

# Curriculum Vitae

**George N. Rouskas**

IEEE Fellow

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**February 2018**

## 1 Brief Resume

### Education

GEORGIA INSTITUTE OF TECHNOLOGY, PhD, Computer Science, 1994  
 GEORGIA INSTITUTE OF TECHNOLOGY, MS, Computer Science, 1991  
 NATIONAL TECHNICAL UNIV. OF ATHENS, GREECE, Diploma, Computer Engineering, 1989

### Professional Experience

NORTH CAROLINA STATE UNIVERSITY, Department of Computer Science, 1994-present  
 Director of Graduate Programs, January 2014-present  
 Professor, 2002-present  
 Associate Professor, 1999-2002  
 Program Coordinator, MS in Computer Networking, 1999-2001  
 Assistant Professor, 1994-1999

KING ABDULAZIZ UNIVERSITY, SAUDI ARABIA  
 Distinguished Scientist, March 2013-present

PARIS 6 UNIVERSITY, FRANCE  
 Invited Professor, October 2012

UNIVERSITY OF EVRY, FRANCE  
 Invited Professor, July 2006, December 2002, June 2000

VITESSE SEMICONDUCTOR  
 Network Architect, 2000-2001 (on Sabbatical leave from NCSU)

GEORGIA INSTITUTE OF TECHNOLOGY  
 Graduate Research/Teaching Assistant, 1989-1994

### Scholarly and Creative Activities

| Type  | Number |
|---|--------|
| Citations (Google Scholar, February 2018)       | 8086   |
| <i>h</i> -Index (Google Scholar, February 2018) | 46     |
| Book  | 3      |
| Proceedings                                     | 6      |
| Book Chapter                                    | 8      |
| Editorial                                       | 6      |
| Refereed Journal Article                        | 75     |
| Refereed Conference Article                     | 101    |
| Invited Conference Article                      | 17     |
| Tutorial  | 4      |
| Keynote Presentations                           | 4      |
| Panels  | 7      |
| Invited Research Presentations                  | 65     |

### Membership in Professional Organizations

IEEE (Communications Society)  
ACM (SIGCOMM)  
Association of Professional Engineers of Greece

### Scholarly and Professional Honors

JOYCE HATCH SERVICE AWARD, NCSU Chapter of ACM/AITP, 2014-2015  
MOST RECEPTIVE GRADUATE PROFESSOR OUTSIDE THE CLASSROOM AWARD, NCSU Chapter of ACM/AITP, 2013-2014  
IEEE FELLOW, Class of 2012  
CAROL MILLER GRADUATE LECTURER AWARD, NCSU Chapter of ACM/AITP, 2011-2012  
IEEE DISTINGUISHED LECTURER, 2010-2011  
OUTSTANDING SERVICE AWARD, IEEE GLOBECOM 2010  
IBM FACULTY AWARD, 2007  
BEST PAPER AWARD, *EVGM Workshop*, 2007 (with C. Castillo and K. Harfoush)  
BEST PAPER AWARD, *CSNDSP Symposium*, 2006 (with B. Chen and R. Dutta)  
ALCOA FOUNDATION ENGINEERING RESEARCH ACHIEVEMENT AWARD, CoE, NCSU, 2004  
ACADEMY OF OUTSTANDING TEACHERS, NCSU, 2004  
ALUMNI OUTSTANDING RESEARCH AWARD, NCSU, 2003  
BEST PAPER AWARD, *SPIE Conference on All-Optical Networking*, 1998 (with I. Baldine)  
NATIONAL SCIENCE FOUNDATION CAREER AWARD, 1997  
OUTSTANDING NEW TEACHER AWARD, Department of Computer Science, NCSU, 1995  
GRADUATE RESEARCH AWARD, College of Computing, Georgia Institute of Technology, 1994

### Professional Service On Campus

CoE Representative to the Administrative Board of the Graduate School, 2016-2017  
CoE University Faculty Scholar Committee, 2012-2014  
CoE ALCOA Awards Committee, 2012-2013  
Operations Research Graduate Admissions Committee, 2012-2013  
CSC 316 (Data Structures) Coordinator, 2004-2017  
Chair, CSC Strategic Planning Committee, 2009-2012  
CSC Awards Committee, 2009-2012  
CSC Graduate Admissions Committee, 2011-2012  
College of Engineering Reappointment, Promotion, and Tenure (RPT) Committee, 2008-2011  
Faculty Recruiting Committee, 2008-2009  
Computing Infrastructure Committee, 2006-2013  
College of Engineering Research Committee, 2007-2008  
Minority Recruiting Committee, 2006-2007  
CSC 316 (Data Structures) Assessment, Spring 2006  
CSC Head Search Committee, 2004-2006  
DELTA IDEA grant review committee, 2004-2005  
DELTA Advisory Committee, 2003-2005

CHAIR, DELTA Subcommittee on Intellectual Property, 2003-2005  
 Engineering Online Advisory Committee, 2003-2005  
 Alumni Outstanding Research Awards Selection Committee, Spring 2004  
 Admissions Standards Committee, MS in Computer Networking, 1998-1999  
 Committee for External Evaluation Visit, Fall 2004  
 Strategic Planning Committee, 2002-2004  
 Research Productivity Committee, 2003-2004  
 CHAIR, Faculty Recruiting Committee, 2000-2002  
 Peer Evaluation Committee, 2000-present  
 Graduate Student Admissions Committee, 1996-1998  
 PhD Qualifying Exam Committee, 1994-1996  
 ECE Faculty Recruiting Committee, 1999-2000

### Professional Service Off Campus

FOUNDING EDITOR-IN-CHIEF, *IEEE Networking Letters*, Elsevier, 2018-present  
 GENERAL CO-CHAIR, *IEEE MASS 2018*, Chengdu, China, October 9-12, 2018.  
 TECHNICAL PROGRAM CO-CHAIR, *NETWORKS 2018*, Cartagena, Spain, September 10-12, 2018.  
 FOUNDING EDITOR-IN-CHIEF, *Optical Switching and Networking*, Elsevier, 2004-2017  
 CHAIR, *IEEE Communications Society Distinguished Lecturer Selection Committee*, 2016-2017  
 VICE CHAIR, *IEEE Communications Technical Activities Council*, 2016-2017  
 CHAIR, *IEEE Optical Networking Technical Committee (ONTC)*, 2016-2017  
 TECHNICAL PROGRAM CO-CHAIR, *IEEE ICC 2017, Optical Networks and Systems (ONS) Symposium*, Paris, France, May 21-25, 2017  
 VICE CHAIR, *IEEE Optical Networking Technical Committee (ONTC)*, 2014-2015  
 SECRETARY, *IEEE Optical Networking Technical Committee (ONTC)*, 2012-2013  
 BEST PAPER AWARD SELECTION COMMITTEE, *IEEE/OSA Journal on Optical Communications and Networking*, 2014-2016.  
 MEMBER, Advisory Board, H2020 European Project FALCON, 2014-2017  
 TRACK CO-CHAIR, EUROPEAN CONFERENCE ON NETWORKS AND COMMUNICATIONS (EuCNC), June 2016.  
 MEMBER, *International Advisory Committee*, Scuola Superiore Sant'Anna, Pisa, Italy, 2013-2016  
 GENERAL CO-CHAIR, *IEEE ICNP 2014*, Raleigh, NC, October 2014  
 GENERAL CHAIR, *IEEE ICCCN 2013*, Nassau, Bahamas, July/August 2013  
 GUEST EDITOR, *JCM Journal of Communications*, December 2011  
 ASSOCIATE EDITOR, *IEEE/OSA Journal of Optical Communications and Networking*, 2010-2012  
 TECHNICAL PROGRAM CO-CHAIR, *ICCCN 2011*, Maui, Hawaii, August 1-4, 2011  
 TECHNICAL PROGRAM CO-CHAIR, *IEEE Globecom 2010, Optical Networks and Systems (ONS) Symposium*, Miami, FL, November 28-December 3, 2010  
 MEMBER, *Best Paper Award Selection Committee, IEEE INFOCOM 2011*.  
 TECHNICAL PROGRAM CO-CHAIR, *ICCCN 2009, Internet Services, Systems and Applications (ISSA) Track*, San Francisco, CA, August 2-6, 2009  
 GENERAL CO-CHAIR, *BROADNETS 2007*, Raleigh, NC., September 10-13, 2007  
 ASSOCIATE EDITOR, *IEEE/ACM Transactions on Networking*, 2000-2004

ASSOCIATE EDITOR, *Computer Networks*, 2001-2004

ASSOCIATE EDITOR, *Optical Networks*, 2000-2004

GUEST EDITOR, *IEEE Journal on Selected Areas in Communications*, October 2000

GENERAL CO-CHAIR, *IEEE LANMAN 2005*, Chania, Crete, Greece, September 2005

TECHNICAL PROGRAM CO-CHAIR, *Traffic Grooming Workshop*, San Jose, CA, October 29, 2004

TECHNICAL PROGRAM CO-CHAIR, *NETWORKING 2004*, Athens, Greece, May 9-14, 2004

TECHNICAL PROGRAM CHAIR, *IEEE LANMAN 2004*, San Francisco, CA, April 25-28, 2004

MEMBER, numerous conference programs committees

NSF PANELIST on several occasions

REVIEWER for numerous books, journals, and conferences

EXTERNAL REVIEWER for the promotion of 50 faculty

## 2 Research Activities

### 2.1 Publications

#### 2.1.1 Books

3. ROUSKAS, G.N., RAMAMURTHY, B., SIVALINGAM, K.M. (editors). Next-Generation Internet Architectures and Protocols. Cambridge University Press, 2011.
2. ROUSKAS, G.N. Internet Tiered Services: Theory, Economics, and Quality of Service. Springer, 2009.
1. DUTTA, R., KAMAL, A., ROUSKAS, G.N. (editors). Traffic Grooming for Optical Networks: Foundations, Techniques, and Frontiers. Springer, 2008.

#### 2.1.2 Journal Publications

75. GAO, L., ROUSKAS, G.N., “A Spectral Clustering Approach to Network-Aware Virtual Request Partitioning.” In press.
74. XIONG, Y., SHI, J., YAYA, Y., LV, Y., ROUSKAS, G.N., “Lightpath Management on SDN-Based Elastic Optical Networks with Power Consumption Considerations.” *IEEE/OSA Journal of Lightwave Technology*, 2018.
73. XIONG, Y., LI, Y., ZHOU, B., WANG, R., ROUSKAS, G.N., “SDN Enabled Restoration with Triggered Precomputation in Elastic Optical Inter-Datacenter Networks.” *Journal of Optical Communications and Networking*, vol. 10, no. 1, January 2018.
72. BHAT, S., UDECGUKWU, R., DUTTA, R., ROUSKAS, G.N., “Network Service Orchestration in Heterogeneous 5G Networks using an Open Marketplace.” *IET Networks*, 2017.
71. TALEBI, S., ROUSKAS, G.N., “On Distance-Adaptive Routing and Spectrum Assignment in Mesh Elastic Optical Networks.” *Journal of Optical Communications and Networking*, 2017.
70. TALEBI, S., KATIB, I., ROUSKAS, G.N., “Distance-Adaptive Routing and Spectrum Assignment in Rings.” *IET Networks*, vol. 5, no. 3, pp. 64-70, May 2016.
69. TALEBI, S., BAMPIS, E., LUCARELLI, G., KATIB, I., ROUSKAS, G.N., “On Routing and Spectrum Assignment in Rings.” *Journal of Lightwave Technology*, vol. 33, no. 1, pp. 151-160, January 1, 2015.
68. COULIBALY, ROUSKAS, G.N., ABD LATIF, M.S., RAZZAQUE, M.A., MANDALA, S., “QoS-Aware Ant-Based Route, Wavelength and Timeslot Assignment Algorithm for Optical Burst Switched Networks.” *Transactions on Emerging Telecommunications Technologies*, 2015.
67. TALEBI, S., BAMPIS, E., LUCARELLI, G., KATIB, I., ROUSKAS, G.N., “Spectrum Assignment in Optical Networks: A Multiprocessor Scheduling Perspective.” *Journal of Optical Communications and Networking*, vol. 6, no. 8, pp. 754-763, August 2014.
66. WANG, H., ROUSKAS, G.N., “Hierarchical Traffic Grooming: A Tutorial.” *Computer Networks*, vol. 69, pp. 147-156, August 2014.

65. YAYAH, A. A., COULIBALY, Y., ISMAIL, A. S., ROUSKAS, G.N., “Hybrid Offset-Time and Burst Assembly Algorithm (H-OTBA) for Delay Sensitive Applications Over Optical Burst Switching Networks.” *International Journal of Communication Systems*, 2014.
64. WOLF, T., GRIFFIOEN, J., CALVERT, K., DUTTA, R., ROUSKAS, G.N., BALDINE, I., NAGURNEY, A., “ChoiceNet: Toward an Economy Plane for the Internet.” *ACM Computer Communications Review*, vol. 44, no. 3, pp. 58-65, July 2014.
63. TALEBI, S., ALAM, F., KATIB, I., KHAMIS, M., KHALIFAH, R., ROUSKAS, G.N., “Spectrum Management Techniques for Elastic Optical Networks: A Survey.” *Optical Switching and Networking*, vol. 13, no. 1, pp. 34-48, July 2014.
62. LIU, X., ROUSKAS, G.N., HE, F., XIONG, H., “MPCP with Look-Ahead for WDM EPON.” *Journal of Optical Communications and Networking*, vol. 6, no. 2, pp. 104-113, February 2014.
61. WANG, H., ROUSKAS, G.N., “Traffic Grooming in Optical Networks: Decomposition and Partial LP Relaxation.” *Journal of Optical Communications and Networking*, vol. 5, no. 8, pp. 825-835, August 2013.
60. CAO, C., ROUSKAS, G.N., WANG, J., TANG, X., “Hybrid FRR/ $p$ -Cycle Design for Link and Node Protection in MPLS Networks.” *International Journal of Electronics and Communications*, vol. 67, no. 6, pp. 470-478, June 2013.
59. WANG, A., IYER, M., DUTTA, R., ROUSKAS, G.N., BALDINE, I., “Network Virtualization: Technologies, Perspectives, and Frontiers.” *IEEE/OSA Journal of Lightwave Technology*, vol. 31, no. 4, pp. 523-537, February 15, 2013.
58. EL-BAWAB, T.S., ESFANDIARI, M., ROUSKAS, G.N., JAYASUMANA, A., EFFENBERGER, F., KAZOVSKY, L., KINCAID, M., MEDARD, M., FROST, V., BANIEWICZ, P., “Toward Specialized Undergraduate Telecommunication Engineering Education in the US.” *IEEE Communications Magazine*, vol. 50, no. 9, pp. 3-4, September 2012.
57. VISWANATH, A., SIVARAMAN, V., ROUSKAS, G.N., “Anomalous Loss Performance for Mixed Real-Time and TCP Traffic in Routers with Very Small Buffers.” *IEEE/ACM Transactions on Networking*, vol. 19, no. 4, pp. 933-946, August 2011.
56. YETGINER, E., ZEYU, L., ROUSKAS, G.N., “Fast Exact ILP Decompositions for Ring RWA.” *Journal of Optical Communications and Networking*, vol. 3, no. 7, pp. 577-586, July 2011. **OSA Spotlight on Optics, September 2011.**
55. DWEKAT, Z., ROUSKAS, G.N., “A Practical Fair Queueing Scheduler: Simplification Through Quantization.” *Computer Networks*, vol. 55, no. 10, pp. 2392-2406, July 2011.
54. CASTILLO, C., ROUSKAS, G.N., HARFOUSH, K., “Online Algorithms for Advance Resource Reservations.” *Journal of Parallel and Distributed Computing*, vol. 71, no. 7, pp. 963-973, July 2011.
53. TOUCH, J., BALDINE, I., DAY, J., DUTTA, R., FINN, G.F., FORD, B., JORDAN, S., MASSEY, D., MATTA, A., PAPADOPOULOS, C., REIHER, P., ROUSKAS, G.N., “A Dynamic Recursive Unified Internet Design (DRUID).” *Computer Networks*, vol. 55, no. 4, pp. 919-935, 10 March 2011.
52. KARMOUS-EDWARDS, G., POLITO, S.G., JUKAN, A., ROUSKAS, G.N., “A New Framework for GLIF Interdomain Resource Reservation Architecture (GIRRA).” *Annals of Telecommunications*, vol. 65, no. 11-12, pp. 1000-1001, November-December 2010.

51. CHEN, B., DUTTA, R., ROUSKAS, G.N., "Clustering for Hierarchical Traffic Grooming in Large Scale Mesh WDM Networks." *Journal of Optical Communications and Networking*, vol. 2, no. 8, pp. 502-514, August 2010.
50. LV, Q., ROUSKAS, G.N., "An Economic Model for Pricing Tiered Network Services." *Annals of Telecommunications*, vol. 65, no. 3-4, pp. 147-161, April 2010.
49. ROUSKAS, G.N., BARADWAJ, N., "On Bandwidth Tiered Service." *IEEE/ACM Transactions on Networking*, vol. 17, no. 6, pp. 1780-1793, December 2009.
48. KARMOUS-EDWARDS, G., VISWANATH, A., REEVES, D.S., BATTETILLI, L., VEGESNA, P., ROUSKAS, G.N. "Edge-Reconfigurable Optical Networks (ERONs): Rationale, Network Design, and Evaluation." *IEEE/OSA Journal of Lightwave Technology*, vol. 27, no. 12, pp. 1837-1845, June 15, 2009.
47. CHEN, B., ROUSKAS, G.N., DUTTA, R., "On Hierarchical Traffic Grooming in WDM Networks." *IEEE/ACM Transactions on Networking*, vol. 16, no. 6, pp. 1226-1238, October 2008.
46. YANG, L., ROUSKAS, G.N., "Optimal Wavelength Sharing Policies in OBS Networks Subject to QoS Constraints." *IEEE Journal on Selected Areas in Communications, supplement on Optical Communications & Networking*, vol. 25, no. 9, pp. 40-49, December 2007.
45. JACKSON, L.E., ROUSKAS, G.N., STALLMAN, M.F., "The Directional  $p$ -Median Problem with Applications to Traffic Quantization and Multiprocessor Scheduling." *European Journal of Operational Research*, vol. 179, no. 3, pp. 1097-1108, June 2007.
44. YANG, L., ROUSKAS, G.N., "Generalized Wavelength Sharing Policies for Absolute QoS Guarantees in OBS Networks." *IEEE Journal on Selected Areas in Communications, supplement on Optical Communications & Networking*, vol. 25, no. 4, pp. 93-104, April 2007.
43. YANG, L., ROUSKAS, G.N., "Adaptive Path Selection in Optical Burst Switched Networks." *IEEE/OSA Journal of Lightwave Technology*, vol. 24, no. 8, pp. 3002-3011, August 2006.
42. HUANG, S., DUTTA, R., ROUSKAS, G.N., "Traffic Grooming in Path, Star, and Tree Networks: Complexity, Bounds, and Algorithms." *IEEE Journal on Selected Areas in Communications*, vol. 24, no. 4, pp. 66-82, April 2006.
41. TENG, J., ROUSKAS, G.N., "A Traffic Engineering Approach to Path Selection in OBS Networks." *OSA Journal of Optical Networking*, vol. 4, no. 11, pp. 759-777, November 2005.
40. TENG, J., ROUSKAS, G.N., "Wavelength Selection in OBS Networks Using Traffic Engineering and Priority-Based Concepts." *IEEE Journal on Selected Areas in Communications*, vol. 23, no. 8, pp. 1658-1669, August 2005.
39. CHEN, B., ROUSKAS, G.N., DUTTA, R., "Traffic Grooming in WDM Ring Networks To Minimize the Maximum Electronic Port Cost." *Optical Switching and Networking*, vol. 1, no. 2, pp. 1-18, May 2005.
38. TENG, J., ROUSKAS, G.N., "A Detailed Analysis and Performance Comparison of Wavelength Reservation Schemes for Optical Burst Switched Networks." *Photonic Network Communications*, vol. 9, no. 3, pp. 311-335, May 2005.
37. XIN, Y., ROUSKAS, G.N., "Light-Tree Routing Under Optical Power Budget Constraints." *OSA Journal of Optical Networking*, vol. 3, no. 5, pp. 282-302, May 2004.



