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Personal Data:

- **Date of birth:** June 22, 1976
- **Place of Birth:** Aarau (Switzerland)
- **Nationality:** Italian
- **Work Address**

(US): University of California, Davis Department of Computer Science 2063 Kemper Hall, 1 Shields Avenue, 95616 DAVIS, CA (USA)	(I): Politecnico di Milano Department of Electronics, Information and Bioeng. Via Ponzio 34/35, 20133 MILANO (I)
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Current position

- **Associate Professor** in Politecnico di Milano (From Dec. 2014 to now)
 - Main activities: research, participation to research projects, tutoring and managing activities for PhD and master students in the framework of industrial and public research projects
 - Lecturer in the “Telecommunications Networks and Internet” undergraduate course and in the graduate course “Communication Network Design”
 - Coordinator of the Erasmus activities for the Telecommunication Engineering course
- **Adjunct Associate Professor** (Step III) at University of California, Davis (From July 2013 to now, 3 months per year)
 - Main activities: research, participation to research projects (as NSF- and DTRA-funded projects), advising and co-tutoring of PhD students
 - Lecturer in the “Network Design and Planning” course

Education:

- **PhD degree in Information Engineering**
March 2003 - March 2006, Politecnico di Milano
 - Dissertation title: “Survivable and availability guaranteed optical WDM Networks: Design and analysis”
- **Master degree in Telecommunication Engineering**
Sept. 1995 - Oct. 2001, Politecnico di Milano
 - Final grade: 95/100

Professional and Research Experiences:

My research activities have been developed mostly in the framework of Italian, European and U.S. government projects or in collaboration with industrial partners (e.g., Nokia Bell Labs, Telecom Italia).

- **Assistant Professor** at *Politecnico di Milano, Italy, Department of Computer Science* 1/2010 - 11/2014 (3 months/year)
- **Research Scientist** at the *University of California, Davis, Department of Computer Science* 1/2010 - 6/2013 (3 months/year)
- **Post-Doc Researcher** at the *University of California, Davis, Department of Computer Science* 11/2007 - 12/2009
 - Main activities: research on optical networking, writing research-funding proposals, tutoring and managing activities for PhD students in the framework of industrial and public research projects
- **Research Collaborator and Teaching Assistant** in *Politecnico di Milano*, 11/2007 - 12/2009 (3 months/year)
- **Post-Doc Assistant researcher**, *Politecnico di Milano*, 4/2006 - 10/2007
 - Member or collaborator of Italian (OSATE, MIMOSA, WONDER) and European (E-Photon-ONE, MUPBED, NOBEL) research projects in next generation networking
- **Visiting PhD student**, *Centre Tecnologic de Telecomunicacions de Catalunya (CTTC), Barcelona (Spain)* 11/2005 - 3/2006
- **Visiting PhD student**, *University of California, Davis (USA)*, 5/2004 - 12/2004
- **Assistant researcher**, *Politecnico di Milano*, 12/2001 - 12/2002
 - Worked in the Italian Government funded project “IP networks on optical packet”
 - Concentrations: studies on the availability in optical networks in collaboration with Pirelli Submarine Telecom System (PSTS) and Telecom Italia Labs (TILAB)
- **Intern**, *CoreCom Labs*, 9/2000 - 10/2001
 - CoreCom (Optical Switching and Processing Research Consortium) was a research consortium between Pirelli Cable&Telecom System and Politecnico di Milano.
 - Concentrations: study of innovative Integer Linear Programming (ILP) models on non-trivial case-study networks

Editorial Work and Community Service:

