

WAIL MARDINI

→→ EDUCATIONAL QUALIFICATION

- **Ph.D .** Major :Computer Science
Title : Planar Chordal Cycles: Their Construction, Applications and Analysis in Mesh Networks
University: *Ottawa University, Ottawa-ON ,Canada, 2006*
- **M.S** Major :computer science
Title : Modelling with D-queues
University: *University of New Brunswick, Fredericton–NB,Canada, 2001*
- **B.Sc** Major : Bachelor in Applied Mathematics
University: *Jordan University of Science& Technology, Irbid, Jordan, 1997*

→→ PROFESSIONAL EXPERIENCE

- **9/2010 – present:** Department Chairman, Chairman of the computer science department at Jordan University of Science and Technology .
- **9/2006 – present:** Assistant Professor , Teaching different computer science courses in different levels from first year to master level course
- **9/2002 – 9/2006:** Researcher, Research on the area of algorithms for optical networks survivability. Studying and developing algorithms in this area, University of Ottawa,Ottawa / ON.
- **9/2001 – 9/2006:** Teaching Assistance, Teaching assistance for different course in areas of: computer science and data & computer communication for both graduate and undergraduate levels, University of Ottawa, Ottawa / ON.
- **9/1999 – 5/2001 :** Teaching & Research Assistance, Teaching assistance and research assistance in the computer science department. Teaching assistance for different computer science courses. Research on modeling and queuing theory, University of New Brunswick , Fredericton / NB.
- **3/1998 – 9/1999:** Lab Instructor & Administrator, Instructor, supervisor and administrator in the computer science department labs.

→→ CURRENT RESEARCH AREA

- Wireless Mesh Networks
- Wireless Sensor Networks
- Wireless Optical Mesh Networks
- Optical Network Survivability
- WiMax Technology
- Scheduling in Parallel Computing
- Intrusion Detection Techniques

→→ AFFILIATIONS

- 1/2009 – 9/2009: Faculty Representative at JUST University Council
9/2007 – 8/2008: Department Representative at JUST IT Faculty Council
1/2005 – 8/2006: President, Computer Science Graduate Student Association at U. Ottawa
10/2004 – 10/2005: SITE student representatives on Engineering Faculty Council at U. Ottawa
1/2004 – 12/2004: VP Communication, Computer Science Graduate Student Association at U. Ottawa
9/2000 - 8/2001: Treasurer, Graduate Student Computer Science Association/U. New Brunswick

