

ROBERT D. DOVERSPIKE

PUBLICATION LIST

JOURNALS, BOOKS, CONFERENCES (WITH PUBLISHED PROCEEDINGS)

- Doverspike, R. D., C. E. Lemke, "A Partial Characterization of a Class of Matrices Defined by Solutions to the Linear Complementarity Problem," *Mathematics of Operations Research*, Vol. 7 (2), 1982, pp. 272-294.
- Doverspike, R. D. , "Some Perturbation Results for the Linear Complementarity Problem," *Mathematical Programming*, Vol. 23 (2), 1982, pp. 181-192.
- Doverspike, R. D. , "Multiplex Bundler Algorithms for the Network Planning System," Proceedings of 3rd International Network Planning Symposium (Networks'86), Innisbrook, Florida, June, 1986, pp. 29-32.
- Doverspike, R. D. , "A Terminal Bay Relief Strategy," *Probability in the Engineering and Informational Sciences*, Vol. 1, 1987, pp. 481-496.
- Sen, S., R. D. Doverspike, S. I. Vohnout, "Diverse Routing in the Unified Facilities Optimizer," Proceedings of *GLOBECOM '89*, pp. 9.5.1 - 9.5.4., Dallas, Texas, November 1989.
- Sen, S., R. D. Doverspike, M. S. Dunatunga, "Unified Facilities Optimizer," University of Arizona Department of Systems and Industrial Engineering Technical Report, January 1989.
- Doverspike, R. D. , "Algorithms for Multiplex Bundling in a Telecommunications Network," *Operations Research*, Vol. 39 (6), 1991, pp. 925-944.
- Doverspike, R. D. , "A Multi-layered Model for Survivability in Intra-LATA Transport Networks," Proceedings of *GLOBECOM '91*, pp. 2025-2031, Phoenix, Arizona, December 1991.
- Doverspike, R. D., C. D. Pack, "Using SONET for Dynamic Bandwidth Management In Local Exchange Networks," Proceedings of 5th International Network Planning Symposium (*Networks'92*), Kobe Japan, May 1992, pp. 73-78.
- Wilson, B. J., R. D. Doverspike, "A Network Control Architecture for Bandwidth Management," Proceedings of *ICC'92*, Chicago, Illinois, June 1992, pp. 347.2.1-347.2.7.
- Kane-Esrig, Y., G. Babler, R. Clapp, R. Doverspike, et. al., "Survivability Risk Analysis and Cost Comparison of SONET Architectures," Proceedings of *GLOBECOM '92*, pp. 841-846, Orlando, Florida, December 1992.
- Castaldo, P. J., V. P. Chaudhary, R. D. Doverspike, B. J. Wilson, "A Better Path to Bandwidth Management," *Bellcore Exchange*, March/April 1992, pp.14-18.
- Doverspike, R. D., V. Jha, "Comparison of Routing Methods for DCS-Switched Networks," *Interfaces*, Special Issue on Telecommunications, Vol. 23 (2), 1993, pp. 21-34.
- ANSI Committee T1, "A Technical Report on Network Survivability Performance," T1A1.2 Technical Report T1A1.2/93-001R2, August 13, 1993. [I was principal contributor]
- Doverspike, R. D., J. Morgan, W. Leland, "Network Design Sensitivity Studies for Use of Digital Cross-Connect Systems in Survivable Network Architectures," *IEEE Journal of Selected Areas in Communications (JSAC)*, Issue on Integrity of Public Telecommunication Networks, Vol. 12 (1), 1994, pp. 69-78.