36. XIN, Y., ROUSKAS, G.N., “A Study of Path Protection in Large-Scale Optical Networks.” *Photonic Network Communications*, vol. 7, no. 3, pp. 267-278, May 2004.
35. BALDINE, I., ROUSKAS, G.N., PERROS, H.G., STEVENSON, D., “Multicast and QoS in the **Jumpstart** Architecture for WDM Burst-Switched Networks.” *Optical Networks*, vol. 4, no. 6, pp. 68-80, November/December 2003.
34. JACKSON, L.E., ROUSKAS, G.N., “Optimal Quantization of Periodic Task Requests on Multiple Identical Processors.” *IEEE Transactions on Parallel and Distributed Systems*, vol. 14, no. 8, pp. 795-806, August 2003.
33. ZAIM, A.H., PERROS, H.G., ROUSKAS, G.N., “Performance Analysis of LEO Satellite Networks.” *IEEE Transactions on Vehicular Technology*, vol. 52, no. 3, pp. 622-636, May 2003.
32. XIN, Y., ROUSKAS, G.N., PERROS, H.G., “On the Physical and Logical Topology Design of Large-Scale Optical Networks.” *IEEE/OSA Journal of Lightwave Technology*, vol. 21, no. 4, pp. 904-915, April 2003.
31. ZAIM, A.H., BALDINE, I., CASSADA, M., ROUSKAS, G.N., PERROS, H.G., STEVENSON, D., “The **Jumpstart** Just-In-Time Signaling Protocol: A Formal Description Using Extended Finite State Machines.” *Optical Engineering*, vol. 42, no. 2, pp. 568-585, February 2003.
30. XU, L., ROUSKAS, G.N., PERROS, H.G., “A Simulation Study of Optical Burst Switching and Access Protocols for WDM Ring Networks.” *Computer Networks*, vol. 41, no. 2, pp. 143-160, January 2003.
29. ROUSKAS, G.N., “Optical Layer Multicast: Rationale, Building Blocks, and Challenges.” *IEEE Network*, vol. 17, no. 1, pp. 60-65, January/February 2003.
28. XU, L., PERROS, H.G., ROUSKAS, G.N., “Access Protocols for Optical Burst-Switched Ring Networks.” *Information Sciences*, vol. 149, no. 1-2, pp. 75-81, January 2003.
27. DUTTA, R., ROUSKAS, G.N., “A Survey of Traffic Grooming Techniques for Optical WDM Networks.” *IEEE Network*, vol. 16, no. 6, pp. 46-56, November/December 2002.
26. JACKSON, L.E., ROUSKAS, G.N., “Deterministic Preemptive Scheduling of Real Time Tasks.” *IEEE Computer*, vol. 35, no. 5, pp. 72-79, May 2002.
25. BAMPIS, E., ROUSKAS, G.N., “The Scheduling and Wavelength Assignment Problem in Optical WDM Networks.” *IEEE/OSA Journal of Lightwave Technology*, vol. 20, no. 5, pp. 782-789, May 2002.
24. RHEE, I., BALAGURU, N., ROUSKAS, G.N., “MTCP: Scalable TCP-like Congestion Control for Reliable Multicast.” *Computer Networks*, vol. 38, no. 5, pp. 553-575, April 2002.
23. BALDINE, I., ROUSKAS, G.N., PERROS, H.G., STEVENSON, D., “**Jumpstart**: A Just-In-Time Signaling Architecture for WDM Burst-Switched Networks.” *IEEE Communications*, vol. 40, no. 2, pp. 82-89, February 2002.
22. ZAIM, A.H., ROUSKAS, G.N., PERROS, H.G., “Computing Call Blocking Probabilities in LEO Satellite Networks: The Single Orbit Case.” *IEEE Transactions on Vehicular Technology*, vol. 51, no. 2, pp. 332-347, March 2002.
21. DUTTA, R., ROUSKAS, G.N., “On Optimal Traffic Grooming in WDM Rings.” *IEEE Journal on Selected Areas in Communications*, vol. 20, no. 1, pp. 110-121, January 2002.

20. RAMESH, S., ROUSKAS, G.N., PERROS, H.G., “Computing Blocking Probabilities in Multi-Class Wavelength Routing Networks with Multicast Calls.” *IEEE Journal on Selected Areas in Communications*, vol. 20, no. 1, pp. 89-96, January 2002.
19. THAKER, D., ROUSKAS, G.N., “Multi-Destination Communication in Broadcast WDM Networks: A Survey.” *Optical Networks*, vol. 3, no. 1, pp. 34-44, January/February 2002.
18. BALDINE, I., ROUSKAS, G.N., “Traffic Adaptive WDM Networks: A Study of Reconfiguration Issues.” *IEEE/OSA Journal of Lightwave Technology*, vol. 19, no. 4, pp. 433-455, April 2001.
17. RAMESH, S., ROUSKAS, G.N., PERROS, H.G., “Computing Blocking Probabilities in Multi-Class Wavelength Routing Networks.” *ACM Transactions on Modeling and Computer Simulation (TOMACS)*, vol. 10, no. 2, pp. 87-103, April 2001.
16. XU, L., PERROS, H.G., ROUSKAS, G.N., “A Survey of Optical Packet Switching and Optical Burst Switching Techniques.” *IEEE Communications*, vol. 39, no. 1, pp. 136-142, January 2001.
15. ZHU, Y., ROUSKAS, G.N., PERROS, H.G., “A Path Decomposition Approach for Computing Blocking Probabilities in Wavelength Routing Networks.” *IEEE/ACM Transactions on Networking*, vol. 8, no. 6, pp. 747-762, December 2000.
14. ZHU, Y., ROUSKAS, G.N., PERROS, H.G., “A Comparison of Allocation Policies in Wavelength Routing Networks.” *Photonic Network Communications Journal*, vol. 2, no. 3, pp. 265-293, August 2000.
13. ORTIZ-LAUREANO, Z., ROUSKAS, G.N., PERROS, H.G., “Scheduling Combined Unicast and Multicast Traffic in Broadcast WDM Networks.” *Photonic Network Communications Journal*, vol. 2, no. 2, pp. 135-154, May 2000.
12. SIVARAMAN, V., ROUSKAS, G.N., “A Reservation Protocol for Broadcast WDM Networks and Stability Analysis.” *Computer Networks*, vol. 32, no. 2, pp. 211-277, February 2000.
11. DUTTA, R., ROUSKAS, G.N., “A Survey of Virtual Topology Design Algorithms for Wavelength Routed Networks.” *Optical Networks*, vol. 1, no. 1, pp. 73-89, January 2000.
10. ORTIZ-LAUREANO, Z., ROUSKAS, G.N., PERROS, H.G., “Maximizing Multicast Throughput in WDM Networks with Tuning Latencies Using the Virtual Receiver Concept.” *European Transactions on Telecommunications*, vol. 11, no. 1, pp. 63-72, January/February 2000.
9. MCKINNON, M.W., PERROS, H.G., ROUSKAS, G.N., “Performance Analysis of Broadcast WDM Networks Under IP Traffic.” *Performance Evaluation*, vol. 36-37, pp. 333-358, August 1999.
8. BALDINE, I., ROUSKAS, G.N., “Reconfiguration and Dynamic Load Balancing in Broadcast WDM Networks.” *Photonic Network Communications Journal*, vol. 1, no. 1, pp. 49-64, June 1999.
7. MCKINNON, M.W., ROUSKAS, G.N., PERROS, H.G., “Performance Analysis of a Photonic Single-Hop ATM Switch Architecture with Tunable Transmitters and Fixed Frequency Receivers.” *Performance Evaluation*, vol. 33, no. 2, pp. 113-136, June 1998.
6. ROUSKAS, G.N., SIVARAMAN, V., “Packet Scheduling in Broadcast WDM Networks with Arbitrary Transceiver Tuning Latencies.” *IEEE/ACM Transactions on Networking*, vol. 5, no. 3, pp. 359-370, June 1997.

5. ROUSKAS, G.N., BALDINE, I., “Multicast Routing with End-to-End Delay and Delay Variation Constraints.” *IEEE Journal on Selected Areas in Communications*, vol. 15, no. 3, pp. 346-356, April 1997.
4. ROUSKAS, G.N., AMMAR, M.H., “Multi-Destination Communication Over Tunable-Receiver Single-Hop WDM Networks.” *IEEE Journal on Selected Areas in Communications*, vol. 15, no. 3, pp. 501-511, April 1997.
3. ROUSKAS, G.N., AMMAR, M.H., “Minimizing Delay and Packet Loss in Single-Hop Lightwave WDM Networks Using TDM Schedules.” *Journal of High Speed Networks*, vol. 5, no. 4, pp. 309-327, 1996.
2. ROUSKAS, G.N., AMMAR, M.H., “Analysis and Optimization of Transmission Schedules for Single-Hop WDM Networks.” *IEEE/ACM Transactions on Networking*, vol. 3, no. 2, pp. 211-221, April 1995.
1. AMMAR, M.H., ROUSKAS, G.N., “On the Design of Protocols for Collecting Responses over a Multiple-Access Channel.” *IEEE Transactions on Communications*, vol. 43, no. 2, pp. 412-420, February 1995.
0. ROUSKAS, G.N., AMMAR, M.H., “Dynamic Reconfiguration in Multihop WDM Networks.” *Journal of High Speed Networks*, vol. 4, no. 3, pp. 221-238, 1995.

### 2.1.3 Editorials

6. ZAI, F., MATTA, I., ROUSKAS, G.N., “Guest Editorial – Advances in Communications and Networking.” *JCM Journal of Communications*, vol. 6, no. 9, p. 1, December 2011.
5. ROUSKAS, G.N., NERI, F., “Editorial.” *Optical Switching and Networking*, vol. 3, no. 4, p. 1, March 2006.
4. ROUSKAS, G.N., NERI, F., “Editorial.” *Optical Switching and Networking*, vol. 2, no. 4, pp. 199-200, December 2005.
3. ROUSKAS, G.N., NERI, F., “Editorial.” *Optical Switching and Networking*, vol. 2, no. 2, p. 71, September 2005.
2. NERI, F., ROUSKAS, G.N., “Editorial.” *Optical Switching and Networking*, vol. 1, no. 1, pp. 1-2, January 2005.
1. GERSTEL, O., LI, B., MCGUIRE A., ROUSKAS, G.N., SIVALINGAM, K.M., ZHANG, Z., “Guest Editorial – Protocols and Architectures for Next Generation Optical WDM Networks.” *IEEE Journal on Selected Areas in Communications*, vol. 18, no. 10, pp. 1805-1809, October 2000.

### 2.1.4 Proceedings

5. ROUSKAS, G.N., ZHU, X. (Editors). *Proceedings of the 4th International Conference on Computer and Communication Networks (ICCCN)*, 2011.
4. ROUSKAS, G.N., TOMKOS, I. (Editors). *Proceedings of the 4th International Conference on Broadband Communications, Networks, and Systems (IEEE BROADNETS)*, 2007.
3. RAMAKRISHNAN, K.K., ROUSKAS, G.N., PATERAKIS, M. (Editors). *Proceedings of the 14th IEEE Workshop on Local and Metropolitan Area Networks (IEEE LANMAN)*, 2005.

2. MITROU, N., KONTOVASSILIS, K., ROUSKAS, G.N., ILIADIS, I., MERAKOS, L. (Editors). *NET-WORKING 2004: Networking Technologies, Services and Protocols; Performance of Computer and Communication Networks; Mobile and Wireless Communications*, LNCS 3042, Springer-Verlag, Berlin, Germany, 2004.
1. ROUSKAS, G.N., BRASSIL, J., SHARMA, P. (Editors). *Proceedings of the 13th IEEE Workshop on Local and Metropolitan Area Networks (IEEE LANMAN)*, 2004.

### 2.1.5 Book Chapters

9. SIMMONS, J., ROUSKAS, G.N., “Routing and Wavelength (Spectrum) Allocation.” In Biswanath Mukherjee, Ioannis Tomkos, Massimo Tornatore, Peter Winzer, and Yongli Zhao (editors), *pringer Handbook of Optical Networks*, Springer, 2018.
8. ROUSKAS, G.N., DUTTA, R., “Hierarchical Traffic Grooming.” In Rudra Dutta, Ahmed E. Kamal, and George N. Rouskas (editors), *Traffic Grooming for Optical Networks: Foundations, Techniques, and Frontiers*, Springer, 2008.
7. DUTTA, R., KAMAL, A.E., ROUSKAS, G.N., “Grooming Mechanisms in SONET/SDH and Next-Generation SONET/SDH.” In Rudra Dutta, Ahmed E. Kamal, and George N. Rouskas (editors), *Traffic Grooming for Optical Networks: Foundations, Techniques, and Frontiers*, Springer, 2008.
6. DUTTA, R., KAMAL, A.E., ROUSKAS, G.N., “Introduction to Traffic Grooming.” In Rudra Dutta, Ahmed E. Kamal, and George N. Rouskas (editors), *Traffic Grooming for Optical Networks: Foundations, Techniques, and Frontiers*, Springer, 2008.
5. ROUSKAS, G.N., XU, L., “Optical Packet Switching.” In Krishna Sivalingam and Suresh Subramanian (editors), *Optical WDM Networks: Past Lessons and Path Ahead*, Kluwer, Norwell, Massachusetts, 2004.
4. ROUSKAS, G.N., “Optical Network Engineering.” In Sudhir Dixit (editor), *IP over DWDM: Building the Next Generation Optical Internet*, John Wiley & Sons, Hoboken, New Jersey, pp. 299-327, 2003.
3. ROUSKAS, G.N., “Routing and Wavelength Assignment in Optical WDM Networks.” In John Proakis (editor), *Wiley Encyclopedia of Telecommunications*, 2002.
2. ROUSKAS, G.N., DUTTA, R., “Design of Logical Topologies for Wavelength Routed Networks.” In Krishna Sivalingam and Suresh Subramanian (editors), *Optical WDM Networks: Principles and Practice*, Kluwer, Norwell, Massachusetts, pp. 79-102, 2000.
1. ROUSKAS, G.N., “Scheduling Algorithms for Unicast, Multicast, and Broadcast.” In Krishna Sivalingam and Suresh Subramanian (editors), *Optical WDM Networks: Principles and Practice*, Kluwer, Norwell, Massachusetts, pp. 171-188, 2000.

### 2.1.6 Refereed Conferences

101. GAO, L., ROUSKAS, G.N., “Virtual Network Reconfiguration with Load Balancing and Migration Cost Considerations.” *Proceedings of IEEE Infocom 2018*, April 15-19, 2018, Honolulu, Hawaii.
100. BHAT, S., ROUSKAS, G.N., “Service-Concatenation Routing With Applications to Network Functions Virtualization.” *Proceedings of ICCCN 2017*, July 31-August 3, 2017, Vancouver, Canada.

99. XIONG, Y., SHI, J., LV, Y., ROUSKAS, G.N., “Power-Aware Lightpath Management for SDN-Based Elastic Optical Networks.” *Proceedings of ICCCN 2017*, July 31-August 3, 2017, Vancouver, Canada.
98. BHAT, S., UDECHUKWU, R., DUTTA, R., ROUSKAS, G.N., “On Service Composition Algorithms for Open Marketplaces of Network Services.” *Proceedings of EuCNC 2017*, June 12-15, 2017, Oulu, Finland.
97. TALEBI, S., ROUSKAS, G.N., KATIB, I., “Offline Distance-Adaptive Routing and Spectrum Assignment in Mesh Elastic Optical Networks.” *Proceedings of IEEE GLOBECOM 2016*, December 4-8, 2016, Washington, DC.
96. XIONG, Y., ROUSKAS, G.N., “Exploiting SDN Principles for Extremely Fast Restoration in Elastic Optical Datacenter Networks,” *Proceedings of IEEE GLOBECOM 2016*, December 4-8, 2016, Washington, DC.
95. UDECHUKWU, R., BHAT, S., DUTTA, R., ROUSKAS, G.N., “Language of Choice: On Embedding Choice-related Semantics in a Realizable Protocol.” *Proceedings of the 37th IEEE Sarnoff Symposium*, September 19-21, 2016, Newark, New Jersey.
94. GAO, L., ROUSKAS, G.N., “Network-Aware Virtual Request Partitioning Based on Spectral Clustering.” *Proceedings of ICCCN 2016*, August 1-4, 2016, Honolulu, Hawaii.
93. BHAT, S., ROUSKAS, G.N., “On Routing Algorithms for Open Marketplaces of Path Services.” *Proceedings of IEEE ICC 2016*, May 23-27, 2016, Kuala Lumpur, Malaysia.
92. KRISHNAMURTHY, R., ROUSKAS, G.N., “Performance Evaluation of Multi-Core, Multi-Threaded SIP Proxy Servers (SPS).” *Proceedings of IEEE ICC 2016*, May 23-27, 2016, Kuala Lumpur, Malaysia.
91. BHAT, S., UDECHUKWU, R., DUTTA, R., ROUSKAS, G.N., “Inception to Application: A GENI based prototype of an Open Marketplace for Network Services.” *Proceedings of IEEE INFOCOM 2016 Workshops*, April 2016, San Francisco, CA.
90. TALEBI, S., KATIB, I., ROUSKAS, G.N., “Offline Distance-Adaptive Routing and Spectrum Assignment (DA-RSA) in Rings.” *Proceedings of IEEE GLOBECOM 2015*, December 6-10, 2015, San Diego, CA.
89. FAYEZ, M., KATIB, I., ROUSKAS, G.N., FAHEEM, H.M., “Spectrum Assignment in Mesh Elastic Optical Networks.” *Proceedings of ICCCN 2015*, August 3-6, 2015, Las Vegas, NV.
88. CHEN, X., WOLF, T., GRIFFIOEN, J., ASCIGIL, O., DUTTA, R., ROUSKAS, G.N., BHAT, S., BALDIN, I., CALVERT, K., “Design of a Protocol to Enable Economic Transactions for Network Services.” *Proceedings of IEEE ICC 2015*, June 8-12, 2015, London, UK.
87. KRISHNAMURTHY, R., ROUSKAS, G.N., “On the Impact of Scheduler Settings on the Performance of Multi-Threaded SIP Servers.” *Proceedings of IEEE ICC 2015*, June 8-12, 2015, London, UK.
86. TALEBI, S., BAMPIS, E., LUCARELLI, G., KATIB, I., ROUSKAS, G.N., “The Spectrum Assignment (SA) Problem in Optical Networks: A Multiprocessor Scheduling Perspective.” *Proceedings of the 18th Conference on Optical Network Design and Modeling (ONDM 2014)*, May 19-22, 2014, Stockholm, Sweden.
85. WANG, H., ROUSKAS, G.N., “Hierarchical Grooming in Optical Networks.” *Proceedings of IEEE GLOBECOM 2013*, December 9-13, 2013, Atlanta, Georgia.