- Management Committee member for COST Action CA15127 “RECODIS”
- Invited as a proposal **Reviewer** for the US National Science Foundation, for the US Global Environment for Network Innovations (GENI) initiative, for the Research Foundation Flanders (FWO), the Czech Science Foundation, the Natural Sciences and Engineering Research Council of Canada (NSERC), the National Centre of Science and Technology Evaluation in Kazakhstan, the National Science Center of Poland, and the United Arab Emirates University
- **Editorial Board Member** for *IEEE Communication Surveys and Tutorial*, for the Springer *Photonic Network Communications* and for Elsevier *Optical Switching and Networking*
- **TPC Member** for OFC (2015-2017), INFOCOM (2012-2017), GlobeCom (2007-2016) and ICC (2007-2017), ANTS (2009-2016), RNDM (2010-2016). Among other conferences, OECC (2014-15), CloudNet (2012-14), ICP (2012-14), IBP (2014-15), LatinCom (2012-2016), LatinCloud (2013-14), NMTS 2011, DRCN (2011-2016), ICOWCSN 2011, IWT 2015, EuCNC (2014-16)

- **TPC co-chair** of DRCN 2017, ONDM 2016, ENIC 2015-16, NaNA 2016
- Active or past **reviewer** of the following international journals: IEEE/ACM Transactions on Networking, IEEE Transactions on Communications, IEEE Journal on Selected Areas on Communication, IEEE/OSA Journal of Lightwave Technology, IEEE/OSA Journal of Optical Communications and Networking, IEEE Communications Letters, IEEE Transactions on Reliability, IEEE Communications Surveys & Tutorials, OSA Optics Express, Optical Switching and Networking, Computer Networks, Computer Communications, ETRI Journal, Optical Fiber Technology Journal, Journal of Parallel and Distributed Computing, Optimal Control Applications and Methods, Networks (Wiley), Annals of Telecommunications, ACM Computing Surveys
- Selected as opponent for the PhD thesis defense of: Emanuele Di Pascale (Trinity College of Dublin, Ireland) NS Ajmal Muhammad (Linköping University, Sweden)
- Selected as committee member for the following PhD defense: Ramon Aparicio Pardo (Technical University of Cartagena, Spain), Jawwad Ahmed (KTH Royal Institute Of Technology, Sweden), Joan Triay (Technical University of Barcelona, Spain)

Grant Writing

In January 2011, I was granted a 70.000 € grant from Politecnico di Milano for a project titled “Towards Green Broadband Access Networks”.

During my activity at U.C.Davis, I substantially contributed in writing several research-grant proposals. Three of them have been funded (others are still currently under examination):

- Department of Energy: “Dynamic Provisioning for Terascale Science Applications using Hybrid Circuit/Packet Technologies” [2008]
- Defense Threat Reduction Agency (DTRA) of the Department of Defense (DoD): “Multi-path Routing, Reprovisioning, and Data Replication to Combat WMD Attacks in Mesh Network” [2009]
- National Science Foundation: “Design and Provisioning of Low-Carbon Optical Datacenter Networks” [2012]

In Politecnico di Milano, I participated in the writing and I was appointed as task/workpackage leader in the following funded projects:

- European Commission: Project “COMBO” (IP Project) [2014-2016]
- Alcatel Lucent Italy: “Long-Reach Passive Optical Networks for Ultra-Broadband Access” [2011-2013]
- Project ENGINE (FP7: Specific Programme “Capacities”, Theme “Research Potential”) [2013-2015]
- Lombardy Region: “New Optical Horizon” [2016-2018]

CS Skills:

Operating Systems: Windows, Linux (user)

Programming: C and C++, Matlab

Applications: Microsoft Office

Simulator: NS2, OMNET, long-term experience with event-driven simulators

Operation Research: CPLEX, AMPL

Networking: WDM, MPLS, GMPLS, SDH/SONET, OTN, RSVP-TE, TCP/IP, IP routing (BGP, OSPF) Ethernet, xDSL, PON, FTTx.

