribution: A Hyper Composite Fading Model", *Accepted for publication, IEEE Trans. Veh. Technol.*, 2025.

10. Y. Xu, M. Zheng, D. Xu, S. Song, and D. B. da Costa, "Sensing-Aided Near-Field Secure Communications with Mobile Eavesdroppers", *Accepted for publication, IEEE Trans. Wireless Commun.*, 2025.

11. O. S. Badarneh, D. B. da Costa, H. S. Silva, and R. A. A. de Souza, "NOMA-Based THz Communications under Beam Misalignment", *Accepted for publication, IEEE Trans. Veh. Technol.*, 2025.

12. S. Wu, L. Yang, J. Li, H. Guo, I. Ahmad, D. B. da Costa, H. Jiang, and D. Niyato, "DRL-Based Pricing-Driven for Task Offloading and Dynamic Resource in Vehicle Edge Computing", *Accepted for publication, IEEE Trans. Mobile Comp.*, 2025.

13. T.-H. Vu, K.-T. Nguyen, D. B. da Costa, H. Shin, and S. Kim, "Aerial STAR-RIS-based Symbiotic Systems with Semi-NOMA Transmission: Performance Analysis and Optimization", *IEEE Int. Things Journal*, vol. 12, no. 18, pp. 38043-38058, Sep. 2025.

14. T. H.-The, T.-T. Le, T.-H. Vu, and D. B. da Costa, "CMNet: Radar-Communication Waveform Recognition via Convolution and Mamba Networks", *IEEE Wireless Commun. Lett.*, vol. 14, no. 9, pp. 2997-3001, Sep. 2025.

15. Z. Sheng, H. Hu, A. Nasir, Y. Fang, and D. B. da Costa, "Online Trajectory Planning and Resource Allocation of UAV-Enabled MEC Networks Empowered by RIS", *IEEE Trans. Green Commun. Net.*, vol. 9, no. 3, pp. 1224-1238, Sep. 2025.

16. Z. Peng, J. Zhu, C. Pan, Z. Zhang, D. B. da Costa, M. Elkashlan, and G. K. Karagiannidis, "Active RIS-Aided Massive MIMO with Imperfect CSI and Phase Noise", *IEEE Trans. Wireless Commun.*, vol. 24, no. 8, pp. 6824-6840, Aug. 2025.

17. T.-H. Vu, A.-T. Le, T. H.-The, D. B. da Costa, and S. Kim, "A New Look for Outage and Ergodic Improvements in Coordinated IoT Paradigms with Hybrid Multiple Access", *IEEE Trans. Veh. Technol*, vol. 74, no. 8, pp. 13284-13289, Aug. 2025.

18. T.-H. Vu, D. B. da Costa, S. Kim, and Q.-V. Pham, "Outage, Capacity, and Error Performance of Downlink RSMA-based Systems: Analysis and Resource Optimization", *IEEE Trans. Commun.*, vol. 73, no. 8, pp. 6868-6883, Aug. 2025.

19. J. Zheng, X. Lai, T. Wu, M. Elkashlan, D. B. da Costa, C. Yuen, and F. Adachi, "Unlocking FAS-RIS Security Analysis with Block-Correlation Model", *IEEE Wireless Commun. Lett.*, vol. 14, no. 4, pp. 2029-2033, July 2025.

20. T.-T. Le, D. B. da Costa, and T. H-The, "Efficient Spectrum Sensing via a Multi-Scale Dual-Path Segmentation Network", *IEEE Wireless Commun. Lett.*, vol. 14, no. 7, pp. 2134-2138, July 2025.

21. Y. Guo, F. Wang, R. Li, S. Shi, X. Li, and D. B. da Costa, "Optical IRS Assisted-Visible Light Positioning in Indoor Non-LOS IoVs Scenarios", *IEEE Int. Things Journal*, vol. 12, no. 14, pp. 27686-27698, July 2025.

22. D. D. Souza, M. M. Freitas, A. L. P. Fernandes, P. H. J. Nardelli, D. B. da Costa, A. M. Cavalcante, and J. C. W. A. Costa, "Trajectory Optimization in User-Centric Distributed Massive MIMO Systems Enabled by UAV Swarms", *IEEE Trans. Veh. Technol.*, vol. 74, no. 6, pp. 9252-9268, June 2025.

23. X. Li, J. Zhao, G. Chen, W. Hao, D. B. da Costa, A. Nallanathan, H. Shin, and C. Yuen, "STAR-RIS Assisted Covert Wireless Communications with Randomly Distributed Blockages", *IEEE Trans. Wireless Commun.*, vol. 24. no. 6, pp. 4690-4705, June 2025.

24. D. Pereira, R. Oliveira, D. B. da Costa, and H. Kim, "Interference Estimation via Model-Based Deep Learning in Grant-Free Networks", *IEEE Wireless Commun. Lett.*, vol. 14, no. 6, pp. 1663-1667, June 2025.

25. C. A. Gutierrez, J. R.-Pineiro, K. Guan, D. Matolak, M. Walter, and D. B. da Costa, "Channel Modeling for Integrated Sensing and Communication in Vehicular Environments: Conceptualization and Challenges", *IEEE Veh. Technol. Magazine*, vol. 20, no. 2, pp. 104-113, June 2025.

26. A.-T. Le, T.-H. Vu, D. B. da Costa, and M. Voznak, "Hybrid Power-Frequency Multiple Access with SIC-Free for Holographic Reconfigurable Intelligent Surface-Based Systems", *IEEE Wireless Commun. Lett.*, vol. 14, no. 5, pp. 1566-1570, May 2025.

27. Y. Zhang, X. Hu, J. Yang, W. Zhang, X. Li, X. Li, and D. B. da Costa, "Dual-Polarized RIS-Assisted Secure Integrated Sensing and Communication Systems", *IEEE Trans. Veh. Technol.*, vol. 74, no. 4, pp. 6679-6684, April 2025.

28. F. H. Kumbar, W. Mesbah, and D. B. da Costa, "A Novel Scheme for QoS-Aware Resource Pooling and Uncoordinated Allocation in Grant-Free NOMA", *IEEE Wireless Commun. Lett.*, vol. 14, no. 4, pp. 1054-1058, April 2025.

29. X. Ma, A. A. Nasir, and D. B. da Costa, "Hybrid Near/Far-Field Communications of RIS-Aided Cell-Free Massive MIMO with Visibility Region Detection", *IEEE Open J. Commun. Society*, vol. 6, pp. 1710-1726, Mar. 2025.

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31. A. Masaracchia, V.-L. Nguyen, D. B. da Costa, E. Ak, B. Canberk, V. Sharma, and T. Q. Duong, "Toward 6G-Enabled URLCCs: Digital Twin, Open RAN, and Semantic Communications", *IEEE Commun. Magazine*, vol. 9, no. 1, pp. 13-20, Mar. 2025.

