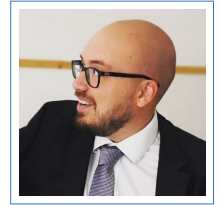


Andrea Marotta

Curriculum Vitae

DISIM
University of L'Aquila
☎ (+39) 3341177069, (+39) 0862433337
✉ andrea.marotta@univaq.it
in LinkedIn



Andrea Marotta is Tenure Track Assistant Professor at the Department of Information Engineering, Computer Science and Mathematics of the University of L'Aquila, Italy. He received his M.Sc. degree in Computer Engineering and his Ph.D. in Information and Communications Technology from the University of L'Aquila, in 2015 and 2019, respectively. During his graduate studies, he was a visiting student at Group for Research on Wireless (GROW) at Instituto Superior Técnico/University of Lisbon, performing research on C-RAN deployment optimisation. In 2017 he spent one year as visiting researcher at the research Institute of Communication, Information and Perception Technologies (TeCIP) of Scuola superiore di studi universitari e di perfezionamento Sant'Anna in Pisa performing research on 5G Radio Access Network design. In 2019 and 2020 he has been visiting researcher at the Computer Networks Lab (NetLab) of the University of California, Davis, performing research on slice reliability. He actively participates in the TPC of IEEE Communications Society conferences. He serves as Associate Editor for the Springer Wireless Networks Journal. He performs research on Network Reliability, SDM Optical Networks, Multi-Access Edge Computing, Radio Access Networks, Software Defined Access, Cybersecurity.

Education

- 2025 **Post-graduate Diploma Course**, *University of Macerata*, Macerata, Italy.
Ethics, Law, Digital Technologies
- 2023 **Post-graduate Diploma Course**, *University of Perugia*, Perugia, Italy.
Projecting tools for the territorial development
- 2019 **Ph.D., Information and Communications Technology**, *University of L'Aquila*, L'Aquila, Italy.
Thesis: Network Design for 5G Converged Access
- 2015 **M.Sc. Computer Engineering**, *University of L'Aquila*, L'Aquila, Italy.
Thesis: Optimisation of Radio Access Network Cloud Architectures Deployment in LTE-Advanced
- 2013 **B.Sc. Computer Engineering**, *University of L'Aquila*, L'Aquila, Italy.
Thesis: Study and implementation of octilinear polygonal approximation algorithms

Qualifications

- 2023 – 2034 **National Scientific Qualification**, *National Scientific Qualification for the functions of associate professor in the Competitive Sector 09/F2 - TELECOMMUNICATIONS.*, Ministry of University and Research.
- 2020 **Qualification for the practice of the Information Engineering profession**, *Section A*, University of L'Aquila.
- 2019 **PF24 Certification**, *Certification issued pursuant to article 3, paragraph 5, of Ministerial Decree 616/2017 for access to the competition for roles as a teacher in secondary schools*, University of L'Aquila.

Research Experience

- July 2026 – present **Director**, *Fibers Lab, National Inter-University Consortium for Telecommunications (CNIT)*, L'Aquila, Italy.
Fundraising and coordination of the experimental activities of the National Laboratory of Advanced Optical Fibers for Photonics (FIBERS). fibers.cnit.it