→→ PUBLICATIONS

1. Wail Mardini, Yaser Khamayseh, Marwa Salayma, "Optimal Power Consumption in Cooperative WSNs for a random Distance using a linear propagation model", *Procedia Computer Science*, Volume 5, The 2nd International Conference on Ambient Systems, Networks and Technologies (ANT-2011) / The 8th International Conference on Mobile Web Information Systems (MobiWIS 2011), 2011, Pages 489-496, ISSN 1877-0509. 19-21 September, 2011. Niagara Falls, Canada.
2. Wail Mardini, Mai Abu Alfool, "Modified WRR Scheduling Algorithm for WiMAX Networks", *Journal of Network Protocols and Algorithms*, Vol 3, No 2 (2011), pp 24-53. ISSN 1943-3581. United States.
3. Wail Mardini, Yaser Khamayseh, Muneer Bani Yasin, Ghadeer Obiedat, "Survey of Latest WiMAX Technologies and Techniques", *Journal of International Review on Computers and Software*, Vol 6, No 4, pp xx-xx, ISSN 1828-6003, United States.
4. B. Alawieh, W. Mardini, H. Mouftah, "A Kalman-Fuzzy Application for Rate Adaptation in IEEE 802.11 based Multihop Ad Hoc Networks", *The 7th International Wireless Communications and Mobile Computing Conference (IWCMC 2011)*, JULY 5 - 8, 2011. ISTANBUL, TURKEY.
5. Wail Mardini, Muneer Bani Yassein, Zainab AbuTaye', "A NEW BACKOFF ALGORITHM FOR IEEE 802.11 DCF MAC PROTOCOL IN MOBILE AD HOC NETWORKS", *Ubiquitous Computing and Communication Journal (UBICC)*, Vol 6, No 3 (2011), pp 907-916. ISSN 1992-8424. Republic of Korea.
6. Musab Al-Ghadi, Ismail Ababneh, Wail Mardini, "Performance study of SINR scheme for Vertical Handoff in wireless network", *Proceeding of the International Conference on Information and Communication Systems (ICICS 2011)*, May 22-24, 2011. Irbid -Jordan. ISBN 978-1-45078-208-1.
7. Yaser M Khamayseh, Abdurraheem Bader, Wail Mardini, Muneer BaniYasein, "A New Protocol for Detecting Black Hole Nodes in Ad Hoc Networks", *International Journal of Communication Networks and Information Security (IJCNIS)*, Vol 3, No 1 (2011), pp 36-47. ISSN: 2076-0930. Pakistan.
8. Muneer Bani Yassein, S. Al-Rushdan, Wail Mardini, Yaser Khamayseh, "Performance of Probabilistic Broadcasting of Dynamic Source Routing Protocol", *Proceeding of The Fourth International Conference on Communication Theory, Reliability, and Quality of Service (CTRQ 2011)*. April 17-22, 2011 - Budapest, Hungary. ISBN: 978-1-61208-005-5.
9. Nahla Shatnawi, Qutaibah Althebyan, and Wail Mardini, "Detection of Insiders Misuse in Database Systems". *Proceedings of The International MultiConference of Engineers and Computer Scientists (IMECS) 2011*, Hong Kong, 16-18 March, 2011, pp. 323-328. ISBN: 978-988-18210-3-4.
10. Ameneh Daeinabi, Akbar Ghaffarpour Rahbar, Wail Mardini, "Protection of Unicast and Multicast Traffic in WDM Mesh Networks: A Survey", *Computer Science Research and Technology (Book chapter)*. Volume 2, Nova Science Publishers 2011, USA. Pp. 1-36. ISBN: 978-1-61122-073-5
11. Ala'a Al-Howaide, Wail Mardini, Yaser Khamayseh, Muneer Bani Yasin. "Fast String Matching Algorithm", *Proceeding of 2010 International Conference on Management Science and Engineering (MSE 2010)*, pages 251-254. October 17-18, 2010 Wuhan, China.
12. Yaser Khamayseh, Wail Mardini, Noor Al-Tarazi. "Preemptive Vs Non Preemptive Scheduling in WMN", *Proceeding of 2010 International Conference on Management Science and Engineering (MSE 2010)*, pages 196-199. October 17-18, 2010 Wuhan, China.
13. Ismail Ababneh, Wail Mardini, Saad Bani-Mohammad, Helal Alawneh, Mohammad Hamed, "Effects of Allocation Request Shape Changes on Performance in 2D Mesh-Connected Multicomputers", *The 2010 IEEE International Conference on Computer and Information Technology (CIT 2010)*. 29 June – 01 July, 2010 in Bradford, UK.
14. Muneer Bani Yassein, Osama Al oqaily, Geyong Min, Wail Mardini, Yaser Khamayseh, Saher Manaseer, "Enhanced Fibonacci Backoff Algorithm for Mobile Ad-Hoc Network", *The 2010 International Workshop on Intelligent Sensor and Wireless Networks (IntelNet 2010)*. 29 June – 01 July, 2010 in Bradford, UK.
15. Yaser Khamayseh, Wail Mardini, Muneer Bani Yasin, "PERFORMANCE EVALUATION OF DIFFERENT MINIMUM SPANNING TREES SCHEMES FOR SCHEDULING IN WMNS". *IADIS International Conference APPLIED COMPUTING 2009*. Rome, Italy. 19 - 21 November 2009
16. Mohammad Ghaleb Ali , Wail Mardini , Akbar Ghaffar Pour Rahbar , Yaser Khamayseh , "Improvement of Metropolitan Wireless Networking Using Wireless Optical Mesh Networks", *JDCTA: International Journal of Digital Content Technology and its Applications*, Vol. 3, No. 3, pp. 60 ~ 73, 2009. Republic of Korea.
17. M. Bani Yassein, A. Al-zou'bi, Y. Khamayseh, W. Mardini , "Improvement on LEACH Protocol of Wireless Sensor Network (VLEACH)", *JDCTA: International Journal of Digital Content Technology and its Applications*, Vol. 3, No. 2, pp. 132 ~ 136, 2009. Republic of Korea.