32. D. Deng, W. Zhou, X. Li, D. B. da Costa, D. W. K. Ng, and A. Nallanathan, "Joint Beamforming and UAV Trajectory Optimization for Covert Communications in ISAC Networks", *IEEE Trans. Wireless Commun.*, vol. 24, no. 2, pp. 1016-1030, Feb. 2025.

33. T. H.-The, G.-V. Nguyen, T.-H. Vu, D. B. da Costa, and Q.-V. Pham, "SRNet: Deep Semantic Segmentation Network for Spectrum Sensing in Wireless Communications", *IEEE Wireless Commun. Lett.*, vol. 14, no. 2, pp. 355-359, Feb. 2025.

34. Z. Yang, S. Zhang, G. Chen, Z. Dong, Y. Wu, and D. B. da Costa, "Secure Integrated Sensing and Communication Systems Assisted by Active RIS", *IEEE Trans. Veh. Technol.*, vol. 73, no. 12, pp. 19791-19796, Dec. 2024.

35. M. M. Freitas, D. D. Souza, A. L. P. Fernandes, D. B. da Costa, A. M. Cavalcante, L. Valcarenghi, and J. C. W. A. Costa, "Scalable User-Centric Distributed Massive MIMO Systems with Restricted Processing Capacity", *IEEE Trans. Wireless Commun.*, vol. 23, no. 12, pp. 19933-19949, Dec. 2024.

36. M. M. Salim, S. I. Al-Dharrab, D. B. da Costa, and A. H. Muqaibel, "Rate-Energy Optimization for Hybrid-Powered Full-Duplex Relays in Cognitive C-NOMA with Impairments", *IEEE Open J. Commun. Society*, vol. 5, pp. 7419-7433, Nov. 2024.

37. B. K. S. Lima, J. P. Matos-Carvalho, R. Dinis, D. B. da Costa, M. Bekko, and R. Oliveira, "LSTM-based Trajectory and Phase-Shift Prediction for RSMA Networks Assisted by AIRS", *IEEE Trans. Commun.*, vol. 72, no. 11, pp. 6929-6942, Nov. 2024.

38. J. Du, Y. Chen, P. Zhang, S. Mumtaz, X. Li, and D. B. da Costa, "An Effective Simultaneous Channel Estimation and Sensing Algorithm for MmWave MIMO-OFDM Systems", *IEEE Trans. Wireless Commun.*, vol. 23, no. 11, pp. 17054-17069, Nov. 2024.

39. M. Ju, X. Lei, and D. B. da Costa, "STAR-RIS-Assisted Full-Duplex Symbiotic Radio", *IEEE Wireless Commun. Lett.*, vol. 13, no. 11, pp. 2945-2949, Nov. 2024.

40. M. Han, J. Du, Y. Chen, Z. Xiao, X. Li, and D. B. da Costa, "Tensor-Based Joint Symbol Symbol Detection, User Localization and Tracking for THz Systems with Dual-Wideband Effects", *IEEE Trans. Veh. Technol.*, vol. 73, no. 11, pp. 17794-17799, Nov. 2024.

41. Y. Yu, R. Xu, G. Chen, D. B. da Costa, and G. Lu, "QoS-Guaranteed Adaptive Power Reflection Coefficient for Self-Powered Cooperative Ambient Backscatter Communication", *IEEE Wireless Commun. Lett.*, vol. 13, no. 10, pp. 2812-2816, Oct. 2024.

42. R. Song, J. Shen, H. Yuan, Z. Gao, X. Ding, Y. Liu, and D. B. da Costa, "Line-of-Sight MIMO Systems: DoF Analysis and Hybrid Beamforming Design", *IEEE Int. Things Journal*, vol. 11, no. 19, pp. 31791-31804, Oct. 2024.

43. T. H-. The, Q.-V. Pham, N. C. Luong, H. Phan, and D. B. da Costa, "Improved Waveform Classification for Integrated Radar-Communication 6G Systems via Convolutional Neural Networks", *IEEE Trans. Veh. Technol.*, vol. 73, no. 9, pp. 13921-13925, Sep. 2024.

44. Y. Gao, Q. Wu, W. Chen, Y. Liu, M. Li, and D. B. da Costa, "IRS-Aided Overloaded Multi-Antenna Systems: Joint User Grouping and Resource Allocation", *IEEE Trans. Wireless Commun.*, vol. 23, no. 8, pp. 8297-8313, Aug. 2024.

45. A. Singh, S. Sharma, M. Sharma, K. Deka, and D. B. da Costa, "Autoencoder Based End-to End OTFS System Design with Hardware Impairments", *IEEE Wireless Commun. Lett.*, vol. 13, no. 8, pp. 2285-2289, Aug. 2024.

46. F. H. Kumbhar, S. Unar, W. Mesbah, and D. B. da Costa, "SAFE-GF-NOMA: Social Autonomous Flocking to Enhance GF-NOMA for Massive Internet of Things Uplink Access Contention", *IEEE Access*, vol. 12, pp. 96085-96099, July 2024.

47. S. Li, F. Wang, Y. Zhang, R. Li, S. Shi, Y. Li, X. Li, and D. B. da Costa, "Orthogonal Chirp Division Multiplexing Assisted Dual-Function Radar Communication in IoT Networks", *IEEE Int. Things Journal*, vol. 11, no. 13, pp. 23752-23764, July 2024.

48. T.-T. Nguyen, T.-H. Vu, L.-T. Tu, T. T. Duy, Q.-S. Nguyen, and D. B. da Costa, "A Low-Complexity Relaying Protocol for Cooperative Short-Packet NOMA-Based Spectrum Sharing Systems", *IEEE Trans. Veh. Technol.*, vol. 76, no. 3, pp. 9044-9049, June 2024.

49. D. Pereira, R. Oliveira, D. B. da Costa, and H. Kim, "Performance Analysis of Slotted-Aloha with Mandatory Access and Retries in a Finite Frame", *IEEE Networking Lett.*, vol. 6, no. 2, pp. 101-105, June 2024.

50. T.-H. Vu, Q.-V. Pham, T.-T. Nguyen, D. B. da Costa, and S. Kim, "Enhancing RIS-Aided Two-Way Full-Duplex Communication with Non-Orthogonal Multiple Access", *IEEE Int. Things Journal*, vol. 11, no. 11, pp. 19963-19977, June 2024.

51. J.-G. Seon, I.-H. Lee, H. Jung, D. B. da Costa, and H. Shin, "Doppler Characterization in LEO Satellite-Aided UAV Swarm Networks", *IEEE Wireless Commun. Lett.*, vol. 13, no. 4, pp. 1178-1182, Apr. 2024.