Languages

Italian (native language), **English**(fluent), **Spanish** (good), **French** (basic)

Awards

- IEEE GLOBECOM 2008 paper entitled “On-Demand Provisioning of Data-Aggregation Requests over WDM Mesh Networks” received the Best Paper Award in the Optical Networking Symposium (1% of accepted papers)
- IEEE ANTS 2008 paper entitled “Transparent Optical Network Design with Mixed Line Rates” received the Best Paper Award
- IEEE ANTS 2009 paper entitled “Survivable IP Topology Design with Reuse of Backup Wavelength Capacity” received the Best Poster Award
- IEEE Latincom 2010 paper entitled “On the Energy Efficiency of IP-over-WDM Networks,” received the Best Paper Award
- IEEE Network 2012 (15th International Telecommunications Network Strategy and Planning Symposium) paper entitled “Dynamic Bandwidth Allocation with Void Filling and Multi-thread for Long Reach WDM/TDM PONs” has received the Fabio Neri Best Paper Award
- IEEE ANTS 2012 paper entitled “Impairment-Aware Lightpath Provisioning in Mixed Line Rate Networks” received the Best Paper Award
- IEEE ANTS 2014 “Cost-Efficient Live VM Migration Based on Varying Electricity Cost in Optical Cloud Networks” received the Best Short Paper Award
- IEEE GLOBECOM 2015 paper entitled “Optimal Network Function Virtualization Realizing End-to-End Requests” received the Best Paper Award in the Next-Generation Networking Symposium
- The paper ”Optimization of long-reach TDM/WDM passive optical networks” received the 2015 Fabio Neri Best Paper Award of the Elsevier journal “Optical Switching and Networking”
- IEEE RNDM 2016 paper entitled “Virtual Network Function Placement for Resilient Service Chaining Provisioning” received the Best Paper Award
- Exemplary Reviewer for IEEE Communications Letters (less than 3% of reviewers) (2011)
- Distinguished Member of the 2016 IEEE INFOCOM Technical Program Committee
- Senior Member of the IEEE

Invited Talks

- July 19th 2016, Politecnico di Milano, Italy - invited talk “To distribute or not to distribute? Impact of latency on Virtual Network Function distribution at the edge of FMC networks”, In the Sino-European Mobile Cloud Project Workshop
- March 28th 2016, University of California, Davis - invited talk “Networking in Spatial Division Multiplexing Systems”, Workshop on Optical Networks (2016), Organized by Networks Lab, Department of CS, University of California, Davis
- Nov. 12th 2015, IEEE GreenCom Conference - invited talk “Lowering Emissions of Cloud Systems by Renewable-Energy-Aware Resource Allocation”