84. KRISHNAMURTHY, R., ROUSKAS, G.N., "Evaluation of SIP Proxy Server Performance: Packet-Level Measurements and Queuing Model." *Proceedings of IEEE ICC 2013*, June 9-13, 2013, Budapest, Hungary.
83. WANG, H., ROUSKAS, G.N., "An Efficient Algorithm for Solving Traffic Grooming Problems in Optical Networks." *Proceedings of IEEE ICC 2013*, June 9-13, 2013, Budapest, Hungary.
82. LIU, X., ROUSKAS, G.N., "MPCP- $\ell$ : Look-Ahead Enhanced MPCP for EPON." *Proceedings of IEEE ICC 2013*, June 9-13, 2013, Budapest, Hungary.
81. LIU, Z., ROUSKAS, G.N., "Scalable Optimal Traffic Grooming in WDM Rings Incorporating Fast RWA Formulation." *Proceedings of IEEE ICC 2013*, June 9-13, 2013, Budapest, Hungary.
80. LIU, Z., ROUSKAS, G.N., "Link Selection Algorithms for Link-Based ILPs and Applications to RWA in Mesh Networks." *Proceedings of the 17th Conference on Optical Network Design and Modeling (ONDM 2013)*, April 16-19, 2013, Brest, France.
79. LIU, Z., ROUSKAS, G.N., "A Fast Path-Based ILP Formulation for Offline RWA in Mesh Optical Networks." *Proceedings of IEEE GLOBECOM 2012*, December 3-7, 2012, Anaheim, California.
78. WOLF, T., GRIFFIOEN, J., CALVERT, K., DUTTA, R., ROUSKAS, G.N., BALDINE, I., NAGURNEY, A., "Choice as a Principle in Network Architecture." *Proceedings of ACM SIGCOMM 2012*, pp. 105-106, August 13-17, 2012, Helsinki, Finland.
77. CAO, C., ROUSKAS, G.N., "Hybrid FRR/ $p$ -Cycle MPLS Link Protection Design." *Proceedings of IEEE GLOBECOM 2011*, December 5-9, 2011, Houston, Texas.
76. LV, Q., ROUSKAS, G.N., "On Optimal Tiered Structures for Network Service Bundles." *Proceedings of IEEE GLOBECOM 2011*, December 5-9, 2011, Houston, Texas.
75. WANG, H., ROUSKAS, G.N., "Flow Isolation in Optical Networks." *Proceedings of IEEE LANMAN 2011*, October 13-14, 2011, Chapel Hill, North Carolina.
74. DWEKAT, Z., ROUSKAS, G.N., "Worst-Case Fair Bin Sort Queuing (WBSQ): A Low Complexity Worst-Case Fair Scheduler." *Proceedings of IEEE ICC 2011*, June 5-9, 2011, Kyoto, Japan.
73. WANG, M.S., WANG, A., BATHULA, B.G., LAI, C.P., BALDINE, I., CHEN, C., MAJUMDER, D., GURKAN, D., ROUSKAS, G.N., DUTTA, R., BERGMAN, K., "Demonstration of QoS-Aware Video Streaming Over A Metro-Scale Optical Network Using A Cross-Layer Architectural Design." *Proceedings of OFC/NFOEC 2011*, paper no. NThC4, March 6-10, 2011, Los Angeles, California.
72. YETGINER, E., ZEYU, L., ROUSKAS, G.N., "RWA in Rings: An Efficient Formulation Based on Maximal Independent Set Decomposition." *Proceedings of IEEE LANMAN 2010*, May 5-7, 2010, Long Beach, New Jersey.
71. LV, Q., ROUSKAS, G.N., "Internet Service Tiering as a Market Segmentation Strategy." *Proceedings of IEEE GLOBECOM 2009*, November 30-December 4, 2009, Honolulu, Hawaii.
70. YETGINER, E., ROUSKAS, G.N., "Power Efficient Traffic Grooming in Optical WDM Networks." *Proceedings of IEEE GLOBECOM 2009*, November 30-December 4, 2009, Honolulu, Hawaii.
69. LV, Q., ROUSKAS, G.N., "An Economic Model for Pricing Tiered Network Services." *Proceedings of IEEE ICC 2007*, June 14-18, 2009, Dresden, Germany.

68. ROUSKAS, G.N., BULLARD, L., CRAIG, A.E., JOINES, J., MILLER, C., MILLER, T., RAUBENHEIMER, D., SILVERBERG, L., WIEBE, E., “Computing Across Curricula: The View of Industry Leaders.” In *Proceedings of the 2009 ASEE Annual Conference & Exposition*, June 14-17, 2009, Austin, TX.
67. CASTILLO, C., ROUSKAS, G.N., HARFOUSH, K., “Resource Co-Allocation for Large-Scale Distributed Environments.” In *Proceedings of the ACM International Symposium on High Performance Distributed Computing (HPDC 2009)*, June 11-13, 2009, Munich, Germany.
66. VISWANATH, A., SIVARAMAN, V., ROUSKAS, G.N., “Considerations for Sizing Buffers in Optical Packet Switched Networks.” *Proceedings of IEEE INFOCOM 2009*, April 19-25, 2009, Rio de Janeiro, Brazil.
65. IYER, M., ROUSKAS, G.N., DUTTA, R., “A Hierarchical Model for Multigranular Optical Networks.” In *Proceedings of IEEE BROADNETS 2008*, September 8-11, 2008, London, UK.
64. ROUSKAS, G.N., BULLARD, L., CRAIG, A.E., JOINES, J., MILLER, C., MILLER, T., RAUBENHEIMER, D., SILVERBERG, L., WIEBE, E., “Computing Across Curricula.” In *Proceedings of the 2008 ASEE Annual Conference & Exposition*, June 22-25, 2008, Pittsburgh, PA.
63. BALDINE, I., CHASE, J., ROUSKAS, G.N., DUTTA, R., “At-Scale Experimentation with Resource Virtualization in a Metro Optical Testbed.” *Proceedings of the 2nd International Conference on the Virtual Computing Initiative (ICVCI 2)*, May 15-16, 2008, RTP, NC.
62. LV, Q., ROUSKAS, G.N., “On Optimal Sizing of Tiered Network Services.” In *Proceedings of IEEE INFOCOM 2008 (miniconference)*, April 13-18, 2008, Phoenix, Arizona.
61. VISWANATH, A., SIVARAMAN, V., ROUSKAS, G.N., “Are Bigger Optical Buffers Necessarily Better.” *Proceedings of IEEE INFOCOM 2008 Student Workshop*, April 13, 2008, Phoenix, Arizona.
60. CASTILLO, C., ROUSKAS, G.N., HARFOUSH, K., “Efficient QoS Resource Management for Heterogeneous Grids.” In *Proceedings of the 21st IEEE International Parallel and Distributed Processing Symposium (IPDPS 2008)*, April 14-18, 2008, Miami, Florida.
59. VELLALA, M., WANG, A., ROUSKAS, G.N., DUTTA, R., BALDINE, I., STEVENSON, D., “A Composition Algorithm for the SILO Cross-Layer Optimization Service Architecture.” *Proceedings of the Advanced Networks and Telecommunications Systems Conference (ANTS 2007)*, December 17-18, Mumbai, India.
58. STEVENSON, D., DUTTA, R., ROUSKAS, G.N., REEVES, D., BALDINE, I., “On the Suitability of Composable Services for a Next General Assurable Network.” *Proceedings of MILCOM 2007*, October 29-31, Orlando, Florida.
57. CASTILLO, C., ROUSKAS, G.N., HARFOUSH, K., “Efficient Implementation of Best-Fit Scheduling for Advance Reservations and QoS in Grids.” *Proceedings of the First IEEE/IFIP International Workshop on End-to-end Virtualization and Grid Management (EVGM 2007)*, October 29-30, 2007, San Jose, California. **Best Paper Award.**
56. BALDINE, I., VELLALA, M., WANG, A., ROUSKAS, G.N., DUTTA, R., STEVENSON, D., “A Unified Software Architecture to Enable Cross-Layer Design in the Future Internet.” *Proceedings of IEEE ICCCN 2007* August 13-16, 2007, Honolulu, Hawaii.

55. ROUSKAS, G.N., BARADWAJ, N., “TDM Emulation in Packet-Switched Networks.” In *Proceedings of IEEE ICC 2007*, June 24-28, 2007, Glasgow, Scotland.
54. ROUSKAS, G.N., DUTTA, R., BALDINE, I., BRAGG, A., STEVENSON, D., “The SILO Architecture for Services Integration, control, and Optimization for the Future Internet.” In *Proceedings of IEEE ICC 2007*, June 24-28, 2007, Glasgow, Scotland.
53. DWEKAT, Z., ROUSKAS, G.N., “A Practical and Efficient Fair Implementation of  $W^2Q+$ .” In *Proceedings of IEEE ICC 2007*, June 24-28, 2007, Glasgow, Scotland.
52. BENSONG, C., DUTTA, R., ROUSKAS, G.N., “Clustering for Hierarchical Traffic Grooming in Large Scale Mesh WDM Networks.” *Proceedings of the 11th Conference on Optical Network Design and Modeling (ONDM 2007)*, pp. 249-258, May 29-31, 2007, Athens, Greece.
51. ROUSKAS, G.N., BARADWAJ, N., “A Framework for Tiered Service in MPLS Networks.” In *Proceedings of IEEE INFOCOM 2007*, pp. 1577-1585, May 6-12, 2007, Anchorage, Alaska.
50. CASTILLO, C., ROUSKAS, G.N., HARFOUSH, K., “On the Design of Online Scheduling Algorithms for Advance Reservations and QoS in Grids.” In *Proceedings of the 21st IEEE International Parallel and Distributed Processing Symposium (IPDPS 2007)*, March 26-30, 2007, Long Beach, California.
49. YANG, L., ROUSKAS, G.N., “Dynamic Wavelength Sharing Policies for Absolute QoS in OBS Networks.” In *Proceedings of IEEE GLOBECOM 2006*, November 27-December 1, 2005, San Jose, CA.
48. YANG, L., ROUSKAS, G.N., “A Framework for Absolute QoS Guarantees in Optical Burst Switched Networks.” In *Proceedings of BROADNETS 2006*, pp. 167-176, October 1-5, 2006, San Jose, CA.
47. BENSONG, C., DUTTA, R., ROUSKAS, G.N., “Clustering Techniques for Hierarchical Grooming.” In *Proceedings of the Fifth International Symposium on Communications Systems, Networks, and Digital Signal Processing (CSNDSP 2006)*, pp. 55-59, July 19-21, 2006, Patras, Greece. **Best Paper Award.**
46. CHEN, B., ROUSKAS, G.N., DUTTA, R., “A Framework for Hierarchical Traffic Grooming in WDM Networks of General Topology.” In *Proceedings of BROADNETS 2005*, October 3-7, pp. 167-176, 2005, Boston, MA.
45. CHEN, B., ROUSKAS, G.N., DUTTA, R., “On the Application of  $K$ -Center Algorithms to Hierarchical Traffic Grooming.” In *Proceedings of the Traffic Grooming Workshop 2005*, pp. 295-301, October 7, 2005, Boston, MA.
44. BALDINE, I., MEHROTRA, P., ROUSKAS, G.N., BRAGG, A., STEVENSON, D., “An Intra- and Inter-Domain Routing Architecture for Optical Burst Switched (OBS) Networks.” In *Proceedings of the Fifth Workshop on Optical Burst/Packet Switching*, pp. 150-159, October 3, 2005, Boston, MA.
43. YANG, L., ROUSKAS, G.N., “Path Switching in Optical Burst Switched Networks.” In *Proceedings of NETWORKING 2005*, LNCS 3462, pp. 406-418, May 2-6, 2005, Waterloo, Canada.
42. TENG, J., ROUSKAS, G.N., “Routing Optimization in Optical Burst Switched Networks.” In *Proceedings of the 9th Conference on Optical Network Design and Modeling (ONDM 2005)*, pp. 1-10, February 7-9, 2005, Milan, Italy.
41. TENG, J., ROUSKAS, G.N., “On Wavelength Assignment in Optical Burst-Switched Networks.” In *Proceedings of BROADNETS 2004*, pp. 24-33, October 25-29, 2004, San Jose, California.



40. XIN, Y., TENG, J., KARMOUS-EDWARDS, G., ROUSKAS, G.N., STEVENSON, D., “Fault Management with Fast Restoration for Optical Burst Switched Networks.” In *Proceedings of BROADNETS 2004*, pp. 34-42, October 25-29, 2004, San Jose, California.
39. CHEN, B., ROUSKAS, G.N., DUTTA, R., “Traffic Grooming in WDM Star Networks.” In *Proceedings of the Traffic Grooming Workshop 2004*, October 29, 2004, San Jose, California.
38. XIN, Y., TENG, J., KARMOUS-EDWARDS, G., ROUSKAS, G.N., STEVENSON, D., “A Novel Fast Restoration Mechanism for Optical Burst Switched Networks.” In *Proceedings of the Third Workshop on Optical Burst Switching*, October 25, 2004, San Jose, California.
37. CHEN, B., ROUSKAS, G.N., DUTTA, R., “Traffic Grooming in WDM Ring Networks with the Min-Max Objective.” In *Proceedings of NETWORKING 2004*, LNCS 3042, pp. 174-185, May 9-14, 2004, Athens, Greece.
36. XIN, Y., ROUSKAS, G.N., “Light-Tree Routing Under Optical Layer Power Constraints.” *Proceedings of IEEE INFOCOM 2004*, pp. 2731-2742, March 7-11, 2004, Hong Kong.
35. DUTTA, R., HUANG, S., ROUSKAS, G.N., “On Optimal Traffic Grooming in Elemental Network Topologies.” In *Proceedings of OPTICOMM 2003*, pp. 13-24, October 15-18, 2003, Dallas, Texas.
34. TENG, J., ROUSKAS, G.N., “A Comparison of the JIT, JET, and Horizon Wavelength Reservation Schemes on A Single OBS Node.” In *Proceedings of the First International Workshop on Optical Burst Switching*, October 16, 2003, Dallas, Texas.
33. XU, L., PERROS, H.G., ROUSKAS, G.N., “Performance Analysis of an Edge Optical Burst Switching Node with A Large Number of Customers.” In *Proceedings of the 18th International Teletraffic Congress (ITC 18)*, September 1-5, 2003, Berlin, Germany.
32. ROUSKAS, G.N., JACKSON, L.E., “Optimal Granularity of MPLS Tunnels.” In *Proceedings of the 18th International Teletraffic Congress (ITC 18)*, September 1-5, 2003, Berlin, Germany.
31. DUTTA, R., HUANG, S., ROUSKAS, G.N., “Traffic Grooming in Path, Star, and Tree Networks: Complexity, Bounds, and Algorithms.” In *Proceedings of ACM SIGMETRICS 2003*, pp. 298-299, June 10-14, 2003, San Diego, CA.
30. XU, L., PERROS, H.G., ROUSKAS, G.N., “A Queueing Network Model of an Edge Optical Burst Switching Node.” In *Proceedings of IEEE INFOCOM 2003*, pp. 2019-2029, April 1-3, 2003, San Francisco, CA.
29. XIN, Y., ROUSKAS, G.N., PERROS, H.G., “Design of Large-Scale Optical Networks.” In *Proceedings of the 14th IASTED International Conference on Parallel and Distributed Computing and Systems*, pp. 822-827, November 4-6, 2002, Cambridge MA.
28. XU, L., PERROS, H.G., ROUSKAS, G.N., “Performance Modeling of an Edge Optical Burst Switching Node.” In *Proceedings of the 17th International Symposium on Computer and Information Sciences*, pp. 377-381, October 28-30, 2002, Orlando, FL.
27. ZAIM, A.H., BALDINE, I., CASSADA, M., ROUSKAS, G.N., PERROS, H.G., STEVENSON, D., “Formal Description of the Jumpstart Just-In-Time Signaling Protocol Using EFSM.” In *Proceedings of OPTICOMM 2002*, pp. 160-173, July 29-31, 2002 Boston, MA.

26. ZAIM, A.H., PERROS, H.G., ROUSKAS, G.N., “Performance Analysis of LEO Satellite Networks.” In *Proceedings of NETWORKING 2002*, LNCS 2345, pp. 790-801, Pisa, Italy, May 19-24, 2002.
25. XU, L., PERROS, H.G., ROUSKAS, G.N., “A Simulation Study of Access Protocols for Optical Burst-Switched Ring Networks.” In *Proceedings of NETWORKING 2002*, LNCS 2345, pp. 863-874, Pisa, Italy, May 19-24, 2002.
24. BALDINE, I., JACKSON, L.E., ROUSKAS, G.N., “Helios: A Broadcast Optical Architecture.” In *Proceedings of NETWORKING 2002*, LNCS 2345, pp. 887-898, Pisa, Italy, May 19-24, 2002.
23. BALDINE, I., ROUSKAS, G.N., PERROS, H.G., STEVENSON, D. “Jumpstart: A Just-In-Time Signaling Architecture for WDM Burst-Switched Networks.” In *Proceedings of NETWORKING 2002*, LNCS 2345, pp. 1081-1086, Pisa, Italy, May 19-24, 2002.
22. ZAIM, A.H., ROUSKAS, G.N., PERROS, H.G., “Computing Call Blocking Probabilities in LEO Satellite Networks: The Single Orbit Case.” In *Proceedings of the 17th International Teletraffic Congress (ITC 17)*, pp. 505-516, December 3-7, 2001, Salvador da Bahia, Brazil.
21. BAMPIS, E., ROUSKAS, G.N., “On Scheduling Problems with Applications to Packet-Switched Optical WDM Networks.” In *Proceedings of OPTICOMM 2001*, pp. 163-172, August 19-24, Denver, Colorado.
20. DUTTA, R., ROUSKAS, G.N., “On Optimal Traffic Grooming in WDM Rings.” In *Proceedings of ACM SIGMETRICS/PERFORMANCE 2001*, pp. 164-174, June 16-20, 2001, Cambridge, MA.
19. ZHU, Y., ROUSKAS, G.N., PERROS, H.G., “A Comparison of Allocation Policies in Wavelength Routing Networks.” In *Proceedings of the SPIE conference on Terabit Optical Networking: Architecture, Control and Management Issues*, vol. 4123, pp. 64-72, November 6-7, 2000, Boston, MA.
18. RAMESH, S., ROUSKAS, G.N., PERROS, H.G., “Computing Blocking Probabilities in Multi-Class Wavelength Routing Networks.” In *Proceedings of NETWORKING 2000*, LNCS 1815, pp. 176-188, May 14-19, 2000, Paris, France.
17. ZHU, Y., ROUSKAS, G.N., PERROS, H.G., “Blocking in Wavelength Routing Networks, Part II: Mesh Topologies.” In *Proceedings of the 16th International Teletraffic Congress (ITC 16)*, pp. 1321-1330, June 7-11, 1999, Edinburgh, UK.
16. BALDINE, I., ROUSKAS, G.N., “Dynamic Reconfiguration Policies for Broadcast WDM Networks.” In *Proceedings of IEEE INFOCOM '99*, pp. 313-320, March 21-25, 1999, New York.
15. ZHU, Y., ROUSKAS, G.N., PERROS, H.G., “Blocking in Wavelength Routing Networks, Part I: The Single Path Case.” In *Proceedings of IEEE INFOCOM '99*, pp. 321-328, March 21-25, 1999, New York.
14. RHEE, I., BALAGURU, N., ROUSKAS, G.N., “MTCP: Scalable TCP-like Congestion Control for Reliable Multicast.” In *Proceedings of IEEE INFOCOM '99*, pp. 1265-1273, March 21-25, 1999, New York.
13. BALDINE, I., ROUSKAS, G.N., “On the Design of Dynamic Reconfiguration Policies for Broadcast WDM Networks.” In *Proceedings of the SPIE conference on All-Optical Networking: Architecture, Control and Management Issues*, vol. 3531, pp. 146-157, November 3-5, 1998, Boston, MA. **Best Paper Award.**

