Filippo Cugini

Personal information

Filippo Cugini

Date of birth: October 30, 1974

Nationality: Italian

Address: Viale IV Novembre 22, 56025, Pontedera (PI)

e-mail: cugini@libero.it

phone: 0039 348 0176821

Education

Master's Degree in Telecoomunication Engineering (Laurea in Ingegneria delle Telecomunicazioni), University of Parma, Italy

Work experience

- July 2017 – present
  Head of Research Area, "II livello – Responsabile di Area di ricerca", PNTLab, Consorzio Nazionale Interuniversitario per le Telecomunicazioni (CNIT), Pisa, Italy.

- Dec 2012 – June 2017
  Head of Research, "III livello – Responsabile di ricerca", National Lab. of Photonic Networks, Consorzio Nazionale Interuniversitario per le Telecomunicazioni (CNIT), Pisa, Italy.

- Aug 2005 – Dec 2012 (permanent position at CNIT since 2006)
  Researcher , "IV livello – Ricercatore", National Lab of Photonic Networks, Consorzio Nazionale Interuniversitario per le Telecomunicazioni (CNIT), Pisa

- Jul 2001 - Jun 2005
  Junior Researcher, "V livello - Collaboratore di ricerca senior", National Lab of Photonic Networks, CNIT, Pisa.

Academic Degree

National habilitation as **Full Professor** (**Professore di I Fascia**) Settore Concorsuale 09/F2 Telecommunications, from 19/11/2020 to 19/11/2029

Scientific activities

Main research interests include theoretical and experimental studies in the field of communications and networking. In particular, the focus is on optical networking, software defined networking (SDN), network programmability, P4, survivability and traffic engineering in IP over optical networks, Segment Routing, cloud/edge networking and cyber security.

He served as co-chair of several international symposia, including the Optical Networks and Systems (ONS) Symposium at GLOBECOM 2010, the workshop on Flexible Optical Networks at GLOBECOM 2012, the Access Network and System (ANS) Symposium at GLOBECOM 2013, the ONDM 2015 Conference, the OFC 2019 N3 Subcommittee. He served as Editorial Board Member of the Elsevier Optical Switching and Networking journal and IEEE Communication Magazine.

He participated, including coordination role, to more than ten FP7/H2020 Projects. He currently serves as Coordinator of the ECSEL BRAINE Project (EU-funded project aiming at boosting Artificial Intelligence at the network Edge, 27 Partners, 16M€

budget). Furthermore, he serves as Technical Coordinator of the B5G-OPEN Project (H2020 EU-funded project aiming at redesigning next generation packet-optical networks, 15 Partners, 5.5M€).

Languages

Italian, English

IT skills

MS Windows, Linux, Juniper JUNOS, C, C++, XML, MS Office, P4.

Scientific publications

297 scientific publications:

- **96** international peer-reviewed journals

- **201** International peer-reviewed conferences

Full list included in the last section of this document

Google Scholar: **>5600**citations, h-index:**38**

https://scholar.google.it/citations?user=ABnt4RQAAAAJ&hl=en

Scopus: **>4300** citations, h-index:**34**

https://www2.scopus.com/authid/detail.uri?authorId=14031056700

Patents

15 patents.

Full list included in the last section of this document

Visiting and international collaborations

Visiting:

- Visiting researcher at KTH Royal Institute of Technology in Stockholm, Kista (Stokholm), Sweden, from 11-06-2005 to 19-06-2005

- Visiting researcher at National Institute of Information and Communications Technology (NICT), Tokyo, Japan, from 11-10-2007 to 14-12-2007

- Visiting researcher at National Institute of Information and Communications Technology (NICT), Tokyo, Japan, from 09-10-2008 to 01-11-2008

- Visiting researcher at Adolfo Ibáñez University, Viña del Mar, Chile, from 10-08-2015 to 14-08-2015

- Visiting researcher at British Telecom, Adastral Park, Ipswich, UK from 13-07-2018 to 03-08-2018

International collaborations, confirmed by joint publications:

- Universitat Politècnica de Catalunya, Spain

- CTTC, Spain,

- Telefónica I+D, Spain,
- Nokia (Alcatel-Lucent), France
- Infinera/Coriant R&D, Germany,
- Infinera/Coriant, Portugal
- Redzinc, Dublin, Ireland
- Budapest University of Technology and Economics, Hungary
- Atos, Spain
- University of Bristol, UK,
- Eindhoven University of Technology (TU/e), Netherlands
- Technische Universität München, Germany
- KTH Royal Institute of Technology in Stockholm, Sweden
- Universidad Carlos III de Madrid, Madrid, Spain
- iMinds, Gent, Belgium
- Computer Technology Institute and Press, Greece
- National Technical University of Athens, Greece
- Sumitomo Electric Industries Ltd., Japan
- Telecom Bretagne, Brest, France
- Old Dog consulting, UK
- Huawei, Germany
- Naudit, Spain
- Universidad Adolfo Ibáñez, Chile
- Deutsche Telekom, Germany
- University College London, UK
- Fraunhofer Institute for Telecommunications, Germany
- Ericsson, Hungary
- Orange Lab. / France Telecom, France
- University of Cambridge, UK
- Cisco Systems Inc., Israel
- AGH University of Science and Technology, Cracow, Poland
- Athens Information Technology, Athens, Greece
- Ericsson, Sweden

- Grotto Networking, USA

- Technische Universität Wien, Austria

- NICT, Japan

- Osaka University, Japan

- Czech Technical University, Prague, Czech Republic

- Librimind, Israel

- Secure-IC S.A.S., Paris, France

- Alum, Tulcea, Romania

- Orange Labs, Warsaw, Poland

- NVIDIA/Mellanox, Israel

- Fraunhofer HHI, Berlin, Germany

- ADVA, Germany

- Qognify, Germany

- Naudit, Spain

- Universidad Politécnica de Cartagena, Spain

- Deutsche Telekom, Germany

- Zeetta Networks Limited, UK

- OpenLightComm Ltd., UK

- University of Peloponnese, Greece

- University of California (UC Davis), USA

- IIT Dharwad, Dharwad, India

- Budapest University of Technology and Economics, Hungary

- Leibniz University, Germany

- DELL, Ireland

Paper presentations

Keynote speaker:

- Cugini, F.; "PCE Architecture Implementation: Challenges and Open Issues", Workshop on GMPLS, co-located with ONDM 2008 Conf., Vilanova i la Geltrú (Spain), March 10th, 2008

Invited talks:

- COIN 2008 Conf., Tokyo, Japan, 2008 "Physical impairments-aware transparent optical networks"

- MANGO Project Workshop, May 8th, 2009 "PCE in multi-layer MPLS over WSON networks"

- *Optical Fiber Communication Conference (OFC),* Anaheim (USA), March 2014 "Benefits of active stateful PCE for Flexgrid networks"

- *European Conference on Optical Communication (ECOC)*, Valencia (Spain), September 2015 "Towards Plug-and-Play Software-defined EONs: Field Trial of Self-Adaptation Carrier Spacing"

- 21st European Conference on Networks and Optical Communications (NOC), Lisbon, Portugal, June 2016 "Adaptation and monitoring for elastic alien wavelengths"

- Optical Network Design and Modeling (ODNM) Conference, May 15-18, 2017 Budapest, Hungary, "Bit Index Explicit Replication (BIER) Multicasting in Transport Networks"

- Optical Network Design and Modeling (ODNM) Conference, May 18-21, 2020 Spain "Designing Disaggregated Optical Networks"

- LEGaTO: Low-Energy Heterogeneous Computing Workshop, co-located with FPL2020 Conference, "BRAINE project - Big data pRocessing and Artificial Intelligence at the Network Edge: overview and use cases",

- IEEE ICCCN 2021 Conference, July 19 - 22, 2021, Athens, Greece, "P4 Programmability at the Network Edge: the BRAINE Approach [Invited]",

- Asia Communications and Photonics (ACP) Conference, Shanghai (China), Oct. 24-27 2021, "Open Packet-Optical Edge Node: State of Art and Challenges [Invited]"

- OFC 2022, "Applications of P4-based Network Programmability in Optical Networks", invited

Presenter:

- GLOBECOM 2003, oral presentation, from 01-12-2003 to 05-12-2003

- GLOBECOM 2004, oral presentation, from 29-11-2004 to 03-12-2004

- HPSR Workshop 2005, Hong Kong, oral presentation, from 12-05-2005 to 14-05-2005

- ECOC 2005 Conf., Glasgow, Scotland, oral presentation, from 25-09-2005 to 29-09-2005

- OFC 2006 Conf., Anaheim, USA, poster presentation, from 05-03-2006 to 10-03-2006

- ICTON 2007 Conf. Rome, Italy, oral presentation, from 01-07-2007 to 05-07-2007

- ECOC 2007 Conf., Berlin, Germany, oral presentation, from 16-09-2007 to 20-09-2007

- OFC Conf. 2008, San Diego, USA, oral presentation, from 24-02-2008 to 28-02-2008

- Workshop on GMPLS, co-located with ONDM 2008, Vilanova i la Geltrú, Spain, Keynote speaker, oral presentation, from 12-03-2008 to 15-03-2008

- COIN Conf. 2008, Tokyo, Japan, Invited talk, oral presentation, from 14-10-2008 to 16-10-2008

- Mango Project Workshop 2009, Invited talk, oral presentation, from 08-05-2009 to 08-05-2009

- IEEE INTERNATIONAL CONFERENCE ON COMMUNICATIONS (ICC) 2010, Cape Town, South Africa, oral presentation, from 23-05-2010 to 27-05-2010

- Photonics in Switching (PS) 2012 Conf., Ajaccio, France, oral presentation, from 11-09-2012 to 14-09-2012

- GLOBECOM 2012 Conf., Anaheim, USA, oral presentation, from 03-12-2012 to 07-12-2012- 25

- GLOBECOM 2013 Conf., Atlanta, USA, oral presentation, from 09-12-2013 to 13-12-2013

- OFC 2014 Conf. Los Angeles, USA, oral presentation (invited talk), from 09-03-2014 to 14-03-2014

- ECOC 2015 Conf., Valencia, Spain, oral presentation (invited talk), from 27-09-2015 to 01-10-2015

- OFC 2016 Conf., Anaheim, USA, oral and poster presentations, from 20-03-2016 to 24-03-2016

- NOC 2016 Conf., Lisboa, Portugal, oral presentation (invited talk), from 01-06-2016 to 03-06-2016

- OFC 2017 Conf., Los Angeles (USA), two oral presentations, from 19-03-2017 to 23-03-2017

- ONDM 2017 Conf., Budapest (Hu), oral presentation (invited), from 15-05-2017 to 18-05-2017

- OFC 2018 Conf., San Diego (USA), oral presentation, from 11-03-2018 to 15-03-2018

- OFC 2019 Conf., San Diego (USA), demo presentation, from 03-03-2019 to 07-03-2019

- OFC 2020 Conf., San Diego (USA), oral presentation, from 08-03-2020 to 12-03-2020

- ONDM 2020 Conf, Barcelona (Spain), two oral presentations, including an invited talk, from 18-05-2020 to 21-05-2020

- OFC 2021, Jun 6-10, 2021, oral presentation

- IEEE ICCCN 2021 Conference, July 19 - 22, 2021, Athens, Greece, invited oral presentation

- Asia Communications and Photonics (ACP) Conference, Shanghai (China), Oct. 24-27 2021, invited oral presentation

- OFC 2022, "Applications of P4-based Network Programmability in Optical Networks", invited oral presentation

Awards

- **CHARLES KAO AWARD 2017** for the best optical communications and networking paper, "Sliceable Transponder Architecture Including Multiwavelength", Journal of Optical Communications and Networking (JOCN), Vol. 6, Issue 7, pp. 590-600, 2014, https://www.comsoc.org/about/awards/paper-awards/ieee-communications-society-charles-kao-award-best-optical-communications

- CORNING STUDENT AWARD, also awarded with invited submission at Journal of Lightwave Technology (JLT). A. Sgambelluri, A. Giorgetti, F. Cugini, G. Bruno, and P. Castoldi, "First demonstration of SDN-based segment routing in multi-layer networks," presented at the Opt. Fiber Commun. Conf., Los Angeles, CA, USA, 2015, Paper Th1.A.5, from 22-03-2015 to 26-03-2015

- OUTSTANDING SERVICE AWARD as TPC chair of the Optical Networks and Systems (ONS) Symposium, IEEE GLOBECOM 2010, from 06-12-2010 to 10-12-2010

- OUTSTANDING SERVICE AWARD as Industry Liaison Officer for IEEE COMSOC Transmission, Access, and Optical Systems Technical (TAOS) Committee, from 01-01-2014 to 31-12-2015

- TOP SCORED PAPER, also awarded with invited submission at Journal of Optical Communications and Networking (JOCN). M. Dallaglio, A. Giorgetti, N. Sambo, F. Cugini, and P. Castoldi, " Impact of slice-ability on dynamic restoration in GMPLS-based flexible optical networks" in OFC Conf., Mar. 2014, from 09-03-2014 to 14-03-2014

- PAPER AWARDED with invited submission at IEEE/OSA Journal of Optical Communications and Networking (JOCN). F. Paolucci, F. Fresi, A. Castro, L. Velasco, F. Cugini, N. Sambo, A. Giorgetti, L. Potì, and P. Castoldi, "Filter optimization in SDN-based flexgrid networks" in Optical Fiber Communication Conf. (OFC), 2014, from 09-03-2014 to 14-03-2014

- PAPER AWARDED with invited submission at Journal of Optical Communications and Networking (JOCN). A. Giorgetti, F. Paolucci, F. Cugini, and P. Castoldi, "Fast restoration in SDN-based flexible optical networks" in Proc. OFC, Mar. 2014, from 09-03-2014 to 14-03-2014

- TOP SCORED PAPER, also awarded with invited submission at Journal of Optical, Communications and Networking (JOCN). N. Sambo, G. Meloni, F. Cugini, A. D'Errico, L. Poti', P. Iovanna, and P. Castoldi, "Routing, code, and spectrum assignment (rcsa) in elastic optical networks," in Proc. of OFC 2015, Mar. 2015, from 22-03-2015 to 26-03-2015

- TOP SCORED PAPER, also awarded with invited submission at Journal of Optical Communications and Networking (JOCN) .A.

Giorgetti, F. Paolucci, F. Cugini and P. Castoldi, "Proactive Hierarchical PCE based on BGP-LS for Elastic Optical Networks," 2015 Optical Fiber Communications Conference and Exhibition (OFC), Los Angeles, CA, 2015, pp. 1-3. doi: 10.1364/OFC.2015.Th1A.3, from 22-03-2015 to 26-03-2015

- TOP SCORED PAPER, also awarded with invited submission at Journal of Lightwave Technology (JLT). N.Sambo, F. Cugini, A. Sgambelluri, and P. Castoldi, "Hierarchical monitoring architecture and OAM" presented at the ECOC Conf., Valencia, Spain, 2015 from 27-09-2015 to 01-10-2015

- TOP SCORED PAPER, also awarded with invited submission at Journal of Lightwave Technology (JLT). A. Giorgetti, A. Sgambelluri, F. Paolucci, F. Cugini and P. Castoldi, "Demonstration of dynamic restoration in segment routing multi-layer SDN networks," 2016 Optical Fiber Communications Conference and Exhibition (OFC), Anaheim, CA, 2016, from 20-03-2016 to 24-03-2016

- PAPER AWARDED (as post-deadline paper) with invited submission at IEEE Journal of Lightwave Technology: L. Velasco, L. Gifre, F. Paolucci, F. Cugini, "First experimental demonstration of autonomic slice networking", Proc. Optical Fiber Communications Conference and Exhibition (OFC 2017), Los Angeles (USA), Mar 2017.

- PAPER AWARDED with invited submission at Journal of Optical Communications and Networking (JOCN). F. Paolucci, F. Cugini, P. Castoldi, "P4-based Multi-Layer Traffic Engineering encompassing Cyber Security", Proc. Optical Fiber Communications Conference and Exhibition (OFC 2018), Los Angeles (USA), Mar. 2018.

- PAPER AWARDED with invited submission at Journal of Optical Communications and Networking (JOCN). F Cugini et al. "Single-Fiber Bidirectional Filterless Metro Network", ONDM 2020, 18-21-05-2020

- PAPER AWARDED with invited submission at Journal of Optical Communications and Networking (JOCN): A. S. Muqaddas, et al., "Field Trial of Multi-Layer Slicing Over Disaggregated Optical Networks Enabling End-to-End Crowdsourced Video Streaming", ECOC Conf 2020

- PAPER AWARDED with invited submission at Journal of Optical Communications and Networking (JOCN): D. Scano et al, "Augmented In-Band Telemetry to the User Equipment for Beyond 5G Converged Packet-Optical Networks", ECOC 2020

Editorial, chairing and organizing activities	**Editor**:

- Book Chapter Editor: "Software Defined Networking (SDN) in Optical Networks" in the book "Elastic Optical Networks", ISBN 978-3-319-30174-7, DOI 10.1007/978-3-319-30174-7, Publisher Springer International Publishing from 01-01-2015 to 01-01-2016

- Book Chapter Editor: "The path computation element" in the book "Handbook of Research on Redesigning the Future of Internet

Architectures", published by IGI Global, Release Date: May 2015, ISBN: 9781466683716, from 01-01-2015 to 01-05-2016

- Book Chapter Editor: "Optical Networks evolution: from programmability to Machine Learning and Spatial Division Multiplexing", published by Texmat, November 2020

- Editorial board member for the Journal on Optical Switching and Networking (OSN), Elsevier, *https://www.journals.elsevier.com/optical-switching-and-networking/editorial-board*, from 01-01-2010 to present

- Editor of the Special issue based on selected ONDM 2015 Conference papers, Journal of Photonic Network Communication 2016, Springer, DOI 10.1007/s11107-016-0639-y from 10-05-2015 to 01-06-2016

- Editorial board member for the Communications Magazine, Associate Technical Editor, from 27-03-2018 to 01-02-2021.

Journal Reviewer (selection):

- IEEE/OSA Journal of Lightweight Technology,

- IEEE/OSA Journal of Optical Communication and Networking,

- IEEE Communications Magazine,

- Elsevier Journal on Optical Switching and Networking (OSN),

- IEEE Transactions on Communications.

