

# CURRICULUM VITAE

## ANNA TZANAKAKI

### SHORT BIOGRAPHY

**Anna Tzanakaki** is an Associate Professor at the Physics Department fo the National and Kapodistrian University of Athens, Greece, Previously, she was a Senior Research Fellow at the University of Bristol, UK and an Associate Professor at the Athens Information Technology (AIT), Greece where she was leading the Network Design and Services (NDS) research group. She has been also an adjunct faculty member of the Information Networking Institute of Carnegie Mellon University, USA. She has obtained a BSc degree from the University of Crete, Greece, an MSc and a PhD both from the University of Essex, UK. She was a Senior Research Officer and also a visiting lecturer at the department of Electronics Systems Engineering at the University of Essex. She was a co-founder of ilotron ltd, a high-technology spin-off from the University of Essex. Following ilotron, Dr Tzanakaki joined Altamar Networks, a subsidiary of Ditech Communications, as a principal engineer responsible for optical architecture and system design. She is a co-author of over 200 publications in international journals and conferences. She is a co-inventor of several granted and published patents. She is a senior member of the IEEE and several Technical Program Committees of international scientific conferences. She has served as an associate editor of the IEEE/OSA Journal of Optical Communications and Networks and is a technical referee for various conferences as well as international scientific journals. She serves and has service as a technical expert for the EU, the national research councils of Greece, UK and Portugal. She has actively participated in a number of European and national funded research collaborative projects and is the technical coordinator of the EU 5G PPP project 5G-VICTORI. Her research interests include converged systems and networks.

## **PROFESSIONAL EXPERIENCE**

**June 2020 – currently: Physics Department, National and Kapodistrian University of Athens**

*Associate Professor*

**July 2014 – June 2020: Physics Department, National and Kapodistrian University of Athens**

*Assistant Professor*

**March 2003- 2013: Athens Information Technology Center of Excellence in Research and Graduate Education**

*Associate Professor*

*Head of the Network Design and Services Group*

*Academic Program Director of the Master in Information and Telecommunications Technology (MSITT)*

*Adjunct faculty member of the Information Networking Institute, Carnegie Mellon University, USA (2004-2011)*

*Research work and interests:*

- optical networking
- cross-layer network design and service provisioning
- convergence in support of telecommunications and IT services

**June 2001-March 2003: Altamar Networks UK, Subsidiary of Ditech Communications Ltd**

*Principal Engineer.* Responsible for optical architecture and system design.

**Feb 2000-June 2001: Ilotron Ltd, UK**

*Co-founder and Senior Engineer.* The position involved intellectual property generation and responsibility of the design of the main Ilotron products

**Department of Electronic Systems Engineering, University of Essex, UK**

**Oct 2000-June 2001:**

*Visiting lecturer* teaching the “Optical Fibre Communication Systems” course for the final year BSc in Electronics Engineering.

**1998-2002:**

*Visiting lecturer* teaching several short courses (Broadband Networks, Photonic Networks, IP and The Optical Layer, Terabit Optical Communications, Devices for WDM

Transmission) given in the framework of the MSc programmes on "Telecommunication and Information Systems" and "The Physics of Laser Communications".

**1996-Jan 2000:**

Senior Research Officer for the Advanced Communications Technologies and Services (ACTS) project entitled "Horizontal Action in Optical Networking" (HORIZON) funded by the European Commission.

**1995-1996:**

Senior Research Officer for the Race R2028 "Multi-wavelength Transport Network" (MWTN) consortium project, funded by the European Commission (EC). The project focused on the design and development of the first Optical Cross-Connect and was awarded the EC prize for "outstanding contribution to technological progress".

**1994: INTRACOM S.A., Greece**

Involved in a project entitled "Structure and Performance of a 34 Mbit/s Optical Link" that provided telephone services with simultaneous transmission of data channels.

**EDUCATION**

**1996-2000: PhD in "Tunable Wavelength Conversion for All-Optical Networks"**

**Department of Electronic Systems Engineering, University of Essex, UK**

The research focused on all-optical fast tunable wavelength conversion employing semiconductor optical amplifiers. This work included detailed theoretical modelling and experimental evaluation of the performance of various wavelength conversion techniques. Their suitability for circuit and packet switched all-optical networks was investigated through a number of system experiments involving optical cross-connects and optical packet switch nodes.

