

CURRICULUM VITAE of Professor Lena Wosinska

1. Personal Data

Name: Lena Wosinska

Affiliation: Chalmers University of Technology, Department of Electrical Engineering (E2)

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University degree: MSc in Electrical Engineering, 1974, Warsaw Univ. of Technology.

Technical Licentiate in Telecommunication systems, 1991, KTH Royal Institute of Technology.

Doctoral degree: PhD in Photonics, 1999, KTH Royal Institute of Technology, “A Study of the Reliability of Optical Switching Nodes for High Capacity Telecommunications Networks”.

Docent degree in Optical Networking, 2008, KTH Royal Institute of Technology.

Current position: Research Professor, Chalmers University of Technology

Previous position (until October 2018): Full Professor of Telecommunication, KTH Royal Institute of Technology, Stockholm, Sweden, Founder and Director of Optical Networks Lab.

2. Current and recent grants.

- “AI-NET Providing Resilient & secure networks [Operating on Trusted Equipment] to Critical infrastructures (AI-NET-PROTECT),” CELTIC-NEXT project 2021 – 2024
- “AI-NET Automation of Network edge Infrastructure & Applications with Artificial intelligence (AI-NET-ANIARA),” CELTIC-NEXT project 2020 – 2023
- “Programmable Photonic Platforms to Meet Future Requirements of Mobile Fronthaul,” Australian Research Council (ARC) Discovery Project Funding and Discovery International Award (DIA), 2020 – 2022, Partner Investigator
- “Green Optical Infrastructure Architectures for Data Centers,” Swedish Research Council (VR), 2019 – 2021
- “Enabling Scalable and Sustainable Data Center Networks,” Swedish Foundation for Strategic Research (SSF), 2019 – 2020
- “5G System Technological Enhancements Provided by Fiber Wireless Deployments (5G STEP FWD),” 2017 – 2021, Marie Skłodowska-Curie Action (MSCA), ITN, EU H2020
- COST Action CA15127 Grant - European Cooperation in the field of Scientific and Technical Research “Resilient communication services protecting end-user applications from disaster-based failures (RECODIS),” 2016 – 2020, one of the proposers (Co-PI), Management Committee member supplement and Swedish representative
- “SEcure Networking for a DATA center cloud in Europe (SENDATE-EXTEND)”, Celtic-Plus project 2016 – 2019, work package leader
- “5G Exchange, 5GEx,” 2015 – 2018, EU H2020
- “The Royal Gardens Case,” 2016 – 2017, European Institute of Technology (EIT) Digital
- “Performance Monitoring of Coherent Optical Networks,” 2016 – 2018, collaboration project with ETS, Canada, granted by NSERC and CIENA, Canada, principal investigator at KTH
- “Energy efficient solutions for mobile access and M2M, EXAM,” 2015 – 2016, European Institute of Technology (EIT) ICT Labs
- “Towards flexible and energy-efficient datacenter networks,” Frame Program, Swedish Research Council (VR), 2015 – 2018, project leader and principal investigator

- “Kista 5G Transport Lab,” Swedish Governmental Agency for Innovation Systems (Vinnova) and Ericsson funded project, 2014 – 2019, principal investigator at KTH, member of the steering group
- “Smart city concepts in Curitiba – innovation for mobility and energy-efficiency,” 2014 – 2017 Swedish Governmental Agency for Innovation Systems (Vinnova), Sweden – Brazil collaboration
- “GreenHaul: Energy efficient backhauling for HetNet wireless deployments,” 2013 – 2014, Wireless@KTH seed project
- “Green 5G Mobile Networks, 5GrEEen”, 2013 – 2014, European Institute of Technology ICT Labs
- “Heterogeneous Networks and Mobile Backhaul”, 2013 – 2014, European Institute of Technology ICT Labs
- “The DIStributed Core for unlimited bandwidth supply for all Users and Services” (DISCUS), EU FP7 large scale Integrated Project 2012 – 2015, project leader at KTH
- “Efficient impairments aware optical network technologies for future bandwidth-abundant networks”, Sweden-Japan collaboration (funded by Vinnova), proj. leader and principal investigator, 2012-2013
- “Performance study of filterless and active switched optical networks”, 2010 – 2015, collaboration project with ETS, Canada, granted by CIENA, Canada, principal investigator at KTH
- COST Action IC0804 Grant - European Cooperation in the field of Scientific and Technical Research “Energy efficiency in large scale distributed systems”, 2009 – 2013, Management Committee member and Swedish representative
- “Security in Optical Networks”, Swedish Governmental Agency for Innovation Systems (Vinnova) <http://www.vinnova.se/en/> funded project 2010 – 2013, project leader and principal investigator
- “Optical Access Seamless Evolution” (OASE), European FP7 large scale Integrated Project 2010 – 2012, work package leader (WP3 for network architectures).
- “Bandwidth Allocation in Future TDM PON”, Swedish Governmental Agency for Innovation Systems (Vinnova) funded project 2008 – 2010, principal investigator
- EU FP7 Network of Excellence BONE, 2008 – 2010, member of advisory board for Virtual Department on Access networks and for Work Package for Dissemination, responsible for implementation of a course on Photonics in Switching in the frame of common Master
- “All-optical overlay network”, Swedish Governmental Agency for Innovation Systems (Vinnova) funded project 2008 – 2010, principal investigator
- “Management Platform for Next Generation of Optical Networks” (MANGO), Eureka/Celtic project, 2008 – 2010, coordinator of the Swedish part of the project
- COST291Grant – European Cooperation in the field of Scientific and Technical Research “Towards Digital Optical Networks”, 2005 – 2009, Management Committee member and Swedish representative
- Network of Excellence e-Photon/ONe+, 2006 – 2008, member of advisory board for Virtual Department on Core Networks and responsible for a course Photonics in Switching in the frame of common Master

3. Active participation in international conferences

- **General Chair and Co-Chair**
 - Workshop Organizer, European Conference on Optical Communication ECOC’20
 - TPC Chair of IEEE/OSA/SPIE Asia Communications and Photonics Conference and Exhibition ACP’20
 - Chair of Subcommittee 3 "Network Architectures, Management, and Applications" IEEE/OSA/SPIE Asia Communications and Photonics Conference and Exhibition ACP’19
 - Chair of Subcommittee 8 “Network Architecture, Control and Management” European Conference on Optical Communication ECOC’19
 - Chair of Track 3 "Network Architectures, Management, and Applications" IEEE/OSA/SPIE Asia Communications and Photonics Conference and Exhibition ACP’18

- Chair of Subcommittee 7 “Core, Metro, and Convergent Networks” European Conference on Optical Communication ECOC’18
 - Co-Chair of Symposium on Optical Network and Broadband Access, 22nd OptoElectronics and Communications Conference OECC 2017
 - Co-Chair of Subcommittee 4 "Network Architectures, Management, and Applications" IEEE/OSA/SPIE Asia Communications and Photonics Conference and Exhibition ACP’15
 - Co-Chair of IEEE International Conference on Transparent Optical Networks/ Workshop on Datacenter Networks ICTON/DCN, since 2015
 - General Co-Chair of IEEE/OSA/SPIE Asia Communications and Photonics Conference and Exhibition ACP’2014
 - General Chair of IEEE International Conference on Optical Network Design and Modeling ONDM’14
 - TPC Chair of IEEE/OSA/SPIE Asia Communications and Photonics Conference and Exhibition ACP’2013
 - TPC Co-Chair of IEEE International Conference on Optical Network Design and Modeling ONDM’13
 - Co-Chair of IEEE International Conference on Transparent Optical Networks/ Workshop on Reliability Issues in Next Generation Optical Networks ICTON/RONEXT, since 2012
 - Chair of Subcommittee SC4 "Network Architectures, Management, and Applications" IEEE/OSA/SPIE Asia Communications and Photonics Conference and Exhibition ACP’12
 - Chair of Optical Networks and Systems Symposium at IEEE International Conference on Communications ICC’2012
 - General Chair of 13th IEEE International Conference on Transparent Optical Networks ICTON’2011
 - Chair of Subcommittee SC4 "Network Architectures, Management, and Applications" IEEE/OSA/SPIE Asia Communications and Photonics Conference and Exhibition ACP’11
 - Co-Chair of IEEE International Conference on Transparent Optical Networks/ 1st Workshop on Green Optical Communications ICTON/GOC, since 2011
 - Co-Chair of Converged/Optical Track, Future Network & Mobile Summit 2010
 - Chair of Subcommittee SC4 "Network Architectures, Management, and Applications" IEEE/OSA/SPIE Asia Communications and Photonics Conference and Exhibition ACP’10
 - Co-Chair of Subcommittee SC4 "Network Architectures, Management, and Applications" IEEE/OSA/SPIE Asia Communications and Photonics Conference and Exhibition ACP’09 and ACP’15
 - Co-Chair of Subcommittee SC4 "Network Architectures, Management, and Applications" SPIE APOC’08
 - 2005 – 2011 General Chair of a yearly conference IEEE International Conference on Transparent Optical Networks/Workshop on Reliability Issues in Next Generation Optical Networks ICTON/RONEXT
- **Member of Steering Committee**
 - IEEE European Conference on Networks and Communications and 6G Summit EuCNC/6G Summit’2021
 - IEEE European Conference on Networks and Communications EuCNC’2020
 - IEEE European Conference on Networks and Communications EuCNC’2019
 - IEEE International Conference on Optical Network Design and Modeling ONDM 2019
 - IEEE European Conference on Networks and Communications EuCNC’2018
 - IEEE International Conference on Optical Network Design and Modeling ONDM 2018