- Doverspike, R. D., B. J. Wilson, "Comparison of Capacity Efficiency of DCS Network Restoration Routing Techniques," *Journal of Network and Systems Management*, Vol. 2 (2), 1994, pp. 95-123.
- Krishnan, K., R. D. Doverspike, C. D. Pack, "Unified Models of Survivability for Multi-Technology Networks," in Fundamental Role of Teletraffic in the Evolution of Telecommunications Networks (J. Labetoulle, J. W. Roberts, eds.), Proceedings of (*ITC-14*), Elsevier, Antibes Juan-les-Pins, France, June 1994, pp. 655-666.
- Sen, S., R. D. Doverspike, S. Cosares, "Network Planning with Random Demand," *Telecommunications Systems*, Vol. 3 (1), 1994, pp. 11-30.
- Krishnan, K., R. D. Doverspike, C. D. Pack, "Improved Survivability with Multi-Layer Dynamic Routing," *IEEE Communications Magazine*, Vol. 33 (7), July 1995, pp. 62-69.
- Doverspike, R. D., M. Maeda, S. Narain, et. al., "Network Management Research in ATDNet," *IEEE Network Magazine*, July/August 1996, pp. 30-41.
- Doverspike, R. D., "Trends in Layered Network Management of ATM, SONET, and WDM Technologies For Network Survivability and Fault Management," *Journal of Network and Systems Management*, Vol. 5 (2), 1997, Special issue on Fault Management.
- Cooper, R. , R. Doverspike (Eds.), "Select Proceedings of the Third INFORMS Telecommunications Conference," *Telecommunications Systems*, Vol. 7 (1-3), 1997.
- Doverspike, R., G. Sahin, J. L. Strand, R. W. Tkach, "Fast Restoration in a Mesh Network of Optical Cross-connects," Proceedings of *OFC 1999*, San Diego, CA, February 1999.
- Doverspike, R., S. Phillips, J. Westbrook, "Future Transport Network Architectures," *IEEE Communications Magazine*, August, Vol. 37 (8), pp. 96-101, 1999.
- Doverspike, R., S. Phillips, J. Westbrook, "Transport Network Architectures in an IP World," Proceedings of BT-sponsored Alliance Engineering Symposium, Oslo, Norway, June 1999.
- Doverspike, R., S. Phillips, J. Westbrook, "Transport Network Architectures in an IP World," *IEEE INFOCOM-2000*, Tel-Aviv Israel. March 2000.
- Doverspike, R., I. Sanić (Eds.), **Heuristic Approaches For Telecommunications Network Management, Planning, And Expansion**, Kluwer Academic Publishers, 2000.
- Doverspike, R., J. Yates, "Challenges For MPLS in Optical Network Restoration," *IEEE Communications Magazine*, Vol. 39 (2), February 2001, pp. 89-97.
- Doverspike, R., J. Strand, G. Li, "Importance Of Wavelength Conversion In An Optical Network," *Optical Networks Magazine*, Vol 2 (3), May/June 2001, pp. 33-44.
- Li, G., J. Yates, R. Doverspike and D. Wang, "Experiments in Fast Restoration using GMPLS in Optical / Electronic Mesh Networks," Postdeadline Papers Digest, *OFC 2001*, Anaheim, CA, March 2001.
- Li, G., R. Doverspike and C. Kalmanek, "Fiber Span Failure Protection in Mesh Optical Networks," *Opticomm 2001*, Denver, CO, August 2001.
- Li, G., R. Doverspike and C. Kalmanek, "Fiber Span Failure Protection in Mesh Optical Networks," *Optical Networks Magazine*, Vol. 3, (3), May/June 2002, pp 21-31.
- Li, G., D. Wang, C. Kalmanek, R. Doverspike, "Efficient Distributed Path Selection for Shared Restoration Connections," *IEEE INFOCOM 2002*, New York.
- Pongpaibool, P., R. Doverspike, M. Roughan, J. Gottlieb, "Handling IP Traffic Surges via Optical Layer Reconfiguration," *OFC 2002*, Anaheim, CA, March 2002.
- Phillips, S., N. Reingold, R. Doverspike, "Network Studies in IP/Optical Layer Restoration," *OFC 2002*, Anaheim, CA, March 2002.
- Yu, Fang, D. Wang, R. Sinha, G. Li, R. Doverspike, C. Kalmanek, "Hybrid Centralized/Distributed Approach to Optical Network Restoration," *OFC 2003*, Atlanta, GA, March 2003.

- Li, G., D. Wang, C. Kalmanek, R. Doverspike, "Efficient Distributed Restoration Path Selection for Shared Mesh Restoration," *IEEE Transactions on Networking*, Vol. 11 (5), Oct 2003, pp 761-771.
- Yu, Fang, R. Sinha, R. Doverspike, B. Cortez, J. Strand, "Link Selection Schemes for Avoiding Channel Contention," 4th International Workshop on the Design of Reliable Communication Networks (*DRCN 2003*), October 2003, Banff Canada.
- Afferton, T., R. Doverspike, C. Kalmanek, K. K. Ramakrishnan, "Packet-Aware Transport for Metro Networks," *IEEE Communications Magazine*, March, 2004, pp. 120-127.
- Li, G., D. Wang, R. Doverspike, C. Kalmanek, J. Yates, "Economic Analysis of IP/Optical Network Architectures," *OFCC 2004*, Los Angeles, CA, March 2004.
- Afferton, T., R. Doverspike, C. Kalmanek, K. K. Ramakrishnan, "Packet-Aware Transport for Metro Networks," 13th IEEE Workshop on Local and Metropolitan Area Networks (*IEEE LANMAN 2004*), San Francisco, CA, April 2004.
- Wang, D., K.K. Ramakrishnan, C. Kalmanek, R. Doverspike, A. Smiljanic, "Congestion Control in Resilient Packet Rings," 12th IEEE International Conference on Network Protocols (*ICNP 2004*), Berlin, October 2004, pp. 108-117.
- Doverspike, R., K. K. Ramakrishnan, J. Wei, J. Pastor, C. Kalmanek, "Service-Driven Networks for Packet-Aware Transport," Invited Talk, *OFCC 2005*, Anaheim, CA, March 2005.
- Sinha, R., F. Yu, R. Doverspike, "Performance Study of Mesh Restoration," *OFCC 2005*, Anaheim, CA, March 2005.
- Wei, J., K.K. Ramakrishnan, R. Doverspike, J. Pastor, L. Aguirre-Torres, C. Kalmanek, T. Afferton, "Convergence through Packet-Aware Transport," *The Journal of Optical Networking*, Special Issue on Convergence, Vol. 5 (4), April 2006, pp. 221-245.
- Li, G., D. Wang, R. Doverspike, "Efficient Distributed MPLS P2MP Fast Reroute," *IEEE INFOCOM 2006*, Barcelona Spain.
- Darcie, T., R. Doverspike, S. Korotky, (Eds.) "Convergence", Special Issue of *The Journal of Optical Networking*, September, 2006.
- Li, G., D. Wang, J. Yates, R. Doverspike, C. Kalmanek, "IP Over Optical Cross-Connect Architectures," *IEEE Communications Magazine*, Vol. 45 (2), February 2007, pp. 34-39.
- Doverspike, R., G. Li, K. Oikonomou, K. K. Ramakrishnan and D. Wang, "IP Backbone Design for Multimedia Distribution: Architecture and Performance," *IEEE INFOCOM 2007*, April 2007, Anchorage Alaska.
- Oikonomou, K., K.K. Ramakrishnan, R. Doverspike, A. Chiu, M. Martinez-Heath, and R. Sinha, "Performability Analysis of Multi-Layer Restoration in a Satellite Network," Springer, Proceedings of *International Teletraffic Congress (ITC-20)*, Ottawa, Canada, June 2007, pp. 77-91.
- Chiu, A., G. Choudhury, R. Doverspike, and G. Li, "Restoration Design in IP over Reconfigurable All-Optical Networks," *NPC 2007*, Dalian, P.R. China, September 2007. (**Won "Best Paper" Award for Conference**)
- Doverspike, R. and P. Magill, "Chapter 13: Commercial Optical Networks, Overlay Networks and Services," in *Optical Fiber Telecommunications V B*, Elsevier 2008.
- Li, G., R. Doverspike, A. Chiu, M. Birk, D. Husa, N. Zanki, "On Transient-Constrained Wavelength Assignment," *IEEE INFOCOM Mini-Conference*, April, 2008, Phoenix, AZ.
- Yuksel, M., K.K. Ramakrishnan, and R. Doverspike, "Cross-Layer Failure Restoration for a Robust IPTV Service," *IEEE LANMAN-2008*, Cluj-Napoca, Romania. Sept, 2008. (**Won "Best Paper" Award for Conference**)