52. T.-V. Nguyen, T.-H. Vu, T. H.-The, and D. B. da Costa, "Secrecy Performance of Short-Packet Communications in MultiHop IoT Networks with Imperfect CSI", *IEEE Wireless Commun. Lett.*, vol. 13, no. 4, pp. 1093-1097, Apr. 2024.

53. O. S. Badarneh and D. B. da Costa, "Fluctuating Nakagami-m Fading Distribution", *IEEE Wireless Commun. Lett.*, vol. 13, no. 4, pp. 959-963, Apr. 2024.

54. Y. Gao, Y. Zhang, H. Geng, X. Li, D. B. da Costa, and M. Zeng, "Aerial-IRS Assisted Securing Communications Against Eavesdropping: Joint Trajectory and Resource Allocation", *IEEE Int. Things Journal*, vol. 11, no. 7, pp. 11974-11985, Apr. 2024.

55. Y. Cheng, J. Du, J. Liu, L. Jin, X. Li, and D. B. da Costa, "Nested Tensor-Based Framework for ISAC Assisted by Reconfigurable Intelligent Surface", *IEEE Trans. Veh. Technol.*, vol. 73, no. 3, pp. 4412-4417, Mar. 2024.

56. Q. Li, L. Li, Y. Li, W. Han, X. Li, and D. B. da Costa, "Low-Complexity SVD Precoding for Faster-Than-Nyquist Signaling Using High-Order Modulations", *IEEE Trans. Aerospace Electron. Systems*, vol. 60, no.1, pp. 591-603, Feb. 2024.

57. X. Ma, X. Lei, P. T. Mathiopoulos, and D. B. da Costa, "Active STAR-RIS Aided Cell-Free Massive MIMO: A Performance Study", *IEEE Trans. Veh. Technol.*, vol. 73, no. 2, pp. 2936-2941, Feb. 2024.

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60. T.-H. Vu, Q.-V. Pham, D. B. da Costa, and S. Kim, "Rate-Splitting Multiple Access-Assisted THz-Based Short-Packet Communications", *IEEE Wireless Commun. Lett.*, vol. 12, no. 12, pp. 2218-2222, Dec. 2023.

61. J. Cao, J. Du, M. Han, J. Liu, X. Li, and D. B. da Costa, "Efficient Sparse Bayesian Channel Estimation for Near-Field Ultra-Scale Massive MIMO Systems", *IEEE Wireless Commun. Lett.*, vol. 12, no. 12, pp. 2133-2137, Dec. 2023.

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65. T.-H. Vu, T.-T. Nguyen, Q.-V. Pham, D. B. da Costa, and S. Kim, "A Novel Partial Decode-and-Amplify NOMA-Inspired Relaying Protocol for Uplink Short-Packet Communications", *IEEE Wireless Commun. Lett.*, vol. 12, no. 7, pp. 1244-1248, July 2023.

66. Z. Hua, Y. Lu, G. Pan, K. Gao, D. B. da Costa, and S. Chen, "Computer Vision Aided mmWave UAV Communication Systems", *IEEE Int. Things Journal*, vol. 10, no. 14, pp. 12548-12561, Jul. 2023.

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70. M. Freitas, D. Souza, G. Borges, A. M. Cavalcante, D. B. da Costa, M. Marquezini, I. Almeida, R. Rodrigues, and J. C. W. A. Costa, "Matched-Decision AP Selection for User-Centric Cell-Free Massive MIMO Networks", *IEEE Trans. Veh. Technol.*, vol. 72, no. 5, pp. 6375-6391, May 2023.

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73. T.-H. Vu, T.-V. Nguyen, Q.-V. Pham, D. B. da Costa, and S. Kim, "Short-Packet Communications in UAV-Based NOMA Systems with Imperfect CSI and SIC", *IEEE Trans. Cognitive Commun. Net.*, vol. 9, no. 2, pp. 463-478, Apr. 2023.

74. T. H.-The, T. R. Gadekallu, W. Wang, G. Yenduri, P. Ranaweera, Q.-V. Pham, D. B. da Costa, and M. Liyanage, "Blockchain for the Metaverse: A Review", *Future Generation Computer Systems*, vol. 143, pp. 401-419, June 2023.

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78. T.-T. Nguyen, T.-H. Vu, D. B. da Costa, P. X. Nguyen, and H. Q. Ta, "Short-Packet Communications in IoT-Aided Cellular Cooperative Networks with Non-Orthogonal Multiple Access", *IEEE Trans. Veh. Technol.*, vol. 72, no. 1, pp. 1296-1301, Jan. 2023.

79. T.-V. Nguyen, V.-D. Nguyen, D. B. da Costa, T. H.-The, R. Q. Hu, and B. An, "Short-Packet Communications in Multi-Hop Networks with WET: Performance Analysis and Deep Learning-Aided Optimization", *IEEE Trans. Wireless Commun.*, vol. 22, no. 1, pp. 439-456, Jan. 2023.

80. F. O. Torres, V. S. JÃºnior, D. B. da Costa, D. L. Cardoso, and R. C. L. Oliveira, "Throughput Maximization for a Multi-Carrier Cell-Less NOMA Network: A Framework Based on Ensemble Metaheuristics", *IEEE Trans. Wireless Commun.*, vol. 22, no. 1, pp. 348-361, Jan. 2023.

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278. D. B. da Costa, M. D. Yacoub, J. C. S. Santos Filho, G. Fraidenraich, and J. R. Mendes, "Generalized Nakagami-m Phase Crossing Rate", *IEEE Commun. Lett.*, vol. 10, no. 1, pp. 13-15, Jan. 2006.

279. J. R. Mendes, M. D. Yacoub, and D. B. da Costa, "Closed-Form Generalised Power Correlation Coefficient of Ricean Channels", *European Trans. Telecommun.*, 2006.

280. M. D. Yacoub, D. B. da Costa, U. S. Dias, and G. Fraidenraich, "Joint Statistics for Two Correlated Weibull Variates", *IEEE Ant. Wirel. Prop. Lett.*, vol. 4, pp. 129-132, 2005.

Editorial Notes

1. X. Li, A. Nallanathan, Y. Zhao, A.-A. A. Boulogeorgos, Y. Xu, and D. B. da Costa, "Special Issue on Passive Reflective Communication for Internet of Things", *IEEE Int. Things Magazine*, vol. 8, no. 2, pp. 60-61, Mar. 2025.

2. G. Yang, A. Nallanathan, X. Li, C. Yuen, J. Zhang, and D. B. da Costa, "Special Issue on Integrated Sensing and Communications for 6G IoE", *IEEE Int. Things Journal*, vol. 11, no. 18, pp. 29230-29234, Sep. 2024.

3. D. B. da Costa, "Reviewers and Editors Appreciation 2023", *IEEE Commun. Lett.*, vol. 28, no. 1, pp. 3, Jan. 2024.

4. M. Di Renzo and D. B. da Costa, "EiC Farewell and Welcome to New EiC", *IEEE Commun. Lett.*, vol. 27, no. 7, pp. 1662-1663, July 2023.