**1993-1994: MSc on "The Physics of Laser Communications"**

**Department of Physics, University of Essex, UK**

**1988-1992: BSc in "Physics"**

**Department of Physics, University of Crete, Greece.**

**RESEARCH PROJECT PARTICIPATION**

- 5G-XHaul - "Dynamically Reconfigurable Optical-Wireless Backhaul/Fronthaul with Cognitive Control Plane for Small Cells and Cloud-RANs", 5G PPP H2020
- CONTENT European Project – CONTENT: Convergence of Wireless Optical Network and IT Resources in support of cloud services, EU project, FP7 ICT, Small or medium scale focused research project (STREP), start November 2012, end October 2015. Project Technical Manager.
- HARP European Project – High capacity network Architecture with Remote radio heads & Parasitic antenna arrays, FP7 ICT, Small or medium scale focused research project (STREP), start November 2012-October 2015, Task Leader and Steering Board Member

- GEYSERS European Project – GEYSERS: Generalised Architecture for Infrastructure Services, EU project, FP7 ICT, Integrated Project (IP), start January 2010, end December 2013. AIT Principal Investigator and WP6 Co-Leader “Exploitation, Dissemination and Standardisation”.
- Lamda User Controlled Infrastructure for European Research (PHOSPHORUS), EU project, IST EU Research Networking Test-beds call September 2005, IP. AIT Principal Investigator.
- Transparent Ring Interconnection (TRIUMPH), EU project, 4<sup>th</sup> IST Call, STREP. Technical Co-manager and WP2 leader.
- Broadband e-Services and Access for the Home (BReATH), EU project, 6<sup>th</sup> framework, SSA. WP3 leader since January 2006.
- E-Photon/ONE +, EU project proposal, 4<sup>th</sup> IST Call, NoE. Participation to various JPs.
- “Autonomous optical networks for global grid computing applications”, Greek-UK project, funded by GSRT and the British Council. AIT Principal Investigator.
- COST291, “Towards Digital Optical Networks”. The project is funded by the EU and is focusing on optical processing for digital network performance, novel network architectures as well as a unified
- COST 288, “Nanoscale and Ultrafast Photonics”. This Action will integrate the most promising telecom-and datacom -oriented topics studied under both Actions, and act as a catalyst for research by improved collaboration and networking, and as a proactive collaboration on identified strategic research topics.
- COST 266, “Advanced Infrastructures for Photonic Networks”. The project was funded by the EU and was aiming to propose and evaluate suitable architectures and identify the key technologies for the next generation photonic networks.
- “Wavelength Switched Packet Network” (WASPNET), UK national project funded by the UK Physical Science and Engineering Research Council (EPSRC). The project dealt with the design and implementation of an optical packet switched and its outcome was the demonstration of a fully functional all-optical packet switched node.
- “Horizontal Action in Optical Networking” (HORIZON) funded by the European Commission within the framework of Advanced Communications Technologies and Services (ACTS). The project provided co-ordination across the photonics domain projects within ACTS and developed a Roadmap on the “Photonics Technologies in Europe”.
- “Multi-wavelength Transport Network” (MWTN) consortium project, funded by the European Commission (EC). The project focused on the design and development of the first Optical Cross-Connect and was awarded the EC prize for “outstanding contribution to technological progress”.

## **MEMBERSHIPS**

- Senior member of the IEEE.
- Co-organizer of the Globecom 2014 workshop on “Wireless Optical Network Convergence in Support of Cloud Architectures”, November 2014, Dallas, USA
- Co-organizer of the workshop on Mobile Cloud Infrastructures and Services workshop, EUCNC 2014, Bologna, Italy 2014
- Co-organizer of a special session on “Transport Software Defined Networking” at FIA’2014, Athens Greece
- Co-chair of Subcommittee 4: Network Architectures, Management and Applications of the Asian Communications and Photonics (ACP) Conference 2013
- Member of the Technical Program Committee of the 4th IEEE International Conference on Cloud Networking, CloudNet 2015, October 2015, Canada