- Chiu, A., G. Choudhury, G. Clapp, R. Doverspike, J. Gannett, J. Klincewicz, G. Li, R. Skoog, J. Strand, A. Von Lehmen, D. Xu, "Network Design and Architectures for Highly Dynamic Next-Generation IP-over-Optical Long Distance Networks," *OFC 2009*, San Diego, CA, March 2009.
- Chiu A., R. Doverspike, G. Li, and J. Strand, "Restoration Signaling Protocol Design for Next-Generation Optical Network," *OFC 2009*, San Diego, CA, March 2009.
- Doverspike, R., G. Li, K. Oikonomou, K. K. Ramakrishnan, R. Sinha, D. Wang, C. Chase, "Designing a Reliable IPTV Network," *IEEE Internet Computing Magazine* May/June 2009, pp. 15-22.
- R. Luebben, G. Li, D. Wang, R. Doverspike, X. Fu, "Fast Rerouting for IP Multicast in Managed IPTV Networks," 17th *IEEE International Workshop on Quality of Service* (IWQoS'09) July 2009, Charleston, SC.
- Oikonomou, K., R. Sinha, and R. Doverspike, "Multi-Layer Network Performance and Reliability Analysis," *The International Journal of Interdisciplinary Telecommunications and Networking (IJITN)*, Vol. 1 (3), pp. 1-29, Sept 2009.
- Chiu, A., G. Choudhury, G. Clapp, R. Doverspike, J. Gannett, J. Klincewicz, G. Li, R. Skoog, J. Strand, A. Von Lehmen, D. Xu, "Network Design and Architectures for Highly Dynamic Next-Generation IP-over-Optical Long Distance Networks," *Journal of Lightwave Technology*, Vol. 27 (12), pp. 1878-1890, June 2009.
- Doverspike, R, Cortez, B, "Restoration in Carrier Networks," Proceedings of the *7th International Workshop on the Design of Reliable Communication Networks (DRCN)*, Oct 2009, Wash. D.C.
- Doverspike, R. K. K. Ramakrishnan, C. Chase, "Structural Overview of Commercial Long Distance IP Networks," Chapter 2 in *Guide to Reliable Internet Services and Applications*, C., Kalmanek, S. Misra, and R. Yang (Eds.), 1st Edition., Springer 2010, ISBN: 978-1-84882-827-8.
- Yuksel, M., K. K. Ramakrishnan, R. Doverspike, R. Sinha, G. Li, K. Oikonomou, and D. Wang, "Cross-Layer Techniques for Failure Restoration of IP Multicast with Applications to IPTV," *International Conference on Communication Systems and Networks* (COMSNETS-2010), Jan 2010, Bangalore, India.
- Clapp, G., R. Doverspike, R. Skoog, J. Strand, and Ann Von Lehmen, "Lessons Learned from CORONET," *OFC 2010*, San Diego, CA, March 2010.
- Zhang, X., M. Birk, A. Chiu, R. Doverspike, M. D. Feuer, P. Magill, E. Mavrogiorgis, J. Pastor, S. L. Woodward, J. Yates, "Bridge-and-Roll Demonstration in GRIPhON (Globally Reconfigurable Intelligent Photonic Network)," *OFC 2010*, San Diego, CA, March 2010.
- Li, Guangzhi, Angela Chiu, Robert Doverspike, Dahai Xu, Dongmei Wang, "Efficient Routing in Heterogeneous Core DWDM Networks," *OFC 2010*, San Diego, CA, March 2010.
- Sinha, R. K., K. K. Ramakrishnan, R. Doverspike, D. Xu, J. Pastor, A. Shaikh, S. Lee, C. Chase, "Proactive Network Management of IPTV Networks," *INM/WREN'10* Workshop on Research on Enterprise Networking, San Jose, CA, April 2010.
- Wang, Dongmei, David Lynch, Jian Li, John Klincewicz, Guangzhi Li, Robert Doverspike, Moshe Segal, "Design of Metro Ethernet Networks," *IEEE LANMAN-2010*, Long Branch, NJ, May 2010.
- Zhang, X., S. Lumetta, A. Chiu, R. Doverspike, "Heuristic Resource Optimization for Dynamic Wavelength Services on Optically Reconfigurable Networks," *ICCCN'10*, Zurich, Switzerland, August 2010.
- Zhang, X., S. Lumetta, A. Chiu, R. Doverspike, "Non-volatile Resource Provisioning for Mission Critical Dynamic Wavelength Services on Agile Optically Reconfigurable Networks," *MILCOM'10*, Baltimore, MD, Nov 2010.