12. MCKINNON, M.W., ROUSKAS, G.N., PERROS, H.G., “Queueing-Based Analysis of Broadcast Optical Networks.” In *Proceedings of ACM SIGMETRICS/PERFORMANCE '98*, pp. 121-130, June 22-26, 1998, Madison, Wisconsin.
11. BALDINE, I., ROUSKAS, G.N., “Dynamic Load Balancing in Broadcast WDM Networks with Tuning Latencies.” In *Proceedings of IEEE INFOCOM '98*, pp. 78-85, March 29-April 1, 1998, San Francisco, California.
10. ORTIZ-LAUREANO, Z., ROUSKAS, G.N., PERROS, H.G., “Scheduling Combined Unicast and Multicast Traffic in Broadcast WDM Networks.” In *Proceedings of the 1998 IFIP Conference on Performance of Information and Communications Systems (PICS '98)*, pp. 137-150, May 25-28, 1998, Lund, Sweden.
9. ORTIZ-LAUREANO, Z., ROUSKAS, G.N., PERROS, H.G., “Scheduling of Multicast Traffic in Tunable-Receiver WDM Networks with Non-Negligible Tuning Latencies.” In *Proceedings of ACM SIGCOMM '97*, pp. 301-310, September 16-18, 1997, Cannes, France.
8. SIVARAMAN, V., ROUSKAS, G.N., “HiPeR- $\ell$ : A High Performance Reservation Protocol with  $\ell$  look-ahead for Broadcast WDM Networks.” In *Proceedings of IEEE INFOCOM '97*, pp. 1272-1279, April 7-11, 1997, Kobe, Japan.
7. ROUSKAS, G.N., SIVARAMAN, V., “On the Design of Optimal TDM Schedules for Broadcast WDM Networks with Arbitrary Tuning Latencies.” In *Proceedings of IEEE INFOCOM '96*, pp. 1217-1224, March 24-28, 1996, San Francisco, California.
6. ROUSKAS, G.N., BALDINE, I., “Multicast Routing with End-to-End Delay and Delay Variation Constraints.” In *Proceedings of IEEE INFOCOM '96*, pp. 353-360, March 24-28, 1996, San Francisco, California.
5. ROUSKAS, G.N., AMMAR, M.H., “Minimizing Delay and Packet Loss in Single-Hop Lightwave WDM Networks Using TDM Schedules.” In *Proceedings of IEEE ICC '95*, pp. 1267-1271, June 19-21, 1995, Seattle, Washington.
4. ROUSKAS, G.N., AMMAR, M.H., “Multi-Destination Communication Over Single-Hop Lightwave WDM Networks.” In *Proceedings of IEEE INFOCOM '94*, pp. 1520-1527, June 14-16, 1994, Toronto, Ontario, Canada.
3. ROUSKAS, G.N., AMMAR, M.H., “Dynamic Reconfiguration in Multihop WDM Networks.” In *Proceedings of ICCCN '94*, pp. 391-395, September 11-14, 1994, San Francisco, California.
2. ROUSKAS, G.N., AMMAR, M.H., “Analysis and Optimization of Transmission Schedules for Single-Hop WDM Networks.” In *Proceedings of IEEE INFOCOM '93*, pp. 1342-1349, March 30 - April 1, 1993, San Francisco, California.
1. ROUSKAS, G.N., AMMAR, M.H., “On the Design of Dynamic Configuration Policies for Multihop WDM Networks.” In *Proceedings of Photonics '93*, September 1993, Atlanta, GA.
0. AMMAR, M.H., ROUSKAS, G.N., “On the Design of Protocols for Collecting Responses over a Multiple-Access Channel.” In *Proceedings of IEEE INFOCOM '91*, pp. 1490-1499, March 1991, Miami, Florida.

### 2.1.7 Invited Conference Proceedings

17. BHAT, S., ROUSKAS, G.N., “Open Marketplace and Service Orchestration for Virtual Optical Networks.” *Proceedings of the 22nd Conference on Optical Network Design and Modeling (ONDM 2018)*, May 14-17, 2018, Dublin, Ireland.
16. TALEBI, S., FURQAN, A., KATIB, I., ROUSKAS, G.N., “Spectrum Assignment in Rings With Shortest Path Routing: Complexity and Approximation Algorithms.” *Proceedings of the International Conference on Computing, Networking and Communications (ICNC 2015)*, February 16-19, 2015, Anaheim, California.
15. DUTTA, R., ROUSKAS, G.N., BALDIN, I., “Traffic Grooming: Balancing Choice and Service in Optical Networks.” *Proceedings of Advanced Photonics for Communications*, July 13-17, 2014, San Diego, California.
14. DUTTA, R., ROUSKAS, G.N., BALDINE, I., “Converging Choice and Service in Future Commodity Optical Networks Using Traffic Grooming.” *Proceedings of 15th International Conference on Transparent Optical Networks (ICTON 2013)*, June 23-27, 2013, Cartagena, Spain.
13. ROUSKAS, G.N., BALDINE, I., CALVERT, K., DUTTA, R., GRIFFIOEN, J., NAGURNEY, A., WOLF, T., “ChoiceNet: Network Innovation Through Choice.” *Proceedings of the 17th Conference on Optical Network Design and Modeling (ONDM 2013)*, April 16-19, 2013, Brest, France.
12. WANG, H., LIU, Z., ROUSKAS, G.N., “Scalable Traffic Grooming in Optical Networks.” *Proceedings of Asia Communications and Photonics Conference (ACP 2012)*, November 7-10, 2012, Guangzhou, China.
11. DUTTA, R., BALDINE, I., WANG, A., IYER, M., ROUSKAS, G.N., “Architectural Support for Internet Evolution and Innovation.” *Proceedings of IEEE ANTS 2010*, December 16-18, 2010, Mumbai, India.
10. KARMOUS-EDWARDS, G., VISWANATH, A., REEVES, D.S., BATTISTILLI, L., VEGESNA, P., ROUSKAS, G.N. “ERONS: Dynamic Lightpath Networking via Overlay Control of Static Optical Connections.” *Proceedings of the 11th Conference on Optical Network Design and Modeling (ONDM 2009)*, February 18-20, 2009, Braunschweig, Germany.
9. ROUSKAS, G.N., DUTTA, R., BALDINE, I. “A New Internet Architecture to Enable Software Defined Optics and Evolving Optical Switching Models.” *Proceedings of the 8th Workshop on Optical Burst/Packet Switching (WOBS 2008)*, September 8, 2008, London, UK.
8. IYER, M., ROUSKAS, G.N., DUTTA, R., “Hierarchical Grooming in Multigranular Networks.” *Proceedings of the Advanced Networks and Telecommunications Systems Conference (ANTS 2007)*, December 17-18, Mumbai, India.
7. ROUSKAS, G.N., “Tiered Service in Packet-Switched Networks.” In *Proceedings of the IEEE Computer Communications Workshop*, February 5-7, 2006, Pittsburgh, PA.
6. ROUSKAS, G.N., “Multicast Routing Under Optical Layer Constraints.” In *Proceedings of the IEEE Computer Communications Workshop*, October 13-16, 2002, Santa Fe, New Mexico.
5. ROUSKAS, G.N., “Jumpstart: A Just-in-Time Signaling Architecture for WDM Burst-Switched Networks.” In *Proceedings of the IEEE LEOS Summer Topicals*, July 15-17, 2002, Mont Tremblant, Quebec, Canada.

4. XU, L., PERROS, H.G., ROUSKAS, G.N., “Access Protocols for Optical Burst-Switched Ring Networks.” In *Proceedings of the 6th Joint Conference on Information Sciences (JCIS 2002)*, pp. 1287-1290, March 8-13, 2002, RTP, North Carolina.
3. DUTTA, R., ROUSKAS, G.N., “Bounds on Traffic Grooming in Star and Tree Networks.” In *Proceedings of the 39th Allerton Conference on Communication, Control, and Computing*, October 3-5, Monticello, Illinois, 2001.
2. DUTTA, R., ROUSKAS, G.N., “Topology Design in WDM Rings to Minimize Electronic Routing: Efficient Computation of Tight Bounds.” In *Proceedings of the 38th Allerton Conference on Communication, Control, and Computing*, pp. 1284-1293, October 4-6, Monticello, Illinois, 2000.
1. ROUSKAS, G.N., “A Comparison of Allocation Policies in Wavelength Routing Networks.” In *Proceedings of the 37th Allerton Conference on Communication, Control, and Computing*, pp. 669-678, September 22-24, Monticello, Illinois, 1999.

### 2.1.8 Tutorials

4. ROUSKAS, G.N., “Tutorial on Network Virtualization.” Presented at the *OFC 2012* Conference, March 2012, Los Angeles, California.
3. ROUSKAS, G.N., “Tutorial on Traffic Grooming and Multigranular Switching in Optical WDM Networks.” Presented at the *NETWORKING 2004* Conference, May 9, 2004, Athens, Greece.
2. ROUSKAS, G.N., “Tutorial on Traffic Grooming and Multigranular Switching in Optical WDM Networks.” Presented at the *IEEE INFOCOM 2004* Conference, March 7, 2004, Hong Kong.
1. ROUSKAS, G.N., PERROS, H.G., “Tutorial on Optical Networks.” In E. Gregori *et al.*, (editors), *Advanced Lectures on Networking: Networking 2002 Tutorials*, Springer-Verlag LNCS 2497, pp. 155-193, 2002. Presented at the *NETWORKING 2002* Conference, May 19, 2002, Pisa, Italy.

### 2.1.9 Keynote Presentations

4. “Perspectives on Future Internet Design.” Keynote presentation, ICIIS Conference, Kandy, Sri Lanka, August 17, 2011.
3. “RWA in WDM Rings: An Efficient Formulation Based on Maximal Independent Set Decomposition.” Keynote Presentation, INFORMS Telecom, Concordia University, Montreal, Canada, May 7, 2010.
2. “Net SILOS: A Network Architecture for Advanced Cross-Layer Experimentation.” Keynote Presentation, Euro-NGI (Next Generation Internet) Conference, July 3, 2009, Aveiro, Portugal.
1. “Hierarchical Traffic Grooming for Multi-Granular Optical Networks.” Keynote presentation, 5th Workshop on Optimization of Optical Networks (OON) 2008, May 7, 2008.

### 2.1.10 Panels (Partial List)

7. “Future Internet: Do We Need Fundamentally New designs?” IEEE LANMAN workshop, October 14, 2011.

6. “Roundtable on RPT Process” Women Faculty Summit, June 16, 2011.
5. “NC State College of Engineering Roundtable on RPT Process” May 5, 2011.
4. “Are All-Optical Networks Manageable?” OFC 2010 Conference, March 22, 2010.
3. “Is Multilayer Optical Networking Feasible?” ONDM 2008 Conference, March 12, 2008.
2. “Optical Networking Research: Decline or Resurgence?” IEEE BROADNETS 2006 conference, October 3, 2006.
1. “Pedagogy, Laptops, and Student Learning: Providing Leadership to Faculty in the Transformation of Courses,” UNC Teaching and Learning with Technology (TLT) conference, March 16, 2006.

### **2.1.11 Invited Research Presentations (Partial List)**

65. “Network-Aware Virtual Request Partitioning Based on Spectral Clustering.” East Carolina University, April 21, 2017.
64. “Enhancing Scholarship and Research in Academia.” Distinguished Lecture, Computer Science Department, King Abdulaziz University, Jeddah, Saudi Arabia, February 18, 2016.
63. “On a Successful Graduate Career.” Distinguished Lecture, Computer Science Department, King Abdulaziz University, Jeddah, Saudi Arabia, February 18, 2016.
62. “On Writing Research and Survey Papers.” Distinguished Lecture, Computer Science Department, King Abdulaziz University, Jeddah, Saudi Arabia, February 18, 2016.
61. “On Writing Successful Research Proposals.” Distinguished Lecture, Computer Science Department, King Abdulaziz University, Jeddah, Saudi Arabia, April 22, 2015.
60. “Routing and Spectrum Assignment in Elastic Optical Networks: A Multiprocessor Scheduling Perspective.” Distinguished Lecture, Computer Science Department, King Abdulaziz University, Jeddah, Saudi Arabia, April 21, 2015.
59. “A New Perspective on Spectrum Management in Elastic Optical Networks.” Position talk, International Conference on Computing, Networking and Communications (ICNC) 2015, Anaheim, California, February 17, 2015.
58. “Traffic Grooming: Balancing Choice and Service in Optical Networks.” Invited presentation, Photonics in Switching 2014, San Diego, California, July 15, 2014.
57. “Perspectives on Networking Research.” Distinguished Lecture, Computer Science Department, King Abdulaziz University, Jeddah, Saudi Arabia, February 11, 2014.
56. “Optimization Approaches in Network Design.” Distinguished Lecture, Computer Science Department, King Abdulaziz University, Jeddah, Saudi Arabia, February 10, 2014.
55. “Perspectives on Future Internet Design.” Distinguished Lecture, Computer Science Department, King Abdulaziz University, Jeddah, Saudi Arabia, May 28, 2013.
54. “Scalable Optical Network Design.” Distinguished Lecture, Computer Science Department, King Abdulaziz University, Jeddah, Saudi Arabia, May 26, 2013.

53. “ChoiceNet: Network Innovation Through Choice.” Invited Presentation, 17th Conference on Optical Network Design and Modeling (ONDM 2013), April 16, 2013, Brest, France.
52. “Scalable Traffic Grooming in Optical Networks.” Invited Presentation, Asia Communications and Photonics Conference (ACP 2012), November 10, 2012, Guangzhou, China.
51. “Scalable Optical Network Design.” CS Distinguished Lecture, Department of Computer Science, Iowa State University, April 5, 2012.
50. “Power-Aware and Computationally-Efficient Optical Network Design.” IEEE Distinguished Lecture, University of Moratuwa, Sri Lanka, hosted by the Sri Lanka IEEE Communications Society chapter, August 16, 2011.
49. “Power-Aware and Computationally-Efficient Optical Network Design.” IEEE Distinguished Lecture, University of Colombo, Sri Lanka, hosted by the Sri Lanka IEEE Communications Society chapter, August 15, 2011.
48. “Power-Aware and Computationally-Efficient Optical Network Design.” IEEE Distinguished Lecture, Virtual Physics Lab, The University of West Indies, Kingston, Jamaica, hosted by the Jamaica IEEE Communications Society chapter, May 12, 2011.
47. “Power-Aware and Computationally-Efficient Optical Network Design.” IEEE Distinguished Lecture, Community Center, hosted by the Orlando, FL, IEEE Communications Society chapter, May 11, 2010.
46. “Power-Aware and Computationally-Efficient Optical Network Design.” IEEE Distinguished Lecture, University of Alabama at Huntsville, hosted by the Birmingham, AL, IEEE Communications Society chapter, May 10, 2011.
45. “Architectural Support for Internet Evolution and Innovation.” Invited Presentation, ANTS 2010 Conference, December 17, 2010, Mumbai, India.
44. “Architectural Support for Internet Evolution and Innovation.” IEEE Disntiguished Lecture, Business and Engineering Complex, University of Alabama at Birmingham, hosted by the Birmingham, AL, IEEE Communications Society chapter, October 8, 2010.
43. “Architectural Support for Internet Evolution and Innovation.” IEEE Distinguished Lecture, Verizon, Temple Terrace, Florida, hosted by the Tampa, FL, IEEE Communications Society chapter, October 7, 2010.
42. “Architectural Support for Internet Evolution and Innovation.” IEEE Distinguished Lecture, Community Center, hosted by the Orlando, FL, IEEE Communications Society chapter, October 6, 2010.
41. “Architectural Support for Internet Evolution and Innovation.” IEEE Distinguished Lecture, Middletown Public Library, Middletown, New Jersey, hosted by the New Jersey Coast IEEE Communications Society chapter, August 12, 2010.
40. “Architectural Support for Internet Evolution and Innovation.” IEEE Distinguished Lecture, National Electronics Museum, Baltimore, Maryland, hosted by the Baltimore, Maryland, IEEE Communications Society chapter, August 11, 2010.
39. “Architectural Support for Internet Evolution and Innovation.” IEEE Distinguished Lecture, DRS Technologies, Gaithersburg, Maryland, hosted by the Washington, DC, IEEE Communications Society chapter, August 10, 2010.

38. "Impairment-Aware Routing: Pitfalls and Challenges." Invited presentation, OFC Workshop on "Are All-Optical Networks Manageable?" March 22, 2010, San Diego, CA.
37. "Dynamic Lightpath Networking via Overlay Control of Static Optical Connections." Invited Presentation, Asia Communications and Photonics Exhibit and Conference (ACP), November 2-6, 2009.
36. "Net SILOS: A Network Architecture for Advanced Cross-Layer Experimentation." Georgia Institute of Technology, September 23, 2009.
35. "Edge-Reconfigurable Optical Networks." Invited Presentation, ONDM Conference, February 18, 2009.
34. "Hierarchical Traffic Grooming for Optical Networks." Universidad Tecnica Federico Santa Maria, Valparaiso, Chile, November 24, 2008.
33. "The SILO Architecture for the Future Internet." Universidad Tecnica Federico Santa Maria, Valparaiso, Chile, November 25, 2008.
32. "Net SILOS: Generalizing the Layered Network Architecture." Department of Computer Science, UNC Chapel Hill, September 19, 2008.
31. "A Composable Network Architecture For Enabling Cross-Layer Interactions." Distinguished Invited Presentation, IEEE ICCCN Conference, August 3-7, 2008.
30. "Net SILOS: An Architecture to Enable an Intelligent and Programmable Optical Layer." ONDM 2008 Conference, March 13, 2008.
29. "Multilayer Optical Networks." Panel at the ONDM 2008 Conference, March 12, 2008.
28. "A Framework for Tiered Service in Packet-Switched Networks." University of Evry, France, July 6, 2006.
27. "Hierarchical Traffic Grooming in WDM Networks." Carleton University, Canada, December 1, 2005.
26. "Traffic Quantization in Packet-Switched Networks." National Technical University of Athens, Greece, June 7, 2004.
25. "Optical Networks: A Practical Perspective." Athens Institute of Technology, Greece, June 10, 2004.
24. "Traffic Quantization in Packet-Switched Networks." University of Patras, Greece, May 31, 2004.
23. "The Jumpstart Optical Burst Switching Testbed." Department of Computer Science, Duke University, Durham, North Carolina, March 19, 2003.
22. "The Traffic Grooming Problem in Optical WDM Networks." University of Evry, Evry, France, December 3, 2002.
21. "Issues in the Design of Large-Scale Optical Networks." University of Evry, Evry, France, December 10, 2002.
20. "The Traffic Grooming Problem in Optical WDM Networks." National Technical University of Athens, Athens, Greece, October 22, 2002.
19. "On Optical Traffic Grooming in WDM Rings." University of North Carolina at Chapel Hill, Chapel Hill, North Carolina, April 12, 2002.