- IEEE International Conference on Optical Network Design and Modeling ONDM 2017
- IEEE International Conference on Optical Network Design and Modeling ONDM 2016
- IEEE International Conference on Optical Network Design and Modeling ONDM 2015
- IEEE European Conference on Networks & Optical Communication NOC 2015
- **Member of Technical Program Committees**
 - IEEE Global Communications Conference GLOBECOM'21
 - IEEE International Conference on Optical Network Design and Modelling ONDM'21
 - IEEE International Conference on Communication ICC'21
 - IEEE Design of Reliable Communication Networks DRCN 2021
 - IEEE Global Communications Conference GLOBECOM'20
 - IEEE International Conference on Communication ICC'20
 - European Conference on Networks and Communications EuCNC 2020
 - IEEE International Workshop on Reliable Networks Design and Modeling RNDM'20
 - IEEE Design of Reliable Communication Networks DRCN 2020
 - IEEE International Conference on Optical Network Design and Modeling ONDM'20
 - Photonics in Switching and Computing PSC'20
 - IEEE Global Communications Conference GLOBECOM'19
 - IEEE International Workshop on Reliable Networks Design and Modeling RNDM'19
 - IEEE International Conference on Communication ICC'19
 - European Conference on Networks and Communications EuCNC 2019
 - IEEE Design of Reliable Communication Networks DRCN 2019
 - IEEE International Conference on Optical Network Design and Modeling ONDM'19
 - Photonics in Switching and Computing PSC'19
 - IEEE NETWORKS'2018
 - European Conference on Networks and Communications EuCNC 2018
 - IEEE International Workshop on Reliable Networks Design and Modeling RNDM'18
 - IEEE Global Communications Conference GLOBECOM'18
 - IEEE International Conference on Optical Network Design and Modeling ONDM'18
 - Photonics in Switching and Computing PSC'18
 - IEEE Design of Reliable Communication Networks DRCN 2018
 - IEEE International Conference on Communication ICC'18
 - IEEE Global Communications Conference GLOBECOM'17
 - European Conference on Networks and Communications EuCNC 2017
 - IEEE International Workshop on Reliable Networks Design and Modeling RNDM'17
 - European Conference on Optical Communication ECOC'17
 - IEEE International Conference on Optical Network Design and Modeling ONDM'17
 - OSA Photonics in Switching PS'17
 - IEEE International Conference on Communication ICC'17
 - IEEE NETWORKS'16
 - IEEE Global Communications Conference GLOBECOM'16

- IEEE International Workshop on Reliable Networks Design and Modeling RNDM'16
- European Conference on Optical Communication ECOC'16
- IEEE Canadian Conference on Electrical and Computer Engineering CCECE'16
- IEEE International Conference on Optical Network Design and Modeling ONDM'16
- IEEE International Conference on Communication ICC'16
- IEEE International Symposium on Advanced Networks and Telecommunication Systems ANTS'15
- IEEE Global Communications Conference GLOBECOM'15
- European Conference on Optical Communication ECOC'15
- IEEE International Workshop on Reliable Networks Design and Modeling RNDM'15
- European Conference on Networks and Communications EuCNC 2015
- IEEE International Conference on Optical Network Design and Modeling ONDM'15
- IEEE International Conference on Communication ICC'15
- IEEE International Symposium on Advanced Networks and Telecommunication Systems ANTS'14
- IEEE NETWORKS'14
- IEEE International Workshop on Reliable Networks Design and Modeling RNDM'14
- European Conference on Networks and Communications EuCNC 2014
- European Conference on Optical Communication ECOC'14
- IEEE Design of Reliable Communication Networks DRCN'14
- IEEE Global Communications Conference GLOBECOM'14
- IEEE International Conference on Transparent Optical Networks/Green Optical Communications ICTON/GOC'14
- IEEE International Conference on Transparent Optical Networks/Reliability Issues in Next Generation Optical Networks ICTON/RONEXT'14
- IEEE Networks and Optical Communications NOC'14
- IEEE International Conference on Communication ICC'14
- IEEE Australasian Telecommunication Networks and Applications Conference ANTAC'13
- IEEE International Symposium on Advanced Networks and Telecommunication Systems ANTS'13
- IEEE International Conference on Optical Network Design and Modeling ONDM'13
- IEEE Design of Reliable Communication Networks DRCN 2013
- IEEE International Workshop on Reliable Networks Design and Modeling RNDM'13
- IEEE Global Communications Conference GLOBECOM'13
- IEEE International Conference on Transparent Optical Networks/Green Optical Communications ICTON/GOC'13
- IEEE International Conference on Transparent Optical Networks/Reliability Issues in Next Generation Optical Networks ICTON/RONEXT'13
- IEEE International Conference on Communication ICC'13
- Future Network & Mobile Summit 2013
- OSA Photonics in Switching PS'12
- NETWORKS'12

- IEEE International Workshop on Reliable Networks Design and Modeling RNDM'12
- IEEE International Conference on Communication ICC'12
- IEEE Global Communications Conference GLOBECOM'12
- Future Network & Mobile Summit 2012
- IEEE International Conference on Optical Network Design and Modeling ONDM'12
- Future Network & Mobile Summit 2012
- IEEE International Conference on Transparent Optical Networks/Green Optical Communications ICTON/GOC'12
- IEEE International Conference on Transparent Optical Networks/Reliability Issues in Next Generation Optical Networks ICTON/RONEXT'12
- IEEE International Symposium on Advanced Networks and Telecommunication Systems ANTS'11
- IEEE International Workshop on Reliable Networks Design and Modeling RNDM'11
- IEEE Design of Reliable Communication Networks DRCN 2011
- IEEE Global Communications Conference GLOBECOM'11
- Future Network & Mobile Summit 2011
- IEEE High Performance Switching and Routing HPSR'11
- IEEE International Conference on Optical Network Design and Modeling ONDM'11
- IEEE International Conference on Communication ICC'11
- IEEE International Conference on Transparent Optical Networks/Green Optical Communications ICTON/GOC'11
- IEEE International Conference on Transparent Optical Networks/Reliability Issues in Next Generation Optical Networks ICTON/RONEXT'11
- IEEE International Symposium on Advanced Networks and Telecommunication Systems ANTS'10
- NETWORKS'10
- IEEE International Workshop on Reliable Networks Design and Modeling RNDM'10
- OSA Photonics in Switching PS'10
- IEEE Networks and Optical Communications NOC'10
- IEEE Global Communications Conference GLOBECOM'10
- IEEE International Conference on Communication ICC'10
- IEEE International Symposium on Advanced Networks and Telecommunication Systems ANTS'09
- IEEE/OSA/SPIE Asia Communications and Photonics Conference and Exhibition ACP'09
- IEEE International Workshop on Reliable Networks Design and Modeling RNDM'09
- IEEE Global Communications Conference GLOBECOM'09
- IEEE International Conference on Transparent Optical Networks/Reliability Issues in Next Generation Optical Networks ICTON/RONEXT'09
- IEEE International Conference on Communication ICC'09
- NETWORKS'08
- IEEE Global Communications Conference GLOBECOM'08
- SPIE Asia-Pacific Optical Communications Conference APOC'08

- IEEE International Conference on Transparent Optical Networks/Reliability Issues in Next Generation Optical Networks ICTON/RONEXT'08
- IEEE International Conference on Transparent Optical Networks – Mediterranean Winter ICTON-MW'07
- IEEE Global Communications Conference GLOBECOM'07
- IEEE International Conference on Transparent Optical Networks/Reliability Issues in Next Generation Optical Networks ICTON/RONEXT'05
- SPIE Photonic Europe (2006)
- IEEE International Conference on Transparent Optical Networks/Reliability Issues in Next Generation Optical Networks ICTON/RONEXT'06
- IEEE International Conference on Transparent Optical Networks/Reliability Issues in Next Generation Optical Networks ICTON/RONEXT'05
- IEEE GLOBECOM'04
- Optical Networks & Technologies Conference OpNeTec'04
- SPIE Photonic Europe (2004)
- IEEE Design of Reliable Communication Networks DRCN'03
- SPIE Photonic Fabrication Europe (2002)
- **Chair of technical sessions**
 - SPIE PhotonicsWest'20 OPTO Metro and Data Center Optical Networks and Short-Reach Links conference, San Francisco, USA, February 2020
 - IEEE/OSA/SPIE Asia Communications and Photonics Conference and Exhibition ACP'19
 - European Conference on Optical Communication ECOC'19
 - IEEE International Conference on Transparent Optical Networks/Green Optical Communications ICTON/RONEXT'19
 - IEEE International Conference on Optical Network Design and Modeling ONDM'179
 - IEEE/OSA/SPIE Asia Communications and Photonics Conference and Exhibition ACP'18
 - European Conference on Optical Communication ECOC'18
 - IEEE European Conference on Networks and Communications EuCNC'2018
 - IEEE International Conference on Communication ICC'18
 - IEEE/OSA/SPIE Asia Communications and Photonics Conference and Exhibition ACP'17
 - European Conference on Optical Communication ECOC'17
 - OSA Photonics in Switching PS'17
 - IEEE High Performance Switching and Routing HPSR 2017, Campinas, Brazil, June 2017
 - IEEE International Conference on Optical Network Design and Modeling ONDM'17
 - IEEE/OSA/SPIE Asia Communications and Photonics Conference and Exhibition ACP'16
 - European Conference on Optical Communication ECOC'16
 - IEEE International Conference on Transparent Optical Networks/Green Optical Communications ICTON/GOC'16
 - IEEE International Conference on Optical Network Design and Modeling ONDM'16
 - IEEE/OSA/SPIE Asia Communications and Photonics Conference and Exhibition ACP'15
 - European Conference on Optical Communication ECOC'15
 - IEEE High Performance Switching and Routing HPSR'15