- Zhang, X., S. Lumetta, A. Chiu, R. Doverspike, "Optimal Resource Provisioning for Dynamic Wavelength Services with Access Port Constraints," *Journal of Lightwave Technology*, Vol. 29 (5), pp. 756-769, 2011.
- Gerber, A. and R. Doverspike, "Traffic Types and Growth in Backbone Networks," *OFC 2011*, Los Angeles, CA, March 2011.
- Shen, Dong, Guangzhi Li, Angela Chiu, Dah-min Hwang, Dahai Xu, Dongmei Wang, Calvin C K Chan, Robert Doverspike, "On Multiplexing Optimization in DWDM Networks," *OFC 2011*, Los Angeles, CA, March 2011.
- Shen, Dong, Guangzhi Li, Dongmei Wang, Calvin C K Chan, Robert Doverspike, "Efficient Regenerator Placement and Wavelength Assignment in Optical Networks," *OFC 2011*, Los Angeles, CA, March 2011.
- Oikonomou, Kostas, Rakesh K. Sinha, Robert Doverspike, "A Network Design Technique for Selective Restoration," *OFC 2011*, Los Angeles, CA, March 2011.
- Li, Guangzhi, Dahai Xu, Dongmei Wang, Angela Chiu, Robert Doverspike, "Circuit Planning Tool over Heterogeneous Networks," Workshop on High Speed Networks (HSN), *INFOCOM 2011*, Shanghai, China, April 2011.
- Yuksel, M., K. K. Ramakrishnan, R. D. Doverspike, R. K. Sinha, G. Li, K. N. Oikonomou, and D. Wang, "Cross-Layer Failure Restoration of IP Multicast with Applications to IPTV," *Computer Networks*, Elsevier, April 2011.
- Suchara, Martin, Dahai Xu, Robert Doverspike, David Johnson, and Jennifer Rexford, "Network Architecture for Joint Failure Recovery and Traffic Engineering," *SIGMETRICS 2011*, San Jose, CA, June, 2011. (**Won "Best Student Paper" Award for Conference**).
- Chiu, A., G. Choudhury, G. Clapp, R. Doverspike, M. Feuer, J. Jackel, J. Klincewicz, G. Li, P. Magill, J. Simmons, R. Skoog, J. Strand, A. Von Lehmen, S. Woodward, and D. Xu, "Architectures and Protocols for Capacity-Efficient, Highly-Dynamic and Highly-Resilient Core Networks," *Journal of Optical Communications and Networking (JOCN)*, Vol. 4 (1), Jan, 2012, pp. 1-14.
- Mahimkar, A., A. Chiu, R. Doverspike, M. Feuer, P. Magill, E. Mavrogiorgis, J. Pastor, S. Woodward, J. Yates, "Bandwidth on Demand for Inter-Data Center Communication," ACM SIGCOMM HotNets Workshop, Boston, MA, Nov 2011.
- Mahimkar, A., A. Chiu, R. Doverspike, M. Feuer, P. Magill, E. Mavrogiorgis, J. Pastor, V. Sethi, D. Xu, S. Woodward, J. Yates, "Outage Detection and Dynamic Re-Provisioning in GRIPhoN – a Globally Reconfigurable Intelligent Photonic Network," *OFC 2012*, Los Angeles, CA, March 2012.
- Li, G., D. Wang, R. Doverspike, T. Gallivan, "On Shared Risk Link Group Optimization, *OFC 2012*, Los Angeles, CA, March 2012.
- Doverspike, R. and J. Yates, "Optical Network Management and Control," *Proceedings of the IEEE*, Vol. 100 (5), May 2012, pp. 1092 – 1104.
- Li, G., D. Wang, T. Gallivan, and R. Doverspike, "On Shared Risk Link Group Optimization," *Journal of Optical Communications and Networking (JOCN)*, Vol. 4 (11), Nov 2012, pp. B52-B57.
- Xu, D., G. Li, B. Ramamurthy, A. Chiu, D. Wang, R. Doverspike, "On Provisioning Diverse Circuits in Heterogeneous Multi-layer Optical Networks," *Elsevier Computer Communications - Special Issue on Reliable Network-based Services*, Vol. 36 (6), March 2013, pp. 689 – 697.
- Bathula, B., R. Sinha, A. Chiu, M. Feuer, G. Li, S. Woodward, W. Zhang, R. Doverspike, P. Magill, and K. Bergman, "Constraint Routing and Regenerator Site Concentration in ROADM Networks," *Journal of Optical Communications and Networking (JOCN)*, Vol. 5 (11), Nov 2013, pp. 1202-1214.