- Member of the Technical Program Committee of the International Conference on Photonics in Switching, 2013-2014
- Member of the Technical Program Committee of the Asian Communications and Photonics (ACP) Conference 2009-2013, Subcommittee 4: Network Architectures, Management and Applications
- Member of the Technical Program Committee of the APOC 2008 Conference, Subcommittee 4: Network Architectures, Management and Applications
- Member of the Technical Program Committee for the "Symposium on Optical Networks and Systems", of Globecom 2005-2013
- Member of the Technical Program Committee, NETWORKS 2008-2013, 13th International Telecommunications Network Strategy and Planning Symposium
- Member of the Technical Program Committee for ICC ONS (Optical Networks and Systems Symposium) 2008-2013
- Member of the Technical Program Committee for ICC 2013
- Member of the Technical Program Committee for ONDM 2012-2013
- Member of the Technical Program Committee for NetCloud Workshop, CloudCom Conference, 2011-2013
- Member of the Technical Program Committee for Future Networks and Mobile Summit (FuNeMS) 2012-2013
- Member of the Technical Program Committee for the workshop on "High Performance Grid Networks", co-located with CCGrid 2008, Lyon, France
- Member of the Technical Program Committee for the COST291 workshop held in conjunction with ONDM2007
- Member of the Technical Program Committee of the workshop on "Service Oriented Optical Networks". The workshop was organised in conjunction with the TNC 2006 conference (<http://www.terena.nl/events/tnc2006/>).
- Member of the Technical Program Committee of the Optical Society of America (OSA) Topical Meeting on Coherent Optical Technologies and Applications, 2006
- Member of the Technical Program Committee of GridNets 2005 held in conjunction with BroadNets2005
- Member of the Technical Program Committee of the Multiprovider QoS/SLA Internetworking - MPQSI 2005, 5-7 June 2005, Chicago, USA
- Member of the technical Program Committee of the Workshop on All Optical Routing WAOR, co-located with the International Conference on Transparent Optical Networks (ICTON), 2004-2007
- Member of the Scientific Committee of the IADIS Virtual Multi Conference on Computer Science and Information Systems, 2005-2007
- Member of the Technical Program Committee of the "Symposium on Emerging Optical Networks" (SEON) held in Portugal on July 2005
- Member of the Greek E-Business forum working group focusing on "Migration from the digital divide to the electronic work environment: How to enable a productive work environment in less favoured regions"

## ***HONOURS & PROFESSIONAL ACTIVITIES***

- OFC 2015-2017, DSN6: Optical Devices, Subsystems, and Networks for Datacom and Computercom, TPC member

- Co-organiser of the 5G Symposium, OFC 2017
- Co-organizer and chair of the workshop on “Short Reach Optical Networks: Highly Synergistic or Different Worlds?”, OFC 2015, Los Angeles, California, USA
- Organizer of the workshop on “Wireless optical network convergence in support of cloud architectures” (WONC), Globecom 2014, Austin, Texas, USA
- Best Paper Award at ONDM 2013, April 2013, Brest, France
- Scientific Expert of the Engineering and Physical Sciences Research Council (EPSRC), Peer Review College of the UK, 2006-2012
- Member of the scientific advisory board of the “*European Coordinated Research on Long Term Challenges in Information and Communication Sciences & Technologies*” (CHIST-ERA ERANET) (2011-2012).
- Scientific Expert of the EU assigned to participate in the evaluation of the performance of various EU funded research projects
- Co-chair of the Sub-committee on Network Architectures, Management, and Applications (SC4) of the Asia Communications and Photonics Conference and Exhibition (ACP) 2013
- Co-chair of the Cluster on All Optical Networks (CAON) TPC at the Future Network and Mobile Summit 2012, Portugal
- Guest editor of the special issue of the Optical Switching and Networking Journal, Elsevier, entitled " Optical Network Architectures and Applications", 2014
- Guest editor of the special issue of the Journal of Networks, Academy Publisher, entitled "All-optically Routed Networks", vol 5, no 11, pp 1245-1247, Nov 2010
- Guest editor of the special issue of the Journal of Optical Communications and Networks, IEEE/OSA, entitled "Optical Networks for the Future Internet", July 2009
- External examiner of the PhD entitled “Design and Optimization of Optical Grids and Clouds”, at University of Gent, Gent, Belgium, March 2013
- External evaluator of the PhD thesis entitled “Energy Saving Photonic Switching and Networking”, Department of Electronics and Information, Politecnico di Milano, Italy, November 2012
- Chair of the “Workshop on Converged Networks and Clouds” held in conjunction with the European Conference on Optical Communications – ECOC 2011, September 2011
- External examiner of the PhD entitled "Optical Class of Service Segregation using the State of Polarization in Circuit and Packet Switched Networks", at the Department of Electronics and Telecommunications, Faculty of Information Technology, Mathematics and Electrical Engineering, Norwegian University of Science and Technology, Trondheim, Norway, September 2010
- Best Student Paper Award, Asia Communications and Photonics Conference and Exhibition (ACP) 2009
- External examiner of the PhD entitled “Design, Analysis and Simulation of Optical Access and Wide-area Networks”, at KTH - Royal Institute of Technology, Stockholm, Sweden, June 2009
- External examiner of the PhD entitled “AUTOMATED PLANNING MODELS FOR FUTURE ICT NETWORKS”, at Aalborg University, Denmark, September 2009
- Co-chair of the workshop entitled “Networks for IT: A new opportunity for optical network technologies” held in conjunction with ECOC2007
- Co-chair of the technical Program Committee of the Workshop on All Optical Routing WAOR, co-located with the International Conference on Transparent Optical Networks (ICTON), 2008-2013