- July 15th 2015, Wroclaw University of Technology, Poland - 4-hours talk “On the Complexity of Routing and Spectrum Allocation in of Metro Optical Ring Networks”
- July 2nd 2015, European Conference on Network and Optical Communications (NOC 2015), London (UK) “On the Design of Metro Optical Ring Networks with Distance-Adaptive Transceivers and Flexible Grid”
- May 8th 2015, Trinity College of Dublin, “Fixed Mobile Convergence in optical access/aggregation networks”
- March 28th 2015, University of California, Davis - invited talk “Overview of research activities in the EU COMBO Project”, Workshop on Optical Networks (2015), organized by Networks Lab, Department of CS, University of California, Davis
- July 2nd 2015, - invited talk “Important network scenarios for fixed mobile convergence - COMBO view”, Workshop “New Telecom Network Architectures for the Cloud Era, An inter EU-projects workshop” colocated with European Conference on Network and Optical Communications (NOC 2014), Milan (Italy),
- March 14th 2013, University of California, Davis - invited talk “Fixed/Mobile Convergence for Next-Generation Access and Aggregation Networks”, Workshop on Optical Networks (2014), organized by Networks Lab, Department of CS, University of California, Davis
- March 12th 2013, Optical Fiber Conference (OFC) 2014, San Francisco - “Complexity and FlexiGrid Networks,”
- April 4th 2013, University of California, Davis - Department of Computer Science Colloquium, “The Role of Optical Networks in the Big Data Era,”
- March 25th 2013, University of California, Davis - invited talk “Traffic Grooming and Spectrum Assignment for Coherent Transceivers in Metro-Flexible Networks”, Workshop on Optical Networks (2013), organized by Networks Lab, Department of CS, University of California, Davis
- March 9th 2012, University of California, Davis - invited talk “Low-Carbon Routing Algorithms for Cloud Computing Services in IP-over-WDM Networks”, Workshop on Optical Networks (2012), organized by Networks Lab, Department of CS, University of California, Davis
- July 8th 2011, Universidad Politecnica de Cartagena (UPCT), Spain - invited talk “Protection in Hybrid Networks: The Case of Sharing of Backup Capacity between IP and Wavelength Services in Optical Backbone Networks” - 1st Workshop “Future Internet: Efficiency in High-Speed Networks” (FIERRO Project)
- June 28th 2011, KTH Royal Institute of Technology, Stockholm, Sweden, invited talk “(3W-)availability-aware routing in optical WDM networks: When, where and at what time” - Network reliability & availability (RONEXT)
- May 17th 2011, KTH Royal Institute of Technology, Kista, Sweden - invited talk “Sharing of Backup Capacity between IP and Wavelength Services in Optical Backbone Networks” - Workshop organized by the project ICT-TNG “Optical Networking Systems and Security in All-Optical Networks”
- July 1st 2010, KTH Royal Institute of Tehnology, Kista, Sweden - invited talk titled “WDM Network Design with Mixed Line Rates”
- Dec. 7th 2009, Wroclaw University of Technology, Poland - 4-hours talk “Fundamentals of WDM Optical Networks Design Modelling”
- Sept. 24th and Oct. 6th 2009, University of California, Davis - 7-hours seminar “WDM Network Design”

- May 7th 2009, KTH Royal Institute of Technology, Kista, Sweden - invited talk “How to exploit the knowledge of connection holding time in dynamic routing”

Teaching Activities:

Courses

- University: Politecnico di Milano (Italy)
Course Name: Communication Networks and Internet (1st module, 50hrs).
Academic Years: 2011/2012, 2012/2013, 2013/2014, 2014/2015, 2015/2016 (2x). Course Name: Communication Networks and Internet (2nd module, 50hrs).
Academic Years: 2015/2016.
- University: Politecnico di Milano (Italy)
Course Name: Communication Network Design (50hrs).
Academic Year: 2013/2014, 2014/2015, 2015/2016.
- University: University of California, Davis (USA)
Course Name: Network Design and Planning(30hrs).
Academic Year: Spring Quarter 2014 and 2016.

10 hour seminars at Politecnico di Milano

- Fall 2011 Lecturer in the graduated course *Communication Network Design*
- *Spring 2008*. Lecturer in the graduated course *Network Planning*
- *Fall 2005-06-07-08-09-10*. Lecturer in the graduated course *Optical Networks*
- *Spring 2004-05-06-07-08-09, Fall 2009-10* Teaching Assistant in the *Telecommunications Networks* and/or *Fundamentals of Telecommunications Networks* undergrad course
- *Spring 2002-3*. Tutor for the students in the laboratory activities of *Telecommunications Networks* and *Fundamentals of Telecommunications Networks* undergrad courses. In the laboratory activity for the “Telecommunication Networks” course, I use NS-2 directly on class with my student to solve real network cases.

4 hour seminars at Politecnico di Milano

- Fall 2010 Lecturer in the graduated course *Switching and Routing*

6 hour seminars at University of California, Davis

- Spring 2010 and 2012 Lecturer in the graduated course *Network Planning*

9 hour seminar at University of California, Davis

- Spring 2013 Lecturer in the graduated course *Optical Networks*

Research Activities:

Some recent areas of research I’ve been recently involved in are:

- Energy efficiency in telecom network
- Flexible/elastic and spatial-division-multiplexing optical networks
- Metro/Access network architectures for 5G transport
- Convergence of fixed and mobile access networks
- Protection of cloud services in optical networks
- Multi-layer optimization of telecom networks

- Disaster resiliency in telecom and cloud infrastructures
- Machine-learning-assisted optical network design

I've also investigated in the past Key Management Schemes (KMS) for Group Communication.