- Oct. 2024 – **Tenure Track Assistant Professor**, *University of L'Aquila*, L'Aquila, Italy.
present Professor for the Telecommunication Engineering Master program. Bachelor and Master thesis Co-supervision. Ph.D. Co-supervision.
- Jan. 2021 – **Lab Head**, *NSLab – Networks and Services Lab*, *University of L'Aquila*, L'Aquila, Italy.
present Coordination of research activities and experimental infrastructure covering 5G/6G and O-RAN, optical access networks, network reliability, edge computing and distributed AI, cybersecurity, and multimedia. The lab integrates commercial O-RAN and NG-PON2 testbeds, coherent P2MP and SDR prototyping platforms, 400G packet and computing infrastructure, supporting Test-Before-Invest activities with industrial partners. networksandserviceslab.it
- Jan. 2021 – **Assistant Professor**, *University of L'Aquila*, L'Aquila, Italy.
Sep. 2024 Professor for the Telecommunication Engineering Master program. Bachelor and Master thesis Co-supervision. Ph.D. Co-supervision.
- Jan. 2023 – **Visiting researcher, secondee**, *Iquadrat Informatica S.L.*, Barcellona, Spain.
Feb. 2023 MSCA-RISE OPTIMIST Project
- Jul. 2022 – **Visiting researcher, secondee**, *Iquadrat Informatica S.L.*, Barcellona, Spain.
Sep. 2022 MSCA-RISE OPTIMIST Project
- Feb. 2020 – **Visiting Researcher**, *University of California*, Davis, CA, US.
Mar. 2020 Research on network reliability with focus on content connectivity.
- Apr. 2019 – **Vice-director**, *Fibers Lab*, *National Inter-University Consortium for Telecommunications (CNIT)*, L'Aquila, Italy.
June 2026 Support to the experimental activities of the National Laboratory of Advanced Optical Fibers for Photonics (FIBERS) at the University of L'Aquila. The infrastructure of FIBERS Lab is the world-first installation of fibers for SDM transmission.
- Jan. 2019 – **Visiting Researcher**, *University of California*, Davis, CA, US.
Aug. 2019 Research on Reliable Slicing with focus on Slice Isolation. Support with Net2Plan environment in the Optical Network course offered at University of California, Davis.
- Nov. 2018 – **Research Fellow**, *University of L'Aquila*, L'Aquila, Italy.
Dec. 2020 Research on 5G networks design and reliability, radio access schemes for ultra Reliable and Low Latency Communications. Bachelor and Master thesis Co-supervision. Seminar activities in telecommunications engineering courses.
- Feb. 2017 – **Laboratory Setup and Management**, *MECLAB*, *University of L'Aquila*, L'Aquila, Italy.
Jan. 2021 Design and setup of the Multi-Access Edge Computing Lab at the University of L'Aquila, funded by the INCIPICT research project. The lab offers the possibility to perform experimental research by the means of prototypal and commercial technologies. Experimental activities performed in the lab include, but are not limited to: 4G/5G emulation; Network Slicing; Multi-Access Edge Computing.
- Feb. 2016 – **Visiting Ph.D. Student**, *Scuola Superiore Sant'Anna*, Pisa, Italy.
Feb. 2017 Research activities on 5G Radio Access Network design and PON Fronthauling.
- Jan. 2015 – **Visiting Student**, *INOV-INESC/ Instituto Superior Técnico*, *Univeristy of Lisbon*, Lisbon, Portugal.
July 2015 M.Sc. thesis work on optimisation of radio access network cloud architectures deployment in LTE-Advanced

Publications

Journal Articles

- J1 **A. Marotta**, D. Cassioli, C. Antonelli, K. Kondepu, and L. Valcarenghi. Network solutions for CoMP coordinated scheduling. *IEEE Access*, volume 7, pages 176624–176633. IEEE, 2019.
- J2 **A. Marotta**, D. Cassioli, K. Kondepu, C. Antonelli, and L. Valcarenghi. Exploiting flexible functional split in converged software defined access networks. *Journal of Optical Communications and Networking*, volume 11, pages 536–546. Optical Society of America, 2019.
- J3 C. Calcaterra, A. Carmenini, **A. Marotta**, U. Bucci, and D. Cassioli. Maxhadoop: an efficient scalable emulation tool to test SDN protocols in emulated hadoop environments. *Journal of Network and Systems Management*, volume 28, pages 1610–1638. Springer, 2020.