18. "On Optical Traffic Grooming in WDM Rings." Department of Electrical Engineering, Duke University, Durham, North Carolina, November 14, 2002.
17. "On Optical Traffic Grooming in WDM Rings." Georgia Institute of Technology, Atlanta, Georgia, November 7, 2001.
16. "Traffic Grooming in WDM Ring, Star, and Tree Networks." Level 3 Communications, Boulder, Colorado, August 21, 2001.
15. "Traffic Grooming in WDM Rings." Alcatel CRC, Richardson, Texas, August 29, 2001.
14. "A Comparison of Allocation Policies for Wavelength Routed Networks." Computer Science Seminar Series, University of Pierre and Marie Curie (Paris XI), Paris, France, June 6, 2000.
13. "A Comparison of Allocation Policies for Wavelength Routed Networks." Seminar Series, Institut National des Telecommunications (INT), Paris, France, May 29, 2000.
12. "A Comparison of Allocation Policies for Wavelength Routed Networks." Computer Science Seminar Series, University of Evry, Paris, France, May 26, 2000.
11. "A Comparison of Allocation Policies for Wavelength Routed Networks." IRISA Networking Seminar, University of Rennes, Rennes, France, May 23, 2000.
10. "Optical Networks: Past, Present, and Future." Computer Science Seminar Series, University of Evry, Paris, France, May 19, 2000.
9. "Optical Networks." General Dynamics Advanced technology Systems, Greensboro, NC, March 15, 2000.
8. "Blocking in Wavelength Routing Networks: A Comparison of Wavelength Allocation Policies and the Effects of Converters." Alcatel CRC Lecture Series, Richardson, Texas, July 9, 1999.
7. "Evolution Path Towards Optical Wavelength Routed Networks," MCNC NCNI Symposium, RTP, NC, May 25, 1999
6. "Blocking and Reconfiguration in WDM Networks," Panel on Optical Networks, NSF Networking PI meeting, Washington, DC, January 23, 1999.
5. "Scheduling, Dynamic Load Balancing, and Multicasting in WDM Networks," Old Dominion University, Norfolk, VA, October 15, 1997.
4. "Traffic Scheduling and Media Access in Optical Broadcast WDM Networks," University of North Carolina, Chapel Hill, May 12, 1997.
3. "Packet Scheduling and New Media Access Protocols for Broadcast WDM Networks with Arbitrary Transceiver Tuning Latencies," University of North Carolina, Greensboro, March 1, 1996.
2. "Single-Hop Lightwave WDM Networks and Applications to Distributed Computing," National Technical University of Athens, Athens, Greece, July 1994.
1. "Single-Hop Lightwave WDM Networks and Applications to Distributed Computing," Emory University, Atlanta, GA, November 1993.

## 2.2 Research Grants

### External Grants

1. **Title:** *AF:Small: Stochastic Optimization: Pushing the Frontiers*  
**Source:** NSF  
**PIs:** George Rouskas  
**Period:** Pending  
**Amount:** \$499,841
2. **Title:** *SAS Graduate Industrial Traineeship, Liang Dong*  
**Source:** SAS  
**PIs:** George Rouskas  
**Period:** 8/2016 - 5/2017  
**Amount:** \$39,407
3. **Title:** *SAS Graduate Student Industrial Traineeships (multiple students)*  
**Source:** SAS  
**PIs:** George Rouskas  
**Period:** 6/2014 - 8/2016  
**Amount:** \$245,662
4. **Title:** *Cisco Internship Program*  
**Source:** Cisco  
**PIs:** Peng Ning, George Rouskas  
**Period:** 5/2012 - 12/2012  
**Amount:** \$160,000
5. **Title:** *NeTS: Large: Collaborative Research: ChoiceNet: Network Innovation Through Choice*  
**Source:** NSF  
**PIs:** Rudra Dutta, George Rouskas  
**Period:** 09/2011 - 08/2014  
**Amount:** \$643,917 (total budget: \$2.732M)
6. **Title:** *NeTS: Small: Computationally Scalable Aware Optical Network design*  
**Source:** NSF  
**PIs:** George Rouskas  
**Period:** 08/2011 - 07/2014  
**Amount:** \$429,995
7. **Title:** *SURFnet GigaPort3 Research Plan 2010*  
**Agency/Program:** SURFnet  
**PIs:** George Rouskas, Gigi Karmous-Edwards  
**Period:** 07/2011 - 12/2011  
**Amount:** \$58,208
8. **Title:** *SURFnet GigaPort3 Research Plan 2010*  
**Agency/Program:** SURFnet  
**PIs:** George Rouskas, Gigi Karmous-Edwards

**Period:** 07/2010 - 06/2011

**Amount:** \$149,802

9. **Title:** *SURFnet GigaPort3 Research Plan 2009*  
**Agency/Program:** SURFnet  
**PIs:** George Rouskas, Gigi Karmous-Edwards  
**Period:** 07/2009 - 06/2010  
**Amount:** \$72,814
10. **Title:** *GENI IMF: Integrated Measurement Framework and Tools for Cross Layer Experimentation*  
**Agency/Program:** GENI Program Office  
**PIs:** Rudra Dutta, George Rouskas, Ilia Baldine (RENCI), KarenBergman (Columbia University)  
**Period:** 10/2009 - 9/2012  
**Amount:** \$419,506
11. **Title:** *Edge Reconfigurable Optical Networks (ERONs) for High-Performance Applications*  
**Agency/Program:** DARPA  
**PIs:** George Rouskas, Douglas Reeves, Gigi Karmous-Edwards  
**Period:** 7/2008 - 12/2008  
**Amount:** \$250,279
12. **Title:** *CPATH-CB: Computing Across Curricula*  
**Agency/Program:** NSF CPATH  
**PIs:** George Rouskas, Jeff Joines, Eric Wiebe, Larry Silverberg, Lisa Bullard  
**Period:** 7/2007 - 6/2010  
**Amount:** \$274,749
13. **Title:** *Collaborative Research: NeTS-FIND: The SILO Architecture for Services Integration, control, and Optimization for the Future Internet*  
**Agency/Program:** NSF NeTS  
**PIs:** George Rouskas, Rudra Dutta, Ilia Baldine, Arnold Bragg, Dan Stevenson  
**Period:** 9/2006 - 2/2010  
**Amount:** \$228,000 (total budget: \$408,000)
14. **Title:** *Traffic Quantization: A Formal Approach To Scalability in Packet-Switched Networks*  
**Agency/Program:** NSF CNS  
**PI:** George Rouskas  
**Period:** 9/2004 – 8/2009  
**Amount:** \$357,314
15. **Title:** *A Formal Approach to Traffic Grooming in Optical Networks with General Topologies*  
**Agency/Program:** NSF CISE/ANIR  
**PIs:** George Rouskas, Carla Savage, Rudra Dutta  
**Period:** 9/2003 – 8/2006  
**Amount:** \$404,968
16. **Title:** *The Jumpstart Project: Transparent Optical Network Management and Routing with Just In Time Signaling*  
**Source:** MCNC-RDI (NSA LTS) LTS  
**PIs:** Dan Stevenson, George Rouskas, Harry Perros

**Period:** 1/2003 – 12/2004  
**Amount:** \$327,103 (total budget: \$1,350,000)

17. **Title:** *Access Protocols for Multicasting in an Optical Burst Switching Metro Ring*  
**Source:** Alcatel  
**PIs:** Harry Perros, George Rouskas  
**Period:** 1/2002 – 9/2003  
**Amount:** \$44,972
18. **Title:** *The Jumpstart Project: Performance Analysis and Alternate Routing for Just In Time Optical Burst Switching Networks*  
**Source:** MCNC-RDI (NSA LTS)  
**PIs:** Dan Stevenson, George Rouskas, Harry Perros, Paul Franzon  
**Period:** 1/2002 – 6/2003  
**Amount:** \$437,645 (total budget: \$1,500,000)
19. **Title:** *The Jumpstart Project: Multicast Support for Just In Time Optical Burst Switching Networks*  
**Source:** MCNC-RDI (NSA LTS)  
**PIs:** Dan Stevenson, George Rouskas, Harry Perros, Paul Franzon  
**Period:** 10/2000 – 3/2001  
**Amount:** \$69,642 (total budget: \$500,000)
20. **Title:** *The Helios Project: Regional Testbed Optical Access Network for IP, Multicast, and Differentiated Service*  
**Source:** MCNC-RDI (DARPA Next Generation Internet (NGI) Program)  
**PIs:** Dan Stevenson (MCNC), George Rouskas  
**Period:** 3/2000 – 3/2002  
**Amount:** \$213,584 (total budget: \$1,800,000)
21. **Title:** *Performance Analysis of Wavelength Routed Wide Area Networks*  
**Source:** NSF CISE/ANIR  
**PIs:** George Rouskas, Harry Perros  
**Period:** 9/1998 – 8/2002  
**Amount:** \$255,384
22. **Title:** *Towards an All-Optical Network Infrastructure: Interconnection of Photonic WDM Broadcast-and-Select Local Area Networks*  
**Source:** NSF CISE/NCR (CAREER)  
**PI:** George Rouskas  
**Period:** 9/1997 – 8/2002  
**Amount:** \$200,000

**Internal Grants**

23. **Title:** *Lambda Scheduling for Grid Applications*  
**Agency/Program:** CACC  
**PIs:** George Rouskas  
**Period:** 7/2007 - 6/2008  
**Amount:** \$40,000
24. **Title:** *Learning with In-class Technology (LIT): The 15-Minute Learning Module Approach*  
**Program:** NCSU LITRE  
**PIs:** George Rouskas, Carol Miller  
**Period:** 6/2006 – 5/2007  
**Amount:** \$8,000
25. **Title:** *Engineering Online Student Access to Internet Lab*  
**Source:** DELTA  
**PIs:** George Rouskas  
**Period:** 1/2003 – 6/2003  
**Amount:** \$10,000
26. **Title:** *Research in Optical Burst Switching*  
**Source:** NCSU Center for Advanced Computing and Communications (CACC)  
**PIs:** Harry Perros, George Rouskas  
**Period:** 7/2001 – 6/2002  
**Amount:** \$43,402
27. **Title:** *The Apollo Project: Optical Burst-Switched Ring Networks*  
**Source:** NCSU Center for Advanced Computing and Communications (CACC)  
**PIs:** Harry Perros, George Rouskas  
**Period:** 7/2000 – 6/2001  
**Amount:** \$35,000
28. **Title:** *The MTCP Project: TCP-like Congestion Control for Reliable Multicast (continuation)*  
**Source:** NCSU Center for Advanced Computing and Communications (CACC)  
**PIs:** Injong Rhee, George Rouskas  
**Period:** 7/1999 – 6/2000  
**Amount:** \$55,439
29. **Title:** *The MTCP Project: TCP-like Congestion Control for Reliable Multicast*  
**Source:** NCSU Center for Advanced Computing and Communications (CACC)  
**PIs:** Injong Rhee, George Rouskas  
**Period:** 7/1998 – 6/1999  
**Amount:** \$22,400
30. **Title:** *All-Optical Solutions to ATM Switching*  
**Source:** NCSU Center for Advanced Computing and Communications (CACC)  
**PI:** George Rouskas  
**Period:** 7/1995 – 6/1996  
**Amount:** \$39,454

31. **Title:** *Multicasting for Multimedia Applications*  
**Source:** NCSU Faculty Development and Research Support  
**PI:** George Rouskas  
**Period:** 1/1995 – 6/1995  
**Amount:** \$4,237

#### Gifts

32. **Title:** *An Intelligent Second-Life VCL-Based Computing Lab*  
**Source:** IBM Faculty Award  
**PIs:** George Rouskas, Michael Young  
**Date of Award:** 7/2007  
**Amount:** \$30,000
33. **Title:** *Integration of Network Survivability Concepts in an MS in Computer Networking Curriculum*  
**Program:** Microsoft Trustworthy Computing Curriculum  
**PIs:** George Rouskas, Rudra Dutta  
**Duration:** 1/2006 – 12/2006  
**Amount:** \$50,000
34. **Title:** Optical Network Lab Equipment  
**Sponsor:** MCNC-RDI  
**PI:** George Rouskas  
**Date of Award:** 8/2003  
**Amount:** \$640,000 (six Optera WDM switches with SONET and Gigabit Ethernet interfaces)
35. **Title:** *Performance Evaluation of IPv6 Tunneling*  
**Program:** IBM Faculty Award  
**PIs:** Mike Devetsikiotis, George Rouskas, Harry Perros  
**Date of Award:** 7/2001  
**Amount:** \$40,000
36. **Title:** Networking Lab Equipment  
**Program:** HP U.S. University Equipment Grants  
**PI:** George Rouskas  
**Date of Award:** 12/1999  
**Amount:** \$159,190 (50 HP Kayak workstations and 3 laser printers)
37. **Title:** Internet Teaching Lab  
**Program:** CAIDA Internet Teaching Laboratories (ITL) Initiative  
**PI:** George Rouskas  
**Date of Award:** 10/1999  
**Amount:** \$100,000 (4 Cisco Routers)

## 3 Teaching and Advisory Activities

### 3.1 Courses Taught and Teaching Evaluations

Since I joined NCSU in the Fall 1994 semester, I have taught the following courses:

1. CSC/ECE 778 – OPTICAL NETWORKS (GRADUATE)  
I created this course, and offered it for the first time in 2001.
2. CSC/ECE 772 – SURVIVABLE NETWORKS (GRADUATE)  
I created this course, and offered it for the first time in 2007.
3. CSC/ECE 579 – INTRODUCTION TO COMPUTER PERFORMANCE EVALUATION (GRADUATE)  
I reorganized this course in 1999, making computer simulation an integral part and adding a significant programming component, to achieve a good balance between theory and practice that was lacking previously.
4. CSC/ECE 573 – INTERNET PROTOCOLS (GRADUATE)  
I created this course, and offered it for the first time in 1997. Since then, it has been one of the most successful course in the College with an approximate total enrollment of more than 2,000.
5. CSC 401 – COMPUTER NETWORKS (UNDERGRADUATE)
6. CSC 316 – DATA STRUCTURES (UNDERGRADUATE)

#### List of Courses Taught Per Semester

- Fall 2017: CSC/ECE 573
- Spring 2017: CSC/ECE 579
- Fall 2016: none (DGP release)
- Spring 2016: CSC 316
- Fall 2015: none (DGP release)
- Spring 2015: none (DGP release)
- Fall 2014: none (DGP release)
- Spring 2014: none (DGP release)
- Fall 2013: CSC 316, CSC/ECE 573
- Spring 2013: none (academic release)
- Fall 2012: CSC 316, CSC/ECE 573
- Spring 2012: CSC/ECE 772
- Fall 2011: CSC 316, CSC/ECE 573

- Spring 2011: CSC 401
- Fall 2010: CSC/ECE 579, CSC/ECE 778
- Spring 2010: CSC 401, CSC/ECE 772
- Fall 2009: none (academic release)
- Spring 2009: CSC 401, CSC/ECE 579
- Fall 2008: CSC/ECE 778
- Spring 2008: CSC 316, CSC/ECE 772
- Fall 2007: none (academic release)
- Spring 2007: CSC 316, CSC/ECE 579, CSC/ECE 772
- Fall 2006: none
- Spring 2006: CSC 316
- Fall 2005: CSC/ECE 778
- Spring 2005: CSC 316
- Fall 2004: CSC/ECE 778
- Spring 2004: CSC/ECE 579
- Fall 2003: CSC/ECE 778
- Spring 2003: CSC/ECE 579
- Fall 2002: CSC/ECE 778
- Spring 2002: CSC/ECE 579
- Fall 2001: CSC/ECE 778
- Spring 2000: on sabbatical
- Fall 2000: on sabbatical
- Spring 2000: CSC/ECE 573
- Fall 1999: CSC/ECE 579
- Spring 1999: CSC 316, CSC/ECE 573
- Fall 1998: CSC 401
- Spring 1998: CSC/ECE 573
- Fall 1997: CSC 401, CSC/ECE 579
- Spring 1997: CSC/ECE 573



- Fall 1996: CSC 401, CSC/ECE 579
- Spring 1996: CSC/ECE 676
- Fall 1995: CSC 401
- Spring 1995: CSC 316
- Fall 1994: CSC/ECE 579

### Course Evaluations

At the end of each semester, NCSU Computer Science students rate the effectiveness of their teachers on a 1–5 scale, where 1 is poor and 5 is truly outstanding. My teaching evaluations for the past three years are listed in the table below.

I have received consistently high evaluations over time, across several different courses and large or smaller student enrollments. In many cases, my scores in course effectiveness, instructor effectiveness, and overall experience are close to a full point above the departmental average. More importantly, I have received such high evaluations *despite* the fact that students perceive my courses as presenting significantly more difficulty than average.

Table 1: Teaching Evaluations in the past three academic years

| COURSE         | SEMESTER    | CLASS SIZE | INSTRUCTOR EXPLAINED DIFFICULT MATERIAL WELL | INSTRUCTOR WAS EFFECTIVE TEACHER | COURSE IMPROVED MY KNOWLEDGE OF SUBJECT | OVERALL COURSE WAS EXCELLENT |
|----------------|-------------|------------|--|----------------------------------|---|------------------------------|
| <b>CSC 316</b> | FALL 2016   | 80         | <b>4.3</b>                                   | <b>4.5</b>                       | <b>4.7</b>                              | <b>4.4</b>                   |
| DEPT AVG       |             |            | 3.9  | 4.0                              | 4.3                                     | 3.8                          |
| <b>CSC 573</b> | FALL 2013   | 29         | <b>4.7</b>                                   | <b>4.8</b>                       | <b>4.8</b>                              | <b>4.7</b>                   |
| DEPT AVG       |             |            | N/A  | N/A                              | N/A                                     | N/A                          |
| <b>CSC 316</b> | FALL 2013   | 94         | <b>4.6</b>                                   | <b>4.8</b>                       | <b>4.7</b>                              | <b>4.5</b>                   |
| DEPT AVG       |             |            | 3.8  | 3.8                              | 4.3                                     | 3.8                          |
| <b>CSC 579</b> | FALL 2012   | 29         | <b>4.6</b>                                   | <b>4.7</b>                       | <b>4.8</b>                              | <b>4.7</b>                   |
| DEPT AVG       |             |            | N/A  | N/A                              | N/A                                     | N/A                          |
| <b>CSC 316</b> | FALL 2012   | 94         | <b>3.9</b>                                   | <b>4.0</b>                       | <b>4.5</b>                              | <b>4.0</b>                   |
| DEPT AVG       |             |            | 3.8  | 3.9                              | 4.2                                     | 3.7                          |
| <b>CSC 772</b> | SPRING 2012 | 22         | <b>4.8</b>                                   | <b>4.8</b>                       | <b>4.8</b>                              | <b>4.7</b>                   |
| DEPT AVG       |             |            | 4.0  | 4.2                              | 4.4                                     | 4.1                          |
| <b>CSC 573</b> | FALL 2011   | 60         | <b>4.8</b>                                   | <b>4.9</b>                       | <b>4.9</b>                              | <b>4.9</b>                   |
| DEPT AVG       |             |            | 4.1  | 4.2                              | 4.4                                     | 4.1                          |
| <b>CSC 316</b> | FALL 2011   | 100        | <b>4.5</b>                                   | <b>4.5</b>                       | <b>4.9</b>                              | <b>4.6</b>                   |
| DEPT AVG       |             |            | 3.9  | 4.0                              | 4.2                                     | 3.8                          |

## 3.2 Advisory Activities

### 3.2.1 Doctoral and Master's Theses in Progress

1. GAO, LINGNAN (PhD)  
*Topic:* Network Virtualization

### 3.2.2 Post Doctoral Fellows

1. YETGINER, EMRE, 2008-2009  
*Topic:* Traffic Grooming for Green Optical Networking
2. ZAIM, A. HALIM, 2001-2002  
*Topic:* Implementation of Signaling Protocols for Optical Burst-Switched Networks
3. RAMESH, SHRIDHAR, 1999-2000  
*Topic:* Performance Analysis of Wavelength Routed Networks

