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**EDUCATION**

**Ph.D. in Electrical Engineering**

**University of Washington**, Seattle, WA, 2001

**Dissertation title:** Service and restoration routing and wavelength assignment, and restoration signaling in optical networks.

**Master of Science in Electrical Engineering**

**University of Washington**, Seattle, WA, 1997

**Thesis title:** Multicast routing and wavelength assignment in wavelength-routed networks.

**Bachelor of Science in Electrical Engineering**

**Bilkent University**, Ankara, Turkiye, 1996

**AWARDS AND ACHIEVEMENTS**

- Wayne C. and Grace Stanley Fellow, U. of Washington, 2000 - 2001.
- NATO/Turkish Scientific-Research Council award for graduate study 1996.
- Top academic achievement scholarship awarded by Bilkent University, 1992 - 1996.
- KOC Foundation, superior achievement award, 1992.
- Ranked 27<sup>th</sup> among ~1,000,000 applicants in national university entrance exam, Turkiye, 1992.

**ACADEMIC EXPERIENCE**

**Miami University**, Oxford, OH **2004-present**  
**Assistant Professor, Electrical and Computer Engineering Dept.**

**University of Nebraska**, Lincoln, NE **2004**  
**Research Assistant Professor, Computer Science and Engineering Dept.**

**The George Washington University**, Washington, DC **2002-2004**  
**Research Scientist, Electrical and Computer Engineering Dept.**

**INDUSTRY EXPERIENCE**

**Corvis Corporation**, Columbia, MD **2001-2002**  
**Senior Network Architect**

**Metawave Communications**, Redmond, WA **Spring 2000**

**AT&T Labs Research**, Red Bank, NJ **Summer 1998**

**ACADEMIC/PROFESSIONAL SERVICE**

- Technical Program Committee Member for : IEEE Globecom 2004 Wireless Communication and Networking Symposium (WCNS), IEEE Globecom 2005 WCNS, and IEEE Globecom 2006.
- Reviewer for numerous journals and conferences in the areas of wireless and optical communication and networking, including:
  - IEEE/ACM Transactions on Networking, IEEE JSAC, Journal of High Speed Networks
  - IEEE Communications Magazine, Optical Networks Magazine (Kluwer)
  - IEEE Infocom; IEEE ICC; IEEE Globecom
  - IEEE/SPIE Opticom/Broadnets, IFIP Optical Network Design and Management Conference
  - Member of the IEEE and ASEE

## PUBLICATIONS

### Patents:

- US Patent 7,088,676, August 2006. R. Doverspike, **G. Sahin**, J. Strand, R. Tkach, "**Methods and Systems for fast restoration in a mesh network of optical cross-connects**"
- US Patent 6,970,417, November 2005. R. Doverspike, **G. Sahin**, J. Strand, R. Tkach, "**Methods and Systems for fast restoration in a mesh network of optical cross-connects**"

### Book Chapter

**G. Sahin**, S. Subramaniam, "**Facilitating Service Level Agreements with Restoration Speed Requirements**", in "Emerging Optical Network Technologies", Springer, 2004.

### Journal/Conference Articles (listed according to topics)

#### Channel-Aware Scheduling in Wireless Networks

- **G. Sahin**, F. Jin, A. Arora, H.A. Choi, "Predictive Scheduling in Multi-Carrier Wireless Networks with Link Adaptation", in proceedings of IEEE Vehicular Technology Conference, Fall 2004.
- F. Jin, **G. Sahin**, A. Arora, H.A. Choi, "The Effects of the Sub-carrier Grouping on Multi-Carrier Channel-Aware Scheduling", in proceedings of Broadband Wireless Networking Symposium 2004.