5. A. Anpalagan, W. Ejaz, S. K. Sharma, D. B. da Costa, M. Jo, and J. Kim, "Special Issue on Green Communication and Computing Technologies for 6G Networks", *IEEE Trans. Green Commun. Net.*, vol. 5, no. 4, pp. 1653-1656, Dec. 2021.

6. N. Zhao, D. B. da Costa, J. Tang, X. Wang, and J. A. Chambers, "Special Issue on Unmanned Aerial Vehicle (UAV)-Enabled Green Communications and Networking", *IEEE Trans. Green Commun. Net.*, vol. 5, no. 3, pp. 1232-1235, Sep. 2021.

7. D. B. da Costa, "Director's Message", TCCN Newsletter, March 2021.

8. D. B. da Costa, J. Zhang, G. K. Karagiannidis, K. P. Peppas, M. Matthaiou, and O. A. Dobre, "IEEE Access Special Section Editorial: Advances in Statistical Channel Modeling for Future Wireless Communications Networks", *IEEE Access*, vol. 8, pp. 160325-160328, Sep. 2020.

9. D. B. da Costa, "Director's Message", TCCN Newsletter, June 2020.

10. M. A. Imran, Y. Zhang, I. Lee, X. Zhang, D. B. da Costa, and A. Imran, "IEEE Access Special Section Editorial: Deployment and Management of Small Heterogeneous Cells for 5G", *IEEE Access*, vol. 8, pp. 19406-19409, Jan. 2020.

11. D. B. da Costa, "Director's Message", TCCN Newsletter, December 2019.

12. D. B. da Costa, G. K. Karagiannidis, O. A. Dobre, P. K. Upadhyay, M. Xia, H. Ding, and R. Schober, "Introduction to the Special Session on Energy-Harvesting Cognitive Radio Networks", *IEEE Trans. Cog. Commun. Net.*, vol. 5, no. 2, pp. 342-346, Jun. 2019.

13. D. B. da Costa, "Director's Message", TCCN Newsletter, May 2019.

14. D. B. da Costa, T. Q. Duong, M. A. Imran, H. Q. Ngo, N. Yang, and O. A. Dobre, "IEEE Access Special Section Editorial: Modeling, Analysis, and Design of 5G Ultra-Dense Networks", *IEEE Access*, vol. 7, pp. 18894-18898, Feb. 2019.

15. D. B. da Costa, T. Q. Duong, Z. Ding, H.-M. Wang, K. Tourki, and N. Al-Dhahir, "IEEE Access Special Section Editorial Note: Non-Orthogonal Multiple Access for 5G Networks", *IEEE Access*, vol. 6, pp. 79280-79284, Dec. 2018.

16. D. B. da Costa, "Editorial Note on Massive Machine-Type Communications (mMTC)", *TCCN Newsletter*, Dec. 2018.

17. D. B. da Costa, "Editorial Note on Ultra-Reliable Low-Latency Communication (URLCC)", *TCCN Newsletter*, May 2018.

18. D. B. da Costa, M. A. Imran, T. Q. Duong, H.-M. Wang, M. Benjillali R. D. Souza, and A. Maaref, "IEEE Access Special Section Editorial Note: Security in Wireless Communications and Networking", *IEEE Access*, vol. 6, pp. 8959-8963, Mar. 2018.

19. D. B. da Costa, "Editorial Note on Non-Orthogonal Multiple Access (NOMA)", *TCCN Newsletter*, Nov. 2017.

20. T. Q. Duong, D. B. da Costa, K. Kim, K.-H. Liu, and V. Q. Bao, "Editorial Note on Secure Physical Layer Communications", *IET Commun.*, vol. 8, no. 8, pp. 1181-1183, Jun. 2014.

Book Chapters

1. D. B. da Costa, Q. Zhao, M. Chaffi, F. Bader, and M. Debbah, "6G: Vision, Applications, and Challenges", Chapter 1 of the book *Fundamentals of 6G Communications and Networking*, Springer, Edited by X. Lin, J. Zhang, Y. Liu, and J. Kim, To Be Published, 2023.

2. V. Bankey, P. K. Upadhyay, and D. B. da Costa, "Physical Layer Security in Hybrid Satellite-Terrestrial Relay Networks," Chapter 1 of the book *Physical Layer Security - Theory and Practice*, Chapter 1 of the book Physical Layer Security - Theory and Practice, Spring, Edited by Prof. Khoa N. Le, pp. 1-28, Jan. 2021.

3. V. Singh, P. K. Upadhyay, K.-J. Lee, and D. B. da Costa, "Cooperative and Cognitive Hybrid Satellite-Terrestrial Networks," Chapter of the book *Cognitive Radio, Mobile Communications and Wireless Networks*, EAI/Springer Innovations in Communications and Computing Book Series, Edited by M. H. Rehmani and R. Dhaou, 2018

4. H. Ding, T. Xu, D. B. da Costa, J. Ge, Y. Zhang, W. Liu, and Y.-N. Zhang, "Low-Complexity and High-Efficient Scheduling Schemes for Spectrum-Sharing Based Secondary Transmissions", Chapter 18 of the book *Spectrum Sharing in Wireless Networks: Fairness, Efficiency, and Security*, CRC Press, Edited by Prof. J. D. Matyjas, Prof. S. Kumar, and Prof. F. Hu, 2016.

5. D. B. da Costa, H. Ding, J. Ge, and W. Yang, "The Design of Efficient, Low-Complexity Cooperative Diversity Schemes from Different Perspectives", Chapter 5 of the book *Resource Allocation and MIMO for 4G and Beyond*, Springer, Edited by Prof. F. Rodrigo P. Cavalcanti, 2013.

Journal Editorial Board

- Editor-in-Chief, IEEE Communications Letters (July 2023-Present).

- Specialty Chief Editor, Wireless Communications Section, Frontiers in Communications and Networks (June 2020-Present).

- Associate Editor-in-Chief, IEEE Open Journal of the Communications Society (July 2022-March 2023).
- Editor at Large, Communications Theory & Systems II, IEEE Transactions on Communications (April 2021-June 2023).
- Executive Editor, IEEE Communications Letters (September 2019-June 2023).
- Associate Editor, IEEE Wireless Communications Letters (July 2021-June 2023).
- Editor, IEEE Transactions on Cognitive Communications and Networking (January 2019-June 2023).
- Editor, IEEE Transactions on Vehicular Technology (August 2012-June 2023).
- Editor, IEEE Transactions on Machine Learning in Communications and Networking (September 2022-June 2023)
- Area Editor, Area: Green, Cognitive, and Intelligent Communications and Networks, IEEE Open Journal of the Communications Society (September 2019-June 2022).
- Editor, IEEE Transactions on Communications (September 2017-March 2021).
- Editor, IEEE Communications Surveys & Tutorials (May 2017-November 2020).
- Associate Technical Editor, IEEE Communications Magazine (January 2012-May 2020).
- Area Editor, KSII Transactions on Internet and Information Systems (September 2017-February 2020).
- Associate Editor, EURASIP Journal on Wireless Communications and Networking (January 2011-January 2020).
- Associate Editor, IEEE Access (June 2016-January 2020).
- Senior Editor, IEEE Communications Letters (March 2019-August 2019).
- Associate Editor, IEEE Communications Letters (May 2012-July 2017).
- Editor, KSII Transactions on Internet and Information Systems (January 2011-September 2017).

