# Prof. Guido Maier, Politecnico di Milano

## Curriculum Vitae

(12/05/2025)

Guido Maier received his Laurea degree in Electronic Engineering (1995) and his Ph.D. degree in Telecommunication Engineering (2000) at Politecnico di Milano (Italy) [PoliMi, for short].

From 1995 until February 2006 he has been a researcher at CoreCom (research consortium supported by Pirelli and PoliMi in Milan, Italy), where he achieved the position of Head of the Optical Networking Laboratory.

In March 2006 he joined the Department of Electronics, Information and Bioengineering (DEIB) at PoliMi as Assistant Professor. In January 2015 he became Associate Professor in the same department (permanent position - public employee - after passing a nation-wide Italian “Abilitazione” competition in 2012).

In June 2021 he obtained the National Scientific Qualification to function as Full Professor in Italian Universities (“Abilitazione Scientifica Nazionale - Prof. Ordinario”).

At the School of Information Engineering at PoliMi, he has been teaching several courses in the area of networking, both for undergraduate and master students. Currently, he teaches “Fundamentals of communications and Internet” at the undergrad level, and “Network Automation” and “Lab Experience” for graduate level. In 2022/2023, Maier kept the PhD course “Switching Architectures and Forwarding Algorithms” (5 credits) (in English language) within the PhD program “INFORMATION TECHNOLOGY” at PoliMI. He has supervised / is supervising 7 PhD students so far (4 in the last 5 years).

He furthermore has kept and is keeping topical courses for employees and executives of various ICT companies, such as: Pirelli, Telecom Italia, Italtel, Nokia Siemens Networks, Sirti, Metroweb, Alcatel, SM Optics, Ericsson, ATM SpA, FIberCop. Topics of these courses have been, for example: Metro Ethernet, Passive Optical Networks, MPLS, Optical Transport Networks, Software Defined Networking. He has been Director of the course "Skill development for IT managers" organized by Cefriel and Politecnico di Milano for ATM S.P.A. (2017-2018).

He has been invited lecturer in several venues and universities abroad, including: Summer Schools for PhD students of EU projects e-Photon/ONe+ and BONE; Faculté Polytecnique de Mons, Belgium; University College London, UK; University of Texas at Dallas, USA; Centre Tecnològic de Telecomunicacions de Catalunya (CTTC), Barcellona, Spain; Poznan University of Technology, Poland; Université Pierre et Marie Curie - Sorbonne Université, Paris, France.

He has participated in several joint research projects with industrial partners (Pirelli, Telecom Italia, Fastweb, RFI, BTO). He was principal investigator and research responsible for PoliMi of industrial contracts with ATM (2023-2024 and 2019-2021) and has been in the same position for a PoliMi research contract with TIM for two years (2013-2014).

He has been involved in the IST-FP6 and FP7 European Projects: MUPBED, NOBEL2, e-Photon/ONe+, BONE, STRONGEST, (IRSES) MobileCloud. He has also been involved in the EIT-ICT project SOFNETS and in several Italian National research projects (Progetti di Ricerca di Interesse Nazionale - PRIN) funded by the Italian Ministry of University and Research, the most recent of which has been ROAD-NGN. He has been recently involved as the leader of the PoliMi team in the H2020 EU project METRO-HAUL (2017-2020) and is the Principal Investigator of the project WatchEDGE (2023-2025) within the framework RESTART, funded by NextGenerationEU.

He is the author or co-author of more than 100 papers published in proceedings of international conferences and about 50 papers published in international journals on networking and optical networks.

As of April 16, 2025, his bibliographical metrics are the following:

- Google Scholar: 3587 citations, h-index 30
- Scopus: 2288 citations, h-index 23.

He is co-inventor of 6 patents with extensions in various countries, including Europe and the U.S.

On August 2, 2016 he co-founded SWAN networks, spin-off of PoliMi, winner of the TIM #WCAP competition in 2016.

His current main areas of interest are: Transport-SDN, orchestration, Enterprise Networking and SD-WAN, network optimization, traffic engineering and prediction by machine learning, optical switching.

