

## Dr. Adnan Abu-Dayya

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Department of Electrical Engineering, Qatar University

- Education*
- B.Sc.in Electrical Engineering, Kuwait University, Kuwait, 1988.
  - Ph.D.in Electrical Engineering, Queens University, Kingston, Canada, 1992.

- Academic experience*
- Associate Professor, Electrical Engineering Department, Qatar University (March 2007-present). Full time till Dec 2008. Since Jan. 2009, seconded on a full time basis to the Qatar Mobility Innovations Center (QMIC) at the Qatar Science & Technology Park as the Founding Executive Director (CEO)
  - Research Scientist, Adjunct Instructor, Queens University, Canada (9/1992-7/1994)

- Non-academic experience*
- Qatar Mobility Innovations Center, Doha, Qatar (01/2009-present)
    - Founding Executive Director (CEO) of QMIC at the Qatar Science and Technology Park. QMIC is the first independent innovations center in the region focused on using R&D to deliver home-made digital platforms and solutions in the areas of Intelligent ,Mobility and Smart Cities
  - AT&T Wireless, Seattle, USA (11/1998-02/2007)
    - Served in a number of senior management positions with AT&T Wireless covering product & technology development, business development, systems engineering, technology planning & strategy
  - Nortel Networks, Ottawa, Canada (7/1995-10/1998)
    - Worked in the advanced wireless technology group as a senior manager, senior member of technical staff.
  - Communications Research Center, Ottawa, Canada (8/1994-7/1995),
    - Senior Consultant, Advanced Radio Systems Group

- Current membership in professional organizations*
- Senior Member, IEEE, (2002-Present)

- Service activities*
- Chairman of Industry Advisory Board, Department of Electrical and Computer Engineering, Texas A&M University in Qatar, Sep. 2018-present
  - Member of Steering Committee, Smart Grid Center, Texas A&M University in Qatar (2017- present)
  - Member of the Advisory Board, Qatar Auto Museum, (Dec. 2020 - present)

*Publications  
And Patents*

### Journal Publications:

1. M. Riaz, H. Qureshi, U. Masood, A. Rizwan, **A. Abu-Dayya**, A. Imran, "A Hybrid Deep Learning-Based (HYDRA) Framework for Multifault Diagnosis Using Sparse MDT Reports", IEEE Access, June 2022.
2. M. Khan, H. Menouar, A. Eldeeb, **A. Abu-Dayya**, F. Salim, "On the Detection of Unauthorized Drones-Techniques and Future Perspectives: A Review," IEEE Sensors Journal, April 2022.
3. M. Manalastas, M. Farooq, S. Zaidi, **A. Abu-Dayya**, A. Imran, "a Data-Driven riven Framework for Inter-Frequency Handover Failure Prediction and Mitigation," IEEE Transactions on Vehicular Technology, March 2022.
4. M.Farooq; M. Manalastas; W. Raza; S. Zaidi; Ali Rizwan; **A. Abu-Dayya**; A. Imran, "A Data-Driven Self-Optimization Solution for Inter-Frequency Mobility Parameters in Emerging Networks", IEEE Transaction on Cognitive Communications and Networking Vehicular Technologies, Feb 2022.
5. U. Masood, H. Farooq, A. Imran, **A. Abu-Dayya**, "Interpretable AI-based Large-scale 3D Pathloss Prediction Model for enabling Emerging Self-Driving Networks ", IEEE Transactions on Mobile Computing, Jan 2022.
6. A. Rizwan, M. Jaber, F. Filali, A. Imran and **A. Abu-Dayya**, "A Zero-Touch Network Service Management Approach Using AI-Enabled CDR Analysis," IEEE Access, vol. 9, pp. 157699-157714, Nov 202.
7. M. Nabeel, U. S. Hashmi, S. Ekin, H. Refai, **A. Abu-Dayya** and A. Imran, "SpiderNet: Spectrally Efficient and Energy Efficient Data Aided Demand Driven Elastic Architecture for 6G," IEEE Network, vol. 35, no. 5, pp. 256-263, September 2021.
8. A. Asghar, H. Farooq, H. N. Qureshi, **A. Abu-Dayya** and A. Imran, "Entropy Field Decomposition Based Outage Detection for Ultra-Dense Networks," IEEE Access, pp. 1-1 February 2021.
9. H. N. Qureshi, A. Imran and **A. Abu-Dayya**, "Enhanced MDT-Based Performance Estimation for AI Driven Optimization in Future Cellular Networks," IEEE Access, vol. 8, pp. 161406-161426, September 2020.
10. Qureshi, A. Imran, **A. Abu-Dayya**, "Enhanced MDT-Based Performance Estimation for AI Driven Optimization in Future Cellular Networks," IEEE Access, pp: 161406-161426, Sep. 2020
11. U. Hashmi, S. Zaidi, A. Imran, **A. Abu-Dayya**, "Enhancing Downlink QoS and Energy Efficiency Through a User-Centric Stienen Cell Architecture for mmWave Networks," IEEE Transactions on Green Communications and Networking, pp 387-403, issue 2, 2020.
12. H. Farooq, A. Imran, **A. Abu-Dayya**, "A multi-objective performance modelling framework for enabling self-optimization of cellular network topology and configurations," Transactions on Emerging Telecommunications Technologies, May 2016.
13. O. Onireti, A. Zoha, J. Moysen, A. Imran, L. Guipponi, M. Imran, and **A.**

**Abu-Dayya**, "A Cell Outage Management Framework for Dense Heterogeneous Networks", IEEE Transactions on Vehicular Technologies, pp. 2097 – 2113, April, 2016.

14. H. Ghazzai, E. Yaacoub, M. Alouini, Z. Dawy, **A. Abu-Dayya**, "Optimized LTE Cell Planning with Varying Spatial and Temporal User Densities", IEEE Transactions on Vehicular Technology, pp. 1575-1589, March 2016.

**Issued Patents:**

1. USA Patent #9,854,451 ," METHODS OF OPTIMIZING TILT ANGLE OF AN ANTENNA", Dec. 2017.
2. USA Patent #9,600,698 B2," BEHAVIOR-BASED SOURCE MONITORING SYSTEM AND METHOD THEREOF", March 2017
3. European Patent Patent # 2399513, " System for non-invasive automated monitoring, detection, analysis, characterisation, prediction or prevention of seizures and movement disorder symptoms," Jan 2017
4. European Patent # EP 2352 002 B1, "A System for Remote Leakage Detection and/or Path Tracking for Underground Fluid Transportation Pipelines"
5. USA Patent # 9,585,116, "Daul mode service wifi access control", Feb. 2017.
6. USA Patent # 6031880, "Carrier recovery in communication system", Feb. 2000.
7. USA Patent # 6603746, "Method and apparatus for controlling transmitted power in wireless communications system", Aug. 2003.
8. USA Patent # 6778,499, "Method and apparatus for enabling the smooth transmission of bursty data in a wireless communications system", Aug. 2004
9. USA Patent # 5991273, "Determining SINR in a communication system". Nov. 1999.
10. USA Patent # 5838742, "Diversity path co-channel interference reduction", Nov. 1998.