Guest Journal Editor

- Guest Editor, IEEE Internet of Things Magazine, Special Issue on "Passive Reflective Communications for Internet of Things", 2024.

- Guest Editor, IEEE Internet oh Things Journal, Special Issue on "Integrated Sensing and Communications for 6G IoE", 2023.

- Guest Editor, IEEE Network, Special Issue on "Native Artificial Intelligence in Integrated Terrestrial and Non-Terrestrial Networks in 6G", 2022.

- Guest Editor, Sensors, Special Issue on "Advances in MIMO and Millimeter-Wave Sensing Communication Systems", 2021.

- Guest Editor, IEEE Transactions on Green Communications and Networking, Special Issue on "Unmanned Aerial Vehicle (UAV)-Enabled Green Communications and Networking" and Special Issue on "Green Communications and Computing Technologies for 6G Networks", 2021.

- Guest Editor, China Communications, Special Issue on "New Advances in Non-Orthogonal Multiple Access", 2020.

- Guest Editor, IEEE Open Journal of Communications Society, Special Issue on "Non-Orthogonal Multiple Access for 5G and Beyond", 2020.

- Lead Associate Editor, IEEE Access, Special Issue on "Advances in Statistical Channel Modeling for Future Wireless Communications Networks", 2019.

- Lead Guest Editor, IEEE Transactions on Cognitive Communications and Networking, Special Issue on "Energy-Harvesting Cognitive Radio Networks", 2018.

- Lead Associate Editor, IEEE Access, Special Issue on "Molecular Communication Networks", 2018.

- Lead Associate Editor, IEEE Access, Special Issue on "Non-Orthogonal Multiple Access for 5G Systems", 2017.

- Lead Associate Editor, IEEE Access, Special Issue on "Modelling, Analysis, and Design of 5G Ultra-Dense Networks", 2017.

- Lead Guest Editor, IEEE Access, Special Issue on "Security in Wireless Communications and Networking", 2016.

- Guest Editor, IEEE Access, Special Issue on "Deployment and Management of Small Heterogeneous Cells for 5G", 2016.

- Lead Guest Editor, KSII Transactions on Internet and Information Systems, Special Issue on "Cognitive Radio Networks: Survey, Tutorial, and New Introduction", 2014.

- Lead Guest Editor, EURASIP Journal on Wireless Communications and Networking, Special Issue on "Cooperative Cognitive Networks", 2013.

- Guest Editor, IET Communications, Special Issue on "Secure Physical Layer Communications", 2013.

Technical Program Committee/Symposium Chair

- Executive Committee, STATIC Arabia 2025, Dhahran, Saudi Arabia, 07-09 September 2025.

- Technical Committee Chair, Saudi Next-G Summit, KFUPM, Dhahran, Saudi Arabia, 22-23 January 2025.

- Symposium Co-Chair, Wireless Communications Symposium, IEEE Global Communications Conference (GLOBECOM 2024), Cape Town, South Africa, December 2024.

- TPC Co-Chair, IEEE International Mediterranean Conference on Communications and Networking (MeditCom 2024), Madrid, Spain, 8-11 July 2024.

- Track Co-Chair, Track 1: PHY and Fundamentals, IEEE Wireless Communications and Networking Conference (WCNC 2024), Dubai, UAE, April 2024.

- TPC Co-Chair, International Conference on 6G Networking (6GNet 2023), Paris, France, October 2023.

- Track Co-Chair, Track 8: Spectrum Sharing, Spectrum Management, Cognitive Radio, and Green Radio, IEEE 97th Vehicular Technology Conference (VTC2023-Spring), Florence, Italy, 18-21 June 2023.

- Lead Symposium Co-Chair, Wireless Communications Symposium, IEEE International Conference on Communications (ICC 2023), Rome, Italy, May 2023.

- Track Co-Chair, Track 1: Physical Layer and Communication Theory, IEEE Wireless Communications and Networking Conference (WCNC 2023), Glasgow, Scotland, March 2023.

- Technical Program Vice-Chair, IEEE 95th Vehicular Technology Conference (VTC2022-Spring), Helsinki, Finland, June 2022.

- Lead Symposium Co-Chair, Cognitive Radio and AI-Enabled Networks Symposium, IEEE Global Communications Conference (GLOBECOM 2021), Madrid, Spain, December 2021.

- Technical Program Chair, XXXIX Brazilian Telecommunications and Signal Processing Symposium (SBrT 2021), Virtual Format, 26-29 September 2021.

- Symposium Chair, Communication Signal Processing Symposium, 17th International Wireless Communications and Mobile Computing Conference (IWCMC 2021), Harbin, China, 28 June-02 July 2021.

- Technical Program Vice-Chair, IEEE 93rd Vehicular Technology Conference (VTC2021-Spring), Virtual Format, April 2021.

- Lead Track Co-Chair, Track 1: PHY and Fundamentals, IEEE Wireless Communications and Networking Conference (WCNC 2021), Nanjing, China, March 2021.

- Symposium Chair, Communication and Signal Processing Symposium, 16th International Wireless Communications and Mobile Computing Conference (IWCMC 2020), Limassol, Cyprus, 15-19 June 2020.

- Track Co-Chair, Track 7: Green Communications and Networking, IEEE 91st Vehicular Technology Conference (VTC2020-Spring), Antwerp, Belgium, 25-28 May 2020.

- Track Co-Chair, Track 1: PHY and Fundamentals, IEEE Wireless Communications and Networking Conference (WCNC 2020), Seoul, South Korea, 6-9 April 2020.

- Lead Symposium Co-Chair, Cognitive Radio and AI-Enabled Networks Symposium, IEEE Global Communications Conference (GLOBECOM 2019),Waikoloa, HI, USA, 9-13 December 2019.

- Symposium Chair, Communication and Signal Processing Symposium, 15th International Wireless Communications and Mobile Computing Conference (IWCMC 2019), Tangier, Morocco, 24-28 June 2019.

- Technical Program Chair, 2nd International Conference on Advanced Communications Technologies and Networking (CommNet 2019), Rabat, Morocco, 12-14 April 2019.