Technical Program Committee (TPC) Chair:

- TPC Chair of the Optical Networks and Systems (ONS) Symposium, IEEE GLOBECOM 2010, from 06-12-2010 to 10-12-2010. Awarded with: "Outstanding service award".

- TPC Chair and Organizer of the Workshop on Flexible Optical Networks (FON), IEEE GLOBECOM 2012, from 07-12-2012 to 07-12-2012.

- TPC Chair of the Access Networks and System (ANS) Symposium on Selected Areas in Communications (SAC), IEEE GLOBECOM 2013, from 09-12-2013 to 13-12-2013

- TPC Chair of the Optical Networks Design and Modelling (ONDM) 2015 Conference, Pisa, Italy, from 11-05-2015 to 14-05-2015

- TPC Chair of the Demo Track, International Conference on High Performance Switching and Routing (HPSR), from 30-06-2015 to 4-07-2015

- Organizer of the Workshop "White Box Optics: Will it Kill or Encourage Innovations?", Optical Networking and Communication Conference & Exhibition (OFC), Los Angeles, California, USA, 2017, 20-03-2017

- Organizer and TPC Chair for the Demo Zone at the European Conference on Optical Communication (ECOC), Rome, Italy, from 23-09-2018 to 27-09-2018

- Organizer of the Symposium on Network Automation, Optical Networking and Communication Conference & Exhibition (OFC), San Diego, California, USA, from 06-03-2019

- TPC Chair of the N3 Symposium on "Architectures and software-defined control for metro and core networks", Optical Networking and Communication Conference & Exhibition (OFC), San Diego, California, USA, from 03-03-2019 to 07-03-2019

- Organizer and TPC Chair for the Demo Zone at Optical Networking and Communication Conference & Exhibition (OFC), San Diego, California, USA, from 8-03-2020 to 12-03-2020

- Organizer and TPC Chair of the Workshop "Reliability in Disaggregated Optical Networks", DRCN Conference, Milan, Italy, from 27-03-2020 to 27-03-2020

- Organizer and TPC Chair of the Workshop "Disaggregated Optical Networks: hype, huge potential or somewhere in the middle?", ONDM Conference, Barcelona, Spain, from 18-05-2020 to 18-05-2020

- Organizer and Chair of the Open Networking Summit, OFC 2021, San Francisco (USA), from 28-03-2021 to 01-04-2021

- Organizer and Chair of the Workshop entitled "Are multi-band optical networks simple extensions of traditional C-band networks?" at the European Conference on Optical Communication (ECOC 2022), Basel Switzerland, from 18-09-2022 to 22-09-2022

Session Chair:

- Session Chair at IEEE INTERNATIONAL CONFERENCE ON COMMUNICATIONS (ICC) ON03 Session "Optical Device and Node Architectures", 25-05-2013

- Session Chair at IEEE Globecom 2012 Conference, SAC_ASN1 Session "DSL, RoF & Misc.", 04-12-2012

- Session Chair at IEEE Globecom 2012 Conference, ONS05 Session "Miscellaneous Topics in Optical Networks & Systems", 05-12-2012

- Session Chair at FON Workshop, IEEE Globecom 2012 Conference, 07-12-2012

- Session Chair at IEEE Globecom 2012 Conference, SA-ANS1 Session "Optical and Hybrid Access Networks", 11-12-2013

- Session Chair at ONDM 2015, Keynote Lecture Session, 12-05-2015

- Session Chair at European Conference on Networks and Optical Communications (NOC), session "Network Control and Energy Efficiency", 01-07-2016

- Session Chair at Optical Networking and Communication Conference & Exhibition (OFC), Session on "Control of Disaggregated Networks", Tu3H, San Diego, California, USA, from 03-03-2019 to 07-03-2019

- Session Chair at ONDM Conference, Session "S9: Converged Optical and Wireless Networks", Barcelona (Spain), from 21-05-2020 to 21-05-2020

University Service — Recruitment Committees:

- Expert member of the Committee for the assignment of a Research Scholarship, Scuola Superiore Sant'Anna, Nov 2014 (Assegno di ricerca su "Affidabilità in reti di accesso di nuova generazione")

- Expert member of the Committee for the assignment of a Research Scholarship, Scuola Superiore Sant'Anna, Nov 2014 (Assegno di ricerca su "Affidabilità delle reti e dei servizi di comunicazione")

- Expert member of the Committee for the assignment of a Research Scholarship, Scuola Superiore Sant'Anna, May 2016 (Assegno di ricerca su "Tecniche di elaborazione ottica del segnale per comunicazioni e radaristica")

- Expert member of the Committee for the assignment of a Research Scholarship, Scuola Superiore Sant'Anna, Oct 2016 (Assegno di ricerca su "Reti dati ad alta velocità e alta affidabilità")

- Expert member of the Committee for the assignment of a Research Scholarship, Scuola Superiore Sant'Anna, June 2017 (Assegno di ricerca su "Testbed federato per reti 5G")

- Expert member of the Committee for the recruitment of University Researcher, Scuola Superiore Sant'Anna, Feb 2019 (Contratto di ricercatore tipo A presso la Scuola Superiore Sant'Anna)

- Expert member of the Committee for the assignment of a Research Scholarship, Scuola Superiore Sant'Anna, March 2021 (Assegno di ricerca su "In-network computation using P4 programmable forwarding")

- Expert member of the Committee for the assignment of a Research Scholarship, Scuola Superiore Sant'Anna, April 2021 (Borsa di studio su "Riconoscimento e tracking di oggetti in scenari stradali supportato da sistemi radiomobili 5G")

- Member of the Committee for the assignment of a Research Scholarship, Scuola Superiore Sant'Anna, Sept 2021 (Assegno di ricerca su "Zero touch networking")

- Member of the graduate commission for thesis dissertations (Commissione di Laurea), Mercatorum Univeristy, on 23/06/2021, 27/10/2021

- Member of the commission for final assessment for the granting of the Research Doctor to PhD candidate Alessio Ferrari (Commissione di Dottorato), Politecnico di Torino, on 19/11/2021

- Expert member of the Committee for the recruitment of University Researcher, Scuola Superiore Sant'Anna, June 2022 (Contratto di ricercatore tipo A presso la Scuola Superiore Sant'Anna)

Technical Program Committee (TPC) member:

- TPC Member, IEEE GLOBECOM 2008 Conference, Optical Networks and Systems (ONS) Symposium, from 30-11-2008 to 04-12-2008

- TPC Member, IEEE GLOBECOM 2009 Conference, Optical Networks and Systems (ONS) Symposium, from 30-11-2009 to 04-12-2009

- TPC Member, IEEE ICC 2011, Optical Networks and Systems (ONS) Symposium, from 05-06-2011 to 09-06-2011

- TPC Member, IEEE GLOBECOM 2011 Conference, Optical Networks and Systems (ONS) Symposium, from 05-12-2011 to 09-12-2011

- TPC Member, IEEE ICC 2012, Optical Networks and Systems (ONS) Symposium, from 10-06-2012 to 15-06-2012

- TPC Member, IEEE GLOBECOM 2012 Conference, Optical Networks and Systems (ONS) Symposium, from 03-12-2012 to 07-12-2012

- TPC Member, IEEE ICC 2013, Optical Networks and Systems (ONS) Symposium, from 09-06-2013 to 13-06-2013

- TPC Member, IEEE GLOBECOM 2013 Conference, Optical Networks and Systems (ONS) Symposium, from 09-12-2013 to 13-12-2013

- TPC Member, IEEE ICC 2014, Optical Networks and Systems (ONS) Symposium, from 10-06-2014 to 14-06-2014

- TPC Member, EuCNC 2014 Conference, Track "Optical Networks", from 23-06-2014 to 26-06-2014

- TPC Member, IEEE GLOBECOM 2014 Conference, Optical Networks and Systems (ONS) Symposium, from 08-12-2014 to 12-12-2014

- TPC Member, IEEE ICC 2015, Optical Networks and Systems (ONS) Symposium, from 08-06-2015 to 12-06-2015

- TPC Member, EuCNC 2015 Conference, Track "Optical Networks", from 29-06-2015 to 02-07-2015

- TPC Member, IEEE GLOBECOM 2015 Conference, Optical Networks and Systems (ONS) Symposium, from 06-12-2015 to 10-12-2015

- TPC Member, IEEE GLOBECOM 2015 Conference, SAC - Access Networks and Systems (ANS) Symposium, from 06-12-2015 to 10-12-2015

- TPC Member, OFC 2016 Conference, Sub-committee N3, from 20-03-2016 to 24-03-2016

- TPC Member, IEEE ICC 2016, Optical Networks and Systems (ONS) Symposium, from 23-05-2016 to 27-05-2016

- TPC Member, EuCNC 2016 Conference, Track "Optical Networks", from 27-06-2016 to 30-06-2016

- TPC Member, Asia-Pacific Conference on Communications (APCC), from 25-08-2016 to 27-08-2016

- TPC Member, IEEE GLOBECOM 2016 Conference, Optical Networks and Systems (ONS) Symposium, from 04-12-2016 to 08-12-2016

- TPC Member, IEEE GLOBECOM 2016 Conference, SAC - Access Networks and Systems (ANS) Symposium, from 04-12-2016 to 08-12-2016

- TPC Member, OFC 2017 Conference, Sub-committee N3, from 19-03-2013 to 23-03-2017

- TPC Member, IEEE ICC 2017, Optical Networks and Systems (ONS) Symposium, from 21-05-2017 to 25-05-2017

- TPC Member, EuCNC 2017 Conference, from 12-06-2017 to 15-07-2017

- TPC Member, Photonics in Switching (PS) 2017 Conference, Optical Networking Category, 24-07-2017 to 27-07-2017

- TPC Member, IEEE GLOBECOM 2017 Conference, SAC - Access Networks and Systems (ANS) Symposium, from 04-12-2017 to 08-12-2017

- TPC Member, OFC 2018 Conference, Sub-committee N3, from 11-03-2018 to 15-03-2018

- TPC Member, IEEE ICC 2018, Optical Networks and Systems (ONS) Symposium, from 21-05-2018 to 25-05-2018

- TPC Member, Optical Networking Category, Photonics in Switching (PS) 2018, from 19-9-2018 to 21-9-2018

- TPC Member, Optical Networks and Systems (ONS) Symposium, IEEE GLOBECOM 2018 Conference, 9-12-2018 to 13-12-2018

- TPC Member, SAC - Access Networks and Systems (ANS) Symposium, IEEE GLOBECOM 2018 Conference, 9-12-2018 to 13-12-2018

- TPC Member, Optical Networking Category, Photonics in Switching (PS) 2018, Sept. 2018

- TPC Member, IEEE ICC 2019, Optical Networks and Systems (ONS) Symposium, 20-24 May 2019

- TPC Member, IEEE International Conference on Communication, Networks and Satellite (ComNetSat), Aug. 2019

- TPC Member, Photonics in Switching and Computing (PSC) 2019, Sett. 2019

- TPC Member, Demo Session, ECOC Conf. 2019, 22-26 Sept. 2019

- TPC Member, Asia-Pacific Conference on Communications (APCC 19), November 2019

- TPC Member, Optical Networks and Systems (ONS) Symposium, IEEE GLOBECOM 2019 Conference, Dec 2019

- TPC Member, SAC - Access Networks and Systems (ANS) Symposium, IEEE GLOBECOM 2019 Conference, 9-13 Dec 2019

- TPC Member, IEEE ICC 2020, Optical Networks and Systems (ONS) Symposium, 7-11 June 2020

- TPC Member, International Conference on Optical Network Design and Modeling (ONDM) 2020, 18-21 May 2020

- TPC Member, International Conference on Photonics (ICP), July 2020

- TPC Member, ACP Conference 2020, Track 3: Network Architectures, Management and Applications, Oct 2020

- TPC Member, Optical Networks and Systems (ONS) Symposium, IEEE GLOBECOM 2020 Conference, 7-11 Dec 2020

- TPC Member, SAC - Access Networks and Systems (ANS) Symposium, IEEE GLOBECOM 2020 Conference, 7-11 Dec 2020

- TPC Member, ONDM 2021, June 2021

- TPC Member, IEEE ICC 2021, Optical Networks and Systems (ONS) Symposium, 14-18 June 2021

- TPC Member, Optical Networks and Systems (ONS) Symposium, IEEE GLOBECOM 2020 Conference, 7-11 Dec 2021

- TPC Member, IEEE ICC 2022, Optical Networks and Systems (ONS) Symposium, May 2022

- TPC Member, ONDM 2022, May 2022

- TPC Member, IEEE MeditCom 2022, Sept 2022

- TPC Member, Optical Networks and Systems (ONS) Symposium, IEEE GLOBECOM 2020 Conference, Dec 2022

Teaching

- Course on "Laboratory of Networks, Systems and Components", 16 hours, International Master on Communication Networks Engineering, 2005/06

- Course on "Laboratory of Networks, Systems and Components", 16 hours, International Master on Communication Networks Engineering, 2006/07

- Course on "Laboratory of Networks, Systems and Components", 16 hours, International Master on Communication Networks Engineering, 2007/08

- Course on "Laboratory of Network Software", 16 hours, International Master on Communication Networks Engineering, 2008/09

- Course on "Laboratory of Traffic Engineering", 16 hours, Laurea Magistrale Computer Science and Networking, 2009/10

- Course on "Laboratory of Traffic Engineering", 16 hours, Laurea Magistrale Computer Science and Networking, 2010/11

- Course on "Laboratory of Traffic Engineering", 30 hours, International Master on Communication Networks Engineering (IMCNE), Masters on Photonic Networks engineering (MAPNET), Erasmus Mundus Programme, 2011/12.

- Course on "Laboratory of Traffic Engineering", 30 hours, to PhD students from Scuola Superiore Sant'Anna (Pisa), Graduate Program in Information and Communication Technologies (GPICT) , 2011/12

- Course on "Laboratory of Traffic Engineering", 30 hours, International Master on Communication Networks Engineering (IMCNE), Masters on Photonic Networks engineering (MAPNET), Erasmus Mundus Programme, 2012/13.

- Course on "Laboratory of Traffic Engineering", 30 hours, Laurea Magistrale Computer Science and Networking, 2012/13

- Course on "Laboratory of Traffic Engineering", 30 hours, to PhD students, Scuola Superiore Sant'Anna (Pisa), Graduate Program in Information and Communication Technologies (GPICT) , 2012/13

- Course on "Laboratory of Traffic Engineering", 30 hours, International Master on Communication Networks Engineering (IMCNE), Masters on Photonic Networks engineering (MAPNET), Erasmus Mundus Programme, 2013/14.

- Course on "Laboratory of Traffic Engineering", 30 hours, Laurea Magistrale Computer Science and Networking, 2013/14

- Course on "Laboratory of Traffic Engineering", 30 hours, to PhD students, Scuola Superiore Sant'Anna (Pisa), Graduate Program in Information and Communication Technologies (GPICT) , 2013/14

- Course on "Laboratory of Traffic Engineering", 30 hours, Laurea Magistrale Computer Science and Networking, 2014/15

- Course on "Laboratory of Traffic Engineering", 30 hours, to PhD students, Scuola Superiore Sant'Anna (Pisa), Graduate Program in Information and Communication Technologies (GPICT) , 2014/15

- Course on "Laboratory of Traffic Engineering", 30 hours, Laurea Magistrale Computer Science and Networking, 2015/16

- Course on "Laboratory of Traffic Engineering", 30 hours, to PhD students, Scuola Superiore Sant'Anna (Pisa), Graduate Program in Information and Communication Technologies (GPICT) , 2015/16

- Organizer and teacher of the course "Tecnici esperti nella comunicazione in fibra ottica", 10 hours, December 2015

- Organizer of the course "Sicurezza nelle reti informatiche", 24 hours, June 2016

- Course on "Netwrok Security", 20 hours, to PhD students, Scuola Superiore Sant'Anna (Pisa), Graduate Program in Information and Communication Technologies (GPICT) and to students of Master Pixnet Erasmus Mundus, Oct 2019

- Course on "Network Security", 20 hours, 2 CFU, to PhD students, Scuola Superiore Sant'Anna (Pisa), Graduate Program in Information and Communication Technologies (GPICT) and to students of Master Pixnet Erasmus Mundus, 2020/2021

- Course on "Programmazione", 12 CFU, SSD: ING-INF/05, Mercatorum University, 2020/2021

- Course on "Network Security", 20 hours, 2 CFU, to PhD students, Scuola Superiore Sant'Anna (Pisa), Graduate Program in Information and Communication Technologies (GPICT) and to students of Master Pixnet Erasmus Mundus, 2021/2022

- Course on "Programmazione", 12 CFU, SSD: ING-INF/05, Mercatorum University, 2021/2022

Supervised Students

- Tutor of PhD students, Scuola Superiore Sant'Anna, Davide Scano (started Oct 1, 2020), Faris Alhamed (started Nov 1, 2021)

- Supervisor or Co-supervisor of master students in thesis activities in the context of network techniques, Scuola Superiore Sant'Anna: Biruk Belele, Maziar Sedghisaray, Behrouz Raeisi, Jobaida Akhtar, Nasir Hussain, Muhammad Akram, Matteo Dallaglio, Domenico Ficara, Nicola Azzaro, Francesca Matteotti, Giovanni Bellusci, Lorenzo Rossi, Giuliano Ippoliti, Piergiorgio Raponi

- Supervisor of master students in thesis activities in the context of computer programming ("Programmazione"), Mercatorum University: Carmine Rumma (graduated 06/2021), Giuseppe Scagliola (06/2021), Fabio Del Citto (07/2021), Luca Giallombardo (10/2021), Andrea Spadaro (10/2021)

Project

- Participation to the CNIT "Mythos" project, 2001-2003.

- Participation to the project: "Affidabilità in reti di telecomunicazioni ottiche", Ricerca Scientifica d'Ateneo (ex-60%), Scuola Superiore Sant'Anna, 2003.

- Participation to PRIN "Ingegneria del traffico end-to-end e protezione in reti DWDM (INTREPIDO)", funded by MIUR, 2003-2004.

- Participation to the project: "Servizi di nuova generazione in reti di telecomunicazioni multi-livello", Ricerca Scientifica d'Ateneo (ex-60%), Scuola Sant'Anna, 2004.