He is/was General Chair of IEEE HSPR 2025, IEEE NetSoft 2022, DRCN 2020 and DRCN 2021, is Track TPC chair of IEEE WCNC 2026 and was TPC chair of IEEE HPSR 2019, TPC chair of NOC 2014, Publicity chair of ONDM, QoS-IP and ICCCN, and TPC member for several international conferences, including: IEEE ICC, IEEE GLOBECOM, IEEE Infocom, SPIE APOC, ONDM, HPSR, NOC. He is a member of the editorial board of Optical Switching and Networking (Elsevier, i.f. 1.9) and has been guest editor of two special issues of the journal. He is the lead guest editor of a special issue of the IEEE Open Journal of the Communications Society. He served as a reviewer for many journals including: IEEE Transactions on Network Science and Engineering, IEEE Transactions on Communications, IEEE Transactions on Computers, IEEE/OSA Journal of Lightwave Technology, IEEE Transaction on Networking, IEEE Network Magazine, IEEE/LEOS Photonics Technology Letters, IEEE Journal of Selected Areas in Communication, OSA Journal of Optical Communication Networks, European Transaction on Telecommunications, IEE Electronics Letters, etc.

He has served as a member of the Department Board of DEIB, representing the Telecommunication Section (2017 – 2023). Since 2025, he is member of the Faculty Board of the PhD programme in Information Technology of PoliMI. He has been a member (2018 – 2025) of the Scientific Council of CoRiTeL (Ericsson Research Consortium on Telecommunications), and since 2025 he is a member of the Board of Directors of the same consortium. He is the delegate of PoliMi research unit within the “Gruppo Telecomunicazioni e Tecnologie dell'Informazione (GTTI)” association (2024-current). In 2018 the Agency for Science and Higher Education of Croatia has appointed him as a member of the expert panel for the re-accreditation of the Faculty of Electrical Engineering and Computing, University of Zagreb.

He is a member of the IEEE Communications Society since 1998. In 2008 he has been elevated to IEEE Senior Member.

# List of Papers

## Journal papers

1. LMM Zorello, L Bliek, S Troia, G Maier, S Verwer (2024). Black-box optimization for anticipated baseband-function placement in 5G networks, in *Elsevier Computer Networks*, Volume 245, May 2024, doi.org/10.1016/j.comnet.2024.110384.

2. G. Maier, A. Albanese, M. Ciavotta, N. Ciulli, S. Giordano, E. Giusti, A. Salvatore, G. Schembra (2024). WatchEDGE: Smart networking for distributed AI-based environmental control, in *Elsevier Computer Networks*, Volume 243, April 2024, doi.org/10.1016/j.comnet.2024.110248.

3. S. Troia, M. Savi, G. Nava, L. M. Moreira Zorello, T. Schneider, G. Maier (2023). “Performance characterization and profiling of chained CPU-bound Virtual Network Functions”, in *Elsevier Computer Networks*, Volume 231, July 2023, doi: 10.1016/j.comnet.2023.109815

4. S. Troia, M. Mazzara, M. Savi, L. M. M. Zorello and G. Maier (2022), "Resilience of Delay-sensitive Services with Transport-layer Monitoring in SD-WAN," in *IEEE Transactions on Network and Service Management*, Vol. 19, n. 3, pp. 2652-2663, 2022, doi: 10.1109/TNSM.2022.3191943.

5. L. M. Moreira Zorello, L. Bliek, S. Troia, T. Guns, S. Verwer and G. Maier (2022), "Baseband-Function Placement with Multi-Task Traffic Prediction for 5G Radio Access Networks," in *IEEE Transactions on Network and Service Management,* Vol. 19, n. 4, pp. 5104-511, 2022, doi: 10.1109/TNSM.2022.3190059.

6. L. M. Moreira Zorello, M. Sodano, S. Troia and G. Maier (2022), "Power-Efficient Baseband-Function Placement in Latency-Constrained 5G Metro Access," in *IEEE Transactions on Green Communications and Networking*, vol. 6, no. 3, pp. 1683-1696, Sept. 2022, doi: 10.1109/TGCN.2022.3152839.