18. Ali, Mohammad G.; Mardini, Wail; Khamayseh, Yaser; Rahbar, Akbar Ghaffar Pour, "Improvements of using the WOMN System in Communication," 5th International Symposium on High Capacity Optical Networks and Enabling Technologies, 2008. HONET 2008., Conference proceeding pp.226-232, 18-20 Nov. 2008. Penang, Malaysia.
19. Daeinabi, Ameneh; Rahbar, Akbar Ghaffar Pour; Mardini, Wail, "Protection of Multicast Traffic in WDM Mesh Networks," 5th International Symposium on High Capacity Optical Networks and Enabling Technologies, 2008. HONET 2008., Conference proceeding pp.192-197, 18-20 Nov. 2008. Penang, Malaysia.
20. Mardini, Wail; Yang, O., "Restorability Analysis of Two Protection Cycles in Random Mesh Networks," Broadband Communications, 3rd International Conference on Networks and Systems, 2006. BROADNETS 2006., vol., no., pp.1-7, 1-5 Oct. 2006. San Jose, California, USA.
21. Wail Mardini, "Planar Chordal Cycles: Their Construction, Applications and Analysis in Mesh Networks," Ph.D. Thesis, School of Information Technology and Engineering., Ottawa University / Canada, 2006.
22. Wail Mardini, Oliver Yang, "The Hop-Count Effect on the Optimal Spare Capacity for P-Cycles, Rings and All-Routes," Canadian Conference on Electrical and Computer Engineering, 2006. CCECE '06., vol., no., pp.1838-1841, 7 – 10 May 2006. Ottawa, Canada.
23. Mardini, Wail; Oliver, Y., "Optimal Backup Capacity Improvements in Optical Mesh Networks," 40th Annual Conference on Information Sciences and Systems (CISS), 2006, vol., no., pp.1696-1696, 22-24 March 2006. Princeton, New Jersey, USA.
24. Mardini, Wail; Yang, O.; Zhai, Y., "Using MCG to find PP-cycles in planar graphs [optical network applications]," Optical Fiber Communication Conference, 2005. Technical Digest. OFC/NFOEC , vol.3, no., pp. 3 pp. Vol. 3-, 6-11 March 2005. Anaheim, California, USA.
25. Shah-Heydari, S.; Mardini, Wail; Yang, O., "Theoretical analysis of restorability of Hamiltonian protection cycles in random mesh networks," Proceeding of IEEE Ninth International Symposium on Computers and Communications, 2004.IEEE ISCC 2004., vol.2, no., pp. 921-926 Vol.2, 28 June-1 July 2004. Alexandria, Egypt.
26. Pochee, P.; Mardini, Wail, "On Latency of a Backup System," Proceeding of IASTED Applied Simulation and Modelling Conference, 2003. September 3 – 5, 2003. Marbella, Spain.
27. Pochee, P.; Mardini, Wail, "Modelling with queues: an empirical study," Proceeding of IEEE Canadian Conference on Electrical and Computer Engineering (CCECE), 2001. , vol.1, no., pp.685-689 vol.1. May 13-16, 2001. Toronto, Canada.
28. Wail Mardini, "Modelling with queues: Theory and empirical study," GSA (Graduate Student Association) 9th Annual Conference on Student Research, UNB Fredericton, February 15-16, 2001.
29. Wail Mardini, "Modelling with D-queues," Master thesis, University of New Brunswick, Fredericton, New Brunswick/ Canada, 2001.

→→ Journal and Conference Duties

Type	Title	Country	Year
Guest Editor	special issue 2012, Network Protocols and Algorithms, ISSN 1943-3581	USA	2012
Track Co-Chair	The 3 rd International Conference on Ambient Systems, Networks and Technologies (ANT-2012)	Canada	2012
TPC member	The Fifth International Conference on Communication Theory, Reliability, and Quality of Service	France	2012
Publication Chair	ICICS conference	Jordan	2012
Guest Editor	special issue 2011 UBICC journal, ISSN 1992-8424	Korea	2011
Session Chair	ICICs 2011, Session: Algorithms and Applications & Software Engineering	Jordan	2011
Session Chair	ANT 2011, Session 12: Quality of Service	Jordan	2011
Session Chair	Applied computing conference, Session FSP 20.10 Mobile Networks and Systems // Wireless Application // Networking // Communications	Italy	2009
Session Chair	CCECE 2006	Canada	2006