- Scientific secretary of the COST291 action “Towards Digital Optical Networks”, 2004-2008
- Organizing committee of the COST291 GBOU/ONNA workshop “Design of Next Generation Optical Networks: from the physical up to the network level perspective”, Gent, Belgium, February 2006
- Chair of the Technical Program Committee of the COST291 workshop on “Issues and Challenges in Optical Networking” held in conjunction with ICTON 2005, Barcelona, June 2005
- Co-organiser of the workshop on “Optical Networking for Grid Services”, ECOC2004, Stockholm, Sweden, September 2004.
- Co-organiser of the workshop on “High Speed Global Grid Networks”, Globecom 2004, December 2004
- Co-organization of two workshops in collaboration with the European Photonics Industry Consortium (EPIC), the IST OPTIMIST Project Consortium and COST288, June 2004, AIT, Greece
- Chair and co-chair of various international scientific workshops, member of several technical program committees of international conferences and review of numerous scientific journals and conferences
- Inventor of one granted and 11 published patents
- Over 150 publications in international scientific journals and conferences
- Over 640 citations for her work (according to “SCOPUS”)

## **BOOKS**

1. S. Azodolmolky, A. Tzanakaki, I. Tomkos, “A Simulation Framework for Performance Evaluation of Optical Burst Switched Networks”, LAMBERT Academic Publishing, in press

## **BOOK CHAPTERS**

1. Anna Tzanakaki, Markos Anastasopoulos, Bijan Rofoe, Shuping Peng, George Zervas, Reza Nejabati, Dimitra Simeonidou, Giada Landi, Giacomo Bernini, Roberto Monno, Nicola Ciulli, Gino Carozzo, Kostas Katsalis, Thanasis Korakis, Dora Christofi, Georgios Dimosthenous, Jordi Ferrer Riera, Eduard Escalona, Jacopo Pianigiani, Dirk Van Den Borne, Gert Grammel, “SDN for Converged Access/Aggregation Networks”, Optical Network Series of Springer, to appear.
2. M. P. Anastasopoulos, A. Tzanakaki, D. Simeonidou, “The impact of renewable energy sources in the CO2 emissions of converged optical network and cloud infrastructures”, Green Communications and Networking, CRC Press, edited by F. Richard Yu; Xi Zhang and Victor C.M. Leung, Oct.2012
3. A. Tzanakaki, M. P. Anastasopoulos, K. Georgakilas, S. Peng, R. Nejabati, E. Escalona, D. Simeonidou, "Energy Efficient VI Planning over Converged Optical Networks and IT Resources," Green Communications, CRC Press, edited by Jinsong Wu, Sundeep Rangan, Honggang Zhang, 2012, in press.
4. Pascale Vicat-Blanc, Sébastien Soudan, Sergi Figuerola, Joan A. Garcia, Espin, Jordi Ferrer, Ester Lopez, Jens Buysse, Chris Develder, Xiaomin Chen, Admela Jukan, Giada Landi, Nicola Ciulli, Anna Tzanakaki, Marc Brogle, Luuk van, Laarhoven, Bartosz Belter, Fabienne Anhalt, Eduard Escalona, Reza Nejabati, Dimitra Simeonidou, Yuri Demchenko, Canh Ngo, Cees de Laat, Matteo Biancani, Michael Roth, Pasquale Donadio, Javier Jim´nez, Jaroslaw, Kowlaczyk, and Ashwin Gumaste, Bringing Optical Networks to the Cloud: an Architecture for a Sustainable Future Internet, “Future Internet: Achievements and Promising Technology”, The European