- Doverspike, R., G. Clapp, P. Douyon, D. Freimuth, K. Gullapalli, J. Hartley, E. Mavrogiorgis, J. O'Connor, J. Pastor, K.K. Ramakrishnan, M. Rauch, M. Stadler, A. Von Lehmen, B. Wilson, S. Woodward, "Using SDN Technology to Enable Cost-effective Bandwidth-on-Demand for Cloud Services," **OFC 2014**, San Francisco, CA, March 2014.
- Von Lehmen, A., R. Doverspike, G. Clapp, D. Freimuth, J. Gannett, K. Kim, H. Kobrinski, E. Mavrogiorgis, J. Pastor, M. Rauch, K. Ramakrishnan, R. Skoog, B. Wilson, S. Woodward, "CORONET: Testbeds, Cloud Computing, and Lessons Learned," **OFC 2014**, San Francisco, CA, March 2014.
- Doverspike, R., G. Clapp, P. Douyon, D. Freimuth, K. Gullapalli, B. Han, J. Hartley, A. Mahimkar, E. Mavrogiorgis, J. O'Connor, J. Pastor, K.K. Ramakrishnan, M. Rauch, M. Stadler, A. Von Lehmen, B. Wilson, S. Woodward, "Using SDN Technology to Enable Cost-effective Bandwidth-on-Demand for Cloud Services," **Journal of Optical Communications and Networking (JOCN)**, Vol. 7 (2), Feb. 2015.
- Von Lehmen, A., R. Doverspike, G. Clapp, D. Freimuth, J. Gannett, K. Kim, H. Kobrinski, E. Mavrogiorgis, J. Pastor, M. Rauch, K. Ramakrishnan, R. Skoog, B. Wilson, S. Woodward, "CORONET: Testbeds, Cloud Computing, and Lessons Learned," **Journal of Optical Communications and Networking (JOCN)**, A447-A458 (2015).
- Nogueira, M., P. Cholda, D. Medhi, R. Doverspike, "Disaster Resilience in Communication Networks: Part 1," Editors Feature Article, **IEEE Communications Magazine**, October 2014, Vol. 52 (10), pp. 44-75.
- Nogueira, M., P. Cholda, D. Medhi, R. Doverspike, "Disaster Resilience in Communication Networks: Part2," Editors Feature Article, **IEEE Communications Magazine**, December 2014, Vol. 52 (12), pp. 56-95.
- Andrade, C., M. Resende, W. Zhang, R. Sinha, K. Reichmann, R. Doverspike, F. Miyazawa, "A Biased Random-key Genetic Algorithm for Wireless Backhaul Network Design," **Journal of Applied Soft Computing**, August 2015, Vol. 33, pp. 150–169.
- Zhang, W., B. Bathula, R. Sinha, R. Doverspike, P. Magill, A. Raghuram, G. Choudhury, "Cost Comparison of Alternative Architectures for IP-over-Optical Core Networks," **Journal of Network and Systems Management**, July 2016, Vol. 24, (3), pp. 607-628.
- Doverspike, R., M. Birk, X. Liu, W. Shieh, D. Richardson, D. Kuchta, "Guest Editorial OFC 2018 Special Issue," **Journal of Lightwave Technology**, January, 2019, Vol. 37, pp. 3-5.
- Doverspike, R. "Carrier Network Architectures and Resiliency," Chapter 1 in **Springer Handbook of Optical Networks, Part B: Core Networks**, B. Mukherjee, et. al. (Eds.), To Appear 2019-2020.