→→ MASTER STUDENTS SUPERVISED

Master students supervised (completed), name, thesis title and year finished

- MOHAMMAD GALEB, "IMPROVEMENT OF METROPOLITAN WIRELESS NETWORK BY USING WIRELESS OPTICAL MESH NETWORK AND FUTURE POSSIBLE IMPROVEMENTS", DECEMBER 2007
- HILAL IBRAHIM ALAWNEH, "EFFECTS OF ALLOCATION REQUEST SHAPE CHANGES ON PERFORMANCE IN 2D

MESH –CONNECTED MULTICOMPUTERS”, JANUARY 2010

- NAHLAH MOHAMMAD SHATNAWI, "DETECTION OF INSIDERS MISUSE IN DATABASE SYSTEMS", MAY 2010
- ASMAHAN ABU AL-HASSAN, "PERFORMANCE ANALYSIS OF ADJUSTED VELOCITY –BASED BROADCASTING IN MOBILE AD HOC NETWORKS", JUNE 2010
- MUSAB AL-GHADI, "DISTANCE –BASED SCHEME FOR VERTICAL HANDOFF IN HETEROGENEOUS WIRELESS NETWORKS " JANUARY 2011
- MAI ABU AL FOUL, " MODIFIED WRR SCHEDULING ALGORITHM FOR WIMAX NETWORKS ", MAY 2011
- ZAINAB ABUTAYE, "ANEW BACKOFF ALGORITHM FOR IEEE 802.11 DCF MAC PROTOCOL IN MOBILE AD HOC NETWORKS ", 2011
- HADEEL TBASHATE, "IMPROVED IMAGE FUSION TECHNIQUE FOR SITUATIONAL AWARENESS" 2010/2011
- RANA HIJAWI, "CO-EXISTENCE PROTOCOLFOR ZIGBEEANDWIFI USING NODE COORDINATION", 2011
- REEM JARADAT, "ZIGBEE AND WIFI INTERFERENCE PROBLEM", 2011
- SHORROQ ALEIDY, "OPTIMAL NUMBER OF RELAYS IN COOPERATIVE COMMUNICATION IN WIRELESS SENSOR NETWORKS", 2011

Master students supervised (in progress), name, tentative thesis title, year started

- MOHAMMAD OLYMAT, "JOB MIGRATION IN CONTIGUOUS PROCESSOR ALLOCATION FOR TWO-DIMENTIONAL MULTICOMPUTERS", 2011
- ALA'A AL-HOWAIDE, " AUTOMATIC WEIGHTED CONTENT SIGNATURE GENERATION SYSTEM", 2011
- BARAQ GALEB, "INTERCLUSTER ROUTING PROTOCOLS EVALUATION", 2011

→→ COURSES TAUGHT AT JUST/JORDAN:

- CS 115 C++ PROGRAMMING LANGUAGE
- CS 116 Visual Basic
- CS 284 Algorithms
- CS 442 Computer Networks
- CS 487 Simulation and Modeling
- CS 784 Advanced Algorithms
- CS 789 Seminar in Advanced Computer Science Topics

→→ COURSES TAUGHT AT OTHER UNIVERSITIES:

- CIS 631: Information Network Analysis and Design, Yarmouk University.
- CSCI 651: Algorithm Concepts, New York Institute of Technology/Jordan.
- MIST 320: Managing Data Communications and Networks, New York Institute of Technology/Jordan.

→→ SKILLS AND EXPERTISE IN PROGRAMMING AND APPLICATIONS

→Programming:

C/C++ using MS Visual Studio .NET and VS 6, Java, VB Macros with Microsoft Excel, Word and PowerPoint, Pascal, Basic, Fortran.

→Applications:

, Microsoft Applications Word, Excel, PowerPoint, Microsoft Access, Microsoft FrontPage, Microsoft Visio, Matlab, SAS, Maple, Minitab

→Others:

CPLEX/AMPL, LEDA libraries for C/C++, Unix and Linux, Windows NT 4 Administrator, Windows 3.1/95/98/2000/xp/vista, Linux, Software Eng.