Future Internet Initiative (FIA), Springer Verlag, May 2011

5. D. Careglio (chapter editor), J. Aracil, S. Azodolmolky, J. García-Haro, S. Gunreben, G. Hu, M. Izal, A. Kimsas, M. Klinkowski, M. Köhn, E. Magaña, D. Morató, P. Pavón-Mariño, J. Perelló, J. Scharf, S. Spadaro, I. Tomkos, A. Tzanakaki, J. Veiga-Gontán, "Performance issues in optical burst/packet", COT291 Towards Digital Optical Networks, Final report, Published by Elsevier, 2009
6. Lena Wosinska (chapter editor), Didier Colle, Piet Demeester, Kostas Katrinis, Marko Lackovic, Ozren Lapcevic, Ilse Lievens, George Markidis, Branko Mikac, Mario Pickavet, Bart Puype, Nina Skorin-Kapov, Dimitri Staessens, Anna Tzanakaki, "Network resilience in future optical networks", COT291 Towards Digital Optical Networks, Final report, Published by Elsevier, 2009
7. F. Matera, S. Bauer, V. Eramo, M. Karasek, H. P. Nolting, M. Nord, B. Satorious, M. Settembre, I. Tomkos, A. Tzanakaki and I. Zacharopoulos, "Transmission Systems" Chapter 2 of "Advanced Infrastructure for Photonic Networks" COST 266 Extended Final Report, Published in 2003
8. A. Kuchar, I. Tomkos, C. Mas and A. Tzanakaki, "Summary of Results and Future Work" Chapter 8 of "Advanced Infrastructure for Photonic Networks" COST 266 Extended Final Report, Published in 2003

## **PUBLICATIONS**

### **Journal Publications**

1. A. Tzanakaki, M. Anastasopoulos, I. Berberana, D. Syrivelis, P. Flegkas, T. Korakis, D. Camps Mur, I. Demirkol, J. Gutiérrez, E. Grass, Q. Wei, E. Pateromichelakis, N. Vucic, A. Fehske, M. Grieger, M. Eiselt, J. Bartelt, G. Fettweis, G. Lyberopoulos, E. Theodoropoulou, and D. Simeonidou, "Wireless-Optical Network Convergence: Enabling the 5G Architecture to Support Operational and End-User Services", IEEE Communications Magazine, August 2017.
2. J. Gutiérrez, N. Maletic, D. Camps-Mur, E. García, I. Berberana, M. P. Anastasopoulos, A. Tzanakaki, V. Kalokidou, P. Flegkas, D. Syrivelis, T. Korakis, P. Legg, D. Markovic, G. Lyberopoulos, J. Bartelt, J. K. Chaudhary, M. Grieger, N. Vucic, J. Zou, and E. Grass, "5G-XHaul: a converged optical and wireless solution for 5G transport networks", *Transactions on Emerging Telecommunications Technologies*, vol. 27, no. 9, pp 1187-1195, September 2016.
3. M. P. Anastasopoulos, A. Tzanakaki, D. Simeonidou, Scalable monitoring and optimization techniques for megascale data centers, "Journal of Lightwave Technology", vol. 34, no. 8, pp. 1980-1989
4. M. P. Anastasopoulos, A. Tzanakaki, D. Simeonidou, Stochastic Energy Efficient Cloud Service Provisioning Deploying Renewable Energy Sources, *IEEE Journal on Selected Areas in Communications*
5. J. Wu, L. Wosinska, A. Tzanakaki, G. Shen, Forward of special issue on "Optical Network Architectures, Systems and Applications", *Telecommunication Systems*, vol. 60, no. 13, May 2015
6. M. Anastasopoulos, A. Tzanakaki, B. Rofoee, S. Peng, Y. Yan, D. Simeonidou, G. Landi, G. Bernini, N. Ciulli, J. Riera, E. Escalona, K. Katsalis and T. Korakis, Optical wireless network convergence in support of energy-efficient mobile cloud services, *Photonic Network Communications*, vol. 29, no. 3, April 2015, pp 269-281
7. Bijan Rahimzadeh Rofoee, Georgios Zervas, Yan Yan, Markos Anastasopoulos, Anna Tzanakaki, Shuping Peng, Reza Nejabati, and Dimitra Simeonidou, "Hardware Virtualized Flexible Network for Wireless-DataCenter", *IEEE/OSA J. Opt. Commun. Netw.*, invited, to



