

Dr. Tania Panayiotou received her diploma degree in Computer Engineering from the University of Patras, Greece in 2005 and the Ph.D degree in Computer Engineering from the University of Cyprus in 2013. She worked as a Research Fellow at KIOS Research Center for Intelligent Systems and Networks of the University of Cyprus (2006-2015), and as an Associate Researcher at the Department of Electrical Engineering, Computer Engineering and Informatics of the Cyprus University of Technology (2014-2015). She served as a teaching staff within the Department of Electrical and Computer Engineering of University of Cyprus (2014), and as a teaching staff within the Department of Information and Communication Systems of Open University of Cyprus (2015). She is currently teaching within the School of Informatics of Neapolis University Pafos.

Her research interests are in the area of large-scale high-speed telecommunication networks algorithms and protocols with emphasis on optical networks. Some of the research areas that she has worked on as part of her PhD and post-doctoral work are: Protection and Restoration in Optical Networks, Routing and Wavelength Assignment (RWA) in Optical Networks (Unicast, Multicast, and Groupcast Connections), Traffic Grooming in Optical Networks, Network Performance Evaluation, Traffic Engineering, Traffic Modeling, Network Control and Management, Modeling Physical Layer Impairments (PLIs), and Statistical Pattern Recognition

Her research work focuses primarily on the development of new algorithms, network and node designs, network modeling and optimization, implementing simulation tools, conducting performance analysis to evaluate new architectures, and network control and management protocols for efficient operation of intelligent optical networks. Her research work involves a number of disciplines such as: Networking Principles, Optical Systems, Heuristic Algorithms, Analytical Modeling, Integer-Linear Programming (ILP), Graph Theory, and Network Emulations/Simulations.

She has published several peer reviewed conference papers and journal papers in the most prestigious conferences and journals in her field. Her research has been funded by the Research Promotion Foundation (RPF) of Cyprus, by the University of Cyprus and the KIOS Research Center for Intelligent Systems and Networks and the Cyprus University of Technology. She is a member of the IEEE.

SELECTED PUBLICATIONS / RESEARCH

- [1] **T. Panayiotou**, G. Ellinas, S. P. Chatzis, "A Data-Driven QoT Decision Approach for Multicast Connections in Metro Optical Networks", 20th *International Conference on Optical Network Design and Modeling (ONDM)*, Cartagena, Spain, May 2016.
- [2] **T. Panayiotou**, K. Manousakis, G. Ellinas, "Static Impairment-Aware Multicast Session Provisioning in Metro Optical Networks", 18th *Mediterranean Electrotechnical Conference (MELECON)*, Limassol, Cyprus, April 2016.
- [3] **T. Panayiotou**, G. Ellinas, and N. Antoniadou, "Multicast Grooming in Metro Networks Based on Physical Layer Constraints", *Springer Photonic Network Communications*, DOI: 10.1007/s11107-015-0589-9, Jan. 2016.
- [4] **T. Panayiotou**, G. Ellinas, and N. Antoniadou, A. Hadjiantonis "Impairment-aware Multicast Session Provisioning in Metro Optical Networks", *Elsevier Computer Networks*, " vol. 91, pp. 675-688, Oct. 2015.
- [5] **T. Panayiotou**, G. Ellinas, and N. Antoniadou, "p-Cycle-based protection of multicast connections in metropolitan area optical networks with physical layer impairments constraints", *Elsevier Journal of Optical Switching and Networking*, vol. 19, part 2, pp. 66-67, April 2015.
- [6] **T. Panayiotou**, N. Antoniadou, and G. Ellinas, "On the impact of polarization-dependent gain/loss for optical multicast sessions", *IEEE/OSA Optics Express*, vol. 22, no 24, November 2014.
- [7] **T. Panayiotou**, G. Ellinas, N. Antoniadou, "Q-based Provisioning for Multicast Connections in Translucent Metropolitan Area Networks," 17th *Conference on Optical Network Design and Modeling (ONDM)*, Stockholm, 19-22 May, 2014.
- [8] **T. Panayiotou**, G. Ellinas, N. Antoniadou, "Hybrid Multicast Grooming in Transparent Optical Networks with Physical Layer Impairments", 7th *Workshop on Wireless Mesh and Ad Hoc Networks (WIMAN, ICCCN)*, Nassau, Bahamas, July 30 – Aug 2, 2013.
- [9] **T. Panayiotou**, G. Ellinas, N. Antoniadou, "Protection Algorithms for Groupcast Sessions in Transparent Optical Networks with Mesh Topologies", 17th *Conference on Optical Network Design and Modeling (ONDM)*, Telecom Bretagne, Brest, France, April 16-19, 2013.
- [10] **T. Panayiotou**, G. Ellinas, and N. Antoniadou, "Segment-Based Protection of Multicast Connections in Metropolitan Areas Optical Networks with Quality-of-Transmission Considerations", *IEEE/OSA Journal of Optical Communications and Networking (JOCN)*, vol. 4, no. 9, pp. 692-702, September 2012.
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- [12] **T. Panayiotou**, G. Ellinas, N. Antoniadou, "p-Cycle-Based Protection of Multicast Connections in Metropolitan Area Optical Networks with Quality-of-Transmission Considerations", 4th *International Workshop on Reliable Networks Design and Modeling (RNDM'12)*, St. Petersburg, Russia, October 3-5, 2012.
- [13] **T. Panayiotou**, G. Ellinas, N. Antoniadou, "Hybrid Graph-Based Traffic Grooming for Multicast Connections in Mesh Optical Networks," *IEEE International Conference on Communication Systems (ICCS'12)*, Singapore, November 21-23, 2012.
- [14] **T. Panayiotou**, G. Ellinas, N. Antoniadou, and A. Hadjiantonis, "A Novel Segment-Based Protection Algorithm for Multicast Sessions in Optical Networks with Mesh Topologies," *IEEE/OSA Optical Fiber Communications Conference (OFC 2011)*, Los Angeles, March 2011.
- [15] **T. Panayiotou**, G. Ellinas, N. Antoniadou, and A. Hadjiantonis, "Node Architecture Design and Network Engineering Impact on Optical Multicasting Based on Physical Layer Constraints," *IEEE 12th International Conference on Transparent Optical Networks (ICTON)*, Munich, Germany, June 2010.

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- [17] G. Ellinas, N. Antoniadis, **T. Panayiotou**, A. Hadjiantonis, and A.M. Levine, "Multicasting Routing Algorithms Based on Q-Factor Physical Layer Constraints in Metro", *IEEE/OSA Photonics Technology Letters*, vol. 21, no. 6, pp. 365-367, March 2009.
- [18] G. Ellinas, **T. Panayiotou**, N. Antoniadis, A. Hadjiantonis, and A.M. Levine, "Multicasting with physical-layer constraints in metropolitan area networks," *IEEE/LEOS International Conference on Transparent Optical Networks (ICTON)*, Athens, Greece, June 2008.