### 3.2.3 Doctoral Dissertations Directed

24. BHAT, SHIREESH (PhD)  
*Topic:* Network Service Orchestration within the ChoiceNet Architecture
23. KRISHNAMURTHY, RAMESH, 2016  
*Topic:* A Framework for Evaluating Server Performance: Application to SIP Proxy Servers
22. TALEBI, SAHAR, 2015  
*Topic:* On Routing and Spectrum Assignment in Elastic Optical Networks
21. BABAUGLU, AHMET CAN, 2014  
*Topic:* Verification Services for the Choice-Based Internet of the Future
20. WANG, HUI, 2013  
*Dissertation:* Efficient Decomposition Techniques for Traffic Grooming Problems in Optical Networks
19. LIU, ZEYU, 2012  
*Dissertation:* On Routing and Wavelength Assignment in WDM Networks
18. IYER, MOHAN, 2010  
*Dissertation:* Providing Bandwidth on Demand Services Using Optical Network Design and the SILO Network Architecture

**2009 Outstanding Teaching Assistant Award**

17. LV, QIAN (2010)  
*Topic:* Economic Models for Internet Tiered Services
16. WANG, ANJING, 2010  
*Topic:* Optimization of Silo Services for the Future Internet  
**2009 Outstanding Teaching Assistant Award**
15. DWEKAT, ZYAD 2009  
*Topic:* Practical Fair Queueing Schedulers: Simplification Through Quantization
14. CASTILLO, CLARIS, 2008  
**2008 College of Engineering Nancy G. Pollock PhD Dissertation Award**  
**2007 Google Anita Borg Scholarship**  
**2006 Outstanding Teaching Assistant Award**  
*Dissertation:* Scheduling and Resource Management in Grids
13. YANG, LI, 2006  
*Dissertation:* Congestion Control and Quality of Service (QoS) Provisions for Optical Burst Switched Networks
12. CHEN, BENSONG, 2005  
**2004 Outstanding Teaching Assistant Award**  
*Dissertation:* Hierarchical Traffic Grooming in Large-Scale WDM Networks
11. TENG, JING, 2004  
*Dissertation:* A Study of Optical Burst Switched Networks with the Jumpstart Just-In-Time Signaling Protocol
10. JACKSON, LAURA E., 2003 (**GAANN Fellow, 2000-2003**)  
*Dissertation:* The Directional  $p$ -Median Problem with Applications to Traffic Quantization and Multiprocessor Scheduling  
**2004 College of Engineering Nancy G. Pollock PhD Dissertation Award**
9. XIN, YUFENG, 2002  
*Dissertation:* Topology Design of Large-Scale Optical Networks
8. XU, LISONG, 2002  
*Dissertation:* Performance Analysis of Optical Burst Switched Networks  
**2007 NSF CAREER Award**

7. DUTTA, RUDRA, 2001  
*Dissertation:* Virtual Topology Design for Traffic Grooming in Optical WDM Networks
6. ZAIM, A. HALIM, 2001  
*Dissertation:* Computing Call Blocking Probabilities in LEO Satellite Networks
5. ZHU, YUHONG, 1999  
*Dissertation:* Computation of Blocking Probabilities in Wavelength Routing Networks
4. BALDIN, ILYA, 1998  
*Dissertation:* Dynamic Reconfiguration in Broadcast WDM Networks
3. ORTIZ-LAUREANO, ZEYDY, 1998 (**NSA Fellow, 1994-1998**)  
*Dissertation:* Techniques to Support Multicast Traffic in Single-Hop WDM Optical Networks
2. MCKINNON, M. WILLIAM (BILL), 1997  
*Dissertation:* Performance Analysis of a Class of Photonic Interconnection Architectures
1. SHARMA, SUPRIYA S., 1997  
*Dissertation:* Optimal Buffer Management for Shared Buffer ATM Switches

### 3.2.4 Master's Theses Directed

12. VELLALA, MANOJ, 2008  
*Topic:* Stack Composition for SILO Architecture
11. KHARE, SRIKRISHNA GIRISH, 2008  
*Thesis:* Linux Implementation of Tiered Service Fair Queueing (TSFQ) Scheduling Disciplines
10. AMUDALA BHASKER, AJAY BABU, 2006  
*Thesis:* Tiered-Service Fair Queueing (TSFQ): A Practical and Efficient Fair Queueing Algorithm
9. BARADWAJ, NIKHIL, 2005  
*Thesis:* Traffic Quantization and its Application to QoS Routing  
**2006 Graduate School Nancy G. Pollock MS Thesis Award**
8. IYER, VIJAY, 2002  
*Thesis:* A Simulation Study of Wavelength Assignment and Reservation Policies with Signaling Delays

7. SINGHAI, MRUGENDRA, 2002  
*Thesis: Helios 2: An All-Optical Broadcast Local Area Network*
6. BENERI, SUDHIN, 2001  
*Thesis: Differentiated Services Support for the Helios Optical WDM Testbed*
5. THAKER, DHAVAL, 2001  
*Thesis: Multicasting in a Partially Tunable Broadcast WDM Network*
4. STUCKEY, JEFFREY J., 1998  
*Thesis: Worst-Case Cell Delay in an ATM Switch Using EDF Scheduling*
3. HABERMAN, BRIAN K., 1997  
*Thesis: Cost, Delay, and Delay Variation Conscious Multicast Routing*  
University
2. BALDIN, ILYA, 1995  
*Thesis: Multicast Routing With End-to-End Delay and Delay Variation Constraints*
1. SIVARAMAN, VIJAY, 1995  
*Thesis: TDM Schedules For Broadcast WDM Networks With Arbitrary Tuning Latencies*  
Australia

### **3.2.5 Preparing the Professoriate**

1. CASTILLO, CLARIS, 2005-2006
2. JACKSON, LAURA E., 1999-2000

### **3.2.6 Teaching Assistant Mentoring**

1. BATTISTILLI, LINA, 2001-2002

### **3.2.7 Certificate of Accomplishment in Teaching**

1. LIU, ZEYU, 2010-2011

### **3.2.8 Visiting Scholars**

1. *Dr. Yu Xiong*, 2016-2017 *Topic: Optical and Datacenter Networks*  
*Affiliation: Chongqing University of Posts and Telecommunications (CUPT), China*
2. *Dr. Batarfi, Omar*, 2014-2015  
*Topic: Visible Light Communications*  
*Affiliation: King Abdulaziz University, Jeddah, Saudi Arabia*

### 3.2.9 Visiting Doctoral Students

1. LI, WENZHE, 2017-2018  
*Topic:* Optical Networks on a Chip (ONoC) *PhD degree from:* Beijing University of Posts and Telecommunications, China
2. LIU, XIAOMIN, 2011-2012  
*Topic:* Ethernet Passive Optical Networks  
*PhD degree from:* Beihang University, China
3. CAO, CHANG, 2010-2011  
*Topic:* *p*-Cycle Protection in MPLS Networks  
*PhD degree from:* Beijing University of Posts and Telecommunications, China
4. VISWANATH, ARUN, 2007-2008 *Buffer Sizing in High-Speed Routers*  
*PhD degree from:* University of New South Wales, Australia

### 3.2.10 Doctoral Dissertation Committees Outside NCSU

1. DEY, SUMAN KR., March 2017  
*Institution:* Indian Institute of Technology, Patna, India  
*Dissertation:* Design and Operation Strategies for IP-over-WDM Networks with Awareness of Cost and Energy Efficiency
2. GANESH, SRI C.S., February 2016  
*Institution:* Indian Institute of Technology, Madras, India  
*Dissertation:* Design and Analysis of Optical Networking Based Data Center Network Architectures
3. GEORGAKILAS, KONSTANTINOS N., January 2013  
*Institution:* Aalborg University, Denmark  
*Dissertation:* Delivery of Services in Multi-Layer Multi-Domain Optical Network Infrastructures
4. VENKATESH, SRI T., June 2009, Indian Institute of Technology, Madras, India  
*Dissertation:* Estimation, Classification, and Analysis of Losses in Optical Burst Switching Networks
5. COUTELEN, THOMAS, June 2008, Concordia University, Montreal, Canada  
*Dissertation:* Loss-Free Architectures in Optical Burst Switched Networks for a Reliable and Dynamic Optical Layer
6. CHOWDHARY, GIRISH V., August 2006, Indian Institute of Technology, Madras, India  
*Dissertation:* Cost-Effective Multicast Traffic Grooming with Survivability Support in WDM Optical Networks
7. MOSHARAF, KAYVAN, December 2005, Carleton University, Canada  
*Dissertation:* Resource Management and Service Differentiation in WDM Networks

### 3.2.11 Doctoral Dissertation Committees

1. UDECHUKWU, ROBINSON, in progress  
*Topic:* ChoiceNet

2. PAMBUDI, SIGIT ARYO, August 2017  
*Topic:* Modeling and Evaluation of Cyber-Physical Threats in Emerging Interdependent Networks
3. GUPTA, ARPIT, in progress  
*Topic:* Context awareness in mobile networks
4. WANG, YAOGONG, November 2013  
*Dissertation:* Caching, Routing and Congestion Control in a Future Information-Centric Internet
5. WANG, GANGYAO, August 2013  
*Dissertation:* Design, Development and Control of > 13kV Silicon-Carbide MOSFET based Solid State Transformer(SST)
6. BOLOOR, KEERTHANA, May 2012  
*Dissertation:* Management of SOA-Based, Data-Intensive Applications Deployed in a Distributed Cloud Subject to Response Time Percentile Service Level Agreements
7. SUN, LEI, April 2012  
*Dissertation:* Understanding the Performance and Topology of Wireless Cognitive Radio Networks
8. LUO, HUAN, August 2010  
*Dissertation:* Efficient Traffic Engineering with Close-to-Optimal Performance
9. SUBRAMANIAN, SURESHKUMAR, June 2010  
*Dissertation:* Measurements and Analysis of the Performance Characteristics of SIP Proxy Servers
10. HONG, SEONGIK, April 2010  
*Dissertation:* Human Movement Patterns, Mobility Models and Their Impacts on Wireless Applications
11. SHIN, KYUYONG, November 2009  
*Dissertation:* Preventing Misbehavior in Cooperative Distributed Systems
12. HA, SANGTAE, October 2009  
*Dissertation:* Improving TCP Congestion Control for High Bandwidth and Long Distance Networks
13. WON, HYUNG SUK, October 2009  
*Dissertation:* Multicast in Wireless Networks
14. LIM, MIN YEOL, August 2009  
*Dissertation:* Improving Power and Performance Performance Efficiency in Parallel and Distributed Computing Systems
15. HU, SHUANG, October 2008  
*Dissertation:* Multicast Routing Protocols in Mobile Ad Hoc Networks
16. TAGGART, CHRISTOPHER S., August 2008  
*Dissertation:* Average Packet Delay Analysis of Ultra Wideband Wireless Networks of Simple Wireless Nodes
17. SAWANT, AMIT PRAKASH, December 2007  
*Dissertation:* Perceptual Display Hierarchies for Visualization
18. KIM, SANGMIN, October 2007  
*Dissertation:* Internet Topology: Illusion and Reality



19. WANG, CHIH-CHIANG, March 2007  
*Dissertation:* Managing Heterogeneity in Structured Peer-to-Peer Systems
20. ALDWAIRI, MONTHER, October 2006  
*Dissertation:* Hardware-Efficient Pattern Matching Algorithms and Architecture for Fast Intrusion Detection
21. JUN, JANGEUN, August 2006  
*Dissertation:* Networking in Wireless Ad Hoc Networks
22. PARK, SANGJOON, June 2006  
*Dissertation:* Performance Analysis of Data Aggregation Schemes for Wireless Sensor Networks
23. SUBRAMANIAM, KAMALA, December 2005  
*Dissertation:* Radio Resource Management in UMTS-WCDMA Systems
24. AKIN, OZDEMIR, December 2004  
*Dissertation:* Active Queue Management and Scheduling Methods for Packet-Switched Networks
25. WANG, XINYUAN, July 2004  
*Dissertation:* Tracing Intruders Behind Stepping Stones
26. WU, CHIEN-LUNG, September 2002  
*Dissertation:* On Network-Layer Packet Traceback: Tracing Denial-of-Service (DoS) and Distributed Denial-of-Service (DDoS) Attacks
27. COZZO, CARMELA, March 2001  
*Dissertation:* Joint Detection and Estimation in Space-Time Communications,
28. HARASZTI, ZSOLT, December 2000  
*Dissertation:* Efficient Rare Event Simulation in Network Performance Analysis Using Direct Probability redistribution
29. ZHU, KAI, August 2000  
*Dissertation:* Statistical Delay Bounds Oriented Packet Scheduling Algorithms in High Speed Networks
30. HAN, MANYOO, October 1999  
*Dissertation:* Quality-of-Service Provisioning in Wireless Cellular Networks
31. MARTIN, JAMES, October 1999  
*Dissertation:* RTT-Based Congestion Avoidance for High Speed TCP Internet Connections
32. VU, CHIEN, October 1999  
*Dissertation:* Multicast Buffered ATM Switch
33. NARASIMHA, MURALI, August 1999  
*Dissertation:* Probabilistic Verification Through Temporal Logics
34. CHANG, CHIH-JEN, July 1999  
*Dissertation:* Performance Modeling and Evaluation of an MPLS Architecture Using the DTM Technology
35. FULP, ERRIN, July 1999  
*Dissertation:* Resource Allocation and Pricing for QoS Management in Computer Networks

36. DENZ, PETER, April 1999  
*Dissertation:* Performance of Error Control Coding Techniques and the Development of a Dynamic Error Control Coding Mechanism for Wireless ATM
37. WRIGHT, STEVEN, March 1999  
*Dissertation:* Delay Bounds and Connection Admission Control for Burstiness-Class Queueing
38. IZQUIERDO, MICHAEL, October 1998  
*Dissertation:* Modeling, Transmission, and Multiplexing of MPEG VBR Video Over Packet-Switched Networks
39. RAMESH, SRIDHAR, August 1998  
*Dissertation:* A Multi-Layer Client-Server Queueing Network Model with Synchronous and Asynchronous Messages
40. BALAY, RAJESH, September 1995  
*Dissertation:* A Lightweight Middleware Architecture and Evaluation of Middleware Performance

### 3.2.12 Master's Thesis Committees

1. APSANGI, CHANDAN, May 2013  
*Thesis:* A Novel Power Efficient Scalable Locking Mechanism for Many Core Systems
2. ANANTHAKRISHNAN, SRINATH KRISHNA, May 2013  
*Thesis:* Customized Scalable Tracing with In-Situ Data Analysis
3. KALLUMKAL, FNU GEORGY MATHEW, March 2013  
*Thesis:* A Micro-cloud Model for Adaptable High Performance Computing
4. ZHANG, HUIJUN, May 2012  
*Thesis:* Convergence of Random Variables
5. NIMBHORKAR, SANKALP, March 2012  
*Topic:* Channel Width Adaptation in Back-Pressure Networks
6. DEUSKAR, GAURISH, May 2010  
*Thesis:* Packet Aggregation Based Backpressure Scheduling in Multi-Hop Wireless Networks
7. BOLOOR, KEERTHANA, April 2009  
*Thesis:* Multi-Point to Single-Point Service Traffic Shaping
8. KANDULA, DHEERAJ, February 2008  
*Thesis:* End-to-End Behavior of Delay Tolerant Networks with Message Ferries.
9. KANDEKAR, KUNAL, May 2006  
*Thesis:* TAO: A Topology-Adaptive Overlay Framework
10. SONI, ARVIND, August 2004  
*Thesis:* Probabilistic and Non-Deterministic Systems
11. PYUN, YOUNG JUNE, August 2004  
*Thesis:* Construction of Low-Diameter Topologies for Scalable Peer-to-Peer Systems

12. SRINIVASARAO, KOUNDINYA, August 2003  
*Thesis: Traffic Grooming in Translucent Optical Ring Networks*
13. JIANG, ZONGLIANG, July 2003  
*Thesis: Symmetric Chain Decomposition and Independent Families of Curves*
14. IYER, PRASHANT, May 2003  
*Thesis: The Complexity of Traffic Grooming in Optical Path Networks with Egress Traffic*
15. HACIOMEROGLU, FATIH, March 2003  
*Thesis: On-Line Measurement-Based Capacity Allocation Schemes*
16. HUANG, SHU, December 2002  
*Thesis: Traffic Grooming in Wavelength Routed Path Networks*
17. JUN, JANGEUN, November 2002  
*Thesis: Capacity Estimation of Wireless Mesh Networks*
18. ADHIKARI, AKSHAY, August 2002  
*Thesis: Voice Over IP Performance Diagnosis*
19. KULKARNI, AMIT, August 2002  
*Thesis: An Investigation of Forwarding in the MPLS Support for Differentiated Services*
20. KULKARNI, GIRISH, August 2002  
*Thesis: A Tabu Search Algorithm for the Steiner Tree Problem*
21. GARG, ASHWAJEET, May 2002  
*Thesis: Assessing the Value of Agent Certification in Global Sourcing: An Exploratory Study in Apparel Sourcing*
22. JONG, WUCHIEH, May 2002  
*Thesis: Multicast Access Protocols in an Optical Burst Switched WDM Ring Network*
23. AKIN, OZDEMIR, December 2001  
*Thesis: Efficient Simulation of TCP/IP Networks Using DPR-Based Splitting*
24. DWEKAT, ZYAD, September 2001  
*Thesis: Construction and Evaluation of a Service Level Agreement Test-Bed*
25. ELHADDAD, MAHMOUD S., August 2001  
*Thesis: Adaptive Multipath Traffic Allocation in TCP/IP Networks*
26. SRIVASTAVA, MANOJ, August 2001  
*Thesis: Security Overlay for RMI*
27. JAYARAM, RANJITH S., July 2001  
*Thesis: Performance Evaluation of TEAR, a TCP-Friendly Flow Control Protocol, Over the Internet and Wireless Networks*
28. ULANATT, VENUGOPALAN, June 2001  
*Thesis: Summary Representation for Service Discovery Protocols*

29. HADDAD, REDA N., April 2000  
*Thesis: SLA to Controls Mapping in Differentiated Services*
30. JOSHI, SRINATH R., February 2000  
*Thesis: Packet Loss Recovery for Unicast Interactive Video Transmission Over the Internet*
31. KONDURI, RAVI KRISHNA, August 1999  
*Thesis: Discrete Element Modeling on a Cluster of Workstations*
32. HAYATNAGARKAR, ABHIJIT, May 1999  
*Thesis: On Realizing Traffic-Driven Security Association Establishment for IPsec*
33. WANG, HAINING, October 1998  
*Thesis: Refining TCP Congestion Control Schemes at End Hosts*
34. QU, DIHENG, May 1998  
*Thesis: Statistical Anomaly Detection for Link-State Routing Protocols*
35. HANSOTI, JATIN, May 1997  
*Thesis: Lava: Secure Delegation of Mobile Applets*
36. CROWDER, WILLIAM, September 1995  
*Thesis: An Experimental Study of Switched Ethernet Networks*

### **3.2.13 Computer Science Qualifying Exam Committees**

1. CASSELL, BRAD, May 2013
2. UDECHUKWU, ROBINSON, January 2014
3. CHUNG, SEUNG EUN, May 2012
4. JIANG, HAIQING, March 2012
5. SLANKAS, JOHN, January 2012
6. LAKSHMINARASIMHAN, SRIRAM, May 2011
7. GOPALAN, RAMYA, April 2011
8. BALIK, SUZANNE, August 2010
9. WANG, YAOGONG, April 2010
10. ZHANG, YONGPENG, April 2010
11. LIU, YAO December 2008
12. DU, JUAN, August 2008
13. HA, SANGTAE, April 2008
14. MIN, JEONG KI, April 2008
15. WANG, CHAO, December 2006

16. LIM, MIN YEOL, August 2006
17. IRWIN, KEITH, December 2005
18. YOUNG, JUNE PYUN, August 2005
19. HUANG, SHU, August 2004
20. DAVIS, BRENT, December 2003