7. S. Troia, A. F. R. Vanegas, L. M. M. Zorello and G. Maier (2022), "Admission Control and Virtual Network Embedding in 5G Networks: A Deep Reinforcement-Learning Approach," in *IEEE Access*, vol. 10, pp. 15860-15875, 2022, doi: 10.1109/ACCESS.2022.3148703.

8. S. Troia, A. Cibari, R. Alvizu, G. Maier (2020). Dynamic programming of network slices in software-defined metro-core optical networks, *Elsevier Optical Switching and Networking,* Vol. 36, 100551, 10pp. 1-13. doi: 10.1016/j.osn.2019.100551

9. S. Troia, F. Sapienza, L. Varé and G. Maier (2021), "On Deep Reinforcement Learning for Traffic Engineering in SD-WAN," in *IEEE Journal on Selected Areas in Communications*, vol. 39, no. 7, pp. 2198-2212, July 2021, doi: 10.1109/JSAC.2020.3041385.

10. T. Ye, J. Ding, T. T. Lee and G. Maier (2020), "AWG-Based Nonblocking Shuffle-Exchange Networks," in *IEEE/ACM Transactions on Networking*, vol. 28, no. 6, pp. 2699-2712, Dec. 2020, doi: 10.1109/TNET.2020.3017500.

11. G. Maier, M. Reisslein (2019). “Transport SDN at the dawn of the 5G era,” in *Elsevier Optical Switching and Networking*, Vol. 33, July 2019, Pages 34-40, doi: 10.1016/j.osn.2019.02.001

*12.* I. Martín, S. Troia, A. Rodríguez, F. Musumeci, G. Maier, R. Alvizu, Ó. González de Dios (2019), "Machine Learning-Based Routing and Wavelength Assignment in Software-Defined Optical Networks," in *IEEE Transactions on Network and Service Management*, vol. 16, no. 3, pp. 871-883, Sept. 2019, doi: 10.1109/TNSM.2019.2927867.

*13.* U. Paul, J. Liu, S. Troia, O. Falowo and G. Maier (2019), "Traffic-profile and machine learning based regional data center design and operation for 5G network," in *KICS Journal of Communications and Networks*, vol. 21, no. 6, pp. 569-583, Dec. 2019, doi: 10.1109/JCN.2019.000055.

*14.* S. Troia, R. Alvizu and G. Maier (2019), "Reinforcement Learning for Service Function Chain Reconfiguration in NFV-SDN Metro-Core Optical Networks," in *IEEE Access*, vol. 7, pp. 167944-167957, 2019, doi: 10.1109/ACCESS.2019.2953498.

*15.* R. Alvizu, S. Troia, G. Maier and A. Pattavina (2017), "Matheuristic with machine-learning-based prediction for software-defined mobile metro-core networks," in *OSA Journal of Optical Communications and Networking*, vol. 9, no. 9, pp. D19-D30, Sept. 2017, doi: 10.1364/JOCN.9.000D19

*16.* A. S. Muqaddas, P. Giaccone, A. Bianco and G. Maier (2017), "Inter-Controller Traffic to Support Consistency in ONOS Clusters," in *IEEE Transactions on Network and Service Management*, vol. 14, no. 4, pp. 1018-1031, Dec. 2017, doi: 10.1109/TNSM.2017.2723477.

*17.* R. Alvizu, X. Zhao, G. Maier, Y. Xu and A. Pattavina (2017), "Energy Efficient Dynamic Optical Routing for Mobile Metro-Core Networks Under Tidal Traffic Patterns," in *IEEE/OSA Journal of Lightwave Technology*, vol. 35, no. 2, pp. 325-333, 15 Jan.15, 2017, doi: 10.1109/JLT.2016.2638739..

*18.* R. Alvizu, G. Maier, N. Kukreja, A. Pattavina, R. Morro, A. Capello and C. Cavazzoni (2017), "Comprehensive Survey on T-SDN: Software-Defined Networking for Transport Networks," in *IEEE Communications Surveys & Tutorials*, vol. 19, no. 4, pp. 2232-2283, Fourth quarter 2017, doi: 10.1109/COMST.2017.2715220.