- Symposium Co-Chair, Emerging Areas in Wireless Communications Symposium, 3rd International Conference on Recent Advances on Signal Processing, Telecommunications and Computing (SigTelCom 2019), Hanoi, Vietnam, 21-22 March 2019.

- Technical Program Co-Chair, IEEE International Conference on Advanced Networks and Telecommunications Systems (ANTS 2018), Indore, India, 16-19 December 2018.

- Track Co-Chair, Track 1: Antenna Systems, Propagation, and RF Design, IEEE 88th Vehicular Technology Conference (VTC2018-Fall), Chicago, USA, 27-30 August 2018.

- Symposium Chair, Communication and Signal Processing Symposium, 14th International Wireless Communications and Mobile Computing Conference (IWCMC 2018), Limassol, Cyprus, 25-29 June 2018.

- Track Co-Chair, Track 1: Antenna Systems, Propagation, and RF Design, IEEE 87th Vehicular Technology Conference (VTC2018-Spring), Porto, Portugal, 3-6 June 2018.

- Symposium Co-Chair, Communication Theory Symposium, 2nd International Conference on Recent Advances on Signal Processing, Telecommunications and Computing (SigTelCom 2018), Ho Chi Minh, Vietnam, 29-31 January 2018.

- Track Co-Chair, Track 1: Antenna Systems, Propagation, and RF Design, IEEE 86th Vehicular Technology Conference (VTC2017-Fall), Toronto, Canada, 24-27 September 2017.

- Track Co-Chair, Track: Recent Results, IEEE 85th Vehicular Technology Conference (VTC2017-Spring), Sydney, Australia, 4-7 June 2017.

- Track Chair, Track 6: Green Communications and Networks, IEEE 85th Vehicular Technology Conference (VTC2017-Spring), Sydney, Australia, 4-7 June 2017.

- Symposium Co-Chair, Communication Theory Symposium, International Conference on Recent Advances on Signal Processing, Telecommunications and Computing (SigTelCom 2017), Da Nang, Vietnam, 9-11 January 2017.

Organization Activities

Workshops/Special Sessions:

- Organizer - Workshop on Native AI and Semantic Communications, IEEE International Symposium on Personal, Indoor and Mobile Radio Communications (PIMRC 2023), Toronto, Canada, September 2023.

- Organizer - Special Session on Signal Processing Challenges for 6G, IEEE Statistical Signal Processing Workshop (SSP 2023), Hanoi, Vietnam, 02-05 July 2023.

- Organizer - Workshop on Holographic MIMO Communications, IEEE International Conference on Communications (ICC 2023), Rome, Italy, 28 May - 01 June 2023.

- Organizing Committee, 48th Wireless World Research Forum (WWRF), Abu Dhabi, UAE, 07-09 Nov. 2022.

- Organizer, Abu Dhabi 6G Summit 2022, 03-04 Nov. 2022.

- Organizer - Special Session on 6G, Title: Connecting Intelligence on 6G, 25th International Symposium on Wireless Personal Multimedia Communications (WPMC 2022), Herning, Denmark, November 2022.

- Organizer - Workshop on Native-AI in Wireless Networks, IEEE International Symposium on Personal, Indoor and Mobile Radio Communications (PIMRC 2022), Virtual Conference, September 2022.

- Organizer - Special Session on "AI/ML Based Communications: Directions and Research Challenges", 5th International Balkan Conference on Communications and Networking (BalkanCom 2022), Sarajevo, Bosnia and Herzegovina, 22-24 August 2022.

- Organizer - Special Session on 6G, 1st International Conference on 6G Networking (6GNet 2022), Paris, France, July 2022.

- Organizer - Workshop on Reconfigurable Intelligent Surfaces for Future Wireless Communications, IEEE Global Communications Conference (GLOBECOM 2021), Madrid, Spain, December 2021.

- Organizer - Workshop on Energy-Efficient Schemes for Beyond 5G, IEEE Vehicular Technology Conference (VTC2021-Spring), 25-28 April, Virtual Format, 2021.

- Organizer - Workshop on Reconfigurable Intelligent Surfaces for Future Wireless Communications, IEEE International Conference on Communications (ICC 2021), 14-18 June, Montreal, Canada, 2021.

- Organizer - Workshop on Rate-Splitting (Multiple Access) for 6G, IEEE International Conference on Communications (ICC 2021), 14-18 June, Montreal, Canada, 2021.

- Organizer - Workshop on Energy-Efficient Schemes for Beyond 5G, IEEE Wireless Communications and Networking Conference (WCNC 2021), 29 March-1 April, Nanjing, China, 2021.

- Organizer - Workshop on Rate-Splitting (Multiple Access) for Beyond 5G, IEEE Wireless Communications and Networking Conference (WCNC 2021), 29 March-1 April, Nanjing, China, 2021.

- Steering Committee Member - Workshop on Practice Further Advances in Massive MIMO, IEEE International Symposium on Personal, Indoor, and Mobile Radio Communications (PIMRC 2020), 31 August-3 September, London, UK, 2020.

- Organizer - 2nd Workshop on Energy Harvesting Communication Networks, IEEE International Symposium on Personal, Indoor, and Mobile Radio Communications (PIMRC 2019), 8-11 September, Istanbul, Turkey, 2019.

- Organizer - Workshop on Energy Harvesting Communication Networks, 16th International Symposium on Wireless Communication Systems (ISWCS 2019), 27-30 August, Oulu, Finland, 2019.

- Publicity Co-Chair - 2nd Workshop on Enabling Energy Internet via Machine-Type Wireless Communications, IEEE Wireless Communications and Networking Conference (WCNC 2019), 15-18 April, Marrakech, Morocco, 2019.

- Organizer - Workshop on Energy Harvesting Communication Networks, IEEE International Symposium on Personal, Indoor, and Mobile Radio Communications (PIMRC 2018), 9-12 September, Bologna, Italy, 2018.

- Organizer, Workshop on Trusted Communications with Physical Layer Security (TCPLS), IEEE Global Communications Conference (GLOBECOM 2013), Atlanta, USA, Dec. 2013.

- Workshop Chair - 2nd International Conference on Computing, Management and Telecommunications (ComManTel 2014).

Conferences:

- Panelist Co-Chair, Abu Dhabi 6G Summit 2022, 03-04 Nov. 2022.

- Special Session Co-Chair, 1st International Conference on 6G Networking (6GNet), Paris, France, July 2022.

- Volunteers Coordinator & IEEE Bahia Section Representative, 11th Latin-American Conference on Communications (LATINCOM'19), Salvador, BA, Brazil, Nov. 2019.

- Posters and PhD Track Chair, 5th International Conference on Industrial Networks and Intelligent Systems (INISCOM'19), Ho Chi Minh, Vietnam, Aug. 2019.

- International Liaison Chair, 25th International Conference on Telecommunications (ICT 2018), Saint-Malo, France, Jun. 2018.