- IEEE International Conference on Transparent Optical Networks/Datacenter Networks ICTON/DCN'15
- IEEE International Conference on Transparent Optical Networks/Green Optical Communications ICTON/GOC'15
- IEEE International Conference on Optical Network Design and Modeling ONDM'15
- IEEE/OSA/SPIE Asia Communications and Photonics Conference and Exhibition ACP'14
- IEEE International Conference on Optical Communications and Networks ICOCN 2014
- PIERS'14
- European Conference on Optical Communication ECOC'14
- IEEE International Conference on Transparent Optical Networks/Green Optical Communications ICTON/RONEXT'14
- IEEE International Conference on Transparent Optical Networks/Green Optical Communications ICTON/GOC'14
- IEEE International Conference on Optical Network Design and Modeling ONDM'14
- IEEE International Conference on Information, Communication and Signal Processing ICICS'13
- IEEE/OSA/SPIE Asia Communications and Photonics Conference and Exhibition ACP'13
- IEEE Optical Network Design and Modeling ONDM'13
- IEEE International Conference on Transparent Optical Networks/Green Optical Communications ICTON/GOC'13
- IEEE/OSA/SPIE Asia Communications and Photonics Conference and Exhibition ACP'12
- IEEE International Conference on Communications (ICC'2012)
- IEEE/OSA/SPIE Asia Communications and Photonics Conference and Exhibition ACP'11
- IEEE International Conference on Transparent Optical Networks ICTON'11
- IEEE Optical Network Design and Modeling ONDM'11
- IEEE/OSA/SPIE Asia Communications and Photonics Conference and Exhibition ACP'10
- IEEE International Conference on Transparent Optical Networks/Reliability Issues in Next Generation Optical Networks ICTON/RONEXT'10
- IEEE International Symposium on Advanced Networks and Telecommunication Systems ANTS'09
- IEEE/OSA/SPIE Asia Communications and Photonics Conference and Exhibition ACP'09
- IEEE International Conference on Transparent Optical Networks/Reliability Issues in Next Generation Optical Networks ICTON/RONEXT'09
- SPIE Asia-Pacific Optical Communications Conference APOC'08
- IEEE International Conference on Transparent Optical Networks/Reliability Issues in Next Generation Optical Networks ICTON/RONEXT'08
- IEEE International Conference on Transparent Optical Networks/Reliability Issues in Next Generation Optical Networks ICTON/RONEXT'07
- IEEE International Conference on Photonics in Switching PS'06 at Crete
- IEEE International Conference on Transparent Optical Networks/Reliability Issues in Next Generation Optical Networks ICTON/RONEXT'06
- SPIE Photonic Europe (2006) in Strassbourg
- IEEE International Conference on Transparent Optical Networks/Reliability Issues in Next Generation Optical Networks ICTON/RONEXT'05
- Optical Networks & Technologies Conference OpNeTec'04

- SPIE Photonic Europé (2004) in Strassbourg
- SPIE Photonic Fabrication Europé (2002) in Brugge
- 1st COST270 workshop in Duebendorf (2001)
- **Sponsor Chair**
 - IEEE International Conference on Optical Network Design and Modelling ONDM'21
- **Publicity Chair**
 - IEEE Design of Reliable Communication Networks DRCN'03
 - IEEE High Performance Switching and Routing HPSR'10

4. Editorial and advisory assignments in international periodicals

- **Guest Editor of OSA Journal on Optical Networking:**
 - Special Issue on High Availability in Optical Networks (HAON), 2006
 - Special Issue on Photonics in Switching (PIS), 2006.
- **Associate Editor of OSA Journal on Optical Networking 2007 – 2009**
- **Guest Editor of Elsevier Optical Switching and Networking**
 - Special Issue on Optical Network Architectures and Management, 2011
 - Special Issue on Optical Networks Control and Management, 2012
 - Special Issue on Optical Network Architectures and Applications, 2013
- **Guest Editor of Springer Telecommunication Systems Journal**
 - Special Issue on Optical Systems and Access Networks, 2012
 - Special Issue on Optical Network Architectures, Systems and Applications, 2013
- **Guest Editor of Springer Journal of Network and System Management**
 - Special Issue on Optical Networks Control and Management, 2014
- **Associate Editor of IEEE/OSA Journal on Optical Communications and Networking, 2009 - 2013**
- **Associate Editor Springer Photonic Network Communications Journal, since 2013**
- **Executive Editor of Wiley Transactions on Emerging Telecommunications Technologies (ETT), since 2016**
- **Coordinating Associate Editor**
 - OSA Journal on Optical Networking special Issue on Reliability Issues in Optical Networks (RION), 2007
 - IEEE/OSA Journal on Optical Communications and Networking special Issue on Optical Networks for Future Internet (ONFI), 2009
- **Guest Editor of IEEE Journal on Selected Areas in Communications**
 - Special Issue on Energy-Efficiency in Optical Networks, 2014
 - Special Issue on Latest advances in optical networks for 5G communications and beyond, 2021
- **Guest Editor of IEEE/OSA Journal on Optical Communications and Networking**
 - Special Issue on Optical Data Center Networks, 2018
- **Guest Editor of IEEE/OSA Journal of Lightwave Technology**
 - Special Issue for selected papers from ECOC2018
- **Guest Editor of IEEE Photonics Technology Letters**
 - Special Issue for selected papers from ACP'2020

- **Guest Editor of IEEE Communications Magazine**
 - Feature Topic (FT) on Next Generation Optical Interconnects for Data Centers, 2021

5. Review/referee assignments in international periodicals

- IEEE/OSA Journal of Lightwave Technology
- IEEE Transactions on Communications
- IEEE/ACM Transactions on Networking
- IEEE Photonics Technology Letters
- IEEE Journal on Selected Areas in Communications
- OSA Journal of Optical Networking
- IEEE/OSA Journal of Optical Communications and Networking
- Springer Journal on Optical and Quantum Electronics
- Academy Publisher Journal of Computers
- Elsevier Optical Switching and Networking

6. Evaluator/opponent of the following PhD theses

- Jens K. Andersson, “Overload Control and Performance Evaluation in a Parlay/OSA Environment”, Techn.Lic. thesis ISRN LUTEDX/TETS—1067—SE+100P, ISSN 1101-3931, Dept. of Communication Systems, Lund University, August 2004
- Carolina Pinart Gilberga, “Novel Management Strategies for Dynamic provisioning and Monitoring in All-Optical, Control Plane Enabled Metro IP/WDM Networks”, Doctoral Thesis, Universitat Politècnica de Catalunya (UPC), December 2005
- Mats Sköld, “Signal Characterization in Optical Networks”, Doctoral Thesis ISBN 978-91-7385-089-6, Photonics Laboratory, Chalmers University of Technology, March 2008
- Koen Casier, “Techno-Economic Evaluation of a next Generation Access Network Deployment in a Competitive Setting”, Doctoral Thesis, University of Gent, September 2009
- Clara Kronberger, “Multiperiod Planning for Optical Core Networks”, Doctoral Thesis, Munich Technical University, March 2011
- Andreas Kimsås, "Network Layer Studies of the Hybrid Optical Migration Capable Network with Service Guarantees", Doctoral Thesis, Norwegian University of Science and Technology NTNU, May 2011
- Domenico Siracusa, “Architectures, Methods and Algorithms to Control Switching in Optical Networks”, Doctoral Thesis, Politecnico di Milano, November 2011
- Fredrik Lindqvist, “Estimation and Detection of Transmission Line Characteristics in the Copper Access Network”, Doctoral Thesis, Lund University, December 2011
- Chamil Jayasundara, “Scalable Deployment of Video-on-Demand Services”, Doctoral Thesis, University of Melbourne, March 2013
- Lida Mollazadeh Sadeghioon, “Contribution to the Design of Optical-Packet Based Metropolitan Area Networks”, Doctoral Thesis, Telecom Bretagne, Brest, October 2013
- Li Yan, “Resource Allocation in Flexible-Grid Optical Networks with Nonlinear Interference,” Techn.Lic. thesis, Chalmers University of Technology, Department of Signals and Systems, January 2016
- Rerngvit Yanggratoke, “Data-driven Performance Prediction and Resource Allocation for Cloud Services”, Doctoral Thesis, KTH Royal Institute of Technology, May 2016
- Pedro Alvarez, “Dynamic Bandwidth Allocation for Open Access and Long-Reach Passive Optical Networks”, Doctoral Thesis, Trinity College Dublin TCD, September 2016