*19.* A. Valenti, A. Rufini, S. Penna, G. Verticale, G. Maier and A. S. Michelangeli (2016). FTTx/VDSL2-Vectoring: prestazioni in una rete di accesso a banda ultra larga multi operatore*. LA COMUNICAZIONE, LX, 185-204.*

*20.* G. Maier, E. Oki (2016). Special issue on High-speed optical transport systems*. Elsevier Optical Switching and Networking, 19, 5-6.*

*21.* R. Alvizu, G. Maier, M. Tornatore and M. Pioro, (2016). Differential delay constrained multipath routing for SDN and optical networks*. Elsevier Electronic Notes in Discrete Mathematics, 52, 277-284.*

*22.* D. G. Garao, G. Maier, A. Pattavina (2015). Multi-stage switching networks for waveguide optical technology*. Revista IEEE America Latina - Transactions, 13, 3562-3567.*

*23.* A. Pages, A. Buttaboni, G. Maier, D. Siracusa, J. Perella Jordi and S. Spadaro (2014). Techniques and benefits of energy-aware load-distribution in multi-domain translucent wavelength switched optical networks*. Springer Journal of Network and Systems Management, 22, 462-487.*

*24.* G. Rizzelli, D. Siracusa, G. Maier, M. Magarini, M. Alam and A. I. Melloni (2014). Optical Backplane Based on Ring-Resonators: Scalability and Performance Analysis for 10Gb/s OOK-NRZ*. MDPI Photonics, 1, 131-145.*

*25.* D. G. Garao, G. Maier and A. Pattavina (2014). Modular architectures of multistage switching networks*. IEEE Transactions on Communications, 62, 3237-3248.*

*26.* G. Rizzelli, G. Maier, M. Quagliotti, M. Schiano and A. Pattavina (2014). Assessing the scalability of next-generation wavelength switched optical networks*. IEEE/OSA Journal Of Lightwave Technology, 32, 2263-2270.*

*27.* G. Maier, A. Pattavina (2013). Deflection routing in IP optical networks*. Springer Telecommunication Systems, 52, 1-10.*

*28.* G. Rizzelli, M. Tornatore, G. Maier, A. Pattavina (2012). Impairment-aware design of translucent DWDM networks based on the k-path connectivity graph*. OSA Journal of Optical Communications and Networking, 4, 356-365.*

*29.* D. Siracusa, S. Grita, G. Maier, A. Pattavina, F. Paolucci, F. Cugini, and P. Castoldi (2012). Domain Sequence Protocol (DSP) for PCE-Based Multi-Domain Traffic Engineering*. OSA Journal of Optical Communications and Networking, 4, 876-884.*

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*31.* S. Secci, J. L. Rougier, A. Pattavina, F. Patrone and G. Maier (2011). Multi-Exit Discriminator Game for BGP Routing Coordination*. Springer Telecommunication Systems, 48, 1-16.*

*32.* G. Maier, A. Pattavina (2010). Multicast three-stage Clos networks*. Elsevier Computer Communications, 33, 923-928.*

*33.* J. Spath, G. Maier, S. Naegele Jackson, C. Cavazzoni, H. M. Foisel, M. Popov, H. Wessing, M. Campanella, S. Nicosia, J. Rauschenbach, L. Perez Roldan, M. Sotos, M. Stroyk, P. Szegedi, & J. M. Uze (2009). MUPBED: a pan-European prototype for multidomain research networks*. IEEE Communications Magazine, 47, 62-71.*

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*35.* G. Maier, C. Busca, and A. Pattavina (2008). Topology-information periodic updates in multi-domain ASON networks with topology aggregation*. Taylor & Francis Group Fiber and Integrated Optics, 27, 265-277.*

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*37.* M. Tornatore, G. Maier, A. Pattavina (2007). WDM network design by ILP models based on flow aggregation*. IEEE/ACM Transactions on Networking, 15, 709-720.*

*38.* M. Tornatore, G. Maier, A. Pattavina (2006). Capacity vs. availability trade-offs for availability-based routing*. OSA Journal of Optical Networking, 5, 858-869.*