- Participation to the project "Reconfigurable Add-Drop Multiplexer (ROADM)", CNIT-Marconi, from 01-01-2005 to 31-12-2005

- Participation to the project COST270 "Reliability of Optical Components and Devices in Communications Systems and Networks", from 01-01-2005 to 06-06-2006

- Participation to the project: "Infrastrutture di Rete per servizi multimediali", Ricerca Scientifica d'Ateneo (ex-60%), Scuola Superiore Sant'Anna, 2005.

- Participation to the project: "Qualità del servizio in Reti Fisse e Mobili Integrate", Ricerca Scientifica d'Ateneo (ex-60%), Scuola Superiore Sant'Anna, 2006.

- Participation to the project: FIRB Italia-Tunisia "Infrastrutture e piattaforme real-time per ambienti di ricerca e e-learning collaborativo", from 04-05-2005 to 08-05-2009.

- Participation to the project: "Fully Flexible ROADM Architectures based on Innovative Optical Devices", CNIT-Ericsson from 01-01-2006 to 31-12-2006

- Participation to VD-M "Metro networks: technologies, architectures and protocols", Network of Excellence "e-Photon/One+", from 01-03-2006 to 28-02-2008

- Participation to the project "Path Computation Element (PCE)", in collaboration with National Institute of Information and Communications Technology (NICT), Tokyo, Japan. from 11-10-2007 to 01-11-2007

- Participation to the project: "Path Computation Element (PCE) for WSON and Multi-domain networks", CNIT, Scuola Superiore Sant'Anna and Ericsson, from 01-01-2008 to 31-12-2008.

- Participation to the project: "ON Planner", CNIT-Ericsson, from 01-01-2008 to 31-12-2008

- Participation to WP11 "VCE on Network Technologies and Engineering", Network of Excellence "Building the Future Optical Network in Europe (BONE)", from 01-01-2008 to 31-12-2010

- Participation to the project: "Network solutions and control plane: (1) multi-domain networks, (2) scalability and performance aspects on PCE", CNIT, Scuola Superiore Sant'Anna and Ericsson, from 01-01-2009 to 31-12-2009

- Scientific responsibility and participation to the project "FS-LAN" subcontracted to CNIT by Scuola Superiore Sant'Anna, from 09-11-2009 to 30-04-2010

- Participation to the project "Network solutions and control plane: WSON Architectures", CNIT, Scuola Superiore Sant'Anna and Ericsson, from 01-01-2010 to 31-12-2010- 27

- Participation to the project EU FP7 "Scalable, Tunable and Resilient Optical Networks Guaranteeing Extremely-high Speed Transport (STRONGEST)", Integrated Project (IP). Scientific responsibility for CNIT in WP3 "Control Plane", from 01-01-2010 to 31-12-2012

- Scientific responsibility and participation to the project "FS-LAN 2" subcontracted to CNIT by Scuola Superiore Sant'Anna, from 01-05-2010 to 30-07-2010

- Scientific responsibility and participation to the project: "SR-Secure" subcontracted to CNIT by Scuola Superiore Sant'Anna, from 22-06-2010 to 30-06-2011

- Direction of the project: "Real-Time Networks" subcontracted to CNIT by Scuola Superiore Sant'Anna, from 27-10-2010 to 31-10-2012

- Participation to the project: "Terabit Coherent Wavelength Switched Optical Network", CNIT-Ericsson, from 01-01-2011 to 31-12-2011

- Participation to the project: "Network solutions and control plane: flex-grid WSONs", CNIT, Scuola Superiore Sant'Anna and Ericsson, from 01-01-2011 to 31-12-2011

- Direction of the project: "Real-Time Networks 2", subcontracted to CNIT by Scuola Superiore Sant'Anna, from 19-07-2011 to 31-10-2012

- Scientific responsibility and participation to the project: "Studio per la realizzazione di un'infrastruttura in fibra ottica per la banda larga nella Regione Toscana" (CIG ZDB05E8144) funded by Regione Toscana, from 01-08-2012 to 31-12-2012

- Scientific responsibility for CNIT (i.e., Contact Point) and participation to the project: EU FP7 "Industry-Driven Elastic and Adaptive Lambda Infrastructure for Service and Transport Networks (IDEALIST)", Integrated Project (IP), from 01-11-2012 to 31-10-2015. Budget for CNIT: 634k€.

- **Project Coordinator** and scientific responsibility of the project: EU FP7 GN3plus "REACTION: Research and Experimental Assessment of Control plane archiTectures for In-Operation flexgrid Network re-optimization", from 24-10-2013 to 01-11-2015

- Scientific responsibility and participation to the project "Architetture e standard per sistemi tecnologici su backbone proprietario RFI", Work Package 5, funded by Rete Ferroviaria Italiana (RFI), from 25-09-2014 to 19-10-2015

- Participation to the project: EU H2020 "Optical peRformanCe monitoring enabling dynamic networks using a Holistic cross-layEr, Self-configurable Truly flexible approach (ORCHESTRA)", Call H2020-ICT-2014, Grant Agreement Number 645360, from 01-02-2015 to 31-01-2018

- Participation to the project: EU 5G-PPP "5GEx", Call H2020-ICT-2014-2, Type of action: IA). Specific involvement in WP4 on control plane for multi-domain heterogeneous networks, from 01-10-2015 to 30-09-2018

- Scientific responsibility for CNIT (i.e., Contact Point): EU H2020 "METRO-HAUL", call ICT-07-2017, Grant agreement ID: 761727, Specific involvement in WP3 and WP5, Task T3.4 leader, Budget for CNIT: 363k€. From 1 June 2017 to 30 September 2020.

- Scientific responsibility and participation to Work Package 6 "Analisi architetturale e porposte per la rete dati del nodo di Roma

e dell'upgrade tecnologico della Direttissima", funded by Rete Ferroviaria Italiana (RFI), from 01-01-2020 to 31-12-2020

- Scientific responsibility for CNIT and participation to the project "BRIC", funded by Scuola Superiore Sant'Anna. Budget for CNIT: 69.6k€. From 01-07-2020 to 31-06-2022

- **Project Coordinator** of the **EU Project** "Big data pRocessing and Artificial Intelligence at the Network Edge (BRAINE)", H2020-ECSEL-2019-2-RIA, Grant agreement ID: 876967. The project includes **27 partners** for an overall budget **>16M€**, of which 715K€ for CNIT. The Project started May 01, 2020, duration 36 months (from 01-05-2020 to 30-04-2023).

- **Project Technical Coordinator** of the **EU Project** "Beyond 5G Optical Network Continuum B5G-OPEN)", H2020, Grant agreement ID: 101016663. The project includes **15 partners** for an overall budget **>5.4M€**, of which 380k€ for CNIT. The Project started Nov 01, 2021, duration 36 months (from 01-11-2021 to 31-10-2024).

Publications (peer reviewed): Journals

1. P. Boffi; N. Sambo; P. Martelli; P. Parolari; A. Gatto; F. Cugini; P. Castoldi, "Mode-Group Division Multiplexing: Transmission, Node Architecture, and Provisioning", Journal of Lightwave Technology, Volume: 40, Issue: 8, Year: 2022

2. B. Shariati et al, "Demonstration of latency-aware 5G network slicing on optical metro networks", Journal of Optical Communications and Networking (JOCN), Volume: 14, Issue: 1, Year: 2022

3. Luis Velasco et al, "End-to-End Intent-Based Networking", IEEE Communications Magazine, Vol 59, Issue 10, Year 2021

4. S. Fichera, A. Sgambelluri, F. Paolucci, A. Giorgetti, N. Sambo, P. Castoldi, F. Cugini, "Blockchain-anchored Disaggregated Optical Networks", Journal of Lightwave Technology, 2021

5. D. Scano, F. Paolucci, K. Kondepu, A. Sgambelluri, L. Valcarenghi, F. Cugini, "Extending P4 in-band telemetry to user equipment for latency- and localization-aware autonomous networking with AI forecasting", IEEE/OSA Journal of Optical Communications and Networking, July 2021, Volume: 13, Issue: 9, DOI: 10.1364/JOCN.425891

6. A.S. Muqaddas et al, "NFV orchestration over disaggregated metro optical networks with end-to-end multi-layer slicing enabling crowdsourced live video streaming", IEEE/OSA Journal of Optical Communications and Networking, Volume: 13, Issue: 8, Aug. 2021, DOI: 10.1364/JOCN.423501

7. S. Barzegar, M. Ruiz, A. Sgambelluri, F. Cugini, A. Napoli, L. Velasco, "Soft Failure Detection, Localization, Identification, and Severity Prediction by Estimating QoT Model Input Parameters", IEEE Transactions on Network and Service Management, May 2021, DOI: 10.1109/TNSM.2021.3077543

8. F. Paolucci, F. Cugini, P. Castoldi, T. Osiński, "Enhancing 5G SDN/NFV Edge with P4 Data Plane Programmability", IEEE Network, Volume 35, Issue 3, May 2021, DOI: 10.1109/MNET.021.1900599

9. I. Pelle, F. Paolucci, B. Sonkoly, F. Cugini, "Latency-sensitive Edge/Cloud Serverless Dynamic Deployment over Telemetry-based Packet-Optical Network", IEEE Journal on Selected Areas in Communications, Vol 39, Issue 9, Sept. 2021, DOI 10.1109/JSAC.2021.3064655

10. D. Uzunidis, M. Presi, A. Sgambelluri, F. Paolucci, A. Stavdas, F. Cugini, "Bidirectional single-fiber filterless optical networks: modeling and experimental assessment", IEEE/OSA Journal of Optical Communications and Networking, June 2021, Volume: 13, Issue: 6, DOI: 10.1364/JOCN.411637

11. A. Sgambelluri, A. Giorgetti, D. Scano, F. Cugini, F. Paolucci, "OpenConfig and OpenROADM Automation of Operational Modes in Disaggregated Optical Networks", IEEE Access, Oct. 2020, Volume: 8, DOI: 10.1109/ACCESS.2020.3031988

12. B. Shariati, M. Ruiz, F. Fresi, A. Sgambelluri, F. Cugini, and L. Velasco, "Real-time Optical Spectrum Monitoring in Filterless Optical Metro Networks", Journal of Photonic Network Communications, June 2020, DOI: 10.1007/s11107-020-00890-z.

13. F. Paolucci ; R. Emmerich ; A. Eira ; N. Costa ; J. Pedro ; P. Wilke Berenguer ; C. Schubert ; J. K. Fischer ; F. Fresi ; A. Sgambelluri ; F. Cugini, "Disaggregated edge-enabled C+L-band filterless metro networks", IEEE/OSA Journal of Optical Communications and Networking, Year: 2020 | Volume: 12, Issue: 3, March 2020, DOI: 10.1364/JOCN.12.000002, Print ISSN: 1943-0620, Electronic ISSN: 1943-0639

14. L. Velasco et al., "Monitoring and Data Analytics for Optical Networking: Benefits, Architectures, and Use Cases," in IEEE Network. Nov/Dec 2019, doi: 10.1109/MNET.2019.1800341, Print ISSN: 0890-8044, Electronic ISSN: 1558-156X

15. F. Musumeci, C. Rottondi, G. Corani, S. Shahkarami, F. Cugini and M. Tornatore, "A Tutorial on Machine Learning for Failure Management in Optical Networks," in Journal of Lightwave Technology, vol. 37, no. 16, pp. 4125-4139, 15 Aug.15, 2019. doi: 10.1109/JLT.2019.2922586

16. K. Kondepu, A. Sgambelluri, F. Cugini, P. Castoldi, R. Morenilla, D. Larrabeiti, B. Vermeulen, L. Valcarenghi, "Performance evaluation of SDN-controlled green mobile fronthaul using a federation of experimental network testbeds", Photonic Network Communications volume 37, pages 399–408, Jan 2019, doi: 10.1007/s11107-018-00822-y

17. F. Paolucci, F. Civerchia, A. Sgambelluri, A. Giorgetti, F. Cugini and P. Castoldi, "P4 Edge node enabling stateful traffic engineering and cyber security," in IEEE/OSA Journal of Optical Communications and Networking, vol. 11, no. 1, pp. A84-A95, Jan. 2019.

18. P. Giardina et al., "Experimental demonstration of a lightpath management procedure based on a hierarchical architecture," in IEEE/OSA Journal of Optical Communications and Networking, vol. 10, no. 4, pp. 386-395, April 2018. doi: 10.1364/JOCN.10.000386

19. A. P. Vela et al., "Soft failure localization during commissioning testing and lightpath operation," in IEEE/OSA Journal of Optical Communications and Networking, vol. 10, no. 1, pp. A27-A36, Jan. 2018. doi: 10.1364/JOCN.10.000A27

20. F. Paolucci, A. Sgambelluri, F. Cugini and P. Castoldi, "Network Telemetry Streaming Services in SDN-Based Disaggregated Optical Networks," in Journal of Lightwave Technology, vol. 36, no. 15, pp. 3142-3149, 1 Aug.1, 2018. doi: 10.1109/JLT.2018.2795345

21. N. Sambo, A. Giorgetti, F. Cugini and P. Castoldi, "Sliceable Transponders: Pre-Programmed OAM, Control, and Management," in Journal of Lightwave Technology, vol. 36, no. 7, pp. 1403-1410, 1 April1, 2018. doi: 10.1109/JLT.2017.2786859

22. L. Velasco et al., "An architecture to support autonomic slice networking," in Journal of Lightwave Technology, vol. 36, no. 1, pp. 135-141, 1 Jan.1, 2018. doi: 10.1109/JLT.2017.2748233

23. F. Morales et al., "Dynamic core VNT adaptability based on predictive metro-flow traffic models," in IEEE/OSA Journal of Optical Communications and Networking, vol. 9, no. 12, pp. 1202-1211, Dec. 2017. doi: 10.1364/JOCN.9.001202

24. F. Cugini, M. Ruiz, T. Foggi, L. Velasco, N. Sambo and P. Castoldi, "Dedicated protection with signal overlap in elastic optical networks," in IEEE/OSA Journal of Optical Communications and Networking, vol. 9, no. 12, pp. 1074-1084, Dec. 2017. doi: 10.1364/JOCN.9.001074

25. A. P. Vela et al., "BER Degradation Detection and Failure Identification in Elastic Optical Networks," in Journal of Lightwave Technology, vol. 35, no. 21, pp. 4595-4604, 1 Nov.1, 2017. doi: 10.1109/JLT.2017.2747223

26. R. Vilalta et al., "TelcoFog: A Unified Flexible Fog and Cloud Computing Architecture for 5G Networks," in IEEE Communications Magazine, vol. 55, no. 8, pp. 36-43, Aug. 2017. doi: 10.1109/MCOM.2017.1600838

27. F. Paolucci, F. Cugini, G. Cecchetti and P. Castoldi, "Open Network Database for Application-based Control in Multi-Layer Networks", *IEEE/OSA Journal of Lightwave Technology (JLT)*, 2017

28. M. Dallaglio, N. Sambo, F. Cugini, P. Castoldi, "Control and Management of Transponders with NETCONF and YANG" in *IEEE/OSA Journal of Optical Communications and Networking (JOCN)*, 2017

29. M. Dallaglio, N. Sambo, F. Cugini, P. Castoldi, "YANG models for vendor-neutral optical networks, reconfigurable through state machine", in *IEEE Communications Magazine,* 2017

30. E. Moreno, A. Beghelli, F. Cugini, "Traffic Engineering in Segment Routing Networks" in *Journal of Computer Networks*, Vol. 114, Pages 23–31, Feb 2017

31. A. Giorgetti, A. Sgambelluri, F. Paolucci, F. Cugini, P. Castoldi, "Segment Routing for Effective Recovery and Multi-domain Traffic Engineering", in *IEEE/OSA Journal of Optical Communications and Networking (JOCN)*, vol. 9, no. 2, pp. A223-A232, Jan. 2017

32. K. Kondepu, A. Sgambelluri, L. Valcarenghi, F. Cugini, and P. Castoldi, "Exploiting SDN for Integrating Green TWDM-PONs and Metro Networks Preserving End-to-End Delay", in *IEEE/OSA Journal of Optical Communications and Networking (JOCN)*, vol. 9, no. 1, pp. 67-74, Jan. 2017, doi: 10.1364/JOCN.9.000067

33. A. Sgambelluri, F. Paolucci, A. Giorgetti, F. Cugini and P. Castoldi, "Experimental Demonstration of Segment Routing," in *IEEE/OSA Journal of Lightwave Technology (JLT)*, vol. 34, no. 1, pp. 205-212, Jan.1, 1 2016. doi: 10.1109/JLT.2015.2473656, http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=7226773&isnumber=7404304

34. T. Foggi and F. Cugini, "Signal Overlap for Elastic Optical Networks," in *IEEE/OSA Journal of Lightwave Technology (JLT)*, vol. 34, no. 14, pp. 3400-3410, July15, 15 2016. doi: 10.1109/JLT.2016.2567479 http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=7469317&isnumber=7502198

35. R. Casellas, O. Gonzalez, F. Paolucci, R. Morro, V. Lopez, D. King, R. Martinez, F. Cugini, R. Munoz, A. Farrel, R. Vilalta, J. P. Fernandez-Palacios, "A control plane architecture for multi-domain elastic optical networks: the view of the IDEALIST project," in *IEEE Communications Magazine*, vol. 54, no. 8, pp. 136-143, August 2016. doi: 10.1109/MCOM.2016.7537188 http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=7537188&isnumber=7537164

36. J. M. Fabrega, et al., "On the filter narrowing issues in elastic optical networks," in *IEEE/OSA Journal of Optical Communications and Networking (JOCN)*, vol. 8, no. 7, pp. A23-A33, July 2016. doi: 10.1364/JOCN.8.000A23 http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=7522660&isnumber=7522653

37. R. Martinez, F. Cugini, R. Casellas, F. Paolucci, R. Vilalta, P. Castoldi, R. Munoz., "Control plane solutions for sliceable bandwidth transceiver configuration in flexi-grid optical networks," in *IEEE Communications Magazine*, vol. 54, no. 8, pp. 126-135, August 2016. doi: 10.1109/MCOM.2016.7537187 http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=7537187&isnumber=7537164

38. Guerzoni, R. et al "Analysis of end-to-end multi-domain management and orchestration frameworks for software defined infrastructures: an architectural survey", *Transactions on Emerging Telecommunications Technologies*, John Wiley & Sons, Ltd, 2016.