Attended conferences: ICTON 2016 (Trento, Italy), OFC 2016 (Anaheim, CA, USA), ECOC 2015 (Valencia, Spain), NOC 2015 (London, UK), OFC 2015 (Los Angeles, CA, USA), NOC 2014 (Milan, Italy), ICC 2014 (Sydney, Australia), OFC 2014 (San Francisco, CA, USA), ICTON 2013 (Cartagena, Spain), ONDM 2013 (Brest, France), OFC 2013 (Anaheim, CA, USA), ICC 2012 (Ottawa, Canada), ONDM 2012 (Colchester, UK), OFC 2012 (Los Angeles, CA, USA), ICTON 2011 (Stockholm, Sweden), ICC 2011 (Kyoto, Japan), OFC 2011 (Los Angeles, CA, USA), ONDM 2011 (Bologna, Italy), IEEE SmartGridComm 2010 (Gaithersburg, MD, USA), INFOCOM 2010 (San Diego, USA), OFC 2010 (San Diego, USA), DRCN 2009 (Washington), OFC 2009 (San Diego), INFOCOM 2008(Phoenix, USA), OFC 2008 (San Diego, USA), DRCN 2007 (La Rochelle, France), Broadnets 2007 (Raleigh, NC, USA), OFC 2007 (Anaheim, CA, USA), GLOBECOM 2006 (San Francisco, CA, USA), TERENA 2006 (Catania, IT), DRCN 2005 (Ischia, IT), OFC 2005 (Anaheim, CA, USA), ONDM 2005 (Milan, IT), Broadnets 2004 (San Josè, CA, USA), DRCN 2003 (Banff, AL, Canada), QoS-IP 2003 (Milano, IT).

Tutoring and supervision activity: I've been responsible for tutoring and coordinating the research activity of more than 50 master and PhD students in POLIMI and UC Davis.

In the following a list of the tutored/co-tutored students (in parenthesis their current position).

Currently I'm the supervisor of 2 PhD students in POLIMI (Omran Ayoub, Ali Hmaity) and I'm co-tutoring 7 PhD students in UC Davis (Sifat Ferdousi, Sedef Savas, Carlos Colman Meixner, Xinbo Wang, Abhishek Gupta, Yu Wu and Lin Wang).

I was the PhD advisor for Nicola Carapellese (currently in SIAE, Italy) and Anna Buttaboni (currently in Reply, Italy) in the period 2012-2015. In the past years, I co-tutored the following PhD students in UC Davis: Mohammad Fahrhan Habib, [Ph.D.] (Intel, California) Uttam Mandal [Ph.D.] (Cisco, California) Ferhat Dikbiyik [Ph.D.] (Sakarya University, Turkey) S. K. Chaitanya Vadrevu [PhD], (Microsoft, Washington) Menglin Liu [Ph. D.] (Google Inc., California), Avishek Nag [Ph. D.] (Trinity College, Dublin), Yi Zhang [Ph. D] (Trinity College Dublin), Rajesh Roy [Ph.D] (Google Inc., California), Dragos Andrei [Ph.D.] (VMWare, California), Cicek Cavdar [Ph.D.] (Royal Institute of Technology, Stockholm, Sweden), Ming Xia [Ph.D.] (LinkedIn, California), Marilet De Andrade [Ph.D.] (American University of Beirut).