*39.* L. Savastano, G. Maier, M. Artinelli, A. Pattavina (2005). Physical parameter design in 2-D MEMS optical switches*. IEEE/OSA Journal of Lightwave Technology, 23, 3147-3155.*

*40.* S. De Patre, G. Maier, A. Pattavina (2005). Design of protected WDM wheel networks under various traffic conditions*. Kluwer Photonic Network Communications, 9, 197-205.*

*41.* G. Maier, M. Tornatore, A. Pattavina (2005). Cost and benefits of survivability in an optical transport network*. TELEDIREKTORATET Telektronikk, 2, 109-125.*

*42.* M. Tornatore, G. Maier, A. Pattavina (2005). Availability design of optical transport network*. IEEE Journal on Selected Areas in Communications, 23, 1520-1532.*

*43.* G. Maier, A. Pattavina, L. Barbato, F. Cecini, M. Martinelli (2004). Routing algorithms in WDM networks under mixed static and dynamic lambda traffic*. Kluwer Photonic Network Communications, 8, 69-87.*

*44.* G. Maier, A. Pattavina, L. Roberti, T. Chich. (2002). A heuristic approach for the design of static multifiber WDM networks: principles and applications*. Kluwer Optical Networks Magazine, 3, 52-66.*

*45.* G. Maier, A. Pattavina, S. De Patre, M. Martinelli (2002). Optical network survivability: protection techniques in the WDM layer*. Kluwer Photonic Network Communications, 4, 251-269.*

*46.* G. Maier, A. Pattavina (2001). Design of photonic rearrangeable networks with zero first-order switching-element-crosstalk*. IEEE Transactions on Communications, 49, 1268-1279.*

*47.* G. Maier, M. Martinelli, A. Pattavina, E. Salvadori (2000). Design and cost performance of the multistage WDM PON access networks*. IEEE/OSA Journal Of Lightwave Technology, 18, 125-143.*

*48.* P. Boffi, G. Maier, M. Martinelli, R. Melen (2000). Optical implementation of asynchronous-transfer-mode header-error control*. OSA Applied Optics, 39, 827-834.*

*49.* A. Pattavina, M. Martinelli, G. Maier, P. Boffi (2000). Techniques and technologies towards all-optical switching*. Kluwer Optical Networks Magazine, 1, 75-93.*

*50.* G. Maier, M. Scappini, M. Martinelli, A. Pattavina (2000). Performance of WDM rings with partial and sparse wavelength conversion under general dynamic traffic*. Wiley-Blackwell European Transactions on Telecommunications, 11, 91-98.*

*51.* P. Parolari, L. Marazzi, D. Rossetti, G. Maier, M. Martinelli (2000). Coherent-to-Incoherent Light Conversion for Optical Correlators*. IEEE/OSA Journal Of Lightwave Technology, 18, 1284-1288.*

## Conference papers

1. S. Troia, E. Gregorini, J. P. Asdikian, M. Li and G. Maier, "Real-time Delay Measurement in SD-WAN based on In-band Network Telemetry," 2024 IEEE 25th International Conference on High Performance Switching and Routing (HPSR), Pisa, Italy, 2024, pp. 149-154, doi: 10.1109/HPSR62440.2024.10635944.

2. J. P. Asdikian, D. Gjeka, A. Pagés, S. Troia, G. Maier and S. Spadaro, "Service Function Chain Resource Allocation and Offloading in Constrained Edge-Cloud Optical Networks," 2024 24th International Conference on Transparent Optical Networks (ICTON), Bari, Italy, 2024, pp. 1-5, doi: 10.1109/ICTON62926.2024.10647990.

3. J. P. H. Asdikian, M. Li and G. Maier, "Performance evaluation of YOLOv8 and YOLOv9 on custom dataset with color space augmentation for Real-time Wildlife detection at the Edge," 2024 IEEE 10th International Conference on Network Softwarization (NetSoft), Saint Louis, MO, USA, 2024, pp. 55-60, doi: 10.1109/NetSoft60951.2024.10588933.