PATENTS

NUMBER	DATE	PATENT TITLE	INVENTORS
6097696	08/01/2000	Optical layer quasi-centralized restoration	R. Doverspike
6970417	11/29/2005	Methods and systems for fast restoration in a mesh network of optical cross connects.	R. Doverspike, G. Sahin, J. Strand, R. Tkach
6982951	01/03/2006	Method for selecting a restoration path in a mesh network	R. Doverspike, C. Kalmanek, G. Li.
7088676	08/08/2006	Methods and systems for fast restoration in a mesh network of optical cross connects	R. Doverspike, G. Sahin; J. Strand, R. Tkach
7180852	02/20/2007	Method for selecting a restoration path in a mesh network	R. Doverspike, C. Kalmanek, G. Li
7298700	11/20/2007	Method for unidirectional and bidirectional label switched path setup in a label switched network	R. Doverspike, C. Kalmanek, G. Li, J. Yates
7450516	11/11/2008	Link selection schemes for avoiding channel contention	B. Cortez, R. Doverspike, R. Sinha, J. Strand, F. Yu
7450496	11/11/2008	Method for selecting a restoration path in a mesh network	R. Doverspike, C. Kalmanek, G. Li
7599373	10/06/2009	Method and apparatus for automated provisioning for customer premises transport equipment	R. Doverspike, C. Kalmanek, M. Martinez-Heath, K. Ramakrishnan, David Yang
7613135	11/03/2009	System and method for routing packet traffic	R. Doverspike, G. Li, D. Wang
7688720	03/30/2010	Method for selecting a restoration path in a mesh network	R. Doverspike, C. Kalmanek, G. Li
7782772	08/24/2010	Method for unidirectional and bidirectional label switched path setup in a label switched network	R. Doverspike, C. Kalmanek, G. Li, J. Yates
7859993	12/28/2010	Two-phase fast reroute with optimized traffic engineering	G. Choudhury, A. Chiu, R. Doverspike, G. Li
7916657	03/29/2011	Network performance and reliability evaluation taking into account abstract components	R. Doverspike, K. Oikonomou, R. Sinha
8010694	08/30/2011	Network performance and reliability evaluation taking into account multiple traffic matrices	R. Doverspike, K. Oikonomou, R. Sinha
8068412	11/29/2011	Link selection schemes for avoiding channel contention	B. Cortez, R. Doverspike, R. Sinha, J. Strand, F. Yu
8150257	04/03/2012	Shared mesh restoration with pre-configured standby lightpaths	G. Choudhury, A. Chiu, R. Doverspike, G. Li, J. Strand
8260133	09/04/2012	Standby restoration signaling for optical networks	G. Li, A. Chiu, R. Doverspike, J. Strand
8406622	03/26/2013	1:n sparing of router resources at geographically dispersed locations	R. Doverspike, R. Sinha, P. Magill, J. Yates
8422379	04/16/2013	Method of simple and efficient failure resilient load balancing	D. Xu, R. Doverspike, D. Johnson, J. Rexford, M. Suchara
8452176	05/28/2013	Reachability matrices spanning multiple domains in an optical network	R. Doverspike, G. Li, A. Chiu, M. Gerhardstein, Y. Guo, D. Wang, D. Xu

8462621	06/11/2013	Systems and methods of multicast reconfiguration using cross-layer information	K. Ramakrishnan, R. Doverspike, M. Yuksel
8467382	06/18/2013	Method and apparatus for providing a control plane across multiple optical network domains	R. Doverspike, A. Greenberg, G. Li, D. Wang, J. Yates, J. Gottlieb, C. Kalmanek, P. Sebos
8515280	08/20/2013	Physically-diverse routing in heterogeneous optical networks	G. Li, A. Chiu, C. Dailey, R. Doverspike, M. Gerhardstein, D. Wang, D. Xu
8532137	09/10/2013	Network architecture for a packet aware transport network	T. Afferton, L. Aguirre-Torres, R. Doverspike, C. Kalmanek, K.K. Ramakrishnan
8611232	12/17/2013	Method of simple and efficient failure resilient load balancing	D. Xu, R. Doverspike, D. Johnson, J. Rexford, M. Suchara
8687956	04/01/2014	Standby restoration signaling for optical networks	G. Li, A. Chiu, R. Doverspike, J. Strand
8750161	06/10/2014	Metropolitan IP aggregation network design tool	D. Matthews, P. Bhagat , R. Doverspike, J. Klincewicz , J. Li, G. Li , D. Lynch, M. Segal, D. Wang
8761601	06/24/2014	1:n sparing of router resources at geographically dispersed locations	R. Doverspike, R. Sinha, P. Magill, J. Yates
8813141	08/19/2014	System and method of providing video content	K. Ramakrishnan, C. Kalmanek, R. Doverspike, W. Fenner
8824461	09/02/2014	Method and apparatus for providing a control plane across multiple optical network domains	R. Doverspike, A. Greenberg, G. Li, D. Wang, J. Yates, J. Gottlieb, C. Kalmanek, P. Sebos
8897641	11/25/2014	Reachability matrices spanning multiple domains in an optical network	R. Doverspike, G. Li, A. Chiu, M. Gerhardstein, Y. Guo, D. Wang, D. Xu
8989018	03/24/2015	Method and apparatus for providing a route recommendation	G. LI, A. Chiu, C. Dailey, R. Doverspike, M. Gerhardstein, D. Hwang, D. Wang, D. Xu
9215166	12/15/2015	Systems and methods of multicast reconfiguration using cross-layer information	K. Ramakrishnan, R. Doverspike, M. Yuksel
9661358	05/23/2017	System and method of providing video content	K. Ramakrishnan, C. Kalmanek, R. Doverspike, W. Fenner