In POLIMI, I tutored or co-tutored the following students: Giuseppe Belgiovine [M. Sc.] (currently), Ahmed Zehaya [M. Sc.] and Ahmed Elbanna [M. Sc.] (currently, visiting from Technical University of Chemnitz), Nazrin Javadova [M. Sc.] (currently), Sahar Moosavi [M. Sc.], Shari Lisi [M. Sc.], Camilla Bellanzon [M. Sc.], Luca Pace [M. Sc.], Omran Ayoub [M. Sc.] (PhD in POLIMI), Diego Leza Marca [M. Sc.], Najme Monajemi [M. Sc.] (Solvay, Milan), Kassem Al Sabeih [M. Sc.], Roberto Fratini [M. Sc.] (PwC, Milan), Giuseppe Rizzelli [Ph.D.] (Facebook, UK), Francesco Musumeci [Ph.D.] (POLIMI, Milan), Micheal Recalcati [M.Sc.] (AZCOM), Davide Cadisco [B. Sc] (AEMCOM), Luis Fernando Hernandez-Sanchez [M.Sc.] (Reply), Lorena Zapata [M.Sc.] (Cefriel, Milan), Diego Lucerna [Ph.D.] (Huawei, Milan), Mirko Gattulli [M. Sc] (ICT Consulting, Milan), Andrea Santoro [B. Sc] (RCS Media Group, Milan), Giuseppe Cici [B. Sc] (Tera, Milan), Ezio Trono [B. Sc], Francesco Cagnano [B. Sc], Daniele Salladini [M.Sc.] (BIP, Milan), Marco Gusmeroli [B. Sc] (NGI Spa, Milan), Michele Brusoni [B. Sc] (EWitness, Varese), Sanda Drakulic [M. Sc.] (now Ph.D Student at TU-Wien), Vida Grkovic [M.Sc] (Banca Intesa, Croatia), Francesca Vismara [M.Sc] (IBM, Ireland), Luca Massironi [M.Sc] (Visiant Spindox), Silvia Beretta [M.Sc] (Reply), Fabio De Grandi [M.Sc] (Gruppo Beta80 - BetaNet), Antonio Pantaleo [M.Sc] (Var Life), Stefano Secci [PhD] (LIP6, Université Pierre & Marie Curie, Paris), Andrea Baruffaldi [M.Sc] (Intesa-San Paolo Bank), Davide Rombola [B. Sc] (Sirti), Valentina Gilardone [B. Sc] (Enel, Italy), Andrea Bertacchi [M.Sc] (Samsung Italia), Marco Lorenzi [M.Sc] (ALTRAN Italia), Simone Ceresa [M.Sc] (National Instruments), Roberto Lucadello [M.Sc] (Hewlett&Packard), Simone Cavallaro [M.Sc] (Gruppo Beta80 - BetaNet), Marco Alberio [B.

Sc] (Alcatel-Lucent), Matteo Carcagni [M.Sc] (Alcatel-Lucent), Stefano Perversi [M.Sc] (Luxottica), Alessandro De Fazio [M.Sc] (Schindler Elevator Corporation), Federico Losego [M.Sc] (Alcatel-Lucent), Daniele Arci [M.Sc] (EidosMedia), Daniele Petecchi [M.Sc] (Vodafone).

In my activity in Politecnico, I hosted various visiting PhD students from foreign institutions: Albert Pages (4 months, 2013) and Paola Garfias (5 months, 2012/2013) [Universitat Politècnica de Catalunya], José Luis Izquierdo Zaragoza (3 months, 2014) [Universitat Politècnica de Cartagena], Roza Goscien and Michail Wozniak (2 weeks) [Wroclaw University of Technology].

Publications:

My current *h*-index is 27 according to the Google Scholar Database and 20 according to Scopus. Citations are around 3200 and 1720, respectively.

