

## MARWAN ABU - AMARA

### EDUCATION

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- 1992 - 1995 **Texas A&M University** College Station, Texas, USA  
*Doctor of Philosophy, Electrical and Computer Engineering*
- 1989 - 1991 **Texas A&M University** College Station, Texas, USA  
*Master of Science, Electrical and Computer Engineering*
- 1984 - 1989 **Kuwait University** Kuwait City, Kuwait  
*Bachelor of Science, Computer Engineering (Honor's List)*

### ACADEMIC EXPERIENCE

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- 2003 - Present **King Fahd University of Petroleum & Minerals** Dhahran, KSA  
*Assistant Professor, Computer Engineering Department*
- *Courses taught:* **Computer Network Design** (graduate course), **Computer Networks** (undergraduate course), **Data and Computer Communications** (undergraduate course), **Computer Architecture** (undergraduate course), and **Digital Logic** (undergraduate course).
- 1992 - 1995 **Texas A&M University** College Station, Texas, USA  
*Lecturer, Electrical Engineering Department*
- *Courses taught:* **Digital Logic** (undergraduate course), and **Electronics** (undergraduate course).
- 1991 - 1992 **Texas A&M University** College Station, Texas, USA  
*Teaching Assistant, Electrical Engineering Department*

### PROFESSIONAL EXPERIENCE

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- 1998 – 2003 **Nortel Networks** Richardson, Texas, USA  
*Senior Technical Advisor, Wireless Network Engineering*
- Design, plan, and optimize wireless data & voice networks.
  - Successfully designed and deployed several wireless data & voice systems for commercial customers.
  - Conducted several workshops related to wireless data & voice network designing, planning, and optimization.
- 1995 - 1997 **Nortel Networks** Richardson, Texas, USA  
*Wireless CDMA System Design Architect*
- Designed the wireless CDMA inter-system soft handoff feature and generated two patents.
  - Authored guidelines for provisioning wireless data & voice networks.
  - Primed performance monitoring for customer's wireless data & voice networks.

### AWARDS

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- CCSE Award of Merit for the category of Distinguished Innovation Project, 2006, *King Fahd University of Petroleum & Minerals*
- President and CEO's Top Talent Award, 2000 and 2001, *Nortel Networks*
- Circle of Excellence - Sales Support Award, 1999, *Nortel Networks*
- Wireless Networks President's Award of Excellence in Technology, 1998, *Nortel Networks*
- Award of Merit - CDMA Product Positioning, 1998, *Nortel Networks*

### PATENTS

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- M. Abu-Amara, "Reducing the Rate of Registration in CDMA-based Mobile Networks," *US Patent Pending*, Serial Number 11641709, December 20, 2006.
- M. Abu-Amara and A. Mahmoud, "Method of Non-Intrusive Control of Mobile Device," *US Patent Pending*, Serial Number 11599457, November 15, 2006.
- M. Abu-Amara, S. Sides, A. Jalali, J. Boppana, S. Doctor, "CDMA Inter-Mobile Switching Center Soft Hand-Off," *US Patent # 6,173,183*, 2001, *US Patent # 5,930,714*, 1999, *European Patent Office # WO/1998/018282*, 1998.