- J4 G. Le, S. Ferdousi, **A. Marotta**, S. Xu, Y. Hirota, Y. Awaji, M. Tornatore, and B. Mukherjee. Survivable virtual network mapping with content connectivity against multiple link failures in optical metro networks. *Journal of Optical Communications and Networking*, volume 12, pages 301–311. Optical Society of America, 2020.
- J5 **A. Marotta** and L. M. Correia. Cost-effective joint optimisation of BBU placement and fronthaul deployment in brown-field scenarios. *EURASIP Journal on Wireless Communications and Networking*, volume 2020, pages 1–26. Springer, 2020.
- J6 C. Rinaldi, F. Franchi, **A. Marotta**, F. Graziosi, and C. Centofanti. On the exploitation of 5G multi-access edge computing for spatial audio in cultural heritage applications. *IEEE Access*, volume 9, pages 155197–155206, 2021.
- J7 F. Franchi, **A. Marotta**, C. Rinaldi, F. Graziosi, L. Fratocchi, and M. Parisse. What can 5G do for public safety? structural health monitoring and earthquake early warning scenarios. *Sensors*, volume 22, page 3020. Multidisciplinary Digital Publishing Institute, 2022.
- J8 V. Gattulli, F. Franchi, F. Graziosi, **A. Marotta**, C. Rinaldi, F. Potenza, and U. Di Sabatino. Design and evaluation of 5G-based architecture supporting data-driven digital twins updating and matching in seismic monitoring. *Bulletin of Earthquake Engineering*, pages 1–21. Springer, 2022.
- J9 **A. Marotta**, D. Cassioli, M. Tornatore, Y. Hirota, Y. Awaji, and B. Mukherjee. Multilayer protection-at-lightpath for reliable slicing with isolation in optical metro-aggregation networks. *Journal of Optical Communications and Networking*, volume 14, pages 289–302. Optica Publishing Group, 2022.
- J10 G. Le, S. Ferdousi, **A. Marotta**, S. Xu, Y. Hirota, Y. Awaji, S. Savas, M. Tornatore and B. Mukherjee. Reliable Provisioning with Degraded Service Using Multipath Routing from Multiple Data Centers in Optical Metro Networks. *Transactions on Network and Service Management*, vol. 20, no. 3, pp. 3334–3347, IEEE, Sep. 2023
- J11 E. Wohlgemuth, Y. Yoffe, I. Attia, M. Imran, P. D. Lakshmijayasimha, **A. Marotta**, P. N. Goki, H. Shalom, F. Fresi, C. Antonelli, A. Mecozzi, P. Anandarajah, L. Potì, D. Sadot A Field Trial of Multi-Homodyne Coherent Detection over Multi-Core Fiber for Encryption and Steganography. *Journal of Lightwave Technology*, vol. 41, no. 9, pp. 2723–2735, Optica Publishing Group, May 2023
- J12 N. Sambo, A. Nespola, A. Sgambelluri, **A. Marotta**, L. Dallachiesa, R. Ryf, P. Castoldi, A. Mecozzi, T. Hayashi, A. Carena, C. Antonelli Field trial of SDN-controlled probabilistic constellation shaping supporting multiple rates over a coupled-core multi-core fiber. *Journal of Lightwave Technology*, vol. 41, no. 12, pp. 3660–3667, Optica Publishing Group, June 2023
- J13 R.S. Luís, G. Rademacher, B.J. Puttnam, G. Di Sciuillo, **A. Marotta**, R. Emmerich, N. Braig-Christophersen, R. Stolte, R. Graziosi, A. Mecozzi, C. Schubert, G. Ferri, F. Achten, P. Sillard, R. Ryf, L. Dallachiesa, S. Shinada, C. Antonelli, H. Furukawa Demonstration of a 15-Mode Network Node Supported by a Field-Deployed 15-Mode Fiber *Journal of Lightwave Technology*, vol. 41, no. 12, pp. 3695–3703, Optica Publishing Group, June 2023
- J14 U. Bucci, D. Cassioli, **A. Marotta** Performance of Spatially Diverse URLLC and eMBB Traffic in Cell Free Massive MIMO Environments, *IEEE Transactions on Network and Service Management*, vol. 21, no. 1, pp. 161–173, IEEE, Feb. 2024
- J15 A. Gatto, P. Parolari, R. Luis, G. Rademacher, B. Puttnam, R. Emmerich, C. Schubert, G. Ferri, F. Achten, P. Sillard, P. Martelli, G. Di Sciuillo, **A. Marotta**, A. Mecozzi, C. Antonelli, P. Boffi, Partial-MIMO based Mode-Group transmission and routing in a field-deployed 15-mode network: throughput, DSP resources and network flexibility, *Journal of Lightwave Technology*, Optica Publishing Group, 2024
- J16 A. Piccioni, **A. Marotta**, C. Rinaldi and F. Graziosi, Enhancing Mobile Networks for Urban Air Mobility Connectivity, *IEEE Networking Letters*, vol. 6, no. 2, pp. 110–114, June 2024