### **3.2.14 Chair, Master of Engineering Advisory Committees**

1. KAKKAR, VIVEK, December 2007
2. KAMATH, ACHALA, December 2006
3. NGUYEN, TUYEN, December 2006

### **3.2.15 Graduate Independent Studies**

1. DEY, PIYALI, Fall 2012  
*Topic:* Interdomain Routing in Optical Networks
2. DEY, PIYALI, Spring 2012  
*Topic:* Interdomain Routing in Optical Networks
3. ADAPPA, ABHISHEK, BHARGAVA, MITTU, Fall 2001  
*Topic:* Simulation of a Class of Queueing Systems
4. RASMUSSEN GLENN, Fall 2000  
*Topic:* Overview of Optical Switching Products: A Business Perspective

### **3.2.16 Undergraduate Independent Research**

1. TITOV, NIKOLAY, Spring 2013  
TOPIC: Scheduling Problems with Applications to Routing and Spectrum Assignment in Optical Networks
2. GOEL, JAY, Spring 2010  
TOPIC: Implementing TCP Functionality in the SILO Architecture
3. HARDY, TREVOR, Spring 2010  
TOPIC: Multithreaded Client-Server Message Board Application
4. ALBRIGHT, TRENT, CHRISTIE, DOUGLAS, WOMBLE, CHEYNE, Spring 1998  
*Topic:* Implementation of a Distributed Distance-Vector Routing Algorithm
5. HENDERSON, DAVID, WILSON, SCOTT, Spring 1996  
*Topic:* Implementation of a Graphical User Interface for Demonstrating the Operation and Performance of Broadcast Routing Algorithms for Packet-Switched Networks

## 4 Service Activities

### 4.1 Committee Appointments

#### UNIVERSITY COMMITTEES

1. CoE representative to the Administrative Board of the Graduate School (ABGS), 2016-2017
2. Judge, NC State Graduate Student Research Symposium, March 26, 2014
3. NC State review panel for Microsoft Research Faculty Fellowship program, 2012-2013
4. DELTA IDEA grant review committee, 2004-2005  
Participated in the IDEA grant selection process for 2004-2005, and reviewed twelve (12) proposals
5. DELTA Advisory Committee, 2003-2005  
Worked with DELTA leadership on policies related to teaching and learning with technology; suggested strategies to increase and improve faculty activities in the area of teaching with technology; recommended areas of investment in distance education and learning technologies;
6. CHAIR, DELTA Subcommittee on Intellectual Property, 2003-2005  
Advised DELTA leadership on intellectual property rights issues related to distance education
7. 2004 Alumni Outstanding Research Awards Selection Committee  
As a recipient of the 2003 Alumni Outstanding Research Award, I served on the University committee which selected the 2004 Award winners

#### COLLEGE OF ENGINEERING COMMITTEES

1. CoE University Faculty Scholar Committee, 2012-2014
2. CoE ALCOA Awards Committee, 2012-2013
3. CoE Reappointment, Promotion, and Tenure (RPT) Committee, 2008-2011
4. CoE Research Committee, 2007-2008  
Advised Associate Dean for Research and Graduate Programs on identifying and promoting major research thrust areas for the College; encouraged and promoted cross-disciplinary research efforts; reviewed research policies and procedures and identified improvements to enhance faculty success in obtaining research funding; and assisted the Associate Dean in the review and oversight of CoE Research Centers.
5. CSC Head Search Committee, 2004-2006  
I was elected by the faculty to the department head search committee in March 2004.  
During the Fall 2005 semester, the committee reviewed applications for the position, conducted telephone interviews with the references of the leading candidates, and solicited letters of recommendation.  
During the Spring 2005 semester, the three CSC members of the committee held meetings with faculty, lecturers, and staff, to solicit input regarding the search process. The whole committee (including the three external members) also met regularly (biweekly), created and published an advertisement for the open position, and solicited applications.  
During the Spring 2006 semester, the committee interviewed the four leading candidates. The top candidate, Prof. Vouk accepted the Dean's offer and serves as the department head.

6. Engineering Online Advisory Committee, 2003-2005  
Suggested and advised the Director of Engineering Online on strategies to improve the College's distance education programs
7. CSC Review Survey Committee, 1998-1999  
Coordinated and carried out the evaluation of the Department Head, Prof. Alan Tharp; specific tasks included: consulting with the departmental constituencies; preparing the evaluation form; collecting and analyzing the results; and preparing a report to Dean Masnari.
8. Admissions Standards Committee, MS in Computer Networking, 1998-1999  
Studied the criteria for admitting MS students to the CSC and ECE Departments, respectively; suggested and implemented changes to ensure that admissions criteria for MSCN students are identical in both departments

#### DEPARTMENT OF COMPUTER SCIENCE COMMITTEES

1. Strategic Planning Committee, 2009-2012 (Chair, 2010-2012)  
In the 2010-12 academic years, I served as the chair of the SPC. The SPC prepared a new strategic plan for the department for the ten years to 2020 that was approved by the faculty in March 2012. I presented part of the plan at the Spring 2011 Strategic Advisory Board meeting. The SPC also continued to organize the faculty lunch series every Thursday during the academic year, with several seminars and presentations by CSC faculty and external speakers.
2. Graduate Student Admissions Committee, 2011-2012
3. Awards Committee, 2009-2012
4. Networks research coordinator, Graduate program review, March 2010
5. Faculty Recruiting Committee, 2008-2009
6. Course Coordinator for CSC 316 (Data Structures), 2005-present  
In Spring 2006, I led the assessment effort for CSC 316. The assessment material for my section of the course are available online at:  
<http://www.csc.ncsu.edu/faculty/rouskas/Courses/CSC316/assessment-spring-2006.html>
7. Computing Infrastructure Committee, 2006-2010
8. CHAIR, Minority Recruiting Committee, 2006-2007
9. Committee for External Evaluation Visit, Fall 2004  
In the Fall 2004 semester, the three CSC members of the Head search committee were responsible for organizing the visit by the external reviewers commissioned by Dean Masnari. The responsibilities included: preparing a long report on the state of the department; putting the agenda together; and hosting the visitors. To prepare for the visit, the committee had regular weekly meetings for two months (September and October). Following the visit, I continued to interact extensively with the reviewers until the submission of the report in late December 2004.
10. Strategic Planning Committee, 2003-2004  
Developed the departmental compact plan for 2003-2004. The highest priority item, namely the allocation of **ten new TAs**, was **fully funded** by the College. The committee also planned the January 2004 faculty retreat, and suggested candidates for the position of Director of Undergraduate Programs to the Department Head.

11. Research Productivity Committee, 2003-2004  
Developed a set of policies to improve the department's research productivity, including the **new course buyout policy** which was adopted overwhelmingly by the faculty
12. Strategic Planning Committee, 2002-2003  
The committee put together a 25-page compact plan document which outlined a set of strategic directions for the department (I contributed about 80% of this document). The two highest priority items identified by the committee, namely the hiring of **nine (9) new faculty** in strategic areas and the allocation of **five (5) new TAs**, were **fully funded** by the College). The committee also crafted **new vision and mission statements** for the department, which were adopted overwhelmingly by the faculty, planned the January 2003 faculty retreat, and led the discussion on strategic issues.
13. CHAIR, Faculty Recruiting Committee, 2001-2002  
Succeeded in hiring our top candidate, Prof. Khaled Harfoush
14. CHAIR, Faculty Recruiting Committee, 2000-2001  
Succeeded in hiring our top candidate, Prof. Rudra Dutta
15. Peer Evaluation Committees: Conducted teaching evaluations of
  - Prof. Helen Gu (2018)
  - Prof. Guoliang Jin (2017)
  - Prof. Raju Vatsavai (2015)
  - Prof. Vincent Freeh (2014)
  - Prof. Kristy Boyer (2013)
  - Prof. Sarah Heckman (2013)
  - Prof. Rudra Dutta (2012)
  - Prof. Khaled Harfoush (2012)
  - Prof. Matthias Stallmann (2011)
  - Prof. Helen Gu (2011)
  - Prof. Nagiza Samatova (2008)
  - Prof. Munindar Singh (2008)
  - Prof. Purush Iyer (2007)
  - Prof. Frank Mueller (2007)
  - Prof. Vincent Freeh (2005)
  - Prof. Jaewoo Kang (2005)
  - Prof. Richard Mayr (2005)
  - Prof. Peng Ning (2005)
  - Prof. Injong Rhee (2002)
  - Prof. Munindar Singh (2002)
  - Prof. Purush Iyer (2001)
  - Prof. Robert StAmant (2000)
  - Prof. Injong Rhee (1999)
16. Graduate Student Admissions Committee, 1996-1998
17. PhD Qualifying Exam Committee, 1994-1996



OPERATIONS RESEARCH COMMITTEES

1. Graduate Student Admissions Committee, 2012-2013
2. Graduate Student Admissions Committee, 2005-2007

DEPARTMENT OF ELECTRICAL AND COMPUTER ENGINEERING COMMITTEES

1. Faculty Recruiting Committee, 1999-2000  
Succeeded in hiring our top candidate, Prof. Mike Devetsikiotis

## 4.2 State and Regional Activities

- PROMOTION OF COMPUTER SCIENCE RESEARCH AND EDUCATION PROGRAMS

I have held a large number of meetings and discussions with local industry, including Alcatel, Cisco, IBM, Lucent, Marconi, Nortel, etc., to promote the department's research and degree programs, and I have held several informational sessions for prospective students

- DISTANCE EDUCATION COURSES

I have offered several courses through NCSU's Engineering Online (formerly Video Based Engineering Education - VBEE) program, which have been well-received by distance education students in the State of North Carolina

- EXTENSION COURSE

In Spring 1998, I offered INTERNET PROTOCOLS (CSC/ECE 573) as an extension course at RTI, RTP; more than twenty (20) part-time students enrolled

## 4.3 National and International Activities

I have been, and continue to be, involved in numerous national and international activities in various roles:

- APPOINTED POSITIONS

1. Chair, IEEE Communications Society Distinguished Lecturer Selection Committee, 2016-2017
2. Vice Chair, IEEE Communications Society Technical and Educational Activities Council, 2016-2017
3. Vice Chair, IEEE Communications Society TCs Recertification Committee, 2016-2017

- ELECTED POSITIONS

1. CHAIR, IEEE Optical Networking Technical Committee (ONTC), 2016-present
2. MEMBER, Advisory Board, H2020 European Project FALCON, 2014-present
3. MEMBER, International Advisory Committee, Scuola Superiore Sant'Anna, Pisa, Italy, 2013-2014
4. VICE CHAIR, IEEE Optical Networking Technical Committee (ONTC), 2014-2015
5. SECRETARY, IEEE Optical Networking Technical Committee (ONTC), 2012-2013

- EDITORIAL BOARDS

1. FOUNDED EDITOR-IN-CHIEF, *IEEE Networking Letters*, 2018-present
2. FOUNDED EDITOR-IN-CHIEF, *Optical Switching and Networking*, Elsevier, 2004-2017  
The *Optical Switching and Networking* (OSN) journal started publication in January 2005. The planning process for the journal took more than eighteen months, during which I participated in a market research study by Elsevier; I defined the aims and scope of the journal; I invited Prof. Fabio Neri to serve as co-Editor-in-Chief and together assembled an excellent editorial board; I engaged in extensive marketing efforts; I put together the first issue; and I worked with the BROADNETS 2004 organizers to publish a special issue with the best papers from the conference. The OSN journal has been well-received by the research community. It received an impact factor of 1.865 for 2016 (JCR Thomson Reuters)
3. *IEEE/OSA Journal of Communications and Networking*, 2010-2012
4. *JCM Journal of Communications*, Special Issue on the “Advances in Communications and Networking,” vol. 6, no. 9, December 2011.
5. *IEEE/ACM Transactions on Networking*, 2000-2004
6. *Computer Networks*, 2001-2004
7. *Optical Networks*, 2000-2004
8. *IEEE Journal on Selected Areas in Communications*, Special Issue on “Protocols for Next Generation Optical WDM Networks,” vol. 18, no. 10, October 2000.

- CONFERENCE ORGANIZING COMMITTEES

13. GENERAL CO-CHAIR, *IEEE MASS 2018*, Chengdu, China, October 9-12, 2018.
12. TECHNICAL PROGRAM CO-CHAIR, *NETWORKS 2018*, Cartagena, Spain, September 10-12, 2018.
11. TECHNICAL PROGRAM CO-CHAIR, *IEEE ICC 2017, Optical Networks and Systems (ONS) Symposium*, Paris, France, May 21-25, 2017.
10. GENERAL CO-CHAIR, *IEEE ICNP 2014*, Raleigh, NC, October 21-24, 2014.
9. GENERAL CHAIR, *ICCCN 2013*, Nassau, Bahamas, July 30-August 2, 2013.
8. TECHNICAL PROGRAM CO-CHAIR, *ICCCN 2011*, Maui, Hawaii, August 1-4, 2011.  
Under my leadership, the event set a number of records in ICCCN history. The main conference received a record 452 paper submissions to twelve tracks. The TPC generated more than 1330 reviews, and a record 134 papers were accepted for an acceptance rate of 29.6%. Including workshop submissions, more than 600 papers were submitted (another record) and the event was attended by more than 350 registered participants (also a record).
7. TECHNICAL PROGRAM CO-CHAIR, *IEEE Globecom 2010, Optical Networks and Systems (ONS) Symposium*, Miami, FL, November 28-December 3, 2010.  
Under my leadership, the ONS Symposium set several records in *Globecom/ICC* history, including number of submissions (148), number of accepted papers (48), number of reviews per paper (3.75), and TPC size.
6. TECHNICAL PROGRAM CO-CHAIR, *IEEE ICCCN 2009, Internet Services, Systems and Applications (ISSA) Track*, San Francisco, CA, August 2-6, 2009.  
Under my leadership, the ISSA track received a record number of submissions for the 2009 event.

5. GENERAL CO-CHAIR, *4th IEEE International Conference on Broadband Communications, Networks, and Systems (IEEE BROADNETS 2007)*, Raleigh, NC, September 10-13, 2007

The conference continued to expand and received a record number of submissions for the 2007 edition. It was by far the largest conference in the field of computer networking to ever take place in the Research Triangle area, attracting attendees from more than twenty countries.

4. GENERAL CO-CHAIR, *14th IEEE Workshop on Local and Metropolitan Area Networks (LANMAN 2005)*, Chania, Crete, Greece, September 18-21, 2005.

Following the tradition of the *IEEE LANMAN Workshop*, after serving as the Technical Program Chair in 2004, I served as the General Chair for the 2005 workshop. Specifically, I was involved in several activities: I recruited K.K. Ramakrishnan of AT&T Labs, a well-known researcher recently elevated to IEEE Fellow, to serve as Technical Program Chair; I recruited Prof. Michael Paterakis to serve as General co-Chair with a focus on local arrangements; I worked with IEEE and the technical committee on computer communications (TCCC) to secure full financial sponsorship by the IEEE Communications Society; I engaged in extensive marketing efforts; I secured two corporate sponsors, Intel and Ericsson Southeast Europe; I was involved in the paper review process; and I led and coordinated all efforts to put together an excellent program, including inviting a keynote speaker and organizing panels on important current research topics.

The workshop set another **record** by receiving **112 submissions**, despite both increasing the paper length and having the meeting at a site which is a bit out-of-the-way. The committee selected 36 papers for presentation. The keynote speech was delivered by Dr. James Roberts of France Telecom. A panel on “Ethernet Everywhere” included experts from Cisco, Intel, Accton, and McData, Tacit Networks, and Copan Systems.

3. TECHNICAL PROGRAM CO-CHAIR, *First Workshop on Traffic Grooming (WTG-2004)*, October 29, 2004, San Jose, CA

This was the first ever workshop on Traffic Grooming, and attracted sixteen submissions from five countries, nine of which were selected for presentation at the workshop and were published in the proceedings. The workshop included a panel on “Future Trends in Traffic Grooming” in which four of the best-known experts in the field participated: Prof. Biswanath Mukherjee (University of California, Davis), Dr. Ori Gerstel (Cisco), Prof. Galen Sasaki (University of Hawaii), and Dr. Slobodanka Tomic (Technical University of Vienna).

2. TECHNICAL PROGRAM CHAIR, *13th IEEE Workshop on Local and Metropolitan Area Networks (LANMAN 2004)*, April 25-28, 2004, San Francisco, CA

The workshop received a **record 109 submissions**, an increase of **73%** over the 63 submissions received by the previous organization. The committee selected 48 papers for presentation, and also selected two papers to share the best paper award. The keynote speech was delivered by Dr. Lawrence Roberts, Chairman and CTO of Caspian Networks, an Internet pioneer who is widely considered as one of the four “fathers of the Internet.”

1. TECHNICAL PROGRAM CO-CHAIR, *Networking 2004*, May 9-14, 2004, Athens, Greece

The conference received a **record 539 submissions**, an increase of **71%** over the 315 submissions received by the previous organization, and **30%** more than the 416 submissions received by the next conference, *Networking 2005*. I chaired the track on “Networking Technologies, Services, and Protocols,” which received the most submissions (224). The committee selected 104 papers for full presentation and 40 papers for poster presentation. One paper was selected for the best paper award. Three keynote speeches were delivered by Prof. Ian Akyildiz, Dr. Jim Roberts, and Prof. Leandros Tassioulas. The program also included 8 tutorials and 4 workshops.