39. N. Sambo, F. Cugini, A. Sgambelluri and P. Castoldi, "Monitoring Plane Architecture and OAM Handler," in *IEEE/OSA Journal of Lightwave Technology (JLT)*, vol. 34, no. 8, pp. 1939-1945, April15, 15 2016. doi: 10.1109/JLT.2015.2510449 http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=7360876&isnumber=7425114

40. G. Meloni, F. Fresi, M. Imran, F. Paolucci, F. Cugini, A. D'Errico, L. Giorgi, T. Sasaki, P. Castoldi, L. Potì, "Software-Defined Defragmentation in Space-Division Multiplexing With Quasi-Hitless Fast Core Switching," in *IEEE/OSA Journal of Lightwave Technology (JLT)*, vol. 34, no. 8, pp. 1956-1962, April15, 15 2016. doi: 10.1109/JLT.2015.2503434 http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=7336486&isnumber=7425114

41. F. Cugini, F. Paolucci, F. Fresi, G. Meloni, N. Sambo, L. Potí, A. D'Errico, P. Castoldi., "Toward Plug-and-Play Software-Defined Elastic Optical Networks," in *IEEE/OSA Journal of Lightwave Technology (JLT)*, vol. 34, no. 6, pp. 1494-1500, March15, 15 2016. doi: 10.1109/JLT.2015.2511802 http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=7365418&isnumber=7425116

42. N. Sambo, G. Meloni, F. Cugini, F. Fresi, A. D'Errico, L. Poti, P. Iovanna, P. Castoldi., "Routing, code, and spectrum assignment, subcarrier spacing, and filter configuration in elastic optical networks [Invited]," in *IEEE/OSA Journal of Optical Communications and Networking (JOCN)*, vol. 7, no. 11, pp. B93-B100, November 1 2015. doi: 10.1364/JOCN.7.000B93 http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=7331134&isnumber=7331118

43. M. Dallaglio, A. Giorgetti, N. Sambo, F. Cugini and P. Castoldi, "Provisioning and restoration with sliceability in GMPLS-based elastic optical networks [Invited]," in *IEEE/OSA Journal of Optical Communications and Networking (JOCN)*, vol. 7, no. 2, pp. A309-A317, February 1 2015. doi: 10.1364/JOCN.7.00A309
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=7035541&isnumber=7035263

44. N. Sambo, G. Meloni, F. Cugini, A. D'Errico, L. Potì, P. Iovanna, P. Castoldi., "Routing Code and Spectrum Assignment (RCSA) in Elastic Optical Networks," in *IEEE/OSA Journal of Lightwave Technology (JLT)*, vol. 33, no. 24, pp. 5114-5121, Dec.15, 15 2015. doi: 10.1109/JLT.2015.2479362
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=7270273&isnumber=7332227

45. L. Velasco, L. M. Contreras, G. Ferraris, A. Stavdas, F. Cugini, M. Wiegand, J. P. Fernandez-Palacios, "A service-oriented hybrid access network and clouds architecture," in *IEEE Communications Magazine*, vol. 53, no. 4, pp. 159-165, April 2015. doi: 10.1109/MCOM.2015.7081090
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=7081090&isnumber=7081062

46. L. Gifre, F. Paolucci, O. González de Dios, L. Velasco, L. M. Contreras, F. Cugini, P. Castoldi, V. López, "Experimental Assessment of ABNO-Driven Multicast Connectivity in Flexgrid Networks," in *IEEE/OSA Journal of Lightwave Technology (JLT)*, vol. 33, no. 8, pp. 1549-1556, April15, 15 2015. doi: 10.1109/JLT.2015.2392073
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=7009960&isnumber=7054625

47. F. Granelli, A. A. Gebremariam, M. Usman, F. Cugini, V. Stamati, M. Alitska, P. Chatzimisios., "Software defined and virtualized wireless access in future wireless networks: scenarios and standards," in *IEEE Communications Magazine*, vol. 53, no. 6, pp. 26-34, June 2015. doi: 10.1109/MCOM.2015.7120042
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=7120042&isnumber=7120004

48. M. Gunkel, A. Mattheus, F. Wissel, A. Napoli, J. Pedro, N. Costa, T. Rahman, G. Meloni, F. Fresi, F. Cugini, N. Sambo, M. Bohn, "Vendor-interoperable elastic optical interfaces: Standards, experiments, and challenges [Invited]," in *IEEE/OSA Journal of Optical Communications and Networking (JOCN)*, vol. 7, no. 12, pp. B184-B193, Dec. 2015. doi: 10.1364/JOCN.7.00B184
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=7367904&isnumber=7367893

49. Paolucci, F. et al, "Active PCE demonstration performing elastic operations and hitless defragmentation in flexible grid optical networks", *Journal of Photonic Network Communications*, 29 (1), 57-66, Springer, 2015

50. D. Klonidis, F. Cugini, O. Gerstel, M. Jinno, V. Lopez, E. Palkopoulou, M. Sekiya, D. Siracusa, G. Thouénon, C. Betoule., "Spectrally and spatially flexible optical network planning and operations," in *IEEE Communications Magazine*, vol. 53, no. 2, pp. 69-78, Feb. 2015. doi: 10.1109/MCOM.2015.7045393
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=7045393&isnumber=7045380

51. E. Hugues-Salas, G. Zervas, D. Simeonidou, E. Kosmatos, T. Orphanoudakis, A. Stavdas, M. Bohn, A. Napoli, T. Rahman, F. Cugini, N. Sambo, S. Frigerio, A. D'Errico, A. Pagano, E. Riccardi, V. López, J. P. F. P. Giménez., "Next generation optical nodes: The vision of the European research project IDEALIST," in *IEEE Communications Magazine*, vol. 53, no. 2, pp. 172-181, Feb. 2015. doi: 10.1109/MCOM.2015.7045406
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=7045406&isnumber=7045380

52. F. Cugini, F. Fresi, F. Paolucci, G. Meloni, N. Sambo, A. Giorgetti, T. Foggi, L. Potí, P. Castoldi., "Active stateful PCE with hitless LDPC code adaptation [Invited]," in *IEEE/OSA Journal of Optical Communications and Networking (JOCN)*, vol. 7, no. 2, pp. A268-A276, February 1 2015. doi: 10.1364/JOCN.7.00A268
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=7035536&isnumber=7035263

53. A. Giorgetti, F. Paolucci, F. Cugini and P. Castoldi, "Dynamic restoration with GMPLS and SDN control plane in elastic optical networks [Invited]," *in IEEE/OSA Journal of Optical Communications and Networking (JOCN)*, vol. 7, no. 2, pp. A174-A182, February 1 2015. doi: 10.1364/JOCN.7.00A174
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=7035267&isnumber=7035263

54. L. Gifre, F. Paolucci, L. Velasco, A. Aguado, F. Cugini, P. Castoldi and V. López., "First Experimental Assessment of ABNO-Driven In-Operation Flexgrid Network Re-Optimization," in *IEEE/OSA Journal of Lightwave Technology (JLT)*, vol. 33, no. 3, pp. 618-624, Feb.1, 1 2015. doi: 10.1109/JLT.2014.2343157
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=6866142&isnumber=7046468

55. F. Paolucci, F. Cugini, F. Fresi, G. Meloni, A. Giorgetti, N. Sambo, L. Potí, A. Castro, L. Velasco and P. Castoldi., "Superfilter technique in SDN-controlled elastic optical networks [Invited]," in *IEEE/OSA Journal of Optical Communications and Networking (JOCN)*, vol. 7, no. 2, pp. A285-A292, February 1 2015. doi: 10.1364/JOCN.7.00A285
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=7035538&isnumber=7035263

56. I. Cerutti, F. Martinelli, N. Sambo, F. Cugini and P. Castoldi, "Trading Regeneration and Spectrum Utilization in Code-Rate Adaptive Flexi-Grid Networks," in *IEEE/OSA Journal of Lightwave Technology (JLT)*, vol. 32, no. 23, pp. 4496-4503, Dec.1, 1 2014. doi: 10.1109/JLT.2014.2359179
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=6905711&isnumber=6924840

57. N. Sambo, G. Meloni, F. Paolucci, F. Cugini, M. Secondini, F. Fresi, L. Potì, P. Castoldi, "Programmable Transponder, Code and Differentiated Filter Configuration in Elastic Optical Networks," in *IEEE/OSA Journal of Lightwave Technology (JLT)*, vol. 32, no. 11, pp. 2079-2086, June1, 1 2014. doi: 10.1109/JLT.2014.2319859
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=6805143&isnumber=6814304

58. N. Sambo, A. D'Errico, C. Porzi, V. Vercesi, M. Imran, F. Cugini, A. Bogoni, L. Potì, P. Castoldi, "Sliceable transponder architecture including multiwavelength source," in *IEEE/OSA Journal of Optical Communications and Networking (JOCN)*, vol. 6, no. 7, pp. 590-600, July 2014. doi: 10.1109/JOCN.2014.6850200
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=6850200&isnumber=6850196

59. G. Meloni, N. Sambo, G. Berrettini, F. Cugini, L. Potì and P. Castoldi, "Technique for rerouting without traffic disruption in optical networks," in *Electronics Letters*, vol. 50, no. 7, pp. 531-533, March 27 2014. doi: 10.1049/el.2013.2264
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=6780240&isnumber=6780208

60. Gifre, Ll. et al., "Experimental assessment of in-operation spectrum defragmentation", *Journal of Photonic network communications*, 27 (3), 128-140, 2014

61. Paolucci F., et at, "Multipath restoration and bitrate squeezing in SDN-based elastic optical networks [Invited]", *Journal of Photonic network communications*, 28 (1), 45-57, 2014

62. V. Vercesi, N. Sambo, M. Scaffardi, F. Cugini, A. Bogoni and P. Castoldi, "Routing and Optical Multiplexing of 10-Gb/s OOK Streams to (DP)-DQPSK Traffic Trunks," in *IEEE Photonics Technology Letters*, vol. 26, no. 12, pp. 1176-1179, June15, 2014. doi: 10.1109/LPT.2014.2317592
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=6798751&isnumber=6814330

63. A. Malacarne, F. Paolucci, F. Cugini, A. Mastropaolo, G. Bottari and L. Potì, "Multiplexing of Asynchronous and Independent ASK and PSK Transmissions in SDN-Controlled Intra-Data Center Network," in *IEEE/OSA Journal of Lightwave Technology (JLT)*, vol. 32, no. 9, pp. 1794-1800, May1, 2014. doi: 10.1109/JLT.2014.2312536
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=6776407&isnumber=6781021

64. A. Sgambelluri, A. Giorgetti, F. Cugini, F. Paolucci and P. Castoldi, "OpenFlow-based segment protection in Ethernet networks," in *IEEE/OSA Journal of Optical Communications and Networking (JOCN)*, vol. 5, no. 9, pp. 1066-1075, Sept. 2013. doi: 10.1364/JOCN.5.001066
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=6608645&isnumber=6608629

65. F. Cugini, F. Paolucci, G. Meloni, G. Berrettini, M. Secondini, F. Fresi, N. Sambo, L. Poti, P. Castoldi, "Push-Pull Defragmentation Without Traffic Disruption in Flexible Grid Optical Networks," in *IEEE/OSA Journal of Lightwave Technology (JLT)*, vol. 31, no. 1, pp. 125-133, Jan.1, 2013. doi: 10.1109/JLT.2012.2225600
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=6334402&isnumber=6387606

66. F. Paolucci, F. Cugini, A. Giorgetti, N. Sambo and P. Castoldi, "A Survey on the Path Computation Element (PCE) Architecture," in *IEEE Communications Surveys & Tutorials*, vol. 15, no. 4, pp. 1819-1841, Fourth Quarter 2013. doi: 10.1109/SURV.2013.011413.00087
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=6422287&isnumber=6661627

67. N. Sambo, G. Meloni, G. Berrettini, F. Paolucci, A. Malacarne, A. Bogoni, F. Cugini, L. Potì, P. Castoldi, "Demonstration of data and control plane for optical multicast at 100 and 200 Gb/s with and without frequency conversion," in *IEEE/OSA Journal of Optical Communications and Networking (JOCN)*, vol. 5, no. 7, pp. 667-676, July 2013. doi: 10.1364/JOCN.5.000667
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=6560468&isnumber=6560464

68. Paolucci, F.; Cerutti, I.; Cugini, F.; Valcarenghi, L.; Castoldi, P.; "Optimal K-survivable backward-recursive path computation (BRPC) in multi-domain PCE-based networks", *Journal of Photonic network communications*, 26 (1), 1-12, 2013

69. A. Giorgetti, S. Fazel, F. Paolucci, F. Cugini and P. Castoldi, "Path Protection with Hierarchical PCE in GMPLS-Based Multi-domain WSONs," in *IEEE Communications Letters*, vol. 17, no. 6, pp. 1268-1271, June 2013. doi: 10.1109/LCOMM.2013.042313.130150
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=6510557&isnumber=6547858

70. A. Giorgetti, F. Cugini, F. Paolucci, L. Valcarenghi, A. Pistone and P. Castoldi, "Performance Analysis of Media Redundancy Protocol (MRP)," in *IEEE Transactions on Industrial Informatics*, vol. 9, no. 1, pp. 218-227, Feb. 2013. doi: 10.1109/TII.2012.2186584
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=6145654&isnumber=6387656

71. N. Sambo, P. Castoldi, F. Cugini, G. Bottari and P. Iovanna, "Toward high-rate and flexible optical networks," in *IEEE Communications Magazine*, vol. 50, no. 5, pp. 66-72, May 2012. doi: 10.1109/MCOM.2012.6194384
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=6194384&isnumber=6194372

72. Siracusa, D.; Grita, S.; Maier, G.; Pattavina, A.; Paolucci, F.; Cugini, F.; Castoldi, P.; "Domain Sequence Protocol (DSP) for PCE-based Multi-domain Traffic Engineering". *IEEE/OSA Journal of Optical Communications and Networking (JOCN)*, vol. 26, p. B168-B178, ISSN: 1943-0620, doi: 10.1364/JOCN.4.000876, 2012,
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=6360185&isnumber=6360158

73. Cugini, F.; Meloni, G.; Paolucci, F.; Sambo, N.; Secondini, M.; Gerardi, L.; Poti, L.; Castoldi, P.; , "Demonstration of Flexible Optical Network based on Path Computation Element", *IEEE/OSA Journal of Lightwave Technology (JLT)*, Digital Object Identifier: 10.1109/JLT.2011.2180361, 2012
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=6107508&isnumber=4357488

74. Sambo, N.; Cugini, F.; Bottari, G.; Iovanna, P.; Castoldi, P.; , "Encompassing ROADM add/drop constraints in GMPLS-based WSONs", *European Transaction on Telecommunications (ETT)*, DOI: 10.1002/ett.1519, 2011.

75. Castoldi, P.; Sambo, N.; Cugini, F.; Valcarenghi, L.; "QoT-aware lightpath set-up in GMPLS-controlled WDM networks: A survey", *Journal of Optical Switching and Networking*, Volume 8, Issue 4, December 2011.

76. Paolucci, F.; Sambo, N.; Cugini, F.; Giorgetti, A.; Castoldi, P.; , "Experimental Demonstration of Impairment-Aware PCE for Multi-Bit-Rate WSONs", *IEEE/OSA Journal of Optical Communications and Networking (JOCN)*, vol.3, no.8, pp.610-619, August 2011
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=5967996&isnumber=6016527

77. Sambo, N.; Paolucci, F.; Meloni, G.; Cugini, F.; Secondini, M.; Poti, L.; Castoldi, P.; , "Candidate Paths for Impairment-Aware PCE in 10-100 Gb/s Optical Networks",*Communications Letters, IEEE* , vol.15, no.8, pp.881-883, August 2011
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=5910093&isnumber=5986793

78. Sambo, N.; Secondini, M.; Cugini, F.; Bottari, G.; Iovanna, P.; Cavaliere, F.; Castoldi, P.; , "Modeling and Distributed Provisioning in 10–40–100-Gb/s Multirate Wavelength Switched Optical Networks", *IEEE/OSA Journal of Lightwave Technology (JLT)*, vol.29, no.9, pp.1248-1257, May1, 2011
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=5722966&isnumber=5742353

79. Sambo, N.; Cugini, F.; Secondini, M.; Iovanna, P.; Bottari, G.; Castoldi, P.; , "Enforcing QoT via PCE in Multi Bit-Rate WSONs", *Communications Letters, IEEE* , vol.15, no.4, pp.452-454, April 2011
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=5719523&isnumber=5749432

80. Paolucci, F.; Gharbaoui, M.; Giorgetti, A.; Cugini, F.; Martini, B.; Valcarenghi, L.; Castoldi, P.; , "Preserving Confidentiality in PCE-based Multi-domain Networks", *IEEE/OSA Journal of Optical Communications and Networking (JOCN)*, vol.3, no.5, pp.465-474, May 2011
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=5759822&isnumber=5873097

81. Pinart, C.; Sambo, N.; Le Rouzic, E.; Cugini, F.; Castoldi, P.; , "Probe Schemes for Quality-of-Transmission-Aware Wavelength Provisioning", *IEEE/OSA Journal of Optical Communications and Networking (JOCN),* vol.3, no.1, pp.87-94, January 2011
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=5677423&isnumber=5730117

82. Cugini, F.; Xu, S.; Harai, H.; Paolucci, F.; Castoldi, P.; "Optical grid networking exploiting path computation element (PCE) architecture", *International Journal of Communication Networks and Distributed Systems*, Vol. 5, No.3 pp. 246 - 262, 2010

83. Sambo, N.; Pointurier, Y.; Cugini, F.; Valcarenghi, L.; Castoldi, P.; Tomkos, I.; , "Lightpath Establishment Assisted by Offline QoT Estimation in Transparent Optical Networks", *IEEE/OSA Journal of Optical Communications and Networking (JOCN)*, vol.2, no.11, pp.928-937,

November 2010
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=5605916&isnumber=5670333

84. Paolucci, F.; Cugini, F.; Iovanna, P.; Bottari, G.; Valcarenghi, L.; Castoldi, P.; , "Delay-Bandwidth-Aware Metric Abstraction Schemes for OIF E-NNI Multidomain Traffic Engineering", *IEEE/OSA Journal of Optical Communications and Networking (JOCN)*, vol.2, no.10, pp.782-792, October 2010
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=5582212&isnumber=5670345