- Arno Vyncke, “A Low Power, Multi-Rate Clock-and-Data Recovery Circuit and MAC Processor for 40 Gbit/s Cascaded Bit-Interleaving Passive Optical Networks”, Doctoral Thesis, University of Gent, October 2016
- Wang Miao, “Flow-controlled and SDN-enabled Optical Switching System for High-capacity and Low-latency Flat Data Center Networks”, Doctoral Thesis, Eindhoven University of Technology, January 2017
- Alvaro Fernandez, "Modelling and Analyzing Cost-Effective Dependability in Passive Optical Networks", Doctoral Thesis, NTNU, Trondheim, February 2017
- Luis Guillermo Martinez Ballesteros, “On the Incorporation of Quality of Experience (QoE) in Mobile Networks. A technical, regulatory and business analysis”, Doctoral Thesis, KTH Royal Institute of Technology, February 2017
- Aditya Kakkar, “Frequency Noise in Coherent Optical Systems: Impact and Mitigation Methods”, Doctoral Thesis, KTH Royal Institute of Technology, June 2017
- Bogdan-Mihai Andrus, “SDN in Optical Networks”, Doctoral Thesis, DTU, November 2017
- Yezi Huang, “Wireline Communications in a Wireless World”, Doctoral Thesis, LTH Lunds Tekniska Högskola, November 2017
- Cai Anliang, “Routing and Spectrum Allocation for Multicast Traffic in Elastic Optical Networks”, Doctoral Thesis, City University of Hong Kong, January 2018
- Nuno Apolónia, “On Service Optimization in Community Network Micro-Clouds”, Doctoral Thesis, Universitat Politècnica de Catalunya (UPC), Spain, September 2018
- Elena Vasileva, “Light Propagation and Anisotropically Scattering Medium”, Doctoral Thesis, KTH Royal Institute of Technology, December 2018
- Fulong Yan, “High Performance Scalable Data Center and Computer Network Architectures Based on Distributed Fast Optical Switches”, Doctoral Thesis, Eindhoven University of Technology, April 2019
- Mikael Mazur, "High spectral efficiency transmission using optical frequency combs", Doctoral Thesis, Photonics Laboratory, Chalmers University of Technology, October 2019
- Ewa Simpanen, “Longer Wavelength GaAs-Based VCSELs for Extended-Reach Optical Interconnects”, Doctoral Thesis, MC2, Chalmers University of Technology, March 2020
- Elena Grigoreva, “Strategic Network Planning for Convergent Optical Networks”, Doctoral Thesis, Technical University Munich, June 2020
- Marco Paulo Viegas Araújo, “Infrastructure Deployment in Unprofitable Areas. A techno-economic model for multiple criteria decision analysis under the European Union telecommunications regulatory framework”, Doctoral Thesis, Stockholm University, September 2020

7. Assignments as outside expert

- **Evaluation of book proposals**
 - “Queuing Systems” by Maria Kihl, Cambridge University Press
- **Evaluation of project proposals**
 - Technology Foundation STW, Nederland Research Council, referee to evaluate a Vici project proposal, 2006.
 - Vinnova, evaluated proposals submitted within the call “Smartare, snabbare, konvergerande lösningar”, September 2009
 - The Natural Sciences and Engineering Research Council of Canada (NSERC), a member of the Electrical and Computer Engineering Evaluation Group for Discovery Grants, June 2012 – June 2015
 - Swedish Research Council (VR), a Co-Chair of the evaluation Committee NT-13, 2015
 - The Science Foundation Ireland (SFI), a member of the proposal evaluation panel, May 2016

- The Fundação para a Ciência e a Tecnologia, I.P. (FCT), the Portuguese public funding agency for R&D, a member of the "Electrical and Electronic Engineering" panel, November 2017
 - European Research Council Executive Agency, evaluator of ERC-ADG research proposals, December 2017
 - European Research Council Executive Agency, a member of the Starting Grant panel of ERC's Systems and Communication Engineering panel, 2018 - 2019
 - The Natural Sciences and Engineering Research Council of Canada (NSERC), panel member for Industry Research Chair NSG21638 IRC proposal evaluation, August 2019
 - The Science Foundation Ireland (SFI), a member of the proposal evaluation panel, March 2020
 - UK Research and Innovation (UKRI), Engineering and Physical Sciences Research Council (EPSRC), evaluator of project proposal, autumn 2020
 - The National Science Centre, Poland (NCN), a member of the proposal evaluation panels OPUS, PRELUDIUM and SONATA BIS, 2020 and 2021
 - The research funding institution of the Catalan Government ICREA, a member of the proposal evaluation panel ICREA Academia, autumn 2020
 - "la Caixa" Foundation (Catalonian Foundation), an expert referee in the Selection Interviews of Doctoral INPhINIT Fellowships Programme, June 2021.
- **Evaluation of applications for professorship**
 - Faculty of Engineering, Ghent University, a referee to evaluate application of Dr. Didier Colle, December 2010
 - INRS-EMT Center, INRS University, a referee to evaluate application of Dr. Martin Maier, August 2011
 - University of Waterloo, a referee to evaluate application of Dr. Pin-Han Ho, October 2013
 - Scuola Sant'Anna in Pisa (SSSUP), a member of the selection committee for an Associate Professor in Telecommunications at SSSUP, Aug. 2014
 - University of Cyprus, the external member of the Promotion Committee of Dr. Georgios Ellinas, to be evaluated for promotion from the Associate Professor to Full Professor in the Dept. of Electrical and Computer Engineering at the University of Cyprus, January 2018
 - University of Bristol, as a referee to assess application of Dr. Reza Nejabati, March 2018
 - Stellenbosch University, South Africa, as a referee to assess application of Dr. A.B. Bagula, November 2020

8. PEDAGOGICAL ACHIEVEMENTS

8.1 Teaching effort

- **Undergraduate courses at KTH**
 - EF114 Reliability Theory and Queuing Theory, 1989 – 1992, teaching assistant
 - EF 108 Computer System, 1989 – 1992, lab assistant
 - EF 116 Computer Networks, 1989 – 1992, lecturer
 - 6B2471 Telecommunication, 1993 – 1999, course responsible/coordinator and lecturer, course development
 - EF147 Telesystem, advanced course, 1993, guest lecturer
 - 6B2501 Digital Technique 1994, teaching assistant
 - 2G1933/6A374/6B3741 Reliability Theory and Queuing Theory, 1995, tutor

- 2B3741/6B3741 Reliability Theory and Queuing Theory, 1996, course responsible and lecturer, development of labborations and new course material
- 2E1521 Queing Theory, 1998, lecturer and tutor
- 2D3103 Teletraffic Theory, 1997 – 1999, course development, course responsible and lecturer.
- 2G1318 Queuing theory and Teletraffic Systems, 1999 – 2002 course responsible and lecturer
- 2G1316/17 Computer Communication and Computer Networks, a basic course elective for many programs at KTH, 2000 – 2002, more than 300 students attended the course. Course responsible and lecturer
- 2G1501 Communication Systems, 2001 – 2002, course responsible and lecturer. I also developed this course 2001 for the new IT program at KTH. Besides lectures and recitations the course included three laborations and a project work. Thus, I developed the labborations and defined the project work. The course was obligatory for IT program and was also given for students from the School of Applied Engineering. In total over 200 students per year attended this course. Furthermore, the course was developed in the way (with the web-based material) that a part of it, except laborations, was suited for distance tuition.
- IK2211 Data Links and Local Area Networks, in 2009 and 2010, guest lecturer
- IO2654 (2B1824) Optical Networking, 2004 - 2018, course development, course responsible until 2013, examiner and lecturer.
- IK1611 (2B1315) Dimensioning of Communication Systems, 2007 - 2018, course development, course responsible until 2013, examiner and lecturer.
- **Postgraduate courses at KTH:**
 - FIK3611 Dimensioning of Advanced Communication Systems, 2011-2018, course development, examiner and lecturer.
 - FIO3654 Advances in Optical Networking, 2011-2018, course development, examiner and lecturer
- **International teaching experience**
 - Common Master in the frame of the Networks of Excellence e-Photon/One+ and BONE. I was responsible and coordinator for a course in Photonics in Switching (6 ECT). I created the curriculum for this course, contributed with own teaching material, collected contributions from other partners and organized all the contributions to create a homogeneous teaching material. I have also taught this course on BONE Summer School 2009 in Krakow, Poland, and on BONE Master School 2010 in Budapest, Hungary.
 - COSC474 Optical Networking, University of Canterbury in Christchurch, New Zealand, autumn 2012
 - COSC264 Data Communications and Networking, University of Canterbury in Christchurch, New Zealand, autumn 2012