- Committee of Visitors (CoV)
  1. DoE Networking Research Program, October 10-11, 2011
- NATIONAL SCIENCE FOUNDATION:
  1. Research Planning
    - (a) US-EC research planning in Next Generation Internet, 2017
    - (b) US-EC research planning in Optical Networking, 2005
  2. Panel Participation
    - (a) NeTS Small panel, April 2016
    - (b) NeTS Medium panel (virtual), April 2015
    - (c) NeTS Medium panel (virtual), April 2014
    - (d) NeTS MRI panel (virtual), April 2013
    - (e) NeTS panel (virtual), April 2013
    - (f) NeTS panel, April 2012
    - (g) NeTS panel, December 2009
    - (h) NeTS panel, May 2009
    - (i) NeTS panel, June 2008
    - (j) CPATH panel, May 2008
    - (k) SBIR/STTR panel, September 2005
    - (l) SBIR/STTR panel, August 2003
    - (m) ITR panel, May 2003
    - (n) ANR panel, December 2002
    - (o) Special Programs in Networking Research panel, May 2001
    - (p) NCR CAREER panel, November 1997
- BEST PAPER AWARD COMMITTEES:
  1. IEEE Communications Society Charles Kao Award for Best Optical Communications and Networking Paper, 2015-17
  2. IEEE ICC 2016
  3. ICNC 2015
  4. ACP 2012
  5. IEEE INFOCOM 2011
  6. IEEE ANTS 2010
  7. ACP 2009
- TECHNICAL PROGRAM COMMITTEE (TPC) MEMBER:  
**2018**
  1. IEEE GLOBECOM 2018, Abu Dhabi
  2. OSA NETWORKS 2018, Zurich, Switzerland
  3. IEEE LANMAN 2018, Washington, DC

4. IEEE ICC 2018, Kansas City, MO
5. 22nd Conference on Optical Network Design and Modeling (ONDM) 2018, Dublin, Ireland

**2017**

1. CoNext Cloud-Assisted Networking (CAN) 2017, Seoul, South Korea
2. IEEE GLOBECOM 2017, Singapore
3. OSA NETWORKS 2017, New Orleans, LA
4. IEEE ICC 2017, Paris, France
5. IEEE LANMAN 2017, Osaka, Japan
6. 21st Conference on Optical Network Design and Modeling (ONDM) 2017, Budapest, Hungary
7. European Conference on Networks and Communications (EuCNC) 2017, Oulu, Finland

**2016**

1. IEEE ICC 2016, Kuala Lumpur, Malaysia
2. IEEE GLOBECOM 2016, Washington, DC
3. IEEE LANMAN 2016, Rome, Italy
4. Networks 2016, Montreal, Canada
5. 20th Conference on Optical Network Design and Modeling (ONDM) 2016, Cartagena, Spain
6. ACM CoNEXT Cloud-Assisted Networking (CAN) Workshop 2016, Irvine, CA
7. International Conference on Telecommunications and Multimedia (TEMU) 2016, Heraklion, Crete
8. European Conference on Networks and Communications (EuCNC) 2016, Athens, Greece

**2015**

1. IEEE ICC 2015, London, UK
2. IEEE GLOBECOM 2015, San Diego, California
3. Design and Reliable Communication Networks (DRCN) Conference 2015, Kansas City, Missouri
4. 19th Conference on Optical Network Design and Modeling (ONDM) 2015, Pisa, Italy
5. IEEE LANMAN 2015, Beijing, China
6. European Conference on Networks and Optical Communications (NOC) 2015, London, UK
7. European Conference on Networks and Communications (EuCNC) 2015, Paris, France
8. IEEE Conference on Network Function Virtualization and Software Defined Networks (NFV-SDN) 2015, San Francisco
9. International Broadband and Photonics Conference (IBP) 2015, Bali, Indonesia

**2014**

1. IEEE ICC 2014, Sydney, Australia
2. IEEE GLOBECOM 2014, Austin, Texas
3. International Conference on Telecommunications and Multimedia (TEMU) 2014, Heraklion, Crete

4. IEEE LANMAN 2014, Reno, Nevada
5. 18th Conference on Optical Network Design and Modeling (ONDM) 2014, Stockholm, Sweden
6. European Conference on Networks and Optical Communications (NOC) 2014, Milan, Italy

**2013**

1. IEEE INFOCOM 2013, Torino (advisory TPC member, with additional responsibilities)
2. IEEE International Conference on Network Protocols (ICNP) 2013, Goettingen, Germany
3. IEEE GLOBECOM 2013, Atlanta, Georgia
4. IEEE ICC 2013, Budapest, Austria
5. IEEE LANMAN 2013, Brussels, Belgium
6. International Teletraffic Congress (ITC) 2013, Shanghai, China
7. Workshop on “Software-Defined Networking on Optics”, co-located with IEEE GLOBECOM 2013
8. International Workshop on Optical Networking (iWON 2013), co-located with IEEE GLOBECOM 2013

**2012**

1. IEEE INFOCOM 2012, Orlando, Florida
2. IEEE GLOBECOM 2012, Anaheim, CA
3. IEEE ICC 2012, Ottawa, Canada
4. IFIP NETWORKING 2012, Prague, Czech Republic
5. International Conference on Computer Communications and Networks (ICCCN) 2012, Munich
6. IEEE INFOCOM Workshop on High Speed Networks 2012, Orlando, Florida
7. Networks 2012, Rome, Italy
8. International Conference on Telecommunications and Multimedia (TEMU) 2012, Heraklion, Crete
9. International Conference on Computing, Networking and Communications (ICNC) 2012, Maui, Hawaii

**2011**

1. IEEE INFOCOM 2011, Shanghai, China (area TPC member, with additional responsibilities)
2. IEEE GLOBECOM 2011, Houston, Texas
3. IEEE ICC 2011, Kyoto, Japan
4. Euro NGI 2011, Kaiserslautern, Germany
5. Design and Reliable Communication Networks (DRCN) Conference 2011, Krakow, Poland
6. Advanced Networks and Telecommunication Systems (ANTS) 2011, Bangalore, India
7. IEEE LANMAN Workshop 2011, Chapel Hill, USA
8. Workshop on Reliable Networks Design and Modeling (RNDM) 2011, Budapest, Hungary
9. International Conference on Communications (ICT) 2011, Ayia Napa, Cyprus

**2010**

1. IEEE INFOCOM 2010, San Diego, CA
2. IEEE GLOBECOM 2010, Miami, Florida
3. IEEE ICC 2010, Cape Town, South Africa
4. IFIP NETWORKING 2010, Chennai, India
5. Euro NGI 2010, Paris, France
6. OFC/NFOEC 2010, San Diego
7. INFORMS Telecom 2010, Montreal, Canada
8. Asia Communications and Photonics (ACP) 2010, Shanghai, China
9. Networks 2010, Warsaw, Poland
10. IEEE LANMAN Workshop 2010, New Jersey, USA
11. Workshop on Reliable Networks Design and Modeling (RNDM) 2010, Moscow, Russia
12. Workshop on Re-Architecting the Internet (ReArch) 2010, Philadelphia, PA

**2009**

1. IEEE INFOCOM 2009, Rio de Janeiro, Brasil
2. IEEE GLOBECOM 2009, Honolulu, HI
3. IEEE ICC 2009, Dresden, Germany
4. OFC/NFOEC 2009, San Diego
5. 13th Conference on Optical Network Design and Modeling (ONDM) 2009, Braunschweig, Germany
6. Euro NGI 2009, Aveiro, Portugal
7. Design and Reliable Communication Networks (DRCN) Conference 2009, Washington, DC
8. Advanced Networks and Telecommunication Systems (ANTS) 2009, New Delhi, India
9. Workshop on Re-Architecting the Internet (ReArch) 2009, Rome, Italy
10. Workshop on Optical Burst Switching (WOBS) 2009, Madrid, Spain

**2008**

1. IEEE INFOCOM 2008, Phoenix, Arizona (area TPC member, with additional responsibilities)
2. IEEE GLOBECOM 2008, New Orleans, LA
3. IEEE ICC 2008, Beijing, China
4. IEEE International Conference on Network Protocols (ICNP) 2008, Orlando, Florida
5. OFC/NFOEC 2008, San Diego
6. Euro NGI 2008, Krakow, Poland
7. Networks 2008, Budapest, Hungary
8. Advanced Networks and Telecommunication Systems (ANTS) 2008, Mumbai, India
9. IEEE INFOCOM Workshop on High Speed Networks 2008, Phoenix, Arizona
10. IEEE LANMAN Workshop 2008, Cluj-Napoca, Romania

**2007**

1. IEEE INFOCOM 2007, Anchorage, Alaska
2. IEEE GLOBECOM 2007, Washington, DC
3. IEEE ICC 2007, Glasgow, UK
4. IEEE LANMAN Workshop 2007, New York, USA
5. IFIP NETWORKING 2007, Atlanta, Georgia
6. International Workshop on GRID over Optical Burst Switching Networks (GOBS) 2007, Athens, Greece

#### **2006**

1. IEEE GLOBECOM 2006, San Francisco, CA
2. IEEE ICC 2006, Istanbul, Turkey
3. IFIP NETWORKING 2006, Coimbra, Portugal
4. International Conference on Computer Communications and Networks (ICCCN) 2006, Arlington, Virginia
5. BROADNETS 2006, San Jose, CA

#### **2005**

1. IEEE GLOBECOM 2005, St. Louis, Missouri
2. IFIP NETWORKING 2005, Waterloo, Canada
3. IFIP Conference on Optical Network Design and Modeling (ONDM) 2005, Milan, Italy
4. BROADNETS 2005, Boston, MA
5. IEEE Workshop on High Performance Switching and Routing (HPSR) 2005, Hong Kong
6. IEEE Workshop on Community Networks and First Mile Solutions (COMNETS) 2005, Boston
7. Workshop on Optical Burst Switching (WOBS) 2005, Boston, MA
8. International Workshop on Optical Networks Control and Management (ONCM) 2005, Oslo, Norway

#### **2004**

1. IEEE INFOCOM 2004, Hong Kong
2. IEEE GLOBECOM 2004, Dallas, Texas
3. BROADNETS 2004, San Jose, CA
4. IEEE Workshop on High Performance Switching and Routing (HPSR) 2004, Phoenix, Arizona
5. Workshop on Optical Burst Switching (WOBS) 2004, San Jose, CA
6. International Workshop on Optical Networks Control and Management (ONCM) 2004, Montreal, Canada

#### **2003**

1. IEEE GLOBECOM 2003, San Francisco, CA
2. IEEE ICC 2003, Anchorage, USA



3. OPTICOMM 2003, Dallas, Texas
4. IEEE Workshop on High Performance Switching and Routing (HPSR) 2003, Torino, Italy
5. Workshop on Optical Burst Switching (WOBS) 2003, Dallas, Texas
6. International Workshop on Optical Networks Control and Management (ONCM) 2003, Kaohsiung, Taiwan

**2002**

1. OPTICOMM 2002, Boston, MA

**2001**

1. OPTICOMM 2001, Denver, Colorado

**2000**

1. OPTICOMM 2000, Dallas, Texas

**1999**

1. SPIE Conference on All-Optical Networking 1999, Boston, MA

**1998**

1. IEEE INFOCOM 1998, San Francisco, CA
2. SPIE Conference on All-Optical Networking 1998, Boston, MA

**1997**

1. IEEE INFOCOM 1997, Kobe, Japan
2. IEEE International Conference on Network Protocols (ICNP) 1997, Atlanta, Georgia

**1996**

1. IEEE INFOCOM 1996, San Francisco, CA

- WORKSHOPS CHAIR, OPTICOMM 2002
- SESSION CHAIR at several conferences and workshops
- PANEL ORGANIZER at several conferences and workshops
- NOMINATOR for elevation to IEEE Fellow for:
  1. Prof. Pin-Han Ho, University of Waterloo, 2018
- REFERENCE for elevation to IEEE Fellow for:
  1. Prof. Nasir Ghani, University of South Florida, 2018
  2. Prof. David Tipper, University of Pittsburgh, 2018
  3. Prof. Martin Maier, University of Quebec, 2018, 2016
  4. Prof. Tarek El-Bawab, Jackson State University, 2017,18
  5. Prof. Mario Pickavet, Ghent University, Belgium, 2017

6. Prof. Lena Wosinska, KTH Royal Institute of Technology, Sweden, 2017
  7. Prof. Dimitra Simeonidou, University of Bristol, 2015
  8. Prof. Tilman Wolf, UMass, 2014, 2015
  9. Prof. Debasish Datta, Indian Institute of Technology, Kharagpur, 2012, 2013, 2015
  10. Prof. Admela Jukan, Technical University of Braunschweig, 2013, 2014
  11. Prof. Suresh Subramaniam, George Washington University, 2013, 2014
  12. Dr. Puneet Sharma, HP Labs, 2013
  13. Prof. Krishna Sivalingam, Indian Institute of Technology, Madras, 2013
  14. Prof. Lakshman Tamil, University of Texas at Dallas, 2012
- EXTERNAL REVIEWER for the promotion to Full Professor for:
    23. Prof. Marija Furdek, KTH, Sweden, 2017
    22. Prof. Piero Castoldi, Scuola Superiore Sant'Anna, 2016
    21. Prof. Vijay Sivaraman, University of New South Wales, 2016
    20. Prof. James Martin, Clemson University, 2015
    19. Prof. Lan Wang, University of Memphis, 2015
    18. Prof. Hamed M. K. Alazemi, Kuwait University, Kuwait, 2014
    17. Prof. Nail Akar, Bilkent University, Turkey, 2014
    16. Prof. Abdallah Shami, University of Western Ontario, 2013
    15. Prof. Chadi Assi, Concordia University, 2012
    14. Prof. Nasir Ghani, University of New Mexico, 2012
    13. Prof. Yao Liang, Indiana University-Purdue University Indianapolis (IUPUI), 2012
    12. Prof. Xiaobo Zhou, University of Colorado, Colorado Springs, 2012
    11. Prof. Neo Antoniadis, City University of New York, 2012
    10. Prof. Ezhan Karasan, Bilkent University, Turkey, 2011
    9. Prof. Ibrahim Matta, Boston University, 2011
    8. Prof. Byrav Ramamurthy, University of Nebraska, Lincoln, 2010
    7. Prof. Jason Jue, University of Texas, Dallas, 2009
    6. Prof. Bin Wang, Wright State University, 2009
    5. Prof. Arunita Jaekel, University of Windsor, 2007
    4. Prof. Michael H. MacGregor, University of Alberta, 2007
    3. Prof. Suresh Subramaniam, George Washington University, 2007
    2. Prof. Krishna Sivalingam, University of Maryland, 2005
    1. Prof. Andrea Fumagalli, University of Texas, Dallas, 2004
  - EXTERNAL REVIEWER for the promotion to Associate Professor with tenure for:
    27. Prof. Jamie Payton, Temple University, 2017

26. Prof. Fatna Belqasmi, Zayed University, UAE, 2017
  25. Prof. Mark Feuer, City University of New York, 2016
  24. Prof. Eric Manley, Drake University, 2014
  23. Prof. Mouhammd Al-Kasassbeh, Mutah University, Jordan, 2013
  22. Prof. Jamal Nahar Banih Salameh, Mutah University, Jordan, 2013
  21. Prof. Spyros Denazis, University of Patras, Greece, 2013
  20. Prof. Murat Yuksel, University of Nevada, Reno, 2011
  19. Prof. Yuhua Chen, University of Houston, 2010
  18. Prof. John Doucette, University of Alberta, Canada, 2010
  17. Prof. Nasir Ghani, University of New Mexico, 2009
  16. Prof. Georgios Ellinas, University of Cyprus, 2009
  15. Prof. Martin Maier, Institut National de la Recherche Scientifique (INRS), Montreal, 2009
  14. Prof. Vinod Vokkarane, University of Massachusetts, Dartmouth, 2009
  13. Prof. Lu Ruan, Iowa State University, 2008
  12. Prof. James Martin, Clemson University, 2007
  11. Prof. Srinivasan Ramasubramanian, University of Arizona, 2007
  10. Prof. Anwar Alyatama, Kuwait University, 2006
  9. Prof. Yao Liang, Virginia Tech, 2006
  8. Prof. Oliver Wu, University of Illinois at Chicago, 2005
  7. Prof. Mike MacGregor, University of Alberta, 2004
  6. Prof. Bin Wang, Wright State University, 2004
  5. Prof. Jason Jue, University of Texas, Dallas, 2003
  4. Prof. Ezhan Karasan, Bilkent University, Turkey, 2003
  3. Prof. Byrav Ramamurthy, University of Nebraska, Lincoln, 2002
  2. Prof. Suresh Subramaniam, George Washington University, 2002
  1. Prof. Andrea Fumagalli, University of Texas, Dallas, 2000
- REVIEWER for several books:
    1. Medhi, D., Ramasamy, K. "Network Routing: Algorithms, Protocols, and Architectures." Morgan Kaufmann, 2014.
    2. Janevski, T. "Next Generation Networks and Future Internet." John Wiley and Sons, 2012.
    3. Chiang, M. The Connected World: A Tour of Networked Life in 20 Questions. Cambridge University Press, 2011.
    4. Murthy, C.S.R., Tamarapalli, V. Optical Burst Switching Networks: An Analytical Approach. Springer, 2010.
    5. Venugopal, S. Data Structures Outside-In Wiley, 2006.
    6. Mukherjee, B. Optical WDM Networks. Springer, 2005.

7. Zhu, K., Zhu, H., Mukherjee, B. Traffic Grooming in Optical WDM Mesh Networks. Springer, 2005.
  8. Jue, J., Vokkarane, V. Optical Burst Switching Networks. Springer, 2005.
  9. Labourdette, J.F. Survivable Routing in WDM Networks. Wiley, 2005.
- REVIEWER for the NSF, all major journals and conferences in the networking field
  - PANELIST, IEEE Admission and Advancement Meeting
    - March 2007
    - March 2002

## 4.4 Media Coverage

- COVERAGE OF THE “SCALABLE OPTICAL NETWORK DESIGN” PROJECT

This project, funded by NSF in 2011, has been featured in national and international media:

1. “Model Finds Optimal Fiber Optic Network Connections 10,000 Times More Quickly.” NC State News Release, June 28, 2011.
2. “Making the high-speed connection.” NC State Technician, July 13, 2011.
3. OSA Spotlight on Optics featured Journal Article #7 in September 2011 (<http://www.opticsinfobase.org/spotlight/summary.cfm?uri=jocn-3-7-577>)
4. Partial list of online references (links available from my homepage):  
Physics Inventions – Science Daily – R&D Mag – PhysOrg.com – My Tech Voice – Space Daily – Silo Breaker – First Science News – OptoIQ – Softpedia – Science ’n’ Technology Updates – Lab Spaces – Red Orbit – EurekAlert – Heavy Reading – Light Reading

- COVERAGE OF THE “NETWORK INNOVATION THROUGH CHOICE” PROJECT

This collaborative project involves PI teams from four institutions: NC State, RENCI, University of Kentucky, and University of Massachusetts. It was funded by the NSF in September 2011 for a total of \$2.7M (\$644K to NC State).

1. “The Future of the Internet is...a la Carte.” NC State News Release, August 9, 2012. Also on ACM TechNews, August 13, 2012.
2. “NC State Part Of Grant To Design Blueprint For Future Internet.” NC State News Release, October 12, 2011.
3. “Re-twining the Future Internet.” NC State Technician, November 8, 2011.
4. UNC Public Radio interviewed the three local PIs (Rouskas, Dutta, Baldine).

- COVERAGE OF THE “JUMPSTART” PROJECT

Our NSA-funded Jumpstart project on optical burst switching (OBS) has received extensive coverage world-wide. A partial list of online references to Jumpstart includes:

1. Local Tech Wire: <http://www.localtechwire.com/article.cfm?u=6591>
2. Lightwave Media (search under key “MCNC”)
3. Light Reading: [http://www.lightreading.com/document.asp?site=lightreading&doc\\_id=45541](http://www.lightreading.com/document.asp?site=lightreading&doc_id=45541)
4. Government Computer News: [http://www.gcn.com/vol1\\_no1/daily-updates/24549-1.html](http://www.gcn.com/vol1_no1/daily-updates/24549-1.html)
5. ACM: <http://www.acm.org/technews/articles/2004-6/0109f.html#item2>
6. Telephony Online: [http://telephonyonline.com/news/telecom\\_new\\_optical\\_protocol/index.html](http://telephonyonline.com/news/telecom_new_optical_protocol/index.html)

- THE NEWS AND OBSERVER

1. “Internet’s future under construction,” Christina Dyrness, March 13, 2000  
A one-half page profile of my research, in the Business Section
2. “Aiming high with low profile,” Dan Egbert, August 29, 2000  
A two-page article highlighting our MCNC-NCSU HELIOS project on Optical Networks

3. “People,” November 4, 1997

An announcement of my NSF CAREER Award appeared in the ONCAMPUS Section

4. “Light division”, Christina Dyrness, March 13, 2000

I was interviewed for, and quoted in, this article on Optical Network research and development in the Triangle area

5. “Two acquisitions put Cisco in fiber-optic game,” Christina Dyrness, August 27, 1999

I was interviewed for, and quoted in, this article on Cisco’s entrance in the Optical Network arena

6. “Lucent exits Centennial; most workers lose jobs,” Dan Egbert, August 24, 2001

I was interviewed for, and quoted in, this article on the closing of Lucent’s facility on Centennial campus

7. “Lucent may leave Centennial space,” Dan Egbert, August 17, 2001

I was interviewed for, and quoted in, this article on the closing of Lucent’s facility on Centennial campus

8. “Lucent brings its act here,” Chris O’Brien, April 14, 1999

I was interviewed for, and quoted in, this article on Lucent’s move to Centennial campus

9. “Lucent eyes Centennial Campus,” Dudley Price and Chris O’Brien, January 29, 1999

I was interviewed for, and quoted in, this article on Lucent’s move to Centennial campus

- UNC PUBLIC TV

1. February 3, 1999, and May 12, 1999

I was interviewed for a documentary on the history and development of the Research Triangle Park