85. Giorgetti, A.; Cugini, F.; Sambo, N.; Paolucci, F.; Andriolli, N.; Castoldi, P.; , "Path state-based update of PCE traffic engineering database in wavelength switched optical networks", *Communications Letters, IEEE* , vol.14, no.6, pp.575-577, June 2010
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=5474948&isnumber=5474920

86. Valcarenghi, L.; Paolucci, F.; Cugini, F.; Castoldi, P.; , "A recursive distributed topology discovery service for grid clients", *Communications Letters, IEEE* , vol.13, no.7, pp.549-551, July 2009
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=5166440&isnumber=5166410

87. Sambo, N.; Andriolli, N.; Giorgetti, A.; Valcarenghi, L.; Cerutti, I.; Castoldi, P.; Cugini, F.; , "GMPLS-controlled dynamic translucent optical networks", *Network, IEEE* , vol.23, no.3, pp.34-40, May-June 2009
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=4939261&isnumber=4939253

88. Callegati, F.; Cugini, F.; Ghobril, P.; Gunreben, S.; Lopez, V.; Martini, B.; Pavon-Marino, P.; Perenyi, M.; Sengezer, N.; Staessens, D.; Szigeti, J.; Tornatore, M.; , "Optical Core Networks Research in the e-Photon-ONe+ Project", *IEEE/OSA Journal of Lightwave Technology (JLT)*, vol.27, no.20, pp.4415-4423, Oct.15, 2009
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=5033649&isnumber=5224043

89. Sambo, N.; Andriolli, N.; Giorgetti, A.; Valcarenghi, L.; Cugini, F.; Castoldi, P.; , "Accounting for Shared Regenerators in GMPLS-Controlled Translucent Optical Networks", *IEEE/OSA Journal of Lightwave Technology (JLT)*, vol.27, no.19, pp.4338-4347, Oct.1, 2009
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=4982668&isnumber=5210716

90. Valcarenghi, L.; Cugini, F.; Paolucci, F.; Castoldi, P.; , " Quality-of-service-aware fault tolerance for grid-enabled applications", Journal of Optical Switching and Networking, no. 5, pp. 150–1585, 2008

91. Sambo, N.; Andriolli, N.; Giorgetti, A.; Cugini, F.; Valcarenghi, L.; Castoldi, P.; , "Distributing Shared Regenerator Information in GMPLS-Controlled Translucent Networks", *Communications Letters, IEEE* , vol.12, no.6, pp.462-464, June 2008
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=4542783&isnumber=4542760

92. Cugini, F.; Sambo, N.; Andriolli, N.; Giorgetti, A.; Valcarenghi, L.; Castoldi, P.; Le Rouzic, E.; Poirrier, J.; , "Enhancing GMPLS Signaling Protocol for Encompassing Quality of Transmission (QoT) in All-Optical Networks", *IEEE/OSA Journal of Lightwave Technology (JLT)*, vol.26, no.19, pp.3318-3328, Oct.1, 2008
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=4738530&isnumber=4738524

93. Andriolli, N.; Buron, J.; Ruepp, S.; Cugini, F.; Valcarenghi, L.; Castoldi, P.; , "Label preference schemes in GMPLS controlled networks", *Communications Letters, IEEE* , vol.10, no.12, pp.849-851, December 2006
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=4027624&isnumber=4027606

94. Martinez, R.; Pinart, C.; Cugini, F.; Andriolli, N.; Valcarenghi, L.; Castoldi, P.; Wosinska, L.; Comellas, J.; Junyent, G.; , "Challenges and requirements for introducing impairment-awareness into the management and control planes of ASON/GMPLS WDM networks", *Communications Magazine, IEEE* , vol.44, no.12, pp.76-85, Dec. 2006
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=4050105&isnumber=4050088

95. Valcarenghi, L.; Foschini, L.; Paolucci, F.; Castoldi, P.; Cugini, F.; , "Topology discovery services for monitoring the global grid", *Communications Magazine, IEEE* , vol.44, no.3, pp. 110- 117, March 2006
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=1607873&isnumber=33764

96. Cugini F., Valcarenghi L., Castoldi P., and Guglielmucci M.; "Low-cost resilience schemes for the Optical Ethernet", Journal of Optical Networking, Vol. 4, Issue 12, pp. 829-837, Dec. 2005.

Publications (peer reviewed): Conferences

1. F. Alhamed;D. Scano;P. Castoldi;F. Paolucci;F. Cugini;I. Verschkov;J. J. Vegas Olmos, "P4 Postcard Telemetry Collector in Packet-Optical Networks", 2022 International Conference on Optical Network Design and Modeling (ONDM), 16-19 May 2022

2. Filippo Cugini et al, "Applications of P4-based Network Programmability in Optical Networks", INVITED paper, OFC 2022, 06-10 March 2022.

3. Alessio Giorgetti et al, "Kubernetes Orchestration in SDN-based Edge Network Infrastructure", OFC 2022, 06-10 March 2022.

4. G. Borraccini, S. Straullu, A. Giorgetti, R. D'Ingillo, D. Scano, A. D'Amico, E. Virgillito, A. Nespola, N. Sambo, F. Cugini, V. Curri, "QoT-Driven Optical Control and Data Plane in Multi-Vendor Disaggregated Networks", 2022 Optical Fiber Communications Conference and Exhibition (OFC), 06-10 March 2022.

5. M. Troscia, A. Sgambelluri, F. Paolucci, P. Castoldi, P. Pagano, F. Cugini, "OneM2M IoT Platform for SDN Control of Optical Networks", Asia Communications and Photonics Conference (ACP), 2021

6. F. Cugini, D. Scano, A. Giorgetti, A. Sgambelluri, F. Paolucci, P. Castoldi, Open Packet-Optical Edge Node: State of Art and Challenges [Invited], Asia Communications and Photonics Conference (ACP), 2021

7. F. Civerchia;A. Sgambelluri;F. Paolucci;L. Maggiani;P. Castoldi;F. Cugini, "Hardware acceleration for Processing Function Virtualization", IEEE International Mediterranean Conference on Communications and Networking (MeditCom), 2021

8. D. Scano, A. Giorgetti, A. Sgambelluri, E. Riccardi, R. Morro, F. Paolucci, P. Castoldi, F. Cugini, "Hierarchical Control of SONiC-based Packet-Optical Nodes encompassing Coherent Pluggable Modules, 2021 European Conference on Optical Communication (ECOC)

9. F. Paolucci, L. De Marinis, P. Castoldi, F. Cugini, "Demonstration of P4 Neural Network Switch", Optical Fiber Communications Conference and Exhibition (OFC), 2021

10. István Pelle, Francesco Paolucci, Balázs Sonkoly, Filippo Cugini, "Fast Edge-to-Edge Serverless Migration in 5G Programmable Packet-Optical Networks", Optical Fiber Communications Conference and Exhibition (OFC), 2021

11. F. Paolucci, A. Sgambelluri, P. Castoldi, F. Cugini, "Telemetry Solutions in Disaggregated Optical Networks: an Experimental View", Optical Fiber Communications Conference and Exhibition (OFC), 2021

12. A. Sgambelluri, D. Scano, A. Giorgetti, F. Paolucci, E. Riccardi, R. Morro, P. Castoldi, F. Cugini, "Coordinating Pluggable Transceiver Control in SONiC-based Disaggregated Packet-Optical Networks", Optical Fiber Communications Conference and Exhibition (OFC), 2021

13. B. Shariati, et al, "A Latency-Aware Real-Time Video Surveillance Demo: Network Slicing for Improving Public Safety", Optical Fiber Communications Conference and Exhibition (OFC), 2021

14. F. Cugini, D. Scano, A. Giorgetti, A. Sgambelluri, P. Castoldi, F. Paolucci, "P4 Programmability at the Network Edge: the BRAINE Approach [Invited]", IEEE ICCCN 2021 Conference, July 19 - 22, 2021, Athens, Greece

15. F. Paolucci, D. Scano, F. Cugini, A. Sgambelluri, L. Valcarenghi, C. Cavazzoni, G. Ferraris, P. Castoldi, "User Plane Function Offloading in P4 switches for enhanced 5G Mobile Edge Computing", International Conference on the Design of Reliable Communication Networks (DRCN), 2021

16. A. S. Muqaddas, et al., "Field Trial of Multi-Layer Slicing Over Disaggregated Optical Networks Enabling End-to-End Crowdsourced Video Streaming", ECOC Conf 2020

17. D. Scano, F. Paolucci, K. Kondepu, A. Sgambelluri, L. Valcarenghi, P. Castoldi, F. Cugini, "Augmented In-Band Telemetry to the User Equipment for Beyond 5G Converged Packet-Optical Networks", ECOC Conf 2020

18. J. J. Vegas Olmos, F. Cugini, F. Buining, N. O'Mahony, T. Truong, L. Liss, T. Oved, Z. Binshtock, D. Goldenberg, "Big Data Processing and Artificial Intelligence at the Network Edge", International Conference on Transparent Optical Networks (ICTON) Conf 2020

19. A. Sgambelluri, F. Paolucci, A. Giorgetti, D. Scano, F. Cugini, "Exploiting Telemetry in Multi-Layer Networks", International Conference on Transparent Optical Networks (ICTON) Conf 2020

20. F. Musumeci, V. Ionata, F. Paolucci, F. Cugini, M. Tornatore, "Machine-learning-assisted DDoS attack detection with P4 language", ICC Conf. 2020, 10.1109/ICC40277.2020.9149043

21. F. Cugini, F. Paolucci, A. Sgambelluri, A. Giorgetti, D. Scano, P. Castoldi, "Designing Disaggregated Optical Networks", International Conference on Optical Network Design and Modeling (ONDM), 2020, DOI: 10.23919/ONDM48393.2020.9133039

22. F. Cugini, A. Sgambelluri, P. Nadimi Goki, F. Paolucci, M. Presi, ""Single-Fiber Bidirectional Filterless Metro Network", 2020 International Conference on Optical Network Design and Modeling (ONDM), 2020, DOI: 10.23919/ONDM48393.2020.9132996

23. A. Sgambelluri, P. Velha, C.J. Oton, A. Giorgetti, A. D'Errico, S. Stracca, F. Cugini, "OpenROADM-Controlled White Box Encompassing Silicon Photonics Integrated Reconfigurable Switch Matrix", Optical Fiber Communications Conference and Exhibition (OFC), 2020

24. D. Scano, A. Giorgetti, S. Fichera, A. Sgambelluri, F. Cugini, "Operational Mode and Slicing Adaptation in OpenConfig Disaggregated Optical Networks", Optical Fiber Communications Conference and Exhibition (OFC), 2020

25. István Pelle; Francesco Paolucci; Balázs Sonkoly; Filippo Cugini, "Telemetry-Driven Optical 5G Serverless Architecture for Latency-Sensitive Edge Computing", Optical Fiber Communications Conference and Exhibition (OFC), 2020

26. S. Fichera; A. Sgambelluri; A. Giorgetti; F. Cugini; F. Paolucci, "Blockchain-Anchored Failure Responsibility Management in Disaggregated Optical Networks", Optical Fiber Communications Conference and Exhibition (OFC), Year: 2020

27. A. Sgambelluri, F. Paolucci, F. Cugini, "Telemetry-Driven Validation of Operational Modes in OpenConfig Disaggregated Networks", ECOC Conference 2019, Sept 2019, DOI 10.1049/cp.2019.0960

28. S. Fichera, N. Sambo, F. Paolucci, F. Cugini, P. Castoldi, "Leveraging Blockchain to Ratify QoT Performance in Multi-Domain Optical Networks", ECOC Conference 2019, Sept 2019, DOI 10.1049/cp.2019.1047

29. A. L. Ruscelli ; S. Fichera ; F. Paolucci ; A. Giorgetti ; P. Castoldi ; F. Cugini, "Introducing Network Softwarization in Next-Generation Railway Control Systems", 2019 6th International Conference on Models and Technologies for Intelligent Transportation Systems (MT-ITS), June 2019, DOI: 10.1109/MTITS.2019.8883348

30. A. Sgambelluri ; A. Giorgetti ; F. Paolucci ; P. Castoldi ; F. Cugini, "Open Source Implementation of OpenConfig Telemetry-Enabled NETCONF Agent", 2019 21st International Conference on Transparent Optical Networks (ICTON), July 2019, DOI: 10.1109/ICTON.2019.8840320, ISSN: 21627339, ISBN: 978-172812779-8

31. Marc Ruiz ; Andrea Sgambelluri ; Filippo Cugini ; Luis Velasco, "Smart Filterless Optical Networks Based on Optical Spectrum Analysis", 2019 21st International Conference on Transparent Optical Networks (ICTON), July 2019, DOI: 10.1109/ICTON.2019.8840240, ISSN: 21627339, ISBN: 978-172812779-8

32. N. Sambo, A. Sgambelluri, F. Cugini, A. D'Errico and P. Castoldi, "Enabling locally automated reconfigurations in disaggregated networks," 2019 24th OptoElectronics and Communications Conference (OECC) and 2019 International Conference on Photonics in Switching and Computing (PSC), Fukuoka, Japan, 2019, pp. 1-3. doi: 10.23919/PS.2019.8818029

33. B. Shariati, F. Fresi, M. Ruiz, F. Cugini and L. Velasco, "Optical Signal Tracking for Robust PAM4 Deployment in Filterless Metro Network Scenarios," 2019 Optical Fiber Communications Conference and Exhibition (OFC), San Diego, CA, USA, 2019, pp. 1-3.

34. F. Paolucci et al., "OpenConfig Control of 100G/400G Filterless Metro Networks with configurable Modulation Format and FEC," 2019 Optical Fiber Communications Conference and Exhibition (OFC), San Diego, CA, USA, 2019, pp. 1-3.

35. F. Cugini, P. Gunning, F. Paolucci, P. Castoldi and A. Lord, "P4 In-Band Telemetry (INT) for Latency-Aware VNF in Metro Networks," 2019 Optical Fiber Communications Conference and Exhibition (OFC), San Diego, CA, USA, 2019, pp. 1-3.

36. F. Cugini, C. Porzi, N. Andriolli, A. Bogoni and P. Castoldi, "Flexible Transceivers and Solutions for Semi-Filterless Metro Networks," 2018 23rd Opto-Electronics and Communications Conference (OECC), Jeju Island, Korea (South), 2018, pp. 1-2.doi: 10.1109/OECC.2018.8730058

37. J. -. Pedreno-Manresa, C. Porzi, J. -. Izquierdo-Zaragoza, F. Cugini and P. Pavon-Marino, "Provisioning in Metro Networks Based on Photonic Integrated WaveBand ROADMs," 2018 European Conference on Optical Communication (ECOC), Rome, 2018, pp. 1-3. doi: 10.1109/ECOC.2018.8535186

38. F. Paolucci et al., "Filterless Optical WDM Metro Networks Exploiting C+L Band," 2018 European Conference on Optical Communication (ECOC), Rome, 2018, pp. 1-3.doi: 10.1109/ECOC.2018.8535529

39. A. Giorgetti, M. Secondini, F. Cugini, A. Sgambelluri and P. Castoldi, "ONOS MetroApp for Filtering Effect Assessment in Metro Optical Networks," 2018 European Conference on Optical Communication (ECOC), Rome, 2018, pp. 1-3. doi: 10.1109/ECOC.2018.8535360

40. N. Sambo et al., "Connection Setup in Open Systems: Interfaces, Amplification, and Equalization," 2018 European Conference on Optical Communication (ECOC), Rome, 2018, pp. 1-3. doi: 10.1109/ECOC.2018.8535418

41. P. Castoldi et al., "Optical White Box: Modeling and Implementation," 2018 20th International Conference on Transparent Optical Networks (ICTON), Bucharest, 2018, pp. 1-4. doi: 10.1109/ICTON.2018.8473937

42. M. Scaffardi et al., "OpenFlow-Control of an OAM-Based Two-Layer Switch Supporting 100Gb/s Real Data-Traffic," 2018 Conference on Lasers and Electro-Optics (CLEO), San Jose, CA, 2018, pp. 1-2.

43. J. Pedreno-Manresa, J. Izquierdo-Zaragoza, F. Cugini and P. Pavon-Marino, "On the benefits of elastic spectrum management in multi-hour filterless metro networks," 2018 International Conference on Optical Network Design and Modeling (ONDM), Dublin, 2018, pp. 184-189. doi: 10.23919/ONDM.2018.8396128

44. F. Paolucci, F. Cugini and P. Castoldi, "P4-based Multi-Layer Traffic Engineering Encompassing Cyber Security," 2018 Optical Fiber Communications Conference and Exposition (OFC), San Diego, CA, 2018, pp. 1-3.

45. S. Shahkarami, F. Musumeci, F. Cugini and M. Tornatore, "Machine-Learning-Based Soft-Failure Detection and Identification in Optical Networks," 2018 Optical Fiber Communications Conference and Exposition (OFC), San Diego, CA, 2018, pp. 1-3.

46. B. Shariati, M. Ruiz, A. Sgambelluri, F. Cugini and L. Velasco, "Real-time Spectrum Surveillance in Filterless Optical Networks," 2018 Optical Fiber Communications Conference and Exposition (OFC), San Diego, CA, 2018, pp. 1-3.

47. A. Sgambelluri et al., "Fully Disaggregated ROADM White Box with NETCONF/YANG Control, Telemetry, and Machine Learning-based Monitoring," 2018 Optical Fiber Communications Conference and Exposition (OFC), San Diego, CA, 2018, pp. 1-3.

48. K. Christodoulopoulos et al., "Observe-Decide-Act: Experimental Demonstration of a Self-Healing Network," 2018 Optical Fiber Communications Conference and Exposition (OFC), San Diego, CA, 2018, pp. 1-3.

49. K. Kondepu et al., "SDN-Enabled Latency-Guaranteed Dual Connectivity in 5G RAN," 2017 Asia Communications and Photonics Conference (ACP), Guangzhou, China, 2017, pp. 1-3.