8.3 Academic supervising experience

8.3.1 Degree projects

Over the years, I have supervised and examined over 90 degree projects. Year 1996 and 1997 two of my students achieved the SAF's awards for the best thesis. Year 2012 one of my master thesis students won the Best Student Paper Award at international conference IEEE/OSA/SPIE ACP2012

8.3.2 PhD theses

- **Supervisor for the following PhD theses**

1. Maryam Lashgari, "Mobile transport network design for cost-efficient service delivery," since 2018
2. Lei Xu, "Network control design for UDWDM PONs," since 2018

3. Jun Li, "Ultra-low latency communication for 5G transport networks," Doctoral Thesis, TRITA-EECS-AVL-2019:59, ISBN: 978-91-7873-243-2, KTH Stockholm, September 2019
4. Forough Yaghoubi, "Agile, Resilient and Cost-efficient Mobile Backhaul Networks," since 2017, Doctoral Thesis, TRITA-EECS-AVL-2019:17, ISBN 978-91-7873-106-0, KTH Stockholm, March 2019
5. Yuxin Cheng, "Optical Interconnects for Next Generation Data Centers: Architecture Design and Resource Allocation," Doctoral Thesis, TRITA-EECS-AVL-2019:18, ISBN 978-91-7873-108-4, KTH Stockholm, March 2019
6. Wanlu Lei, "Flexibility and optimization in optical networks supporting future cloud and mobile networks", 2017 - 2018
7. Mohammad Rehan Raza, "Control Plane for Next-Generation Optical Transport Networks," Techn. Lic. Dec. 2016, "Orchestration Strategies for Slicing in 5G Networks: Design and Performance Evaluation," Doctoral Thesis, TRITA-EECS-AVL-2018:56, ISBN 978-91-7729-912-7, KTH Stockholm, October 2018
8. Kun Wang, "Migration towards Next-Generation Optical Transport Networks," Doctoral Thesis, TRITA-ICT 2017:13, ISBN: 978-91-7729-404-7, KTH Stockholm, June 2017
9. Rui Fay Lin, "High-Capacity Short-Reach Optical Communications," Doctoral Thesis, TRITA-ICT 2016:33, ISBN: 978-91-7729-177-0, KTH Stockholm, December 2016
10. Pawel Wiatr, "Energy Saving vs. Performance: Trade-offs in Optical Networks," Doctoral Thesis, TRITA-ICT 2016:12, ISBN: 978-91-7595-935-1, KTH Stockholm, May 2016
11. Mozghan Mahloo, "Transport Solutions for Future Broadband Access Networks," Doctoral Thesis, TRITA-ICT-COS-1501, ISSN 1653-634, KTH Stockholm, April 2015
12. Jawwad Ahmed, "Dynamic Resource Provisioning and Survivability Strategies in Optical Networks," Doctoral Thesis, TRITA-ICT-COS-1302, ISSN 1653-6347, KTH Stockholm, June 2013
13. Amornrat Jirattigalachote, "Provisioning Strategies for Transparent Optical Networks Considering Transmission Quality, Security, and Energy Efficiency," Doctoral Thesis, TRITA-ICT/MAP AVH Report 2012:05, ISSN 1653-7610, KTH Stockholm, May 2012
14. JiaJia Chen, "Design, analysis and simulation of optical access and wide-area networks," Doctoral Thesis, TRITA-ICT/MAP AVH Report 2009:1, ISSN 1653-7610, KTH Stockholm May 2009
15. Ajmal Muhammad, "Planning and Provisioning Strategies for Optical Core Networks," Doctoral Thesis, ISBN: 978-91-7519-115-7, Linköping University, April 2015
16. Americo F. Muchanga, "Interdomain Traffic Engineering and Faster Restoration in Optical Networks," Doctoral Thesis, TRITA-ICT/ECS AVH 06:07, ISBN 978-91-7178-5001-5, KTH Stockholm December 2006
17. Antoine B. Bagula, "Hybrid Routing in Next Generation IP Networks: QoS Routing Mechanisms and Network Control Strategies," Doctoral Thesis, TRITA-ICT/ECS AVH 06:08, ISBN 978-91-7178-5001-5, KTH Stockholm, December 2006

- **Supervisor for the following Licentiate theses**

- Mohsan Chughtai Niaz, "Design of all-optical networks based on ultra-high capacity links and nodes," Licentiate Thesis, TRITA-ICT/COS, ISSN 1653-6347, May 2012

- **Best Student Paper Awards.** My PhD students receive Best Student Paper Awards at international conferences: SPIE APOC 2007, SPIE APOC 2008, IEEE/OSA/SPIE ACP 2009, IEEE/OSA/SPIE ACP 2010, IEEE/OSA/SPIE ACP 2012, IEEE/OSA/SPIE ACP 2014, IEEE/OSA/SPIE ACP 2017

8.3.3 Postdoctoral fellows (supervisor/mentor)

Rui Lin: 2016 -

Carlos Natalino da Silva: 2016 –

Andrea Sgambelluri: 2015 – 2016
Dung Pham Van: 2015 – 2016
Ajmal Muhammad: 2015 – 2016
Meiqian Wang: 2015 – 2016
Matteo Fiorani: 2013 – 2015
Marija Furdek: 2013 – 2014
Jawwad Ahmed: 2013
Amornrat Jirattigalachote: 2012 – 2013
Cicek Cavdar: 2010 – 2013
Marilet de Andrade: 2010 – 2011
Jiajia Chen: 2009 – 2012

9. Administrative assignments

9.1 Experience from unit leadership

- Founder and director of Optical Networks Lab (ONLab), 2010 - 2019

<https://www.kth.se/en/ict/forskning/cos/research/onlab/optical-networks-laboratory-1.343994>
(previously NEXt Generation Optical NETworks NEGONET research group) established 2006

Leading a group of young researchers can also be seen as mentoring young colleagues towards their academic career. I consider it as an important part of my responsibility. It is also a pleasure to see how members of my group develop under my supervision. I also noticed that I use to attract female students to making the academic carrier since majority of my group members are females, which is quite unusual in our research community.

Group management involves searching for and planning new research directions and topics, managing current and applying for new projects, supervising students. Our projects, especially Vinnova, Swedish Research Council and EU projects, involve frequent project meetings, reports, project and work package management.

In fact, the administrative work takes a lot of my time and effort. In certain years, I was involved in preparation of up to 8 project proposals. While writing project proposals is educational and gives a broader perspective on relevant scientific topics, the amount of time and effort, which is consumed to sustain even a small research group in financial health, is out of any reasonable proportion.

9.2 Membership of university boards or councils

- Member of the E2 Department Evaluation Committee (DEC) at Chalmers Univ. of Technology, 2021 -
- Teacher representative in the KTH/ICT Recruiting Committee 2017 – 2018
- Member of the KTH Faculty Assembly 2015 – 2018
- Teachers representative in the KTH Promotion Committee 2015 – 2018
- Member of the Education Council of the ICT School in 2013 – 2014
- Chair of Subject Council for Networking and Communications 2013 – 2018
- Representative of teachers and researchers in the Board of the ICT School in 2009 – 2012
- Representative of the ICT School in the Faculty Board at KTH in 2009 – 2012