4. N. Ploch, S. Troia, W. Kellerer and G. Maier, "Edge-to-Cloud Federated Learning with Resource-Aware Model Aggregation in MEC," 2024 IEEE International Conference on Communications Workshops (ICC Workshops), Denver, CO, USA, 2024, pp. 347-352, doi: 10.1109/ICCWorkshops59551.2024.10615545.

5. L. Borgianni, S. Troia, D. Adami, G. Maier and S. Giordano, "Assessing the Efficacy of Reinforcement Learning in Enhancing Quality of Service in SD-WANs," GLOBECOM 2023 - 2023 IEEE Global Communications Conference, Kuala Lumpur, Malaysia, 2023, pp. 1765-1770, doi: 10.1109/GLOBECOM54140.2023.10437333.

6. S Troia, G Maier, S Bregni (2023), “Experimental Evaluation of SD-WAN Performance in a Municipal Network Test Bed”, 2023 IEEE Latin-American Conference on Communications (LATINCOM), 1-5

7. N. Ellsworth, S. Troia, T. Zhang, M. Tacca, G. Maier, A Fumagalli (2023), “Experimental Demonstration and Results of Cross-layer Monitoring Using OpenNOP: an Open Source Network Observability Platform”, 23rd International Conference on Transparent Optical Networks (ICTON), 1-4

8. L. M. Moreira Zorello, K. Eradatmand, S. Troia, A. Pattavina, Y. Zhang, G. Maier (2023). “Auction-based network slicing for 5G RAN”, IEEE 9th International Conference on Network Softwarization (NetSoft 2023)

9. L. Borgianni, S. Troia, D. Adami, G. Maier, S. Giordano (2023), “From MPLS to SD-WAN to ensure QoS and QoE in cloud-based applications”, IEEE 9th International Conference on Network Softwarization (NetSoft 2023)

10. N Ellsworth, T Zhang, S Troia, G Maier, A Fumagalli (2023), “Enhancing cross layer monitoring on open optical transport networks”, Optical Fiber Communication Conference 2023, M3Z. 14

11. L. Galluccio et al., "Reinforcement Learning for Resource Planning in Drone-Based Softwarized Networks," 2022 20th Mediterranean Communication and Computer Networking Conference (MedComNet), 2022, pp. 200-207, doi: 10.1109/MedComNet55087.2022.9810398.

12. Troia S, Moreira Zorello Ligia Maria, & Maier G (2021). SD-WAN: how the control of the network can be shifted from core to edge. In *25th International Conference on Optical Network Design and Modelling, ONDM 2021, Proceedings* (pp. 1-3). IEEE.

13. Sebastian Troia, Marco Mazzara, Ligia Maria Moreira Zorello, & Guido Maier (2021). Performance Evaluation of Overlay Networking for delay-sensitive services in SD-WAN. In *2021 IEEE International Mediterranean Conference on Communications and Networking (MeditCom)* (pp. 1-6).

14. Maier Guido, Askari Leila, Troia Sebastian, Zorello Ligia Maria Moreira, Musumeci Francesco, & Tornatore Massimo (2020). Reconfiguration of VNF Placement in an Optical Metro Network by a Modular Planning Tool. In *Optical Fiber Communication Conference 2020* (pp. 1-3).

15. Ligia Maria Moreira Zorello, Sebastian Troia, Serena Giannotti, Rodolfo Alvizu, Stefano Bregni, & Guido Maier (2020). On the Network Slicing for Enterprise Services with Hybrid SDN. In *2020 IEEE 12th Latin-American Conference on Communications (LATINCOM)* (pp. 1-6).

16. Moreira Zorello L. M., Troia S., Quagliotti M., & Maier G. (2020). Power-aware optimization of baseband-function placement in cloud radio access networks. In *2020 24th International Conference on Optical Network Design and Modeling, ONDM 2020* (pp. 1-6). Institute of Electrical and Electronics Engineers Inc..

17. Troia Sebastian, Moreira Zorello Ligia Maria, Maralit Alvin J., & Maier Guido (2020). SD-WAN: An Open-Source Implementation for Enterprise Networking Services. In *2020 22nd International Conference on Transparent Optical Networks (ICTON)* (pp. 1-4).