#### Gigabit Internet: IP/MPLS-over-optical Networks

- S. Koo, **G. Sahin**, S. Subramaniam, "**Dynamic LSP Routing in IP/MPLS over WDM**", IEEE Journal of Selected Areas in Communications, 2006 (to appear).
- W. Yao, **G. Sahin**, M. Li, and B. Ramamurthy "**Analysis of Multi-Hop Traffic Grooming in WDM Mesh Networks**", in proceedings of IEEE Broadband Wireless Networking Symposium 2005.
- S. Koo, **G. Sahin**, S. Subramaniam, "**Cost Efficient LSP Protection in IP-MPLS-over-WDM Overlay Networks**", IEEE International Communication Conference 2003.

#### Control-message scheduling/Quality of Service in Optical Networks

- **G. Sahin**, S. Subramaniam, "**Providing Quality of Protection Classes Through Control Message Scheduling in DWDM Mesh Networks with Capacity Sharing**", IEEE Journal of Selected Areas in Communications, November 2004.
- **G. Sahin**, S. Subramaniam, "**Online Control-Message Scheduling for Quality of Protection (QoP) in DWDM Mesh Networks**", IEEE Optical Fiber Communication Conference, March 2003.
- **G. Sahin**, S. Subramaniam, "**Quality of Protection Through Control Message Scheduling in Optical Mesh Networks**", 4<sup>th</sup> Int. Workshop on Design of Reliable Commun. Networks, 2003.
- **G. Sahin**, S. Subramaniam, "**Control Message Scheduling for Improving Restoration Times in Optical Mesh Networks**", invited paper, IASTED International Conference on Parallel and Distributed Computing and Systems, November 2002.

#### Signaling/GMPLS-based-control for Restoration in Optical Networks

- **G. Sahin**, S. Subramaniam, M. Azizoglu, "**Signaling and Capacity Assignment for Mesh-Based Restoration Schemes in Optical Networks**", OSA Journal of Optical Networking, May 2002.
- R. Doverspike, **G. Sahin**, J. Strand, R. Tkach, "**Fast Restoration in a Mesh Network of Optical Cross-connects**", IEEE Optical Fiber Communication Conference, 1999.

#### Capacity Optimization in DWDM Mesh Networks

- **G. Sahin**, M. Azizoglu, "**Optical Layer Survivability for Single and Multiple Service Classes**", Journal of High Speed Networks, special issue on survivable WDM networks, October 2001.
- **G. Sahin**, M. Azizoglu, "**Optical Layer Survivability: Single Service Class Case**", IEEE/SPIE Optical Networking and Communications Conference, 2000.

### **Wavelength Assignment in WDM Ring Networks**

- **G. Sahin**, M. Azizoglu, "**Wavelength Assignment Algorithms for Service and Restoration in WDM Rings**", OSA Journal of Optical Networking, February 2002.
- **G.Sahin**, M. Azizoglu, "**An Efficient Wavelength Assignment Algorithm for Service and Restoration in WDM Rings**", IEEE Optical Fiber Communication Conference, March 2001.

### **Multicasting in Wide-Area Optical Networks**

- **G. Sahin**, M. Azizoglu, "**Routing and Wavelength Assignment in All-Optical Networks with Multicast Traffic**", European Transactions on Telecommunications, special issue on WDM networks, January 2000.
- **G. Sahin**, M. Azizoglu, "**Multicast Routing and Wavelength Assignment in Wide-area Networks**", Proceedings of SPIE, All-Optical Communication Systems: Architecture, Control, and Network Issues IV, 1998.

### **Management in Optical Networks**

- S. Stanic, **G. Sahin**, S. Subramaniam, H. Choi, H.-A. Choi, "**Monitoring and Alarm Management in Transparent Optical Networks**", submitted to IEEE JSAC, 2004.
- S. Stanic, S. Subramaniam, H. Choi, **G. Sahin**, H.-A. Choi, "**Efficient Alarm Management in Optical Networks**", 3<sup>rd</sup> DARPA Information Survivability Conference 2003.
- S. Stanic, S. Subramaniam, H. Choi, **G. Sahin**, H.-A. Choi, "**On monitoring transparent optical networks**", Workshop on Optical Networks (in conjunction with ICPP '02), August 2002.