Books

1. G. Ellinas, G. K. Chang, M. Tornatore, “Fiber-Wireless Convergence for 5G Mobile Fronthaul and Backhaul Networks,” Ed. Springer, in press

Journal papers

1. A. Buttaboni, M. De Andrade, M. Tornatore, A. Pattavina “Dynamic Bandwidth and Wavelength Allocation with Coexisting Transceiver Technology in WDM/TDM PONs,” in *Optical Switching and Networking*, Vol. 21, pp. 31-42, July 2016
2. R. Goscién, K. Walkowiak, and M. Tornatore, “Survivable Multipath Routing of Anycast and Unicast Traffic in Elastic Optical Networks,” in *IEEE/OSA Journal of Optical Communications and Networking* Vol. 8, No. 6, pp. 343-355, June 2016
3. N.-H. Bao, , M. Tornatore, C. U. Martel, and B. Mukherjee “Fairness-Aware Degradation Based Multipath Re-provisioning Strategy for Post-Disaster Telecom Mesh Networks”, in *IEEE/OSA Journal of Optical Communications and Networking*, Vol. 8, No. 6, pp. 441-450, June 2016
4. T. Lin, Z. Zhou, M. Tornatore, B. Mukherjee, “Demand-Aware Network Function Placement,” in *IEEE/OSA Journal of Lightwave Technology*, Vol. 34, No. 11, pp. 2590-2600, June 2016
5. X. Wang, S. Thota, M. Tornatore, S.-S. Lee, H.-H. Lee, S. Park, and B. Mukherjee, “Energy-efficient Virtual Base Station Formation in Optical-Access-Enabled Software Defined CRAN,” in *IEEE Journal on Selected Areas on Communications*, Vol. 34, No. 5, pp. 1130-1139, May 2016
6. F. Musumeci, C. Bellanzon, N. Carapellese, M. Tornatore, A. Pattavina, S. Gosselin “Optimal Placement of BBU Hotels for 5G C-RAN deployment over WDM aggregation networks,” [Invited Paper] in *IEEE/OSA Journal of Lightwave Technology*, Vol. 34, No. 8, pp. 1963-1970, April 2016
7. S. Savas , C. Ma, M. Tornatore, B. Mukherjee, “Backup reprovisioning with partial protection for disaster-survivable software-defined optical networks,” in *Photonic Network Communications*, Vol. 31, No. 2, pp. 186-195, April 2016,
8. Z. Zhong, N. Hua, M. Tornatore, C. Ma, Y. Li, X. Zheng, and B. Mukherjee, “Energy Efficiency and Blocking Reduction for Tidal Traffic via Stateful Grooming in IP-over-Optical Networks,” in *IEEE/OSA Journal of Optical Communications and Networking*, Vol. 8, No. 3, pp. 175-189, March 2016
9. M. Savi, R. Fratini, G. Verticale, M. Tornatore, “Performance Evaluation of Video Servers Replication in Metro/Access Networks,” in *Computer Networks*, Vol. 93, pp. 96-110, Dec. 2015
10. D. Chitimalla, S. Thota, S. S. Savas, P. Chowdhury, M. Tornatore, S.-S. Lee, H.-H. Lee, S. Park and B. Mukherjee, “Application-Aware Software-Defined EPON Access Network,” in *Photonic Network Communications*, Vol. 30, No. 3, pp. 324-336, Dec. 2015
11. A. Gupta, U. Mandal, P. Chowdhury, M. Tornatore, and B. Mukherjee, “Cost-Efficient Live VM Migration Based on Varying Electricity Cost in Optical Cloud Networks,” in *Photonic Network Communications*, Vol. 30, No. 3, pp. 376-386, Dec. 2015
12. H. Cukurtepe , M. Tornatore, A. Yayimli , and B. Mukherjee, “Impairment-Aware Dynamic Lightpath Provisioning in Mixed Line Rate Networks,” in *Optical Switching and Networking*, Vol. 18, pp. 191-200, Nov. 2015