- J17 M. Scatá, A. La Corte, **A. Marotta**, F. Graziosi and D. Cassioli, A Complex Network and Evolutionary Game Theory Framework for 6G Function Placement, *IEEE Open Journal of the Communications Society*, vol. 5, pp. 2926-2941, 2024
- J18 C. Centofanti, **A. Marotta**, V. Gudepu, D. Cassioli, F. Graziosi, H. Roberts, C. Brenard, K. Kondepu, End-to-end slicing of RAN based on next-generation optical access network, *Photonic Network Communications*, 1-9, 2024
- J19 C. Centofanti, W. Tiberti, **A. Marotta**, F. Graziosi, D. Cassioli, Taming latency at the edge: A user-aware service placement approach, *Computer Networks*, vol. 247, 2024
- J20 Z. Ali, W. Tiberti, **A. Marotta**, D. Cassioli, Empowering network security: Bert transformer learning approach and MLP for intrusion detection in imbalanced network traffic, *IEEE Access*, 2024
- J21 C. Centofanti, D. Lozzi, C. Cococchetta, **A. Marotta** An Efficient Edge-Based System for Nucleated Oval-Shaped Red Blood Cell Counting. *IEEE Access*, vol. 12, pp. 195629-195641, 2024
- J22 A. Piccioni, **A. Marotta**, C. Rinaldi, C. Centofanti, K. Kondepu, D. Cassioli, F. Graziosi Exploiting O-RAN neutral hosting for first responders connectivity in emergency scenarios. *Computer Communications*, vol. 238, pp. 108188, 2025
- J23 Z. Ali, W. Tiberti, **A. Marotta**, D. Cassioli Deep Transfer Learning for Intrusion Detection in Edge Computing Scenarios. *IEEE Internet of Things Journal*, vol. 12, no. 21, pp. 44882-44896, 2025
- J24 G. Le, V. T. Hoang, S. Ferdousi, **A. Marotta**, S. Xu, Y. Hirota, Y. Awaji, M. Tornatore, B. Mukherjee Reliable Provisioning of Low-Latency and High-Bandwidth Extended Reality Live Streams. *IEEE Journal on Selected Areas in Communications*, vol. 43, no. 5, pp. 1755-1766, 2025
- J25 C. Rinaldi, C. Centofanti, L. Comanducci, M. Pezzoli, A. Bernardini, **A. Marotta**, F. Antonacci Immersive Acoustics via Next-Generation Networks: Achieving High-Fidelity Audio in the Metaverse. *IEEE Open Journal of the Communications Society*, vol. 6, pp. 7899-7919, 2025
- J26 Q. Wu, D. Ribezzo, G. Di Sciuillo, S. Cocchi, D. A. Shaji, L. A. Zischler, R. S. Luis, P. Serena, C. Lasagni, A. Bononi, T. Hayashi, A. Gagliano, P. Martelli, A. Gatto, P. Parolari, P. Boffi, D. Bacco, A. Zavatta, Y. Zhu, W. Hu, Z. Xu, M. Shtaif, **A. Marotta**, F. Graziosi, A. Mecozzi, C. Antonelli Integration of quantum key distribution and high-throughput classical communications in field-deployed multi-core fibers. *Light: Science & Applications*, vol. 14, art. 274, Nature Publishing Group, 2025
- J27 C. Rinaldi, A. Piccioni, C. Centofanti, **A. Marotta**, P. Di Marco, F. Graziosi Architectural Challenges and Solutions in Multimedia IoT Over 5G Networks. *IEEE Transactions on Broadcasting*, vol. 72, no. 1, pp. 46-61, 2026
- J28 Z. Ali, N. Aslam, **A. Marotta**, W. Tiberti, D. Cassioli A Systematic Review of Kernel-Level Security Mechanisms, Vulnerability Detection and Mitigation in Modern Operating Systems. *Sensors*, vol. 26, no. 8, art. 2452, MDPI, 2026
- J29 G. Di Sciuillo, L. A. Zischler, D. A. Shaji, Q. Wu, R. S. Luís, R. Emmerich, M. van den Hout, B. J. Puttnam, G. Rademacher, C. Lasagni, P. Serena, A. Bononi, T. Hayashi, C. Schubert, C. Okonkwo, R. Ryf, L. Palmieri, M. Shtaif, **A. Marotta**, A. Mecozzi, C. Antonelli Characterization of Stimulated Raman Scattering in Field-Deployed Coupled-Core Multi-Core Fibers. *Journal of Lightwave Technology*, vol. 44, no. 2, pp. 550-557, 2026
- J30 G. Di Sciuillo, R. S. Luís, M. van den Hout, R. Emmerich, N. Braig-Christophersen, Q. Wu, B. J. Puttnam, D. A. Shaji, **A. Marotta**, F. Graziosi, A. Mecozzi, C. Schubert, T. Hayashi, T. Nagashima, C. Okonkwo, G. Rademacher, C. Lasagni, P. Serena, A. Nespola, H. Furukawa, C. Antonelli 19.2 THz S+C+L Transmission over Field-Deployed Coupled-Core Multi-Core Fiber Enabled by Distributed Raman Amplification. *Journal of Lightwave Technology*, 2026