## PUBLICATIONS

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- M. Abu-Amara, A. Mahmoud, T. Sheltami, A. Al-Shahrani, K. Al-Otaibi, S.M. Rehman, T. Anwar, “Performance of UMTS/WLAN Integration at Hot-Spot Locations Using OPNET,” Proceedings of 4th IEEE-GCC Conference, November 11-14, 2007, Bahrain, 5 pages.
- S. Asadullah, A. Mahmoud, M. Abu-Amara, T. Sheltami, “Vertical Handoff Characterization for SIP and mSCTP Based UMTS-WLAN Integration Solutions,” Proceedings of 4th IEEE-GCC Conference, November 11-14, 2007, Bahrain, 5 pages.
- T. Sheltami, A. Mahmoud, M. Abu-Amara, “An Ad hoc Wireless Sensor Network for Telemedicine Applications,” Arabian Journal for Science and Engineering (AJSE), Volume 32, No. 1B, April 2007, pp. 131-143.
- T. Landolsi and M. Abu-Amara, “CDMA Access Channel Performance under Idle-Mode Ping-Pong Effect in Inter-MS Handoffs,” Proceedings of the 3rd International Symposium on Wireless Communication Systems (ISWCS), September 5-8, 2006, Valencia, Spain, pp. 584-586.
- M. Abu-Amara, S. Sait, Abdul Subhan, “A Heuristics Based Approach for Cellular Mobile Network Planning,” Proceedings of the 2006 International Wireless Communications & Mobile Computing Conference, July 3-6, 2006, Vancouver, Canada, p. 79.
- A. Mahmoud, M. Abu-Amara, T. Sheltami, E. Rahman, J. Jaffar, “WLAN Integration For Future Generation Mobile Network Operators – A Case Study,” Proceedings of 18th National Computer Conference (NCC 18), March 26-29, 2006, Riyadh - Saudi Arabia, pp. 47-54
- T. Sheltami, A. Mahmoud, M. Abu-Amara, “Warning and Monitoring System using Sensor Networks,” Proceedings of 18th National Computer Conference (NCC 18), March 26-29, 2006, Riyadh - Saudi Arabia, pp. 63-68
- A. Mahmoud, T. Sheltami, M. Abu-Amara, “Wireless Sensor Network Implementation for Mobile Patient,” Proceedings of 3rd IEEE-GCC Conference, March 19-22, 2006, Bahrain
- T. Sheltami, A. Mahmoud, M. Abu-Amara, “Telecare Monitoring System Based on Wireless Sensor Network,” International Journal of Computer Science and Network Security, Vol. 5, No. 12, December 2005, pp. 66-74
- A. Mahmoud and M. Abu-Amara, “Performance of Inter-Base Station Soft Handoff for 3G CDMA Networks,” Proceeding of the First International Conference on Modeling, Simulation and Applied Optimization, Sharjah, U.A.E. February 2005
- M. Abu-Amara, “Minimum Traffic Inter-BS SHO Boundary Selection Algorithm for CDMA-Based Wireless Networks,” Proceedings of the 2004 IEEE Radio and Wireless Conference, Atlanta, Georgia, September 2004, pp. 51-53
- H. Sayeed, M. Abu-Amara, H. Abu-Amara, “Optimal Asynchronous Agreement and Leader Election Algorithm for Complete Networks with Byzantine Faulty Links,” Distributed Computing, Vol. 9, Issue 3, 1995, pp. 147-156
- M. Abu-Amara, “Asynchronous Failure Location Algorithm for Fiber-Optic Networks,” Proceedings of the Seventh IEEE Symposium of Parallel and Distributed Processing, San Antonio, Texas, October, 1995, pp. 690-693
- H. Sayeed, M. Abu-Amara, H. Abu-Amara, “Asynchronous Agreement and Leader Election Algorithms for General Networks with Byzantine Faulty Links,” Proceedings of the ISCA Eighth International Conference on Parallel and Distributed Computing Systems, Orlando, Florida, September, 1995, pp. 177-182
- H. Sayeed, M. Abu-Amara, H. Abu-Amara, “Optimal Asynchronous Agreement Algorithm for Complete Networks with Byzantine Links,” Proceedings of the ISCA/IEEE Seventh International Conference on Parallel and Distributed Computing Systems, Las Vegas, Nevada, October, 1994, pp. 593-596
- M. Abu-Amara and H. Abu-Amara, “Locating Switching Faults In General Synchronous Fiber-Optic Networks,” Proceedings of the ISCA/IEEE Seventh International Conference on Parallel and Distributed Computing Systems, Las Vegas, Nevada, October, 1994, pp. 761-766
- S. Sarwar and M. Abu-Amara, “Functional Languages: A Performance Study,” Journal of Systems and Software, Volume 20, Number 2, February 1993, pp. 163-167

## REFERENCES

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Available upon request