13. F. Dikbiyik, L. Sahasrabudde, M. Tornatore, B. Mukherjee, "Exploiting Excess Capacity, Part II: Differentiated Services under Traffic Growth," in *IEEE/ACM Transactions on Networking*, Vol. 23, No. 5, pp. 1599-1609, Oct. 2015
14. X. Chen, M. Tornatore, S. Zhu, F. Ji, W. Zhou, C. Chen, D. Hu, L. Jiang, Z. Zhu, "Flexible Availability-Aware Differentiated Protection in Software-Defined Elastic Optical Networks," in *IEEE/OSA Journal of Lightwave Technology*, Vol. 33, No. 18, Sept. 2015
15. S. Ferdousi, F. Dikbiyik, M. F. Habib, M. Tornatore, B. Mukherjee, "Disaster-Aware Datacenter Placement and Dynamic Content Management in Cloud Networks," in *IEEE/OSA Journal of Optical Communications and Networking*, Vol. 7, No. 7, pp. 681-694, July 2015
16. N.-H. Bao, M. Habib, M. Tornatore, C. Martel, B. Mukherjee, "Global vs. Essential Post-Disaster Re-provisioning in Telecom Mesh Networks," *IEEE/OSA Journal of Optical Communications and Networking*, Vol. 7, No. 5, pp. 392-400, May 2015
17. M. De Andrade, A. Buttaboni, M. Tornatore, P. Boffi, P. Martelli, A. Pattavina, "Optimization of Long-Reach TDM/WDM Passive Optical Networks," in *Optical Switching and Networking*, Vol. 16, pp. 36-45, April 2015
18. A. Pages, M. Tornatore, J. Perello, S. Spadaro, A. Morea, "Analysis of performance degradation in sleep-mode enabled core optical networks," in *IEEE/OSA Journal of Optical Communications and Networking*, Vol. 7, Issue 3, pp. 537-546, Mar. 2015
19. X. Yu, M. Tornatore, M. Xia, J. Wang, J. Zhang, Y. Zhao, J. Zhang, B. Mukherjee, "Migration from Fixed Grid to Flexible Grid in Optical Networks," in *IEEE Communications Magazine*, Vol. 53, no.2, pp. 34 - 43, Feb. 2015
20. M. Tornatore, C. Rottondi, Róza Goscién, K. Walkowiak, G. Rizzelli, A. Morea "On the Complexity of Routing and Spectrum Assignment in Flexible Grid Networks," in *Journal of Optical Communications and Networking*, Vol. 7, No. 2, pp. A256-A267, Feb. 2015
21. S. S. Savas, M. F. Habib, M. Tornatore, F. Dikbiyik, and B. Mukherjee, "Network Adaptability to Disaster Disruptions by Exploiting Degraded-Service Tolerance," in *IEEE Communications Magazine*, Vol. 52, No. 12, pp. 58-65, Dec. 2014
22. A. Pages, M. Tornatore, F. Musumeci, S. Spadaro, J. Perello, A. Morea, "A Blocking Analysis for Green WDM Networks with Transponder Power Management," to be published in *IEEE/OSA Journal of Lightwave Technology*, Vol. 32, No. 22, Nov. 2014
23. S. S. Savas, F. Dikbiyik, M. F. Habib, M. Tornatore, B. Mukherjee, "Disaster-aware Service Provisioning with Multicast in Cloud Networks," in *Photonic Network Communications*, Vol. 28, No. 2, pp. 123-134, Oct. 2014.
24. F. Dikbiyik, M. Tornatore, B. Mukherjee, "Minimizing the Risk of Disaster Failures in Telecom Mesh Networks," in *IEEE/OSA Journal of Lightwave Technology*, Vol. 32, No. 18, pp. 3175-3183, Sept. 2014
25. N. Carapellese, M. Tornatore, A. Pattavina, "Energy Efficient BaseBand Units (BBU) Placement in a Fixed/Mobile Converged WDM Aggregation Network," in *IEEE Journal on Selected Areas on Communications*, Vol. 32, No. 8, pp. 1542 - 1551, Aug. 2014
26. S. Zhang, M. Tornatore, G. Shen, J. Zhang, and B. Mukherjee, "Evolving Traffic Grooming in Multi-Layer Flexible-Grid Optical Networks with Software-Defined Elasticity," in *IEEE/OSA Journal of Lightwave Technology*, Vol. 32, No. 16, pp. 2905-2914, Aug. 2014
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