18. Troia S., Martinez D. E., Martin I., Ligia Maria Moreira Zorello., Maier G., Hernandez J. A., Gonzalez De Dios O., Garrich M., Romero-Gazquez J. L., Moreno-Muro F. -J., Marino P. P., & Casellas R. (2019). Machine Learning-assisted Planning and Provisioning for SDN/NFV-enabled Metropolitan Networks. In *2019 European Conference on Networks and Communications, EuCNC 2019* (pp. 438-442). Institute of Electrical and Electronics Engineers Inc..

19. D. Andreoletti, S. Troia, F. Musumeci, S. Giordano, G. Maier and M. Tornatore, "Network Traffic Prediction based on Diffusion Convolutional Recurrent Neural Networks," IEEE INFOCOM 2019 - IEEE Conference on Computer Communications Workshops (INFOCOM WKSHPS), 2019, pp. 246-251, doi: 10.1109/INFCOMW.2019.8845132.

20. Troia Sebastian, Giorgetti Alessio, Sgambelluri Andrea, & Maier Guido (2019). Dynamic Virtual Network Function Placement over a Software-Defined Optical Network. In *Optical Fiber Communication Conference 2019* (pp. 1-3).

21. S. Troia, MOREIRA ZORELLO LIGIA MARIA, G. Maier, G. Verticale, & P. Giaccone (2019). Portable MiniLab for Hands-on Experimentation with Software Defined Networking. In *Proceedings of the International Conference on Telecommunications (ConTEL) 2019* (pp. 1-7).

22. Sebastian Troia, Alberto Rodriguez, Rodolfo Alvizu, & Guido Maier (2018). SENATUS: an experimental SDN/NFV Orchestrator. In *Proceedings of Network Function Virtualization and Software Defined Networks (NFV-SDN 2018)* (pp. 1-5). IEEE.

23. I. Martín, J. A. Hernández, S. Troia, F. Musumeci, G. Maier and O. G. de Dios, "Is Machine Learning Suitable for Solving RWA Problems in Optical Networks?," *2018 European Conference on Optical Communication (ECOC)*, 2018, pp. 1-3, doi: 10.1109/ECOC.2018.8535562..

24. S. Troia et al., "Machine-Learning-Assisted Routing in SDN-Based Optical Networks," 2018 European Conference on Optical Communication (ECOC), 2018, pp. 1-3, doi: 10.1109/ECOC.2018.8535437.

25. S. Troia, R. Alvizu, ZHOU YOUDUO, G. Maier, & A. Pattavina (2018). Deep Learning-based Traffic Prediction for Network Optimization. In *Proceedings of ICTON 2018* (pp. 1-4).

26. Alvizu Rodolfo, Troia Sebastian, Maier Guido, & Pattavina Achille (2018). Machine-Learning-Based Prediction and Optimization of Mobile Metro-Core Networks. In *2018 IEEE Photonics Society Summer Topical Meeting Series (SUM)* (pp. 155-156).

27. R. Alvizu, V. Soto, S. Troia, & G. Maier (2018). Enabling multipath optical routing with hybrid differential delay compensation. In *Proceedings of ICTON 2018* (pp. 1-4).

28. Rodolfo Alvizu, Sebastian Troia, NGUYEN VAN MINH, Guido Maier, & Achille Pattavina (2018). Network Orchestration for Dynamic Network Slicing for Fixed and Mobile Vertical Services. In *Proceedings of OFC 2018* (pp. 1-2).

29. TROIA SEBASTIAN, G. Sheng, R. Alvizu, G. Maier, & A. Pattavina (2017). Identification of tidal-traffic patterns in metro-area mobile networks via matrix factorization based model. In *International Conference on Pervasive Computing and Communications* (pp. 1-5).

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31. N. Kukreja, G. Maier, R. Alvizu, & A. Pattavina (2016). SDN based automated testbed for evaluating multipath TCP. In *Proceedings of ICC 2016* (pp. 1-6).

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