appear

8. M. P. Anastasopoulos, A. Tzanakaki, B. Rofoee, S. Peng, G. Zervas, D. Simeonidou, G. Landi, G. Bernini, N. Ciulli, J.F. Riera, E. Escalona, J. A. Garcia-Espin, K. Katsalis, T. Korakis, "A Converged Network Architecture for Energy Efficient Mobile Cloud Computing", *Photonic network communications*, Springer, invited, June 2015, Volume 29, Issue 3, pp 269-281, (< 8% acceptance rate)
9. Jordi Ferrer Riera, Anna Tzanakaki, Alexandru-Florian Antonescu, Markos Anastasopoulos, Joan A. García-Espín, Eduard Escalona, Shuping Peng, Giada Landi, Giacomo Bernini, Bartosz Belter, Damian Parniewicz, Xavier Hesselbach, Sergi Figuerola, Dimitra Simeonidou, "Virtual Infrastructures as a service enabling converged optical networks and Data Centres", *Journal of Optical Switching and Networking*, SI on Optimization and Application in Converged Optical and Data Center Networks, Elsevier, vol. 14, August 2014, pp 197–208
10. Konstantinos N. Georgakilas, Markos P. Anastasopoulos, Anna Tzanakaki, "Stochastic Optimization for Deployment of Correlated Cloud Services over Optical Networks", *IEEE Communications Letters*, vol. PP, no. 99, pp.1,1
11. Anna Tzanakaki, Markos Anastasopoulos, Kostas Georgakilas, Giada Landi, Giacomo Bernini, Nicola Ciulli, Jordi Ferrer Riera, Eduard Escalona, Joan A. García-Espin, Xavier Hesselbach, Shuping Peng, Reza Nejabati, and Dimitra Simeonidou, Damian Parniewicz, Bartosz Belter, Juan Rodriguez Martinez, "Planning of Dynamic Virtual Optical Cloud Infrastructures: The GEYSERS approach", *IEEE Communications Magazine*, Special Issue on "Advances in Network Planning", January 2014
12. Anna Tzanakaki, Markos P. Anastasopoulos, and Kostas Georgakilas, *Dynamic Virtual Optical Networks Supporting Uncertain Traffic Demands*, *IEEE/OSA J. Opt. Commun. Netw.*, vol. 5, no. 10, October 2013, Invited
13. M. P. Anastasopoulos, A. Tzanakaki, D. Simeonidou, "Stochastic Planning of Dependable Virtual Infrastructures over Optical Datacenter Networks", *IEEE/OSA J. Opt. Commun. Netw.*, vol. 5, no. 9, September 2013
14. Anna Tzanakaki, Markos P. Anastasopoulos, Georgios S. Zervas, Bijan R. Rofoee, Reza Nejabati, Dimitra Simeonidou, "Virtualization of Heterogeneous Wireless-Optical Network and IT infrastructures in support of Cloud and Mobile Cloud Services", *IEEE Communications Magazine*, August 2013
15. J. Buysse, K. Georgakilas, A. Tzanakaki, M. De Leenheer, B. Dhoedt and C. Develder, "Energy-Efficient Resource Provisioning Algorithms for Optical Clouds", *IEEE/OSA J. Opt. Commun. Netw.*, Vol. 5, No. 3, Mar 2013, pp. 226-239
16. K. Georgakilas, A. Tzanakaki, M. Anastasopoulos, J. M. Pedersen, "Converged Optical Network and Data Center Infrastructure Planning", *Journal of Optical Communications and Networking (JOCN)*, 2012, vol. 4, no. 9, September 2012
17. M. P. Anastasopoulos, A. Tzanakaki, K. Georgakilas, "Evolutionary Optimization for Energy Efficient Service Provisioning in IT and Optical Network Infrastructures", *OSA Optics Express*, Dec. 2011.
18. M. P. Anastasopoulos, A. Tzanakaki, K. Georgakilas, D. Simeonidou, "Energy Aware Planning of Multiple Virtual Infrastructures over Converged Optical Network and IT Physical Resources", *OSA Optics Express*, Dec. 2011.
19. Anna Tzanakaki, Kostas Katrinis, Tanya Politi, Alexandros Stavdas, Mario Pickavet, Peter Van Daele, Dimitra Simeonidou, Mike J. O'Mahony, Slavisa Aleksic, Lena Wosinska, Paolo Monti, "Dimensioning the Future Pan-European Optical Network with Energy Efficiency Considerations", *Journal of Optical Communications and Networking*,