LIST OF PUBLICATIONS

Journal papers

1. M. Lashgari, L. Wosinska, and P. Monti, "End-to-End Provisioning of Latency and Availability Constrained 5G Services," *IEEE Communications Letters*, Print ISSN: 1089-7798, Online ISSN: 1558-2558, DOI: 10.1109/LCOMM.2021.3063262, March 2021
2. C. Natalino, A. Udalcovs, L. Wosinska, O. Ozolins, and M. Furdek, "Spectrum Anomaly Detection for Optical Network Monitoring using Deep Unsupervised Learning," *IEEE Communications Letters*, Print ISSN: 1089-7798, Online ISSN: 1558-2558, DOI: 10.1109/LCOMM.2021.3055064, Vol. 25, Issue 5, pp 1583-1586, May 2021
3. Y. Li, J. Mårtensson, B. Skubic, Y. Zhao, J. Zhang, L. Wosinska, P. Monti, "Flexible RAN: combining dynamic baseband split selection and reconfigurable optical transport to optimize RAN performance," *IEEE Network*, DOI: 10.1109/MNET.001.1900477, Vol. 34, Issue 4, pp 180-187, July/Aug. 2020
4. C. Natalino, A. de Sousa, L. Wosinska, M. Furdek, "Content placement in 5G-enabled edge/core datacenter networks resilient to link cut attacks," *Wiley NETWORKS Special Issue on Resilience of Communication Networks to Random Failures and Disasters*, Vol. 75, Issue: 4, pp 392-404, April 2020, early access from Feb. 2020 at: <https://doi.org/10.1002/net.21930>
5. R. Lin, Y. Cheng, M. De Andrade, L. Wosinska, and J. Chen, "Disaggregated Data Centers: Challenges and Trade-offs," *IEEE Communications Magazine*, Vol. 58, Issue: 2, pp 20-26, Feb. 2020
6. M. Furdek, V.W.S. Chan, C. Natalino, and Lena Wosinska, "Network-Wide Localization of Optical-Layer Attacks," *Springer Nature, ONDM 2019, LNCS 11616*, Book: *Optical Network Design and Modeling*, Chapter No: 27, Chapter DOI: 10.1007/978-3-030-38085-4_27, Jan. 2020
7. J. Zhu, M. Furdek, C. Natalino, L. Wosinska, and Z. Zhu, "How to Survive Targeted Fiber Cuts: A Game Theoretic Approach for Resilient SDON Control Plane Design," *Springer Nature, ONDM 2019, LNCS 11616*, Book: *Optical Network Design and Modeling*, Chapter No: 15, Chapter DOI: 10.1007/978-3-030-38085-4_15, Jan. 2020
8. L. Zhang, J. Chen, E. Agrell, R. Lin, and L. Wosinska, "Enabling Technologies for Optical Data Center Networks: Spatial Division Multiplexing," (Invited Tutorial), *IEEE/OSA Journal of Lightwave Technology (JLT)*, Print ISSN: 0733-8724, Online ISSN: 1558-2213, DOI: 10.1109/JLT.2019.2941765, Vol. 38, Issue 1, pp. 18 – 30, Jan.. 2020
9. F. Tonini, C. Raffaelli, L. Wosinska, P. Monti, "Cost-Optimal Deployment of a C-RAN With Hybrid Fiber/FSO Fronthaul," *IEEE/OSA Journal of Optical Communications and Networking (JOCN)*, Vol. 11, Issue 7, pp. 397 - 408, July 2019
10. C. Natalino, M. Schiano, A. Di Giglio, L. Wosinska, and M. Furdek, "Experimental Study of Machine-Learning-Based Detection and Identification of Physical-Layer Attacks in Optical Networks," *IEEE/OSA Journal of Lightwave Technology (JLT)*, Print ISSN: 0733-8724, Online ISSN: 1558-2213, DOI: 10.1109/JLT.2019.2923558, Vol. 37, Issue 16, pp. 4173 – 4182, Aug. 2019
11. M. R. Raza, C. Natalino, P. Öhlen, L. Wosinska, and Paolo Monti, "Reinforcement Learning for Slicing in a 5G Flexible RAN," *IEEE/OSA Journal of Lightwave Technology (JLT)*, Print ISSN: 0733-8724, Online ISSN: 1558-2213, DOI: 10.1109/JLT.2019.2924345, Vol. 37, Issue 20, pp. 5161 - 5169, Oct. 2019
12. Ch. Ranaweera, P. Monti, B. Skubic, E. Wong, M. Furdek, L. Wosinska, C. Mas Machuca, A. Nirmalathas, and Ch. Lim, "Optical Transport Network Design for 5G Fixed Wireless Access," *IEEE/OSA Journal of Lightwave Technology (JLT)*, Print ISSN: 0733-8724, Online ISSN: 1558-2213, DOI: 10.1109/JLT.2019.2921378, Vol. 31, Issue 16, pp. 3893 - 3901, Aug. 2019
13. A. Bogoni, A. Mecozzi, Ch. M. Okonkwo, D. V. Plant, K. Saitoh, L. Wosinska, G. N. Liu, A. Umbach, G. Charlet, R. Gaudino, "Foreword to the Special Issue on the 44th European Conference on Optical Communication (ECOC 2018)," *IEEE/OSA Journal of Lightwave Technology (JLT)*, Vol. 37, Issue 5, pp. 1450 – 1455, March 1 2019, DOI: 10.1109/JLT.2019.2905487
14. M. R. Raza, A. Rostami, L. Wosinska, and Paolo Monti, "A Slice Admission Policy Based on Big Data Analytics for Multi-Tenant 5G Networks," [Invited] *IEEE/OSA Journal of Lightwave Technology (JLT)*,

- Vol. 37, Issue 7, pp. 1690-1697, Print ISSN: 0733-8724, Online ISSN: 1558-2213, April 2019, DOI: 10.1109/JLT.2019.2896138
15. J. Li, X. Shen, L. Chen, D. P. Van, J. Ou, L. Wosinska, and J. Chen, "Service Migration in Fog Computing Enabled Cellular Networks to Support Real-time Vehicular Communications," *IEEE Access*, Vol. 7, Issue 1, pp. 13704-13714, Print ISSN: 2169-3536, Online ISSN: 2169-3536, December 2019, DOI: 10.1109/ACCESS.2019.2893571
 16. J. Li, X. Shen, L. Chen, J. Ou, L. Wosinska, and J. Chen, "Delay-Aware Bandwidth Slicing for Service Migration in Mobile Backhaul Networks," *IEEE/OSA Journal of Optical Communications and Networking (JOCN)*, Vol. 11, Issue 4, pp. B1-B9, Apr. 2019
 17. C. Natalino, F. Idzikowski, L. Chiaraviglio, L. Wosinska, and P. Monti, "Energy- and fatigue-aware RWA in optical backbone networks," *Elsevier Optical Switching and Networking (OSN) Journal*, Vol. 31, pp. 193-201, Jan. 2019
 18. C. Natalino, A. Yayimli, L. Wosinska, and M. Furdek, "Infrastructure upgrade framework for Content Delivery Networks robust to targeted attacks," *Elsevier Optical Switching and Networking (OSN) Journal*, Vol. 31, pp. 202-210, Jan. 2019
 19. P. Wiatr, J. Chen, P. Monti, L. Wosinska, and Di Yuan, "Routing and wavelength assignment vs. EDFA reliability performance in optical backbone networks: An operational cost perspective," *Elsevier Optical Switching and Networking (OSN) Journal*, Vol. 31, pp. 211-217, Jan. 2019
 20. F. Yaghoubi, M. Mahloo, L. Wosinska, P. Monti, F. de Souza Farias, J. Weyl, and Jiajia Chen, "A Techno-Economic Framework for 5G Transport Networks," *IEEE Wireless Communications*, Vol. 25, Issue 5, pp. 56-63, October 2018
 21. Li Yan, M. Fiorani, A. Muhammad, M. Tornatore, E. Agrell, and L. Wosinska, "Network Performance Trade-Off in Modular Data Centers With Optical Spatial Division Multiplexing," *IEEE/OSA Journal of Optical Communications and Networking (JOCN)*, Vol. 10, Issue 9, pp. 796-808, Sept. 2018
 22. V. Abedifar, M. Furdek, A. Muhammad, M. Eshghi, and L. Wosinska, "Routing, Modulation, and Spectrum Assignment in Programmable Networks Based on Optical White Boxes," *IEEE/OSA Journal of Optical Communications and Networking (JOCN)*, Vol. 10, Issue 9, pp. 723-735, Sept. 2018
 23. A. Tzanakaki, L. Wosinska, L. Schares, H. Liu, and D. Simeonidou, "Special Issue on Optical Data Center Networks," [Guest Editorial] *IEEE/OSA Journal of Optical Communications and Networking (JOCN)*, Vol. 10, Issue 7, pp. 1-3, July 2018
 24. H. Yuan, M. Furdek, A. Muhammad, L. Wosinska, and G. Zervas, "Space Division Multiplexing in Data Centre Networks: On Multi-Core Fibre Solutions and Crosstalk Suppressed Resource Allocation," *IEEE/OSA Journal of Optical Communications and Networking (JOCN)*, Vol. 10, Issue 4, pp. 272-288, April 2018.
 25. F. Yaghoubi, M. Furdek, A. Rostami, P. Öhlén, and L. Wosinska, "Consistency-aware Weather Disruption-tolerant Routing in SDN-based Wireless Mesh Networks," *IEEE Transactions on Network and Service Management (TNSM)*, Vol. 15, Issue 2, pp. 582-595, Jan. 2018 DOI: 10.1109/TNSM.2018.2795748
 26. M.R. Raza, M. Fiorani, A. Rostami, P. Öhlen, L. Wosinska, and P. Monti, "Dynamic Slicing Approach for Multi-Tenant 5G Transport Networks," [Invited] *IEEE/OSA Journal of Optical Communications and Networking (JOCN)*, Vol. 10, Issue 1, pp. A77-A90, Jan. 2018.
 27. C. Natalino, L. Chiaraviglio, F. Idzikowski, L. Wosinska, and P. Monti, "Joint Optimization of Failure Management Costs, Electricity Costs, and Operator Revenue in Optical Core Networks," *IEEE Transactions on Green Communications and Networking*, Vol. 2, Issue 1, pp. 291-304, Jan. 2018, DOI: 10.1109/TGCN.2017.2771156
 28. Z. Lu, X. Pang, O. Ozolins, A. Udalcovs, R. Schatz, U. Westergren, G. Jacobsen, S. Popov, L. Wosinska, S. Xiao, W. HU, and J. Chen, "Digital mobile fronthaul employing differential pulse code modulation with suppressed quantization noise," *OSA Optics Express*, Vol. 25, Issue 25, pp. 31921-31936, Nov. 2017.