- Publicity Co-Chair, 28th IEEE International Symposium on Personal, Indoor and Mobile Radio Communications (PIMRC 2017), Montreal, QC, Canada, Oct. 2017.

- Posters and PhD Track Chair, 3rd International Conference on Industrial Networks and Intelligent Systems (INISCOM'17), Thu Dau Mot, Vietnam, Sep. 2017.

- Publicity Co-Chair, International Conference on Advanced Communication Systems and Information Security (ACOSIS'16), Marrakesh, Morocco, Oct. 2016.

- Co-Organizer, Brazilian Telecommunications Symposium (SBrT 2013), Fortaleza-CE, Brazil, Sep. 2012.

IEEE Vehicular Technology Society

- Latin American Chapters Coordinator, IEEE Vehicular Technology Society (2017-2022).

- Distinguished Lecturer (2017-2019).
  VTS DL Tour in Portugal (2018):
  - Nova University of Lisbon - 07. Nov. 2018.
  - University of Coimbra - 08. Nov. 2018.
  - University of Porto - 09. Nov. 2018.

- Distinguished Lecturer (2019-2021).

- Distinguished Speaker (2021-2024).
  VTS DS Tour in Portugal (2023)
  - NOVA University Lisbon - 27 March 2023
  - University of Coimbra - 29 March 2023
  - University of Aveiro - 31 March 2023

- Vice-Chair, Propagation Committee (2023-2025).

IEEE Technical Committee on Cognitive Networks (TCCN)

- Director - TCCN Newsletter (2019-2021)

- TCCN Vice-Chair of Americas (2019-2020)

- Feature Topic Editor, *Massive Machine-Type Communications*, TCCN Newsletter, December 2018.

- Feature Topic Editor, *Ultra-Reliable Low-Latency Communications*, TCCN Newsletter, May 2018.

- Feature Topic Editor, *Non-Orthogonal Multiple Access*, TCCN Newsletter, November 2017.

- Chair of the Special Interest Group "Energy-Harvesting Cognitive Radio Networks".

IEEE Signal Processing and Computing for Communications Technical Committee (SPCC)

- Vice-Chair of the Special Interest Group on "Reconfigurable Intelligent Surfaces for Signal Processing and Communications".

Industry Panel/Talks

- Industry Panel at Saudi Next-G Summit 2025 - Title: What is the Next-G Business Case?

- Industry Talk at IEEE International Symposium on Personal, Indoor and Mobile Radio Communications (PIMRC 2023) - Title: The Path Towards 6G: A Glimpse from a Multiple Access Perspective.

- Special Session Speaker at IEEE International Symposium on Personal, Indoor and Mobile Radio Communications (PIMRC 2023) - Title: Halfway to Become a Professional (or What Career Should I Choose)?

- Industry Speaker at 22nd IEEE Statistical Signal Processing (SSP) Workshop 2023 - Title: The Next G's: Vision, Technologies, and Challenges.

Invited Talks/Seminars

- Panel Session (Title: Predictive Maintenance & Digital Ecosystem: Smarter Strategies for Equipment Reliability), STATIC Arabia 2025, Dhahran, Saudi Arabia, 07-09 September 2025.

- Keynote Speaker - 21st International Wireless Communications & Mobile Computing Conference (IWCMC 2025), Abu Dhabi, UAE, 12-16 May 2025.

- Panel Session (Title: Improving the Quality of Life Using Technology) - Solution Hackathon, KFUPM & UCL, Dhahran, Saudi Arabia, 17 February 2025.

- Keynote Speaker - Saudi Next-G Summit, Dhahran, Saudi Arabia, 22 January 2025.

- Keynote Speaker - 5th KAUST 6G Summit, Thuwal, Saudi Arabia, 04 November 2024.

- Seminar - IRC for Communication Systems and Sensing, KFUPM, 24 April 2024.

- Plenary Speaker - XLI Brazilian Symposium on Telecommunications and Signal Processing (SBrT 2023), 11 October 2023, Sao Jose dos Campos, Sao Paulo, Brazil.

- Invited Talk - RSMA Webinar Series - 19 September 2023.

- Invited Talk - Beijing University of Posts and Telecommunications (BUPT), 29 August 2023, Beijing, China.

- Invited Seminar - Beijing University of Posts and Telecommunications (BUPT), 29 August 2023, Beijing, China.

- Invited Seminar - Beijing Institute of Technology (BIT), 25 August 2023, Beijing, China.

- Invited Seminar - Chinese University of Hong Kong (CUHK), 23 August 2023, Shenzhen, China.

- Invited Seminar - Peng Cheng Laboratory, 22 August 2023, Shenzhen, China.

- Invited Seminar - South China University of Technology, 21 August 2023, Guangzhou, China.

- Invited Talk - Southern University of Science and Technology (SUSTech), 18 August 2023, Shenzhen, China.

- Invited Seminar - Southern University of Science and Technology (SUSTech), 16 August 2023, Shenzhen, China.

- Invited Seminar - University of Electronic Science and Technology (UESTC), 14 August 2023, Chengdu, China.

- Invited Seminar - Southwest Jiaotong University (SWJTU), 10 August 2023, Chengdu, China.

- 29th National Conference on Communications (NCC 2023), Indian Institute of Technology Guwahati, 23 February 2023.

- CNGCN Distinguished Lecture Series, LNM Institute of Information Technology, Jaipur, India, 11 January 2023.

- YunTech Community, 18 October 2021.

- Regional Speaker Program 2021 - IEEE ComSoc Latin America, 02 September 2021.

- 28th International Conference on Telecommunications (ICT 2021), Workshop on "Advances in Physical Layer Security for 6G Networks", 03 June 2021.

- King Abdullah University of Science and Technology, Saudi Arabia, 26 May 2019.

- Queen's University Belfast, UK, 28 March 2019.

- Graduate Program in Electrical Engineering, University of Brasília (UnB), Brazil, 28 November 2018.

- 1st Workshop of the Graduate Program in Electrical Engineering, Federal University of Pará, Brazil, 27 November 2018.

- 2nd Workshop on Communication Networks and Power Systems (WCNPS 2017), November 2017.

Tutorials

- IEEE Global Communications Conference (GLOBECOM 2023); Title: Rate-Splitting Multiple Access for 6G: Recent Advances and Future Research.

- IEEE Statistical Signal Processing (SSP) Workshop 2023; Title: Rate-Splitting Multiple Access: Recent Advances from a Polarimetric Perspective.

- IEEE Global Communications Conference (GLOBECOM 2021); Title: Application of NOMA in 6G Networks: Future Vision for Next Generation Multiple Access.

- Brazilian Telecommunications Symposium (SBrT 2020); Title: 6G Wireless: Paving the Way Towards Smart Radio Environment Via Reconfigurable Intelligent Surfaces.