IEEE/OSA, vol. 3, no. 4, pp. 272–280, 2011

20. K. Katrinis and A. Tzanakaki, "On the Dimensioning of WDM Optical Networks with Impairment-aware Regeneration", in *IEEE/ACM Transactions on Networking*, vol. 19, no. 3, pp 735-746, June 2011
21. Amornrat Jirattigalachote, Cicek Cavdar, Paolo Monti, Lena Wosinska, Anna Tzanakaki, "Dynamic Provisioning Strategies for Energy Efficient WDM Networks with Dedicated Path Protection", *Optical Switching and Networking Journal*, Elsevier, Special Issue on Green Communications and Networking, accepted for publication
22. K. Georgakilas, K. Katrinis, A. Tzanakaki and O. B. Madsen, "Performance Evaluation of Impairment Aware Routing under Single and Double Link Failures", *Journal of Optical Communications and Networking*, IEEE/OSA, vol. 2, no 8, pp. 633–641, August 2010
23. Amornrat Jirattigalachote, Kostas Katrinis, Anna Tzanakaki, Lena Wosinska, Paolo Monti, "Quantifying the Benefit of BER-based Differentiated Path Provisioning in WDM Optical Networks", *Journal of Networks*, Academy Publishers, Invited Paper, vol. 5, no 11, pp 1279-1289, Nov 2010
24. A. Teixeira, A. Tzanakaki, D. Careglio, and M. Klinkowski, "Wavelength Routed Optical Networks", *Journal of Networks*, Academy Publishers, guest editorial, vol 5, no 11, pp 1245-1247, Nov 2010
25. L. Wosinska, D. Simeonidou, A. Tzanakaki, C. Raffaelli, and T. Politi, "Optical Networks for the Future Internet", *Journal of Optical Communications and Networking*, IEEE/OSA, Feature Issue, guest editorial, vol. 1, no. 2, July 2009
26. I. Tomkos, D. Careglio, A. Tzanakaki and J. Sole-Pareta, "Challenges and Opportunities in Advanced Optical Networking", *Computer Networks*, Elsevier, guest editorial, vol. 52, no. 10, July 2008
27. A. D. Ellis, D. Cotter, S. Ibrahim, R. Weerasuriya, C. W. Chow, J. Leuthold, W. Freude, S. Sygletos, P. Vorreau, R. Bonk, D. Hillerkuss, I. Tomkos, A. Tzanakaki, C. Kouloumentas, D. J. Richardson, P. Petropoulos, F. Parmigiani, G. Zarris, D. Simeonidou, Optical interconnection of core and metro networks, *Journal of Optical Networking*, vol. 7, no.11, pp.928-935, 2008
28. Bartosz Belter, Artur Binczewski, Gino Carrozzo, Nicolla Ciulli, Eduard Escalona, George Markidis, Reza Nejabati, Dimitra Simeonidou, Maciej Stroiński, Anna Tzanakaki, Georgios Zervas, *Between Grids and Networks: Grid-enabled Network Control Planes, Campus-wide information systems*, The international journal of information and learning technology, vol. 25, no. 5, 2008, pp. 273-286
29. G. Markidis and A. Tzanakaki, "Network Performance Improvement through Differentiated Survivability Services in WDM networks", *Journal of Optical Networking*, vol. 7, no. 6, pp. 564-572, 2008
30. Georgios Zervas, Eduard Escalona, Reza Nejabati, Dimitra Simeonidou, Gino Carrozzo, Nicola Ciulli, Bartosz Belter, Artur Binczewski, Maciej Stroiński, Anna Tzanakaki, George Markidis, *Athens Information Technology "Phosphorus Grid-enabled GMPLS Control Plane (G2MPLS): Architectures, Services and Interfaces"*, *Communications Magazine*, vol. 46, no. 6, June 2008, pp:128 - 137
31. Nicola Ciulli, Gino Carrozzo, Giodi Giorgi, Georgios Zervas, Eduard Escalona, Yixuan Qin, Reza Nejabati, Dimitra Simeonidou, Franco Callegati, Aldo Campi, Walter Cerroni, Bartosz Belter, Artur Binczewski, Maciej Stroiński, Anna Tzanakaki, George Markidis, "Architectural approaches for the integration of the service plane and control plane in optical networks", *Optical Switching and Networking Journal*, Elsevier, Invited Paper, vol. 5, 2008, pp 94-106