CONFERENCE PRESENTATIONS (NO PROCEEDINGS)

- Sen, S., R. D. Doverspike, "A Model for Simultaneous Capacity Expansion, Multiplexing, and Routing for Inter-office Network Planning," Telecommunications Sponsored Session, ORSA/TIMS Conference, St. Louis, Missouri, October 1987.
- Sen, S., R. D. Doverspike, S. Dunatunga, I. Gammage, "Decomposition-Coordination Algorithms for the Unified Facilities Optimizer (UFO)," Telecommunications Sponsored Session, ORSA/TIMS Conference, Washington, D. C., April, 1988.
- Sen, S., R. D. Doverspike, S. I. Vohnout, "Routing Options in the Unified Facilities Optimizer, Telecommunications Sponsored Session, ORSA/TIMS Conference, Vancouver, B. C., Canada, May 1989.
- Sen, S., R. D. Doverspike, S. Dunatunga, "Capacity Expansion in the Unified Facilities Optimizer, Telecommunications Sponsored Session, ORSA/TIMS Conference, Vancouver, B. C., Canada, May 1989.
- Sen, S., R. D. Doverspike, "Design of Switched DS1 Networks," 1st ORSA Telecommunications Conference, Boca Raton, Florida, March 1990.
- Doverspike, R. D., "Planning Survivable DCS-Switched Bandwidth Networks," Supercomm/ICC '90, Atlanta, Georgia, April 1990.
- Sen, S., S. I. Vohnout, R. D. Doverspike, "Diverse Routing in Network Planning," Telecommunications Sponsored Session, ORSA/TIMS Conference, Philadelphia, Pennsylvania, May 1990.
- Doverspike, R. D., "Planning SONET Switched Bandwidth Networks," Eastern Communications Forum (ECF-90), Boston, Massachusetts, May 1990.
- Doverspike, R. D., "Operations Research Models for New Telecommunications Network Architectures," International Federation of Operational Research Societies (IFORS) Workshop on Operations Research Models in Telecommunications, Athens, Greece, June 1990.
- Doverspike, R. D., "Design of Switched DS1 Networks," 1st ORSA Telecommunications Conference, Boca Raton, Florida, March 1990.
- Doverspike, R. D., "Comparison of Routing Methods for DCS-Switched Networks," Telecommunications Sponsored Session, TIMS/ORSA Conference, Nashville, TN, May 1991.
- Doverspike, R. D., J. L. Strand, "Public Telecommunications Networks-Modeling Basics," Tutorial Session, 2nd ORSA Telecommunications Conference, Boca Raton, Florida, March 1992.
- Sen, S., R. D. Doverspike, S. Cosares, "Network Planning with Random Demand," Telecommunication Systems Conference, Nashville TN, March 1993.
- Doverspike, R. D., B. Wilson, "Comparison of DCS Restoration Methods," Telecommunications Sponsored Session, TIMS/ORSA Conference, Phoenix, Arizona, Nov 1993.
- Doverspike, R. D., I. Saniee, S. Cosares, "A Survey of Optimization Problems for Survivability in Transmission Networks," Telecommunications Sponsored Session, TIMS/ORSA Conference, Boston, Massachusetts, April 1994.
- Doverspike, R. D., J. L. Strand, "Network Management and Planning for Public ATM/Sonet Networks," Tutorial Session, 3rd ORSA Telecommunications Conference, Boca Raton, Florida, March 1995.
- Doverspike, R. D., "Routing, Network Design, and Restoration in DCS Public Telecommunications Networks," University of Iowa Telecommunications Network Design Workshop 1995.
- Doverspike, R. D., "Layered Network Management of ATM, SONET, and WDM Technologies," Telecommunications Sponsored Session, INFORMS Conference, Atlanta, GA, November 1996.