- Brazilian Telecommunications Symposium (SBrT 2018); Title: Non-Orthogonal Multiple Access for 5G Networks.

- Brazilian Telecommunications Symposium (SBrT 2011); Title: Cooperative Communications.

Research/Academic/Industry Visits

- Lappeenranta University of Technology, Finland, Host: Prof. Pedro H. J. Nardelli, June-August 2024.

- Beijing Institute of Technology (BIT), Beijing, China, Host: Prof. Kai Yang, 24-30 August 2023.

- Southern University of Science and Technology (SUSTech), Shenzhen, China, Host: Prof. Weijie Yuan, 16-23 August 2023.

- Southwest Jiaotong University (SWJTU), Chengdu, China, Host: Prof. Xianfu Lei, 07-15 August 2023.

- Instanbul Medipol University, Turkey, Host: Prof. Huseyin Arslan, September-November 2019.

- King Abdullah University of Science and Technology, Saudi Arabia, Host: Prof. Mohamed-Slim Alouini, May-August 2019.

- Lappeenranta University of Technology, Finland, Host: Prof. Pedro H. J. Nardelli, January-April 2019.

- Queen's University Belfast, UK, Host: Prof. Trung Q. Duong, March 2019.

- University of Malaga, Spain, Host: Prof. F. Javier López-Martinez, July 2018.

- New University of Lisbon, Portugal, Host: Prof. Rodolfo Oliveira, July 2018.

Natural Sciences and Engineering Research Council of Canada (NSERC)

- Member of the NSERC Electrical and Computer Engineering Evaluation Group (2022-2025).

Advisory Board

- Member of Ceará Council of Scientific and Technological Development (FUNCAP), Brazil, Area: Telecommunications (July 2012 - May 2017).

Scientific Consultant

- Ceará Council of Scientific and Technological Development (FUNCAP), Brazil, Area: Telecommunications (February 2016-Present).

- Brazilian Ministry of Education (CAPES) (July 2012 - Present).

- National Council of Scientific and Technological Development (CNPq), Brazil (March 2012 - Present).

Honors and Awards

- **2025**: World's Top 2% Scientists by Stanford/Elsevier (Two Categories: Year 2024 & Career).
- **2025**: Best Research Award, Electrical Engineering Department - King Fahd University of Petroleum & Minerals (KFUPM).
- **2025**: Top 1% Scientists in the World in 2024 by Research.com - broad field of Electronics and Electrical Engineering.
- **2025**: Open RAN & 6G Challenge Award by Research, Development and Innovation Authority (RDIA) - In recognition of exceptional contributions to advancing innovation in Open RAN & 6G Technologies.

- **2024**: Best Paper Award - IEEE Middle East Conference on Communications and Networking (MECOM 2024).
- **2024**: World's Top 2% Scientists by Stanford/Elsevier (Two Categories: Year 2023 &*Career*).
- **2024**: Best Paper Award - IEEE 10th International Conference on Communications and and Electronics (ICCE 2024).
- **2024**: Top 1% Scientists in the World in 2023 by Research.com - broad field of Electronics and Electrical Engineering.
- **2023:** World's Top 2% Scientists by Stanford/Elsevier (Two Categories: Year 2022 & Career).
- **2023:** Top 1% Scientists in the World by Research.com - broad field of Electronics and Electrical Engineering.
- **2022:** Best Paper Award - IEEE Global Conference on Communications (GLOBECOM 2022) - Wireless Communications Symposium.
- **2022:** World's Top 2% Scientists by Stanford/Elsevier (Two Categories: Year 2021 & Career).
- **2022:** Top 1% Scientists in the World by Research.com - broad field of Electronics and Electrical Engineering.
- **2021:** Nokia Visiting Professor Grant Recipient.
- **2021:** Exemplary Editor Award - IEEE Open Journal of the Communications Society.

- **2021:** Distinguished Speaker - IEEE Vehicular Technology Society.
- **2021:** World's Top 2% Scientists by Stanford/Elsevier (Two Categories: Year 2020 & Career).
- **2019:** Exemplary Reviewer Award - IEEE Wireless Communications Letters.
- **2019:** Exemplary Reviewer Award - IEEE Communications Letters.
- **2019:** Certificate of Appreciation - Symposium Chair, IEEE Global Communications Conference.
- **2019:** Certificate of Appreciation - Notable services and fine contributions towards the advancement of IEEE Access.
- **2018:** Nokia Visiting Professor Grant Recipient, Host: Lappeenranta University of Technology, Finland.
- **2018:** Productivity Research Fellow of the National Council of Scientific and Technological Development (CNPq) - Level 1D, Brazil.
- **2018:** Best Paper Award - International Conference on Advanced Communication Technologies and Networking (CommNet 2018).
- **2018:** Outstanding Associate Editor of 2017 - IEEE Access.
- **2018:** Certificate of Appreciation - Notable services and fine contributions towards the advancement of IEEE Access.
- **2017:** Exemplary Reviewer Award - IEEE Communications Letters
- **2017:** Distinguished Lecturer - IEEE Vehicular Technology Society.
- **2016:** Certificate of Appreciation - Top Associate Editor for outstanding contribution to IEEE Transactions on Vehicular Technology.
- **2016:** Exemplary Editor Award - IEEE Communications Letters.

- **2016:** Exemplary Reviewer Award - IEEE Communications Letters.

- **2015:** Most Cited Researcher from Federal University of Ceará in July and September, Source: Research Gate.

- **2015:** Certificate of Appreciation - Top Associate Editor for outstanding contribution to IEEE Transactions on Vehicular Technology.

- **2013:** Exemplary Reviewer Award - IEEE Wireless Communications Letters.

- **2013:** Certificate of Appreciation - Top Associate Editor for outstanding contribution to IEEE Transactions on Vehicular Technology.

- **2013:** Senior Member, IEEE

- **2012:** Productivity Research Fellow of the National Council of Scientific and Technological Development (CNPq) - Level 2, Brazil.

- **2011:** Best Paper Award in XXIX Brazilian Telecommunications Symposium (SBrT 2011).

2010: Best Paper Award - 13th International Symposium on Wireless Personal Multimedia Communications (WPMC 2010).

- **2010:** Productivity Research Fellow of the Ceará Council of Scientific and Technological Development (FUNCAP), Brazil.

- **2009:** Best Ph.D. Thesis in Electrical Engineering by the Brazilian Ministry of Education (CAPES) in the 2009 CAPES Thesis Contest.

- **2009:** Best Paper Award in IEEE International Symposium on Computers and Communications (ISCC 2009).

Number of Citations - Source: Google Scholar

- 12,668 Citations, h Index: 58, i10 Index: 261.

Scopus

- h Index: 50, h10 Index: 43, h5 Index: 34.

I hereby declare that all the information given above is correct to best of my knowledge.

September 28^{th}, 2025