50. F. Morales et al., "Experimental Assessment of a Flow Controller for Dynamic Metro-Core Predictive Traffic Models Estimation," 2017 European Conference on Optical Communication (ECOC), Gothenburg, 2017, pp. 1-3. doi: 10.1109/ECOC.2017.8346220

51. G. Serafino et al., "Semi Filter-Less Drop & Waste Network Demonstration with Integrated SOI Optical Filter," 2017 European Conference on Optical Communication (ECOC), Gothenburg, 2017, pp. 1-3. doi: 10.1109/ECOC.2017.8346157

52. F. Cugini, M. Ruiz, T. Foggi, L. Velasco and P. Castoldi, "Partial Signal Overlap with Cancellation-based Detection for Spectrally-efficient EONs," 2017 European Conference on Optical Communication (ECOC), Gothenburg, 2017, pp. 1-3. doi: 10.1109/ECOC.2017.8346028

53. F. Paolucci, A. Sgambelluri, M. Dallaglio, F. Cugini and P. Castoldi, "Demonstration of gRPC Telemetry for Soft Failure Detection in Elastic Optical Networks," 2017 European Conference on Optical Communication (ECOC), Gothenburg, 2017, pp. 1-3. doi: 10.1109/ECOC.2017.8346066

54. N. Sambo, A. Giorgetti, F. Cugini, M. Dallaglio and P. Castoldi, "Control and Management of Sliceable Transponders," 2017 European Conference on Optical Communication (ECOC), Gothenburg, 2017, pp. 1-3.doi: 10.1109/ECOC.2017.8346031

55. A. P. Vela, M. Ruiz, F. Cugini and L. Velasco, "Combining a machine learning and optimization for early pre-FEC BER degradation to meet committed QoS," 2017 19th International Conference on Transparent Optical Networks (ICTON), Girona, 2017, doi: 10.1109/ICTON.2017.8025009

56. P. Castoldi, A. Giorgetti, A. Sgambelluri, F. Paolucci and F. Cugini, "Segment Routing in multi-layer networks," 2017 19th International Conference on Transparent Optical Networks (ICTON), Girona, 2017, pp. 1-4. doi: 10.1109/ICTON.2017.8025070

57. F. Cugini; N. Sambo; T. Foggi; M. Ruiz; L. Velasco; P. Castoldi, "Signal Overlap for Efficient 1+1 Protection in Elastic Optical Networks (EONs)", OFC 2017 Conf., March 2017

58. F. Fresi; G. Meloni; T. Foggi; F. Cugini; L. Potì, "First Field Trial Demonstration of Hitless Defragmentation with Signals Overlap in Elastic Optical Networks", OFC 2017 Conf., March 2017

59. P. Giardina; N. Sambo; M. Dallaglio; G. Bernini; G. Carrozzo; F. Cugini; P. Castoldi, "Configuring monitoring entities through NETCONF and YANG in control and hierarchical management planes", OFC 2017 Conf., March 2017

60. M. Dallaglio; N. Sambo; F. Cugini; P. Castoldi, "Pre-programming resilience schemes upon failure through NETCONF and YANG", OFC 2017 Conf., March 2017

61. F. Paolucci; N. Sambo; F. Cugini; P. Castoldi, "Demonstration of effective OAM for alien wavelength and transport network", OFC 2017 Conf., March 2017

62. A. P. Vela; Marc Ruiz; F. Fresi; N. Sambo; F. Cugini; L. Velasco; P. Castoldi, "Early Pre-FEC BER Degradation Detection to Meet Committed QoS", OFC 2017 Conf., March 2017

63. F. Paolucci; A. Giorgetti; F. Cugini; P. Castoldi, "Service Chaining in Multi-Layer Networks using Segment Routing and Extended BGP FlowSpec", OFC 2017 Conf., March 2017

64. Ruiz, M and Fresi, F and Vela, AP and Meloni, G and Sambo, N and Cugini, F and Poti, L and Velasco, L and Castoldi, P, "Service-triggered Failure Identification/Localization Through Monitoring of Multiple Parameters", European Conference on Optical Communication (ECOC), 2016

65. F. Paolucci et al., "Interoperable Multi-Domain Delay-aware Provisioning using Segment Routing Monitoring and BGP-LS Advertisement", European Conference on Optical Communication (ECOC), 2016

66. M. Dallaglio, N. Sambo, F. Cugini and P. Castoldi, "Management of sliceable transponder with NETCONF and YANG," 2016 International Conference on Optical Network Design and Modeling (ONDM), Cartagena, Spain, 2016, pp. 1-6. doi: 10.1109/ONDM.2016.7494062
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=7494062&isnumber=7493949

67. G. Cecchetti, F. Cugini, F. Paolucci, P. Castoldi and A. Giorgetti, "Introducing database communication technologies for TED replication in multi-domain networks," 2016 8th International Workshop on Resilient Networks Design and Modeling (RNDM), Halmstad, 2016, pp. 203-208. doi: 10.1109/RNDM.2016.7608288
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=7608288&isnumber=7608258

68. F. Cugini, N. Sambo, F. Paolucci, F. Fresi and P. Castoldi, "Adaptation and monitoring for elastic alien wavelengths," 2016 21st European Conference on Networks and Optical Communications (NOC), Lisbon, 2016, pp. 82-87. doi: 10.1109/NOC.2016.7506990
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=7506990&isnumber=7506973

69. L. Valcarenghi et al., "SDN-controlled energy-efficient mobile fronthaul: An experimental evaluation in federated testbeds," 2016 European Conference on Networks and Communications (EuCNC), Athens, 2016, pp. 298-301. doi: 10.1109/EuCNC.2016.7561051
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=7561051&isnumber=7560984

70. P. Castoldi, T. Foggi, F. Paolucci and F. Cugini, "Next steps in elasticity: Enabling signal overlap in optical networks," 2016 18th International Conference on Transparent Optical Networks (ICTON), Trento, 2016, pp. 1-4. doi: 10.1109/ICTON.2016.7550419
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=7550419&isnumber=7550246

71. F. Cugini, C. Porzi, N. Sambo, A. Bogoni and P. Castoldi, "Receiver architecture with filter for power-efficient drop&waste networks," 2016 Optical Fiber Communications Conference and Exhibition (OFC), Anaheim, CA, 2016, pp. 1-3.
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=7537712&isnumber=7537198

72. A. Giorgetti, A. Sgambelluri, F. Paolucci, F. Cugini and P. Castoldi, "Demonstration of dynamic restoration in segment routing multi-layer SDN networks," 2016 Optical Fiber Communications Conference and Exhibition (OFC), Anaheim, CA, 2016, pp. 1-3.
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=7537496&isnumber=7537198

73. F. Paolucci, F. Cugini, G. Cecchetti and P. Castoldi, "Open database for interconnected traffic engineered multi-layer networks," 2016 Optical Fiber Communications Conference and Exhibition (OFC), Anaheim, CA, 2016, pp. 1-3.
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=7537497&isnumber=7537198

74. M. Dallaglio, N. Sambo, J. Akhtar, F. Cugini and P. Castoldi, "YANG model and NETCONF protocol for control and management of elastic optical networks," 2016 Optical Fiber

Communications Conference and Exhibition (OFC), Anaheim, CA, 2016, pp. 1-3.
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=7537779&isnumber=7537198

75. F. Paolucci, A. Sgambelluri, N. Sambo, F. Cugini and P. Castoldi, "Hierarchical OAM Infrastructure for Proactive Control of SDN-Based Elastic Optical Networks," 2015 IEEE Global Communications Conference (GLOBECOM), San Diego, CA, 2015, pp. 1-6. doi: 10.1109/GLOCOM.2015.7417223
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=7417223&isnumber=7416057

76. A. Giorgetti, P. Castoldi, F. Cugini, J. Nijhof, F. Lazzeri and G. Bruno, "Path Encoding in Segment Routing," 2015 IEEE Global Communications Conference (GLOBECOM), San Diego, CA, 2015, pp. 1-6. doi: 10.1109/GLOCOM.2015.7417097
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=7417097&isnumber=7416057

77. K. Christodoulopoulos et al., "ORCHESTRA - Optical performance monitoring enabling flexible networking," 2015 17th International Conference on Transparent Optical Networks (ICTON), Budapest, 2015, pp. 1-4. doi: 10.1109/ICTON.2015.7193584
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=7193584&isnumber=7193279

78. K. Kondepu, A. Sgambelluri, L. Valcarenghi, F. Cugini and P. Castoldi, "An SDN-based integration of green TWDM-PONs and metro networks preserving end-to-end delay," 2015 Optical Fiber Communications Conference and Exhibition (OFC), Los Angeles, CA, 2015, pp. 1-3. doi: 10.1364/OFC.2015.Th2A.62
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=7121674&isnumber=7121453

79. A. Sgambelluri, A. Giorgetti, F. Cugini, G. Bruno, F. Lazzeri and P. Castoldi, "First demonstration of SDN-based segment routing in multi-layer networks," 2015 Optical Fiber Communications Conference and Exhibition (OFC), Los Angeles, CA, 2015, pp. 1-3. doi: 10.1364/OFC.2015.Th1A.5
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=7121572&isnumber=7121453

80. N. Sambo et al., "Routing, code, and spectrum assignment (RCSA) in elastic optical networks," 2015 Optical Fiber Communications Conference and Exhibition (OFC), Los Angeles, CA, 2015, pp. 1-3. http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=7121928&isnumber=7121453

81. A. Giorgetti, F. Paolucci, F. Cugini and P. Castoldi, "Proactive Hierarchical PCE based on BGP-LS for Elastic Optical Networks," 2015 Optical Fiber Communications Conference and Exhibition (OFC), Los Angeles, CA, 2015, pp. 1-3. doi: 10.1364/OFC.2015.Th1A.3

82. L. Valcarenghi et al., "Experimenting the integration of green optical access and metro networks based on SDN," 2015 17th International Conference on Transparent Optical Networks (ICTON), Budapest, 2015, pp. 1-4. doi: 10.1109/ICTON.2015.7193625
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=7193625&isnumber=7193279

83. F. Cugini et al., "Towards plug-and-play software-defined EONs: Field trial of self-adaptation carrier spacing," 2015 European Conference on Optical Communication (ECOC), Valencia, 2015, pp. 1-3. doi: 10.1109/ECOC.2015.7341669
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=7341669&isnumber=7341603

84. M. Imran et al., "Quasi-hitless software-defined defragmentation in space division multiplexing (SDM)," 2015 European Conference on Optical Communication (ECOC), Valencia, 2015, pp. 1-3. doi: 10.1109/ECOC.2015.7341673
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=7341673&isnumber=7341603

85. R. Casellas et al., "Control plane solutions for sliceable bandwidth variable transceivers in Elastic Optical Networks," 2015 European Conference on Networks and Communications (EuCNC), Paris, 2015, pp. 345-349. doi: 10.1109/EuCNC.2015.7194096
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=7194096&isnumber=7194024

86. P. Castoldi, G. Bernini, K. Christodoulopoulos, F. Cugini and N. Sambo, "A monitoring architecture for self-configurable optical networks," 2015 17th International Conference on Transparent Optical Networks (ICTON), Budapest, 2015, pp. 1-4. doi: 10.1109/ICTON.2015.7193583
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=7193583&isnumber=7193279

87. O. G. de Dios et al., "First demonstration of multi-vendor and multi-domain EON with S-BVT and control interoperability over Pan-European testbed," 2015 European Conference on Optical Communication (ECOC), Valencia, 2015, pp. 1-3. doi: 10.1109/ECOC.2015.7341689
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=7341689&isnumber=7341603

88. A. Sgambelluri, F. Paolucci, A. Giorgetti, F. Cugini and P. Castoldi, "SDN and PCE implementations for segment routing," 2015 20th European Conference on Networks and Optical

Communications - (NOC), London, 2015, pp. 1-4. doi: 10.1109/NOC.2015.7238607
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=7238607&isnumber=7238599

89. A. Sgambelluri, A. Giorgetti, F. Paolucci, F. Cugini and P. Castoldi, "Experimental demonstration of multi-domain segment routing," 2015 European Conference on Optical Communication (ECOC), Valencia, 2015, pp. 1-3. doi: 10.1109/ECOC.2015.7341836
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=7341836&isnumber=7341603

90. N. Sambo, F. Cugini, A. Sgambelluri and P. Castoldi, "Hierarchical monitoring architecture and OAM Handler," 2015 European Conference on Optical Communication (ECOC), Valencia, 2015, pp. 1-3. doi: 10.1109/ECOC.2015.7341672
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=7341672&isnumber=7341603

91. Castoldi, P.; Valcarenghi, L.; Cugini, F.; Cavaliere, F.; Iovanna, P.; "What Role for Photonics in Xhaul Networks of 5G systems?", Asia Communications and Photonics Conf., 2015http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=7121570&isnumber=7121453

92. A. Napoli et al., "Towards DSP technology interoperability for next generation metro/regional optical networks," 2015 International Conference on Photonics in Switching (PS), Florence, 2015, pp. 238-240. doi: 10.1109/PS.2015.7329012
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=7329012&isnumber=7328918

93. R. Casellas et al., "IDEALIST control plane architecture for multi-domain flexi-grid optical networks," 2014 European Conference on Networks and Communications (EuCNC), Bologna, 2014, pp. 1-5. doi: 10.1109/EuCNC.2014.6882653
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=6882653&isnumber=6882614

94. N. Sambo et al., "First demonstration of SDN-controlled SBVT based on multi-wavelength source with programmable and asymmetric channel spacing," 2014 The European Conference on Optical Communication (ECOC), Cannes, 2014, pp. 1-3. doi: 10.1109/ECOC.2014.6963857
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=6963857&isnumber=6963816

95. N. Sambo et al., "Transponder architecture supporting multi-wavelength source," 2014 International Conference on Optical Network Design and Modeling, Stockholm, 2014, pp. 156-161.http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=6855781&isnumber=6855750

96. L. Gifre et al., "Experimental assessment of inter-datacenter multicast connectivity for ethernet services in flexgrid networks," 2014 The European Conference on Optical Communication (ECOC), Cannes, 2014, pp. 1-3. doi: 10.1109/ECOC.2014.6964051
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=6964051&isnumber=6963816

97. P. Castoldi et al., "Exploiting differentiated filter configuration in fixed and flex-grid optical networks," 2014 16th International Conference on Transparent Optical Networks (ICTON), Graz, 2014, pp. 1-4. doi: 10.1109/ICTON.2014.6876271
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=6876271&isnumber=6876260

98. M. Dallaglio, A. Giorgetti, N. Sambo, F. Cugini and P. Castoldi, "Impact of slice-ability on dynamic restoration in GMPLS-based Flexible Optical Networks," Optical Fiber Communications Conference (OFC), San Francisco, CA, 2014, pp. 1-3. doi: 10.1364/OFC.2014.M2B.1, TOP SCORED
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=6886839&isnumber=6886510

99. L. Velasco et al., "First experimental demonstration of ABNO-driven in-operation flexgrid network re-optimization," Optical Fiber Communications Conference (OFC), San Francisco, CA, 2014, pp. 1-3. doi: 10.1364/OFC.2014.Th3K.3
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=6887214&isnumber=6886510

100. A. Giorgetti, F. Paolucci, F. Cugini and P. Castoldi, "Fast restoration in SDN-based flexible optical networks," Optical Fiber Communications Conference (OFC), San Francisco, CA, 2014, pp. 1-3. doi: 10.1364/OFC.2014.M2B.1
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=6886761&isnumber=6886510

101. F. Paolucci et al., "Filter optimization in SDN-based flexgrid networks," Optical Fiber Communications Conference (OFC), San Francisco, CA, 2014, pp. 1-3. doi: 10.1364/OFC.2014.Th3I.4
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=6886804&isnumber=6886510

102. F. Cugini et al., "Benefits of active stateful PCE for flexgrid networks," Optical Fiber Communications Conference (OFC), San Francisco, CA, 2014, pp. 1-3. doi: 10.1364/OFC.2014.Th3I.1
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=6886801&isnumber=6886510

103. Meloni G. et al, "First demonstration of optical signal overlap", Photonics in switching (PS) Conf. Post-deadline paper, 2014

104. A. Castro, F. Cugini, L. Velasco and P. Castoldi, "On the benefits of differentiating the filter configurations in flexi-grid optical networks," 2014 The European Conference on Optical Communication (ECOC), Cannes, 2014, pp. 1-3. doi: 10.1109/ECOC.2014.6964077
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=6964077&isnumber=6963816

105. I. Cerutti, F. Martinelli, N. Sambo, F. Cugini and P. Castoldi, "Regenerator placement in code-rate-adaptive flexi-grid networks," 2014 The European Conference on Optical Communication (ECOC), Cannes, 2014, pp. 1-3. doi: 10.1109/ECOC.2014.6964028
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=6964028&isnumber=6963816

106. H. D. Thanh, M. Morvan, P. Gravey, F. Cugini and I. Cerutti, "On the spectrum-efficiency of transparent optical transport network design with variable-rate forward error correction codes," 16th International Conference on Advanced Communication Technology, Pyeongchang, 2014, pp. 1173-1177. doi: 10.1109/ICACT.2014.6779143
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=6779143&isnumber=6778899

107. M. Bohn et al., "Elastic optical networks: The vision of the ICT project IDEALIST," 2013 Future Network & Mobile Summit, Lisboa, 2013, pp. 1-9.
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=6633583&isnumber=6633516

108. A. Sgambelluri, A. Giorgetti, F. Cugini, F. Paolucci and P. Castoldi, "Effective flow protection in OpenFlow rings," 2013 Optical Fiber Communication Conference and Exposition and the National Fiber Optic Engineers Conference (OFC/NFOEC), Anaheim, CA, 2013, pp. 1-3. doi: 10.1364/NFOEC.2013.JTh2A.01
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=6532493&isnumber=6532492

109. G. Meloni et al., "Optical multicast at 224 Gb/s with tunable frequency conversion in a flex-grid network testbed," 2013 Optical Fiber Communication Conference and Exposition and the National Fiber Optic Engineers Conference (OFC/NFOEC), Anaheim, CA, 2013, pp. 1-3. doi: 10.1364/OFC.2013.OTu2A.4
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=6532980&isnumber=6532492

110. N. Sambo et al., "Software defined code-rate-adaptive Terabit/s based on time-frequency packing," 2013 Optical Fiber Communication Conference and Exposition and the National Fiber Optic Engineers Conference (OFC/NFOEC), Anaheim, CA, 2013, pp. 1-3. doi: 10.1364/OFC.2013.OTh1H.5
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=6532865&isnumber=6532492