- Wilson, B. J., R. D. Doverspike, "Network Management Aspects of the ATDNet ATM/SONET Network," Telecommunications Sponsored Session, INFORMS Conference, Atlanta, GA, November 1996.
- Doverspike, R. D., J. L. Strand, "Tutorial: The Optical Transport Layer: Technology, Network Design, and Management Aspects," Tutorial Session, 4th INFORMS Telecommunications Conference, Boca Raton, Florida, March 1998.
- Doverspike, R. D., "Optical Layer Cross-Connect Restoration Methods," 4th INFORMS Telecommunications Conference, Boca Raton, Florida, March 1998.
- Doverspike, R. D., "Optical Layer Cross-Connect Restoration Methods," ICC'98 Workshop on WDM Network Mgmt, Atlanta, GA, June 1998.
- Doverspike, R. D., J. L. Strand, G. Li, "Analysis of Restoration Against Node Failure in a Mesh Network of Optical Cross-Connects," 5th INFORMS Telecommunications Conference, Boca Raton, Florida, March 2000.
- Doverspike, R.D., "Towards an IP and Optical Layer Transport Network", NJ Chapter of INFORMS, RUTCOR, April 2000.
- Doverspike, R. D., and J. L. Strand, "Optical Networking Workshop," 6th INFORMS Telecommunications Conference, Boca Raton, Florida, March 2002.
- Doverspike, R., S. Phillips and N. Reingold, "Network Studies in IP/Optical Layer Restoration," 6th INFORMS Telecommunications Conference, Boca Raton, Florida, March 2002.
- Doverspike, R. D., "IP and Optical Layer Networks: Hype and Reality," Keynote speaker at 3rd IEEE Workshop on IP Operations & Management (IPOM-2003), October 2003, Kansas City, Missouri 2003.
- Wang, D., K.K. Ramakrishnan, C. Kalmanek, R. Doverspike, and A. Smiljanic, "Congestion Control in Resilient Packet Rings," 7th INFORMS Telecommunications Conference, Boca Raton, Florida, March 2004.
- Balasaygun K., A. Chiu, R. Doverspike, and J. Strand, "Optical Hubbing Design in Metro Transport Networks," 7th INFORMS Telecommunications Conference, Boca Raton, Florida, March 2004.
- Li, G., D. Wang, J. Yates, C. Kalmanek, and R. Doverspike, "Efficient Restoration Capacity Design in MPLS Networks," 7th INFORMS Telecommunications Conference, Boca Raton, Florida, March 2004.
- Doverspike, R. D., "**Packet-aware Transport in Metro Networks**," Keynote Speaker, "The Future of SONET," **Lightreading** Seminar, May, 2004, New York, NY.
- Li, G., D. Wang, K. Balasaygun, R. Doverspike, and R. Magill, **WiMax Network Design**, 8th INFORMS Telecommunications Conference, Dallas, TX, March 2006.
- Doverspike, R., J. Yates, J. Pastor, M. Birk "Evolution of IP/OL Performance Management", Invited Panel on Optical Performance Monitoring, **OFC 2006**, March 2006.
- Doverspike, R., "Practical Aspects of Bandwidth-on-Demand in Optical Networks," Panel on Emerging Networks Service Provider Summit – **OFC 2007**, Anaheim, CA, March 2007.
- Ramakrishnan, K. and R. Doverspike, "IPTV Challenges," Invited tutorial – **OFC 2008**, San Diego, CA, February 2008.
- Doverspike, R., Organizer of Workshop on "Packet/TDM Network Convergence, Opportunities and Challenges," **OFC 2008**, San Diego, CA, February 2008.
- Li, G., D. Wang and R. Doverspike, "A Simple And Efficient Restoration Method In IPTV Networks," 9th INFORMS Telecommunications Conference, University Park, MA, March 2008.

- Sinha, R. Doverspike, G. Li, K. Oikonomou, K. K. Ramakrishnan, and D. Wang, "Performability Analysis And Design Of Multicast IPTV Distribution," 9th INFORMS Telecommunications Conference, University Park, MA, March 2008.
- Doverspike, R., G. Li, D. Xu, A. Chiu, and D. Wang, "Physical-Diverse Routing in Heterogeneous Optical Networks," 10th INFORMS Telecommunications Conference, Montreal Canada, May 2010.
- Doverspike, R. Toso, M. Resende, D. Wang, "Design of Metro Ethernet networks," 10th INFORMS Telecommunications Conference, Austin, TX, Nov 2010.
- Doverspike, R., "Where and How Telecommunication Carriers Provide Network Restoration", Invited Talk, *Design of Reliable Communications Networks (DRCN)*, Krakow, Poland, Oct 2011.
- Wang, D., R. Doverspike, J. Li, D. Lynch, M. Resende, R. Toso, "Heuristics For Design of Metro Ethernet Networks," 12th INFORMS Telecommunications Conference, Boca Raton, FL, March 2012.
- Doverspike, R., "Where and How Telecommunication Carriers Provide Network Restoration", Invited Talk, Rutgers Center for Operations Research (RUTCOR), New Brunswick, NJ, April 2012.
- Doverspike, R., Organizer of Workshop entitled, " Can transport equipment cost reductions keep pace with carrier Internet growth?" *OFC 2013*, Los Angeles, CA, March 2013.
- Doverspike, R., "Evolution of Bandwidth-on-Demand-Services," Dynamic Network Services Panel, *OFC 2013*, Los Angeles, CA, March 2013.
- Doverspike, R., " Tutorial. The Practice of Network Modeling and Design in Commercial Telecommunications Networks," GERAD Optimization Days, Montreal Canada, May 2013.
- Doverspike, R., T. Anschutz, M. Birk, "Applications of SDN in Transport Networks," Panel on SDN for Transport Networks, *OFC 2014*, San Francisco, CA, March 2014.
- Doverspike, R., M. Esfandiari, M. Birk, "The Potential of SDN for Planning and Provisioning Carrier Metro Networks," SDN Workshop, *OFC 2015*, Los Angeles, CA, March 2015.
- Doverspike, R., J. Reich, "Automated Planning and Provisioning for Carrier Metro Networks," Keynote Talk, *Design of Reliable Communications Networks (DRCN)*, Kansas City, March 2015.