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31. F. Tonini, M. Fiorani, M. Furdek, C. Raffaelli, L. Wosinska, and Paolo Monti, "Radio and Transport Planning of Centralized Radio Architectures in 5G Indoor Scenarios," *IEEE Journal on Special Areas in Communications (JSAC)*, Vol. 35, Issue 8, pp. 1837 – 1848, DOI: 10.1109/JSAC.2017.2710582, August 2017.
32. D. P. Van, M. Fiorani, L. Wosinska, and J. Chen, "Adaptive Open-Shop Scheduling for Optical Interconnection Networks," *IEEE/OSA Journal of Lightwave Technology (JLT)*, Vol. 35, Issue 13, pp. 2503-2513, DOI: 10.1109/JLT.2017.2695078, July 2017
33. M. Ruffini, M. Achouche, A. Arbelaez, R. Bonk, A. Di Giglio, N. J. Doran, M. Furdek, R. Jensen, J. Montalvo, N. Parsons, T. Pfeiffer, L. Quesada, C. Raack, H. Rohde, M. Schiano, G. Talli, P. Townsend, R. Wessaly, L. Wosinska, X. Yin, and D. B. Payne, "Access and Metro Network Convergence for Flexible End-to-End Network Design," [Invited], *IEEE/OSA Journal of Optical Communication and Networking (JOCN)*, Vol. 9, Issue 6, pp. 524-535, June, 2017.
34. Y. Cheng, M. Fiorani, R. Lin, L. Wosinska, and J. Chen, "POTORI: a passive optical top-of-rack interconnect architecture for data centers," *IEEE/OSA Journal of Optical Communication and Networking (JOCN)*, Vol. 9, Issue 5, pp. 401 - 411, DOI: 10.1364/JOCN.9.000401, May 2017
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36. M. Fiorani, P. Samadi, Y. Shen, L. Wosinska, and K. Bergman, "Flexible Network Architecture and Provisioning Strategy for Geographically Distributed Metro Data Centers," *IEEE/OSA Journal of Optical Communication and Networking (JOCN)*, Vol. 9, Issue 5, pp. 385-392, May 2017
37. K. Wang, C. Mas Machuca, L. Wosinska, P. J. Urban, A. Gavler, K. Brunnström and J. Chen, "A Techno-Economic Analysis of Active Optical Network Migration Towards the Next Generation Optical Access," *IEEE/OSA Journal of Optical Communication and Networking (JOCN)*, Vol. 9, Issue 4, pp. 327 – 341, DOI: 10.1364/JOCN.9.000327, April, 2017.
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39. P. Samadi, M. Fiorani, Y. Shen, L. Wosinska, and Keren Bergman, "Flexible Architecture and Autonomous Control Plane for Metro-Scale Geographically Distributed Data Centers," *IEEE/OSA Journal of Lightwave Technology (JLT)*, Vol. 35, Issue: 6, pp. 1188 – 1196, DOI: 10.1109/JLT.2017.2652480, March 2017
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42. C. Natalino, L. Chiaraviglio, F. Idzikowski, C. R. L. Francés, L. Wosinska, and P. Monti, "Lifetime-Aware Operation of Green Optical Backbone Networks," *IEEE Journal on Special Areas in Communications (JSAC) Series on Green Communications and Networking (SGCN)*, Vol. 34, Issue 12, pp. 3915 – 3926, DOI: 10.1109/JSAC.2016.2611879, December 2016

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44. A. Nag, M. Furdek, P. Monti, L. Wosinska, and M. Ruffini, "Exploiting Dual Homing in Access Networks to Improve Resiliency in Core Networks," *IEEE/OSA Journal of Optical Communication and Networking (JOCN)*, Vol. 8, Issue: 11, pp. 854 - 862, November 2016
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Conference papers

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2. C. Natalino, F. Lipp, D. Hock, N. Aerts, M. Schiano, A. Di Giglio, L. Wosinska, and Marija Furdek, "Demonstration of Machine-Learning-Assisted Security Monitoring in Optical Networks," (Invited Demo) in Proc. of European Conference on Optical Communication ECOC2019, Dublin, Ireland, Sept. 2019.
3. C. Natalino, A. Udalcovs, L. Wosinska, O. Ozolins, and M. Furdek, "One-Shot Learning for Modulation Format Identification in Evolving Optical Networks," (Post Deadline Paper) in Proc. of OSA Photonic Networks and Devices 2019, San Francisco, August 2019
4. M. R. Raza, C. Natalino, L. Wosinska, and P. Monti, "Machine-Learning-based methods for slice admission in 5G Networks," in Proc. of IEEE Photonics in Switching and Computing PSC2019, Fukuoka, Japan, July 2019.
5. M. Lashgari, L. Wosinska, and P. Monti, "A Shared-Path Shared-Compute Planning Strategy for a Resilient Hybrid C-RAN," (Invited paper), in Proc. of IEEE International Conference on Transparent Optical Networks ICTON2019, Angers, France, July 2019.
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- 238.A. Kujawski, P. Szczepanski, and L. Wosinska, "Output power optimization in laser with nonlinear absorber," International Symposium on Optical System Design, Berlin, September 1992.

239.P. Szczepanski and L. Wosinska, "Model of bistable operation of laser with saturable absorber," International Conference From Galileo's "occhialino" to optoelectronics: frontiers of optical systems and materials, Padova, June 1992.

240.L. Wosinska,"Optical shift register – operation principles," invited paper on Communications Workshop, FEORC, Virginia Polytechnic Institute and State University, Blacksburg, April 1-4, 1991.

Invited talks, keynotes, tutorials and seminars

1. "Optical data center network architectures and resource allocation," keynote at SPIE Photonics West 2020, San Francisco, USA, February 2020
2. "Flexibility Domains in Optical Networks: Exploring the value of flexible optical networks," invited talk at IEEE/OSA/SPIE Asia Communications and Photonics Conference ACP2019, Chengdu, China, November 2019
3. "Enabling Technologies for Optical Data Center Networks: Spatial Division Multiplexing," tutorial talk at IEEE/OSA Optical Fiber Communication Conference and Exposition OFC2019, San Diego, USA, March 2019
4. "Flexible optical networks: concepts, developments and challenges," keynote at West-Lake Photonics Symposium, Hangzhou, China, November 2018
5. "Optical Network Architectures for Datacenters," invited talk at OSA NETWORKS 2017, New Orleans, USA, July 2017
6. "Optical Datacenter Network: Challenges and Recent Developments," keynote at IEEE HPSR 2017, June 18-21, Campinas, Brazil, 2017
7. "Green optical networks: energy saving vs. network performance tradeoff," two seminars at University of Auckland and Auckland University of Technology, New Zealand, July and August 2016
8. "Towards flexible and energy-efficient datacenter networks," talk at Data Center Summit, IEEE/OSA Optical Fiber Communication Conference and Exposition OFC2016, Anaheim, USA, March 20-24, 2016
9. "Green optical networks," invited talk at IEEE International Symposium on Advanced Networks and Telecommunication Systems ANTS 2015, Kolkata, Dec. 2015
10. "Energy efficient optical networking," invited talk at Optics and Photonics in Sweden 2015, Stockholm, Oct. 2015
11. "Optical networks for green communication and interconnects," invited talk at IEEE GreenCom2015, Nov. 2015
12. "Flexible and cost efficient optical 5G transport networks," talk at IEEE Photonics in Switching PS 2015, Florence, Sept. 2015
13. "Optical networks for energy-efficient data centers," two talks: at Progress In Electromagnetics Research Symposium (PIERS2014), Guangzhou, China, Aug. 2014 and at IEEE/OSA/SPIE Asia Communications and Photonics Conference ACP2014, Shanghai, Nov. 2014
14. "Photonic Networks for the Future Internet: Challenges and Opportunities," talk at DTU 2014 Summit Workshop on Photonics Technologies, Technical University of Denmark, Lyngby, June 19, 2014
15. "Optical networks for energy-efficient data centers," seminar at University of California UC Davis, USA, March 2014 IEEE International Microwave and Optoelectronics Conference IMOC 2013, Rio de Janeiro, Brazil, August 2013
16. "Green (Optical) Networks @ KTH," seminar at University of Canterbury UC, Christchurch, New Zealand, Aug. 2012