111. A. Sgambelluri, F. Paolucci, F. Cugini, L. Valcarenghi and P. Castoldi, "Generalized SDN control for access/metro/core integration in the framework of the interface to the Routing System (I2RS)," 2013 IEEE Globecom Workshops (GC Wkshps), Atlanta, GA, 2013, pp. 1216-1220. doi: 10.1109/GLOCOMW.2013.6825159
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=6825159&isnumber=6824917

112. A. Castro et al., "Experimental demonstration of an active stateful PCE performing elastic operations and hitless defragmentation," 39th European Conference and Exhibition on Optical Communication (ECOC 2013), London, 2013, pp. 1-3. doi: 10.1049/cp.2013.1486
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=6647679&isnumber=6647462

113. R. Muñoz et al., "IDEALIST control and service management solutions for dynamic and adaptive flexi-grid DWDM networks," 2013 Future Network & Mobile Summit, Lisboa, 2013, pp. 1-10.
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=6633577&isnumber=6633516

114. Cecchetti, G.; Ruscelli, A.; Cugini, F.; Castoldi, P.; An implementation of EURORADIO protocol for ERTMS systems", Proceedings of World Academy of Science, Engineering and Technology, 2013

115. A. Giorgetti, F. Cugini, F. Paolucci and P. Castoldi, "OpenFlow and PCE architectures in Wavelength Switched Optical Networks," 2012 16th International Conference on Optical Network Design and Modelling (ONDM), Colchester, 2012, pp. 1-6. doi: 10.1109/ONDM.2012.6210213
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=6210213&isnumber=6210176

116. F. Cugini, F. Paolucci, N. Sambo, L. Potì, A. D'Errico and G. Bottari, "Reliable flexible-ROADM architecture enabling modulation format adaptation," 2012 38th European Conference and Exhibition on Optical Communications, Amsterdam, 2012, pp. 1-3. doi: 10.1364/ECEOC.2012.We.3.D.4
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=6706305&isnumber=6705887

117. N. Sambo, F. Cugini, G. Berrettini, G. Meloni, F. Paolucci and L. Potì, "Flex-grid optical network supporting multicasting at high transmission rates," 2012 38th European Conference and

Exhibition on Optical Communications, Amsterdam, 2012, pp. 1-3. doi:
10.1364/ECEOC.2012.Mo.2.D.5
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=6705951&isnumber=6705887

118. F. Cugini et al., "Experimenting push-pull defragmentation in flexible optical networks with direct detection," 2012 IEEE Global Communications Conference (GLOBECOM), Anaheim, CA, 2012, pp. 2876-2881. doi: 10.1109/GLOCOM.2012.6503553
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=6503553&isnumber=6503052

119. F. Paolucci, F. Cugini, N. Hussain, F. Fresi and L. Potì, "OpenFlow-based flexible optical networks with enhanced monitoring functionalities," 2012 38th European Conference and Exhibition on Optical Communications, Amsterdam, 2012, pp. 1-3. doi:
10.1364/ECEOC.2012.Tu.1.D.5
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=6706145&isnumber=6705887

120. N. Sambo, F. Cugini, G. Bottari, P. Iovanna and P. Castoldi, "Routing and spectrum assignment for super-channels in flex-grid optical networks," 2012 38th European Conference and Exhibition on Optical Communications, Amsterdam, 2012, pp. 1-3. doi: 10.1364/ECEOC.2012.Mo.1.D.4
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=6705914&isnumber=6705887

121. Giorgetti, A.; Paolucci, F.; Cugini, F.; Castoldi, P.; , "Impact of Intra-domain Information in GMPLS-based WSONs with Hierarchical PCE", *Optical Fiber Communication Conference and Exposition (OFC/NFOEC), 2012 and the National Fiber Optic Engineers Conference,* March 2012

122. Cugini, F.; Secondini, M.; Sambo, N.; Bruno, G.; Bottari, G.; Iovanna, P.; Castoldi, P.; , "Push-Pull Technique for Defragmentation in Flexible Optical Networks", *Optical Fiber Communication Conference and Exposition (OFC/NFOEC), 2012 and the National Fiber Optic Engineers Conference,* March 2012

123. Bruno, G.; Riccardi, E.; Rossaro, A.; Cugini, F.; Sambo N.; , "Evolutions of a pan-European Network over TrueWave-RS Fiber Enabled by Flexible Grid and Coherent Detection", *Optical Fiber Communication Conference and Exposition (OFC/NFOEC), 2012 and the National Fiber Optic Engineers Conference,* March 2012

124. Meloni, G.; Paolucci, F.; Sambo, N.; Cugini, F.; Secondini, M.; Gerardi, L.; Poti, L.; Castoldi, P.; , "PCE architecture for flexible WSON enabling dynamic rerouting with modulation format adaptation", *Optical Communication (ECOC), 2011 37th European Conference and Exhibition on* , vol., no., pp.1-3, 18-22 Sept. 2011
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=6066000&isnumber=6065781

125. Sambo, N.; Cugini, F.; Bottari, G.; Iovanna, P.; Castoldi, P.; , "Distributed setup in optical networks with flexible grid", *Optical Communication (ECOC), 2011 37th European Conference and Exhibition on* , vol., no., pp.1-3, 18-22 Sept. 2011
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=6066059&isnumber=6065781

126. Sambo, N.; Cugini, F.; Bottari, G.; Bruno, G.; Iovanna, P.; Castoldi, P.; , "Lightpath provisioning in wavelength switched optical networks with flexible grid", *Optical Communication (ECOC), 2011 37th European Conference and Exhibition on* , vol., no., pp.1-3, 18-22 Sept. 2011
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=6066165&isnumber=6065781

127. Gharbaoui, M.; Paolucci, F.; Martini, B.; Cugini, F.; Castoldi, P.; , "Behavior-Based Policies for Preserving Confidentiality in PCE-based Multi-domain MPLS Networks", *Policies for Distributed Systems and Networks (POLICY), 2011 IEEE International Symposium on* , vol., no., pp.81-88, 6-8 June 2011
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=5976799&isnumber=5976788

128. Sambo, N.; Meloni, G.; Paolucci, F.; Secondini, M.; Poti, L.; Cugini, F.; Castoldi, P.; , "Impairment-aware PCE in multi bit-rate 10–100 Gb/s WSON with experimental demonstration", *Optical Fiber Communication Conference and Exposition (OFC/NFOEC), 2011 and the National Fiber Optic Engineers Conference* , vol., no., pp.1-3, 6-10 March 2011
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=5875375&isnumber=5875055

129. Sambo, N.; Cugini, F.; Bottari, G.; Iovanna, P.; Castoldi, P.; , "Provisioning schemes accounting for ROADM add/drop constraints in GMPLS-based WSON", *Optical Fiber Communication Conference and Exposition (OFC/NFOEC), 2011 and the National Fiber Optic Engineers Conference* , vol., no., pp.1-3, 6-10 March 2011
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=5875425&isnumber=5875055

130. Gharbaoui, M.; Paolucci, F.; Giorgetti, A.; Cugini, F.; Martini, B.; Castoldi, P.; , "Behavior-based authorization policy for multi-domain PCE-based MPLS and WSON", *Optical Fiber Communication Conference and Exposition (OFC/NFOEC), 2011 and the National Fiber Optic*

Engineers Conference , vol., no., pp.1-3, 6-10 March 2011
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=5875232&isnumber=5875055

131. Giorgetti, A.; Paolucci, F.; Cugini, F.; Castoldi, P.; , "Hierarchical PCE in GMPLS-based multi-domain Wavelength Switched Optical Networks", *Optical Fiber Communication Conference and Exposition (OFC/NFOEC), 2011 and the National Fiber Optic Engineers Conference* , vol., no., pp.1-3, 6-10 March 2011
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=5875233&isnumber=5875055

132. Sambo, N.; Cugini, F.; Secondini, M.; Bottari, G.; Cavaliere, F.; Iovanna, P.; Castoldi, P.; , "10–40 Gbit/s multi bit-rate GMPLS-controlled transparent optical networks in presence of cross-phase modulation", *Optical Communication (ECOC), 2010 36th European Conference and Exhibition on* , vol., no., pp.1-3, 19-23 Sept. 2010
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=5621510&isnumber=5621084

133. Cugini, F.; Andriolli, N.; Bottari, G.; Iovanna, P.; Valcarenghi, L.; Castoldi, P.; , "Designated PCE election procedure for traffic engineering database creation in GMPLS multi-layer networks", *Optical Communication (ECOC), 2010 36th European Conference and Exhibition on* , vol., no., pp.1-3, 19-23 Sept. 2010
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=5621517&isnumber=5621084

134. Paolucci, F.; Cugini, F.; Martini, B.; Gharbaoui, M.; Valcarenghi, L.; Castoldi, P.; , "Preserving confidentiality in PCEP-based inter-domain path computation", *Optical Communication (ECOC), 2010 36th European Conference and Exhibition on* , vol., no., pp.1-3, 19-23 Sept. 2010
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=5621205&isnumber=5621084

135. Andriolli, N.; Cugini, F.; Iovanna, P.; Bottari, G.; Bogoni, A.; Valcarenghi, L.; Castoldi, P.; , "Introducing TE Metrics to account for Transponder and Grooming Resources in GMPLS Multi-layer Networks", *Photonics in Switching (PS) Conference,* 2010

136. Giorgetti, A.; Valcarenghi, L.; Cugini, F.; Castoldi, P.; , "PCE-Based Dynamic Restoration in Wavelength Switched Optical Networks", *Communications (ICC), 2010 IEEE International Conference on* , vol., no., pp.1-6, 23-27 May 2010
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=5502798&isnumber=5501741

137. Buzzi, L.; Bardellini, M.C.; Siracusa, D.; Maier, G.; Paolucci, F.; Cugini, F.; Valcarenghi, L.; Castoldi, P.; , "Hierarchical Border Gateway Protocol (HBGP) for PCE-Based Multi-Domain Traffic Engineering", *Communications (ICC), 2010 IEEE International Conference on* , vol., no., pp.1-6, 23-27 May 2010
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=5502390&isnumber=5501741

138. Paolucci, F.; Cugini, F.; Iovanna, P.; Bottari, G.; Castoldi, P.; , "Delay-based bandwidth-aware topology abstraction scheme for OIF E-NNI multi-domain routing", *Optical Fiber Communication (OFC),* March 2010
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=5465244&isnumber=5465158

139. Valcarenghi, L.; Korus, P.; Paolucci, F.; Cugini, F.; Kantor, M.; Wajda, K.; Castoldi, P.; , "Experimental Evaluation of PCE-Based Batch Provisioning of Grid Service Interconnections", *Global Telecommunications Conference, 2009. GLOBECOM 2009. IEEE* , vol., no., pp.1-6, Nov. 30 2009-Dec. 4 2009
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=5425717&isnumber=5425208

140. Paolucci, F.; Cugini, F.; Giorgetti, A.; Valcarenghi, L.; Castoldi, P.; Iovanna, P.; Bottari, G.; Welin, A.; , "PCE architecture for OIF E-NNI multi-domain routing evaluated in an intra-domain WSON scenario", *Optical Communication, 2009. ECOC '09. 35th European Conference on* , vol., no., pp.1-2, 20-24 Sept. 2009
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=5286972&isnumber=5286960

141. Sambo, N.; Pointurier, Y.; Cugini, F.; Valcarenghi, L.; Castoldi, P.; Tomkos, I.; , "Lightpath establishment in distributed transparent dynamic optical networks using network kriging", *Optical Communication, 2009. ECOC '09. 35th European Conference on* , vol., no., pp.1-2, 20-24 Sept. 2009
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=5287042&isnumber=5286960

142. Andriolli, N.; Cugini, F.; Scaffardi, M.; Castoldi, P.; Poti, L.; Bogoni, A.; Bianchi, A.; Ponzini, F.; , "All-optical cell acknowledgment in synchronous optical packet switches", *Photonics in Switching, 2009. PS '09. International Conference on* , vol., no., pp.1-2, 15-19 Sept. 2009
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=5307824&isnumber=5307734

143. Paolucci, F.; Valcarenghi, L.; Castoldi, P.; Cugini, F.; , "A Recursive Distributed Topology Discovery Service for Network-Aware Grid Clients", *Communications, 2009. ICC '09. IEEE*

International Conference on , vol., no., pp.1-6, 14-18 June 2009
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=5198661&isnumber=5198564

144. Korus, P.; Paolucci, F.; Valcarenghi, L.; Cugini, F.; Castoldi, P.; Kantor, M.; Wajda, K.; , "Experimental evaluation of batch versus per-request service interconnection activation in PCE-based Grid networking", *High Performance Switching and Routing, 2009. HPSR 2009. International Conference on* , vol., no., pp.1-6, 22-24 June 2009
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=5307436&isnumber=5307415

145. Sambo, N.; Pointurier, Y.; Cugini, F.; Castoldi, P.; Tomkos, I.; , "Lightpath establishment in PCE-based dynamic transparent optical networks assisted by end-to-end quality of transmission estimation", *Transparent Optical Networks, 2009. ICTON '09. 11th International Conference on* , vol., no., pp.1-4, June 28 2009-July 2 2009
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=5185034&isnumber=5184967

146. Sambo, N.; Pinart, C.; Le Rouzic, E.; Cugini, F.; Valcarenghi, L.; Castoldi, P.; , "Signaling and multi-layer probe-based schemes for guaranteeing QoT in GMPLS transparent networks", *Optical Fiber Communication, (OFC) Conference on* , vol., no., pp.1-3, 22-26 March 2009
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=5032902&isnumber=5032267

147. Cugini, F.; Andriolli, N.; Giorgetti, A.; Paolucci, F.; Valcarenghi, L.; Castoldi, P.; Iovanna, P.; Welin, A.; "PCE in multi-layer MPLS over WSON networks" Proceedings of iPOP2009, Tokyo, June 11-12

148. Cugini, F.; Paolucci, F.; Valcarenghi, L.; Castoldi, P.; Welin, A.; , "Global load balancing of Zero-bandwidth TE LSPs in MPLS networks", *Optical Fiber Communication, (OFC) Conference on* , vol., no., pp.1-3, 22-26 March 2009
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=5032545&isnumber=5032267

149. Ramos, F.M.V.; Giorgetti, A.; Cugini, F.; Castoldi, P.; Crowcroft, J.; White, I.H.; , "Power Excursion Aware Routing in GMPLS-based WSONs", *Optical Fiber Communication, (OFC) Conference on* , vol., no., pp.1-3, 22-26 March 2009
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=5032901&isnumber=5032267

150. Cugini, F.; Paolucci, F.; Valcarenghi, L.; Castoldi, P.; Welin, A.; , "PCE communication protocol for resource advertisement in multi-domain BGP-based networks", *Optical Fiber Communication, (OFC) 2009. Conference on* , vol., no., pp.1-3, 22-26 March 2009
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=5032918&isnumber=5032267

151. Andriolli, N.; Cugini, F.; Valcarenghi, L.; Castoldi, P.; Welin, A.; , "Virtual network topology manager (VNTM) and path computation element (PCE) cooperation in multi-layer GMPLS networks", *Optical Fiber Communication (OFC) Conference on* , vol., no., pp.1-3, 22-26 March 2009
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=5032493&isnumber=5032267

152. Huang, S.; Kitayama, K.; Cugini, F.; Paolucci, F.; Giorgetti, A.; Valcarenghi, L.; Castoldi, P.; "An experimental analysis on OSPF-TE convergence time", APOC Conference, 2008

153. Sambo, N.; Cerutti, I.; Cugini, F.; Giorgetti, A.; Valcarenghi, L.; Castoldi, P.; , "Segment restoration scheme with QoT-guarantees in GMPLS-controlled translucent networks", *Optical Communication, 2008. ECOC 2008. 34th European Conference on* , vol., no., pp.1-2, 21-25 Sept. 2008
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=4729386&isnumber=4729060

154. Giorgetti, A.; Paolucci, F.; Cugini, F.; Valcarenghi, L.; Castoldi, P.; Bernstein, G.; , "Routing and Wavelength Assignment in PCE-based Wavelength Switched Optical Networks", *Optical Communication, 2008. ECOC 2008. 34th European Conference on* , vol., no., pp.1-2, 21-25 Sept. 2008
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=4729383&isnumber=4729060

155. Cugini, F.; Xu, S.; Harai, H.; Paolucci, F.; Valcarenghi, L.; Castoldi, P.; , "Introducing path computation element (PCE) in optical grid networking", *Optical Communication, 2008. ECOC 2008. 34th European Conference on* , vol., no., pp.1-2, 21-25 Sept. 2008
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=4729517&isnumber=4729060

156. Sambo, N.; Cugini, F.; Cerutti, I.; Valcarenghi, L.; Castoldi, P.; Poirrier, J.; Le Rouzic, E.; Pinart, C.; , "Probe-based schemes to guarantee lightpath quality of transmission (QoT) in transparent optical networks", *Optical Communication, 2008. ECOC 2008. 34th European Conference on* , vol., no., pp.1-2, 21-25 Sept. 2008
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=4729518&isnumber=4729060

157. Sambo, N.; Cugini, F.; Andriolli, N.; Giorgetti, A.; Valcarenghi, L.; Castoldi, P.; , "Path restoration schemes in GMPLS-controlled translucent networks", *Photonics in Switching, 2008.*

PS 2008. International Conference on , vol., no., pp.1-2, 4-7 Aug. 2008
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=4804266&isnumber=4804135

158. Sambo, N.; Andriolli, N.; Giorgetti, A.; Cugini, F.; Valcarenghi, L.; Castoldi, P.; , "Introducing Crosstalk-Awareness into GMPLS-controlled transparent optical networks", *Optical Fiber communication/National Fiber Optic Engineers Conference, 2008. (OFC/NFOEC) 2008. Conference on* , vol., no., pp.1-3, 24-28 Feb. 2008
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=4528563&isnumber=4528018

159. Paolucci, F.; Cugini, F.; Valcarenghi, L.; Castoldi, P.; , "Enhancing Backward Recursive PCE-based Computation (BRPC) for Inter-Domain Protected LSP Provisioning", *Optical Fiber communication/National Fiber Optic Engineers Conference, 2008.(OFC/NFOEC) 2008. Conference on* , vol., no., pp.1-3, 24-28 Feb. 2008
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=4528564&isnumber=4528018

