

Mostafa Hassan Dahshan, PhD.

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Summary

Over 8 years of combined academic research, teaching, software development and professional IT experience. Earned a Ph.D. degree in Electrical and Computer Engineering and a Masters degree in Telecommunications Systems, in addition to a Bachelor of Computer Engineering.

Education

University of Oklahoma

Norman, Oklahoma, U.S.A
2003 – 2006

Ph.D., Electrical & Computer Engineering

- Dissertation Title: Performance Enhancement of Large Scale Networks with Heterogeneous Traffic.
- Designed queue optimization techniques for minimizing queueing delay.
- Designed a resource based pricing mechanism for flow reservation QoS techniques.
- Designed a flow management mechanism for improving the fairness in DiffServ networks – Patent pending.
- Covered several subjects in telecommunications, including fiber optics, DWDM networks and wireless communications.

University of Oklahoma

Tulsa, Oklahoma, U.S.A
2001 – 2002

M.S., Telecommunications Systems

- Professional Project: Design and partial implementation of a reliable, fault tolerant, decentralized teleconferencing system over IP.
- Covered several topics in computers and networks, including security, network design, e-commerce, database management, multimedia, image and video compression, and others.

Cairo University

Cairo, Egypt
1994 – 1999

B.S., Computer Engineering

- Graduation Project: Design and implementation of an emulation system of a wired LAN environment over a wireless RF medium (wireless NIC card).

Work Experience

King Saud University

Riyadh, Saudi Arabia
2007 – Current

Assistant Professor of Computer Engineering

College of Computer and Information Sciences

Taught / Teaching the following courses (all course descriptions/notes are available on my website)

- Computer Networks (Graduate)
- Security Engineering (Graduate – selected topic)
- Security and Internet Protocols (Undergraduate)
- Network Programming (Undergraduate)
- Introduction to Data Transmission (Undergraduate)
- Seminar (Undergraduate)

Developed course descriptions for the following undergraduate courses

- Network Programming
- Network Security Lab
- Optical Networks
- Data Compression

Supervised the following undergraduate projects

- Performance analysis of VoIP over MPLS
- Network Traffic Analyzer
- Intelligent Firewall
- Distributed (Peer to Peer) Messaging System
- Cryptographic Power Analyzer

Awarded the best faculty website at the college level for year of 2007.

University of Oklahoma

Tulsa, Oklahoma, U.S.A
2007

Adjunct Faculty Member

School of Electrical and Computer Engineering
College of Engineering

Taught the following course

- Telecommunications Laboratory

University of Oklahoma

Tulsa, Oklahoma, U.S.A
2005 – 2007

Information Technology Specialist II

National Resource Center for Youth Services
College of Continuing Education

- Developed client/server database applications using MySQL, PHP, Perl, and JavaScript.
- Full administration of department servers and Active Directory network.
- Developed applications using Visual Studio C++, Visual C# and Visual Basic.
- Provided technical assistance to both on-site and remote users for different types of communication devices.

University of Oklahoma

Tulsa, Oklahoma, U.S.A
2002 – 2005

Research Assistant

School of Electrical and Computer Engineering
College of Engineering

- Provided full setup and maintenance of the lab network, including routing, subnetting, NAT, DNS and DHCP server support.
- Worked as an interim lab manager during transitional periods.
- Assisted graduate students in lab experiments with different research tools, including network impairment emulators, traffic generators, OPNET, Network Simulation NS2, etc.
- Supported different UNIX/Linux platforms

Egypt Armed Forces

Cairo, Egypt
2000 – 2001

IT Department

- Developed several database applications to replace manual systems
- Provided general computer and network support

Publications

Journal Publications

- Mostafa H. Dahshan and Pramode K. Verma, “Refined Assured Forwarding Framework for Differentiated Services Architecture,” Journal of Computer Communications – Elsevier, Vol. 30, Issue 18, Pages 3841-3850, December 2007.
- Mostafa H. Dahshan and Pramode K. Verma, “Resource Based Pricing Framework for Integrated Services Networks,” Journal of Networks – Academy Publisher, Vol. 2, Issue 3, June 2007.

Conference Publications

- Mostafa H. Dahshan, An Algorithm for Finding Optimal Node-Disjoint Paths in Optical Switched Networks, 2nd International Conference on Computer Technology and Development, Cairo, Egypt, Nov 2-4, 2010.
- Hakki H. Refai, Mostafa H. Dahshan, and James J. Sluss, Jr., Precise Control over the Individual DMD Micromirror for Volumetric Three-Dimensional Display Applications,” IEEE 3DTV Conference: The True Vision - Capture, Transmission and Display of 3D Video, Istanbul, Turkey, 28-30 May 2008.
- Hakki H. Refai, Mostafa H. Dahshan, and James J. Sluss, Jr., “Tablet PC Interaction with Digital Micromirror Device (DMD),” Proceedings of the IS&T/SPIE Electronic Imaging 2007, Vol. 6507, San Jose, CA, January 28 - February 1, 2007.
- Mostafa H. Dahshan and Pramode K. Verma, “Pricing for Quality of Service in High Speed Packet Switched Networks,” The 2006 IEEE Workshop on High Performance Switching and Routing – HPSR’06, Poznan, Poland, June 7-9, 2006.
- Mostafa H. Dahshan and Pramode K. Verma, “Performance Enhancement of Heavy Tailed Queueing Systems using a Hybrid Integration Approach”, IEEE Global Telecommunications Conference – GLOBECOM’05, St. Louis, MO, USA, Nov 28-Dec 2, 2005.
- Mostafa H. Dahshan and Pramode K. Verma, “Performance Enhancement by Segregation and Hybrid Integration in General Queueing Networks,” International Symposium on Performance Evaluation of Computer and Telecommunication Systems – SPECTS’05, Philadelphia, PA, USA, July 24-28, 2005.
- Sarma V. Nedunuri, Mostafa H. Dahshan, and John Y. Cheung, “A Dynamically Reconfigurable, Decentralized Multiparty Teleconferencing System Over IP,” 15th International Conference on Parallel and Distributed Computing Systems – ICPDCS’02, Louisville, USA, September 2002.

Skills

- Teaching experience in the area of computer networks and telecommunications.
- Research experience in the area of Quality of Service in IP networks , traffic engineering, teleconferencing and display technologies. Reviewed technical papers for major international conferences.
- Technical experience in managing different types of network devices and protocols, including routers, switches, subnetting, VLANs, ACLs, NAT, etc.
- Programming experience in several languages including Assembly, C, C++, C#, Pascal, VB, Perl, PHP, UNIX shell scripts, bash, regular expressions and others.

Patents

- Mostafa H. Dahshan, Pramode K. Verma and James J. Sluss, Jr., “Refined Assured Forwarding Framework for Differentiated Services Architecture.” (Pending: US Patent App. 20080080382)
- Hakki H. Refai, Mostafa H. Dahshan and James J. Sluss, Jr., “Computer System Interaction with Digital Micro mirror Device.” (Pending: US Patent App. 20080192068)