17. "Accounting for physical layer impairments in transparent WDM networks," seminar at University of California UC Davis, USA, March 2010
18. "Introduction to Photonics in Switching," tutorial at Summer School of Network of Excellence BONE and Common Master course, Budapest, September 2010
19. "Photonic switch architectures and reliability performance" IEEE European Conference on Networks & Optical Communication NOC 2010, Faro, Portugal, June 2010
20. "Photonics in Switching: advances and challenges," tutorial at Summer School of Network of Excellence BONE, Krakow, September 2009
21. "Cost vs. reliability performance of fiber access networks," seminar at University of California Davis, USA, March 2009
22. "Next-Generation Fiber Access Network Architectures," seminar at Shanghai Jiao Tong University STJU, October 2008
23. "Evolution of Fiber Access Networks: Cost and Reliability Tradeoff," two seminars: at State Key Laboratory of Advanced Optical Communication Systems and Networks, Peking University and at Tsinghua University, Beijing, China, October 2008
24. "Next-Generation Fiber Access Networks," tutorial at workshop ISIS, Stockholm, June 2nd 2008
25. "Photonics in Switching," tutorial at 16th International Traveling Summer School on Microwaves and Lightwaves ITSS, Warszawa, July 8 – 14, 2006
26. "A Photonic Packet Switch For High Capacity Optical Networks," seminar at University of Texas at Dallas UTD, USA, September 2002
27. "Reliability of optical networks and systems," tutorial at 1st COST 270 workshop on Reliability of optical network, systems and components, December 12-14, 2001, Dübendorf, Switzerland

Books and book chapters

1. C. Natalino, S. Ristov, L. Wosinska, and M. Furdek, "Functional measures to evaluate network vulnerability to disasters," Chapter 1.5 in the book "Guide to Disaster-resilient Communication Networks" of COST CA15127 Action RECODIS, J. Rak and D. Hutchison (Eds), Springer, July 2020.
2. A. de Sousa, D. Santos, C. Natalino, L. Wosinska, C. Mas Machuca, and M. Furdek, "Structural methods to improve the robustness of anycast communications to large-scale failures," Chapter 2.9 in the book "Guide to Disaster-resilient Communication Networks" of COST CA15127 Action RECODIS, J. Rak and D. Hutchison (Eds), Springer, July 2020.
3. F. Yaghoubi, M. Furdek, A. Rostami, P. Öhlén, and L. Wosinska, "Resilient Routing against Rain Disruptions for Wireless Networks," Chapter 24 in the book "Guide to Disaster-resilient Communication Networks" of COST CA15127 Action RECODIS, J. Rak and D. Hutchison (Eds), Springer, July 2020
4. B. Skubic and L. Wosinska, "Introduction to Optical Access Networks," in Handbook on Optical Networks, P. Winzer, B. Mukherjee, I. Tomkos, M. Tornatore (Eds.), Springer, 2020
5. F. Yaghoubi, M. Mahloo, L. Wosinska, P. Monti, F. S. Farias, J. C. W. A. Costa, J. Chen, "Techno-economic and Business Feasibility Analysis of 5G Transport Networks," Chapter 13 in Optical and Wireless Convergence for 5G Networks, A.M. Abdalla, J. Rodriguez, I. Elfergani, A. Teixeira (Eds), Wiley, April 2019. <https://doi.org/10.1002/9781119491590.ch13>.
6. P. Monti, C. Cavdar, I. Cerutti, J. Chen, A. Mohammad, L. Velasco, P. Wiatr, L. Wosinska, "Green optical networks: power savings versus network performance," in Green Communications: Principles, Concepts and Practice, K. Samdanis, P. Rost, A. Meader, M. Meo, C. Verikoukis (Eds.), Wiley, July 2015.

7. P. Monti, L. Valcarenghi, A. Udalcovs, R. Schatz, L. Wosinska, "Energy Efficiency Aspects in Optical Access and Core Networks," in *Optical Communications and Related Microwave Techniques*, O. Strobel (Ed.), Wiley, 2015.
8. M. Forzati, J. Chen, M. Kantor, B. Lannoo, C. Larsen, C. Mattsson, A. Mitsenkov, G. Parca, E. Pereira, A. Pinto, A. Teixeira, L. Wosinska, M. Zuhdi, "Economics of Next Generation Networks", chapter in the book *Springer Optical Transmission FP7 BONE Project Experience*, Teixeira, António; Tosi Beleffi, Giorgio Maria (Eds.), Series *Signals and Communication Technology*, 2012, 235-274, DOI: 10.1007/978-94-007-1767-1_5.
9. C. Vázquez, J. Montalvo, V. Moeyaert, K. Yuksel, C. Caucheteur, P. Gravey, T. Loukina, D. Larrabeiti, K. Ennser, G. Franzl, F. Hauske, L. Wosinska, P. Monti, J. Ahmed, J. Lazaro, "Signal Processing, Management and Monitoring in Transmission Networks," chapter in the book *Springer Optical Transmission FP7 BONE Project Experience*, Teixeira, António; Tosi Beleffi, Giorgio Maria (Eds.), Series *Signals and Communication Technology*, 2012, DOI: 10.1007/978-94-007-1767-1_2.
10. Editors: L. Wosinska, K. Sato, J. Wu, J. Zhang, "Network Architectures, Management, and Applications IX", *Proceedings of SPIE Volume: 8310*, 15 December 2011, ISBN: 9780819489586.
11. P. Monti, C. Cavdar, J. Chen, L. Wosinska, A. Fumagalli, "New Dimensions for Survivable Service Provisioning in Optical Backbone and Access Networks," in *Resilient Optical Network Design: Advances in Fault-Tolerant Methodologists*, Mark Leeson and Yousef Kaviani (Eds.), IGI Global, Hershey, PA, USA, 2011.
12. Editor: L. Wosinska, "Network Architectures, Management, and Applications VIII", *Proceedings of SPIE Volume: 7989*, 10 January 2011, ISBN: 9780819485571.
13. J. Chen and L. Wosinska "Efficient Next-Generation Optical Networks - Design and Analysis of Fiber Access and Core Networks", VDM Verlag, Dr Muller Aktiengesellschaft & Co. KG, ISBN: 978-3-639-22413-9, 2010.
14. B. Skubic, J. Chen, B. Chen, J. Ahmed, L. Wosinska: "Dynamic bandwidth allocation in EPON and GPON", chapter in the book *Wireless and Wireline Optics Centric Next Generation Networks*, Iniewski, K. (ed), Wiley, 2010.
15. Editors: K. Sato, L. Wosinska, J. Wu, Y. Ji, "Network Architectures, Management, and Applications VII", *Proceedings of SPIE Volume: 7633*, 19 November 2009, ISBN: 9780819480354.
16. W. Kabaciński (chapter editor), J. Chen, G. Danilewicz, J. Kleban, M. Spyropoulou, I. Tomkos, E. Varvarigos, K. Vlachos, S. Węclewski, L. Wosinska and K. Yiannopoulos: *Novel Switch Architectures*, chapter in the book *COST 291 – Towards digital optical networks (I. Tomkos et al., eds)*, LNCS 5412, April 2009.
17. P. Kourtessis (chapter editor), C. Almeida, C.-H. Chang, J. Chen, S. Di Bartolo, P. Fasser, M. Gagnaire, E. Leitgeb, Mário Lima, M. Löschnigg, M. Marciniak, N. Pavlovic, Y. Shachaf (assistant editor), A. L. J. Teixeira, G. M. Tosi Beleffi and L. Wosinska: "Evolution of Optical Access Networks," chapter in the book *COST 291 – Towards digital optical networks (I. Tomkos et al., eds)*, LNCS 5412, April 2009.
18. L. Wosinska (chapter editor), D. Colle, P. Demeester, K. Katrinis, M. Lackovic, O. Lapcevic, I. Lievens, G. Markidis, B. Mikac, M. Pickavet, B. Puype, N. Skorin-Kapov, D. Staessens and Anna Tzanakaki: "Network resilience in future optical networks," chapter in the book *COST 291 – Towards digital optical networks (I. Tomkos et al., eds)*, LNCS 5412, April 2009.
19. Editors: W. Hu, Shoa-Kai Liu, K. Sato, L. Wosinska, *Network Architectures, Management, and Applications VI*, *Proceedings of SPIE Volume: 7137*, 19 November 2008, ISBN: 9780819473776
20. J. Chen, M. Kantor and K. Wajda, L. Wosinska (chapter editor), *Network Protection*, chapter in the book *Next-Generation FTTH Passive Optical Networks: Research Towards Unlimited Bandwidth Access (J. Prat, ed.)*, Springer 2008, ISBN: 978-1-4020-8469-0

Patents

1. F. Yaghoubi, A. Rostami, J. Chen, P. Ohlen, and L. Wosinska, "Routing Control in a Communication Network", filed worldwide patent, PCT/EP2015/079815, Dec. 2015 (holder: Ericsson)
2. M. Mahloo, J. Chen and L. Wosinska, "CoMP backhauling solutions via PON," Worldwide patent, PCT/SE2014/051029, Patent number 20170288777, 2017/10/5 (holder: Ericsson)
3. M. Mahloo, J. Chen and L. Wosinska, "Passive optical networks structure and a remote node in a backhaul communication network," US Patent 10,097,269, 2018
4. J. Chen and L. Wosinska, "Improvements in optical communications networks: Reliable PON architecture supporting Ultra-large number of Users," Worldwide patent, PCT/SE2009/051221, Sept. 2009 (holder: Ericsson)
5. L. Wosinska, "Optisk – elektrisk vippa och anordningar för tidsmultiplex/demultiplex och synkronisering/fördröjning", Swedish patent 467 435 July 13, 1992 (holder: Ericsson)