160. Castoldi, P.; Paolucci, F.; Giorgetti, A.; Cugini, F.; Valcarenghi, L.; Huang, S.; Kitayama, K.-i.; , "Management-augmented stateless PCE for Wavelength Routed Optical Networks", *Transparent Optical Networks, 2008. ICTON 2008. 10th Anniversary International Conference on* , vol.3, no., pp.23-26, 22-26 June 2008
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=4598646&isnumber=4598636

161. Sugang Xu; Cugini, F.; Weiping Ren; Harai, H.; , "An experiment of dynamic optical grid network provisioning in wavelength switched optical networks with joint optimization capability", *Optical Internet, 2008. COIN 2008. 7th International Conference on* , vol., no., pp.1-2, 14-16 Oct. 2008
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=4773382&isnumber=4773348

162. Cugini, F.; "PCE Architecture Implementation: challenges and open issues", VII Workshop in GMPLS networks. Spain, 2008

163. Cugini, F.; , "Physical impairments-aware transparent optical networks", *Optical Internet, 2008. COIN 2008. 7th International Conference on* , vol., no., pp.1-2, 14-16 Oct. 2008
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=4773420&isnumber=4773348

164. Ghelfi P., Cugini F., Di Muro R., Nayar B., Bogoni A., Potì L., and Castoldi P. "Effective Strategy for Extending the Transparent Domain of Optical Mesh Networks", International Symposium on Microwave and Optical Technology, Italy, Roma, December, 2007

165. Castoldi, P.; Cugini, F.; Valcarenghi, L.; Sambo, N.; Le Rouzic, E.; Poirrier, J.; Andriolli, N.; Paolucci, F.; Giorgetti, A.;, "Centralized vs. Distributed Approaches for Encompassing Physical Impairments in Transparent Optical Network", *Optical Network Design and Modeling, 2007, ONDM 2007 Conference,* 2007

166. Ficara, D.; Paolucci, F.; Valcarenghi, L.; Cugini, F.; Castoldi, P.; Giordano, S.; , "The Beacon Number Problem in a Fully Distributed Topology Discovery Service", *Global Telecommunications Conference, 2007. GLOBECOM '07. IEEE* , vol., no., pp.2591-2596, 26-30 Nov. 2007
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=4411402&isnumber=4410910

167. Cugini, F.; Ghelfi, P.; Bogoni, A.; Valcarenghi, L.; Castoldi, P.; Muro, R. Di; Nayar, B.; , "RWA for Mitigating Power Excursion Effects in EDFA-based all-Optical Metro Networks", *Optical Communication (ECOC), 2007 33rd European Conference and Ehxibition of* , vol., no., pp.1-2, 16-20 Sept. 2007
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=5758526&isnumber=5757122

168. Cugini, F.; Sambo, N.; Giorgetti, A.; Valcarenghi, L .; Castoldi, P.; Rouzic, E. Le; Poirrier, J.; , "GMPLS extensions to Encompass Shared Regenerators in Transparent Optical Networks", *Optical Communication (ECOC), 2007 33rd European Conference and Ehxibition of* , vol., no., pp.1-2, 16-20 Sept. 2007
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=5758564&isnumber=5757122

169. Berrettini, G.; Meloni, G.; Scaffardi, M.; Paolucci, F.; Valcarenghi, L.; Castoldi, P.; Bogoni, A.; Poti, L.; Di Muro, R.; Nayar, B.; Cugini, F.; , "Testbed for 100 Gb/s Ethernet", *Testbeds and Research Infrastructure for the Development of Networks and Communities, 2007. TridentCom 2007. 3rd International Conference on* , vol., no., pp.1-7, 21-23 May 2007
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=4444723&isnumber=4444646

170. Valcarenghi, L.; Paolucci, F.; Castoldi, P.; Cugini, F.; Adami, D.; Ficara, D.; Giordano, S.; , "Topology discovery and performance information services for optical grids", *Broadband Communications, Networks and Systems, 2007. BROADNETS 2007. Fourth International Conference on* , vol., no., pp.124-130, 10-14 Sept. 2007
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=4550415&isnumber=4550387

171. Cugini, F.; Paolucci, F.; Valcarenghi, L.; Castoldi, P.; , "Implementing a Path Computation Element (PCE) to encompass physical impairments in transparent networks", *Optical Fiber Communication and the National Fiber Optic Engineers Conference, (OFC/NFOEC) 2007. Conference on* , vol., no., pp.1-3, 25-29 March 2007
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=4348896&isnumber=4348298

172. Cugini, F.; Giorgetti, A.; Andriolli, N.; Paolucci, I.; Valcarenghi, L.; Castoldi, P.; , "Multiple Path Computation Element (PCE) Cooperation for Multi-layer Traffic Engineering", *Optical Fiber Communication and the National Fiber Optic Engineers Conference,(OFC/NFOEC) 2007. Conference on* , vol., no., pp.1-3, 25-29 March 2007
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=4348895&isnumber=4348298

173. Ghelfi, P.; Cugini, F.; Poti, L.; Bogoni, A.; Castoldi, P.; Di Muro, R.; Nayar, B.; , "Optical Cross Connects Architecture with per-Node Add&Drop Functionality", *Optical Fiber Communication and the National Fiber Optic Engineers Conference, (OFC/NFOEC) 2007. Conference on* , vol., no., pp.1-6, 25-29 March 2007
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=4348520&isnumber=4348298

174. Sambo, N.; Cugini, F.; Andriolli, N.; Giorgetti, A.; Valcarenghi, L.; Castoldi, P.; , "Lightweight RSVP-TE extensions to account for Shared Regenerators in Translucent Optical Networks", *Photonics in Switching, 2007* , vol., no., pp.35-36, 19-22 Aug. 2007
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=4300731&isnumber=4300711

175. Castoldi, P.; Cugini, F.; Ghelfi, P.; Valcarenghi, L.; Franzl, G.; Gravey, P.; Morvan, M.; Rea, L.; Matera, F.; Wajda, K.; , "Design of Reliable Metro Core Networks", *Transparent Optical Networks, 2007. ICTON '07. 9th International Conference on* , vol.3, no., pp.130-133, 1-5 July 2007
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=4296263&isnumber=4296216

176. Callegati, F.; Wosinska, L.; Tornatore, M.; Cugini, F.; , "Research in Optical Transport Networks: The e-Photon/ONe+ Experience", *Transparent Optical Networks, 2007. ICTON '07. 9th International Conference on* , vol.1, no., pp.3-6, 1-5 July 2007
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=4296016&isnumber=4296000

177. Ghelfi P., Cugini F., Potì L., Bogoni A., Castoldi P., Di Muro R., and Nayar B. "Architettura di nodo ottico trasparente con funzionalità di ADD&DROP condivisa", Fotonica 2007, Italy, Mantova, May 21-23, 2007

178. Castoldi, P.; Andriolli, N.; Cerutti, I.; Sambo, N.; Valcarenghi, L.; Giorgetti, A.; Cugini, F.; Ruepp, S.; Buron, J.; , "A Framework for Label Preference in GMPLS Controlled Optical Networks", *Transparent Optical Networks, 2007. ICTON '07. 9th International Conference on* , vol.3, no., pp.13-17, 1-5 July 2007
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=4296233&isnumber=4296216

179. Cugini, F.; Sambo, N.; Giorgetti, A.; Andriolli, N.; Valcarenghi, L.; Castoldi, P.; "Physical impairment-aware control plane based on GMPLS signaling extensions", in China-Italy Bilateral Workshop on Photonics for Communication and Sensing, Xi'an,China, Oct. 2006.

180. Ennser, K.; Rogowski, T.; Ghelfi P.; Cugini, F.; Castoldi, P.; "Reconfigurable Add/Drop Multiplexer Design to Implement Flexibility in Optical Networks", *Transparent Optical Networks, 2006 International Conference on* , vol.3, no., pp.74-77, June 2006
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=4013801&isnumber=4013778

181. Cugini, F.; Andriolli, N.; Valcarenghi, L.; Castoldi, P.; , "Enhancing link bundling performance in GMPLS transparent networks", *Optical Fiber Communication Conference, 2006 and the 2006 National Fiber Optic Engineers Conference. (OFC) 2006* , vol., no., pp. 3 pp., 5-10 March 2006
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=1636877&isnumber=34305

182. Andriolli, N.; Valcarenghi, L.; Castoldi, P.; Buron, J.; Ruepp, S.; Cugini, F.; , "Signaling protocol extensions for converter-saving wavelength assignment in GMPLS optical networks", *High Performance Switching and Routing, 2006 Workshop on* , 2006
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=1709733&isnumber=36067

183. Valcarenghi, L.; Paolucci, F.; Castoldi, P.; Rossi, L.; Cugini, F.; , "Integrated multi-layer bandwidth recovery for multimedia communications", *High Performance Switching and Routing, 2006 Workshop on* , 2006
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=1709723&isnumber=36067

184. Sambo, N.; Giorgetti, A.; Andriolli, N.; Cugini, F.; Valcarenghi, L.; Castoldi, P.; , "OPN09-03: GMPLS Signaling Feedback for Encompassing Physical Impairments in Transparent Optical Networks", *Global Telecommunications Conference, 2006. GLOBECOM '06. IEEE* , vol., no.,

pp.1-5, Nov. 27 2006-Dec. 1 2006
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=4151038&isnumber=4150630

185. Castoldi, P.; Valcarenghi, L.; Paolucci, F.; Martini, V.; Baroncelli, F.; Cugini, F.; Martini, B.; , "Network Resource Management in High-Quality Networks", *Broadband Communications, Networks and Systems, 2006. BROADNETS 2006. 3rd International Conference on* , vol., no., pp.1-10, 1-5 Oct. 2006
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=4374345&isnumber=4374296

186. Cugini F., Ghelfi P., Giorgetti A., Valcarenghi L., and Castoldi P. "Partial Cross-Connection Capability OXCs for Ring Interconnection", Sixth International Workshop on Optical Networking Technologies (Optical Cross-Connects (OXC): From research to practice) colocated with Globecom 2005, MO, St. Louis, 28 Nov. - 2 Dec., 2005,

187. Kantor M., Wajda K., Rea L., Tarantino A., Matera F., Cugini F., Paolucci F., Valcarenghi L., and Castoldi P. "Experimenting with Commercial Router MPLS Recovery Schemes", Broadband Europe 2005, France, Bordeaux, Dec. 12-15, 2005

188. Adami, D.; Castoldi, P.; Cugini, F.; Giordano, S.; Repeti, M.; Valcarenghi, L.; , "Performance evaluation of recovery techniques in a grid oriented Metrocore/VESPER field trial", *Testbeds and Research Infrastructures for the Development of Networks and Communities, 2005. Tridentcom 2005. First International Conference on* , vol., no., pp. 12- 21, 23-25 Feb. 2005
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=1386176&isnumber=30172

189. Giorgetti, A.; Andriolli, N.; Valcarenghi, L.; Castoldi, P.; Cugini, F.; , "Introducing node adaptation capability descriptor in GMPLS multi-region networks", *High Performance Switching and Routing, 2005. HPSR. 2005 Workshop on* , vol., no., pp. 29- 33, 12-14 May 2005
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=1503188&isnumber=32245

190. Valcarenghi, L.; Paolucci, F.; Foschini, L.; Cugini, F.; Castoldi, P.; , "Centralized and distributed topology discovery service implementations", *High Performance Interconnects, 2005. Proceedings. 13th Symposium on* , vol., no., pp. 160- 162, 17-19 Aug. 2005
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=1544593&isnumber=32970

191. Cugini, F.; Andriolli, N.; Valcarenghi, L.; Castoldi, P.; , "Physical impairment aware signalling for dynamic lightpath set up", *Optical Communication, 2005. ECOC 2005. 31st European Conference on* , vol.4, no., pp. 979- 980 vol.4, 25-29 Sept. 2005
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=1584287&isnumber=33433

192. Cugini, F.; Valcarenghi, L.; Castoldi, P.; Raponi, P.G.; , "A cost-effective implementation of fast GMPLS shared protection for IP over 10 Gigabit Ethernet networks", *High Performance Switching and Routing, 2005. HPSR. 2005 Workshop on* , vol., no., pp. 100- 103, 12-14 May 2005
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=1503202&isnumber=32245

193. Cugini, F.; Valcarenghi, L.; Castoldi, P.; Guglielmucci, M.; , "Low-cost resilience schemes for the optical Ethernet", *Transparent Optical Networks, 2005, Proceedings of 2005 7th International Conference* , vol.1, no., pp. 411- 416 Vol. 1, 3-7 July 2005
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=1505833&isnumber=32275

194. Valcarenghi, L.; Rossi, L.; Paolucci, F.; Castoldi, P.; Cugini, F.; , "Multi-layer bandwidth recovery for multimedia communications: an experimental evaluation", *Next Generation Internet Networks, 2005* , vol., no., pp. 310- 317, 18-20 April 2005
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=1431682&isnumber=30874

195. Cugini F., Valcarenghi L., Giorgetti, A. and Castoldi P. "Implementazione di un sistema di protezione GMPLS condiviso per reti Ethernet ottiche", Garr05, Italy, Pisa, May, 2005

196. Cugini, F.; Valcarenghi, L.; Castoldi, P.; "Implementazione di un sistema di protezione GMPLS condiviso per reti Ethernet ottiche", Fotonica, Italy, Trani, 2005

197. Cugini, F.; Andriolli , N.; Valcarenghi , L.; Castoldi , P.; , "A novel signaling approach to encompass physical impairments in GMPLS networks", *Global Telecommunications Conference Workshops, 2004. GlobeCom Workshops 2004. IEEE* , vol., no., pp. 369- 373, 29 Nov.-3 Dec. 2004
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=1417604&isnumber=30597

198. Cugini, F.; Andriolli, N.; Castoldi, P.; , "A novel OSPF extension including node architectural constraints for GMPLS networks", *Telecommunications Network Strategy and Planning Symposium. NETWORKS 2004, 11th International* , vol., no., pp. 291- 296, 13-16 June 2004
http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=1341859&isnumber=29565

199. Martini B., Baroncelli F., Cugini F., Valcarenghi L., and Castoldi P. "Optical Ethernet Span Protection using XML-based Multi Protocol Framework", SPIE Photonics Europe, France, Strasbourg, April, 2004

200. Cugini F., Valcarenghi L., Castoldi P., and Ippoliti G. "Experimental demonstration of a low-cost 1:1 optical span protection", Workshop on "Protection and Restoration: from SONET/SDH to Next-Generation Networks", *GlobeCom 2003*, USA, San Francisco, December, 2003

201. Castoldi, P.; Cugini, F.; Giorgetti, A.; Valcarenghi, L.; "An integrated Scheme for Multilayer Restoration", Photonics in Switching 2003 (PS 2003), France, Versailles, 28 Sept - 2 Oct, 2003

Patents

1. Ghelfi P, Cugini F, Rogowski T., Ennser K., Castoldi P., Di Muro R., Nayar B. (2006), "Reconfigurable Optical Cross Connect (OXC) based on Wavelength Selective Switches (WSS)", PCT/EP2006/066222, 11-09-2006

2. Castoldi P, Cugini F, Sambo N, Cerutti I, Giorgetti A, Valcarenghi L (2008), "Restoration scheme for an optical network and method of using such a scheme", PCT/EP2008/062533, 19-09-2008

3. Cugini F, Castoldi, P., Welin, A. (2009), "Inter-Domain Advertisements in Multi-Domain Networks", PCT/EP2009/055111, 28-04-2009

4. Cugini F, Paolucci F., Valcarenghi L., Castoldi P., Welin A. (2009), "Global Load Provisioning of Zero-bandwidth Traffic Engineering Label Switched Paths", PCT/SE2009/050545, 14-05-2009

5. Cugini F, Paolucci, F., Castoldi, P., Welin, A., Iovanna, P., Bottari, G (2010), "Method and Apparatus for Path Computation Element and Routing Controller cooperation", PCT/SE2010/050901, 23-08-2010

6. Sambo, N., Cugini F, Castoldi, P., Iovanna, P., Bottari, G. (2010), "Method And Apparatus For Dynamic Wavelength Allocation In Wavelength Switched Optical Networks", PCT/EP2010/062344, 24-08-2010

7. Sambo, N., Cugini F, Castoldi, P., Iovanna, P., Bottari, G (2010), "Establishing Connections in a Multi-Rate Optical Network", PCT/EP2010/065559, 15-10-2010

8. Sambo N, Cugini F, Castoldi P, Bottari G, Iovanna P (2011), "Method of configuring an optical path, a path computation engine and an optical communications network node", PCT/EP2011/054229, 21-03-2011

9. Sambo, N., Cugini I F, Castoldi, P., Bottari, G., Iovanna, P. (2011), "Routing and Bandwidth Assignment for flexible grid wavelength switched optical networks", PCT/EP2011/067166, 30-09-2011

10. Magri R., Cugini F, Paolucci, F., Sambo N., Castoldi, P. (2011), "Path Computation in Wavelength Switched Optical Networks", PCT/EP2011/069303, 03-11-2011

11. Sambo, N., Cugini F, Castoldi, P., Bottari, G., Iovanna, P. (2011), "A Method and Apparatus for Allocating Slots for Transmission of Data", PCT/EP2011/072117, 07-12-2011

12. Cugini F, Sambo, N., Castoldi, P., Bottari, G., Bruno G., Iovanna, P. (2012), "Changing the Spectral Position of a Lightpath", PCT/EP2012/055153, 22-03-2012

13. N. Sambo, F. Cugini, G. Bottari, P. Iovanna, P. Castoldi, (2012), "Routing for super channel for bandwidth variable wavelength switched optical network", PCT/EP2012/066029, 16-08-2012

14. Giorgetti A, Bottari G, Castoldi P, Cugini F, Paolucci F, Sgambelluri A (2013), "Traffic Recovery in Openflow Networks", PCT/EP2013/053778, 26-02-2013

15. Castoldi P, Cugini F, Dallaglio M, Sambo N, "Metodo di gestione di una rete di telecomunicazioni", numero assegnato alla domanda: 102016000096594, 27-09-2016