32. Carla Raffaelli, Kyriakos Vlachos, Nicola Andriolli, Jakob Buron, Ruth van Caenegem, Grzegorz Danilewicz, Jorge M Finochietto, Joan Garcia-Haro, Dimitrios Klonidis, Mike O'Mahony, Guido Maier, Achille Pattavina, Pablo Pavon-Marino, Sarah Ruepp, Michele Savi, Mirco Scaffardi, Ioannis Tomkos, Anna Tzanakaki, Lena Wosinska, Konstantinos Yannopoulos, Fabio Neri, "Photonics in Switching: architectures, technologies and systems The e-Photon/ONE+ research results - Part I : system aspects", COMNET, vol. 52, no. 10, July 2008, Pages 1873-1890
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### **Conference Publications**

1. A. Tzanakaki, M. P. Anastasopoulos, and D. Simeonidou, “Optical networking: An important enabler for 5G”, invited, ECOC 2017, Sweden, September 2017.
2. A. Tzanakaki, M. P. Anastasopoulos, and D. Simeonidou, “Optical Networking Interconnecting Disaggregated Compute Resources: An enabler of the 5G Vision”, invited, in Proc. of Optical Network Design and Modeling (ONDM) 2017 Conference, Budapest, Hungary, May 2017.
3. A. Tzanakaki, “5G infrastructures supporting end-user and operational services: The 5G-XHaul architectural perspective”, 2016 IEEE ICC 2016, Workshop on 5G Architecture

4. M. Anastasopoulos, A. Tzanakaki, D. Simeonidou, "Enabling Mega-DCs through Scalable Monitoring and Optimisation", in proc. of ECOC 2015, Spain, **Highly Ranked**
5. M. Anastasopoulos, A. Tzanakaki, D. Simeonidou, "Scalable Service Provisioning in Converged Optical/Wireless Clouds using Compression Techniques", in proc. of OFC 2015, Los Angeles, California, USA
6. Bijan Rahimzadeh Rofoee, Kostas Katsalis, Yan Yan, Yi Shu, Thanasis Korakis, Leandros Tassioulas, Anna Tzanakaki, Georgios Zervas, Dimitra Simeonidou, "Demonstration of Service-differentiated Communications over Converged Optical Sub-Wavelength and LTE/WiFi Networks using GEANT Link," in proc. of OFC 2015, Los Angeles, California, USA
7. M. Anastasopoulos, A. Tzanakaki, and D. Simeonidou, "Energy-Aware Offloading in Mobile Cloud Systems with Delay Considerations", CCSNA, in proc. of Globecom 2014, Austin, Texas, USA
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**Scientific workshops (with review)**

107. A. Tzanakaki, M. P. Anastasopoulos, D. Simeonidou, "Virtualizing converged network infrastructures in support of mobile cloud services", Mobile Cloud Infrastructures and Services workshop, EUCNC 2014, invited
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109. A. Tzanakaki, et.al "Convergence of wireless Optical Network and IT rEsources iN supporT of cloud services", Workshop on Network Virtualization, FIA 2014, Athens, Greece, invited
110. A. Tzanakaki, M. P. Anastasopoulos, Planning Optimized Virtual Infrastructures over Converged Optical Network and IT Physical Infrastructures, FNMS 2012, Workshop on Cloud Networking – Technical and Business Challenges July 2012, Berlin
111. A. Tzanakaki, M. P. Anastasopoulos, D. Simeonidou, Energy Efficiency and CO2 Emissions Considerations in Integrated IT and Optical Network Infrastructures, ETSI workshop on Energy Efficiency, Genoa, Italy, June 21-22
112. A. Tzanakaki, M.P Anastasopoulos, K. Georgakilas et.al., "Power Considerations for ICT Sustainability: the GEYSERS Approach," in proc. of 4th Future Internet Cluster Workshop on ICT and Sustainability, 2011
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### **Other publications and presentations**

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2. A. Tzanakaki, "Optical Access Networks", Internal Intracom Training Course, November 2006.
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## **Patents**

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