- J31 I. M. Ramadan, G. Di Sciuillo, Q. Wu, D. Ribezzo, D. A. Shaji, L. A. Zischler, R. S. Luís, P. Serena, C. Lasagni, A. Bononi, T. Hayashi, A. Gagliano, P. Martelli, A. Gatto, P. Parolari, P. Boffi, **A. Marotta**, C. Centofanti, F. Graziosi, A. Mecozzi, C. Antonelli Coexisting QKD and Real-Time Encrypted High-Speed Fiber-Optic Communication in Field-Deployed Multi-Core Fibers. *Journal of Lightwave Technology*, 2026
- J32 D. A. Shaji, R. S. Luís, B. J. Puttnam, D. Orsuti, M. S. Neves, B. Boriboon, G. Di Sciuillo, Q. Wu, S. Gross, A. Ross-Adams, M. J. Withford, S. Shinada, F. P. Guiomar, P. P. Monteiro, L. Palmieri, **A. Marotta**, A. Mecozzi, C. Antonelli, H. Furukawa Experimental demonstration of a low-cost petabit-per-second SDM network node. *Optics Express*, vol. 34, no. 8, pp. 13894-13902, Optica Publishing Group, 2026
- J33 A. Souza, M. Quagliotti, M. M. Hosseini, **A. Marotta**, C. Centofanti, F. Arpanaei, A. Villavicencio Paz, J. M. Rivas-Moscoso, G. Gambari, L. Nadal, M. Ruiz, S. Parker, J. Pedro A Generalized Cost Model for Techno-Economic Analysis in Optical Networks. *Photonics*, vol. 13, no. 2, art. 125, MDPI, 2026

In Conference Proceedings

- C1 F. Matera, M. Vari, M. Posada, G. Maier, F. Giannone, L. Valcarenghi, **A. Marotta**, and C. Antonelli. Fiber access cost models from road NGN project. IET, 2016.
- C2 S. Medranda Posada, G. Maier, F. Giannone, L. Valcarenghi, **A. Marotta**, and C. Antonelli. Comparison of multi-operator PON technologies beyond NG-PON2: A real greenfield case-study. In *2016 18th International Conference on Transparent Optical Networks (ICTON)*, pages 1–4. IEEE, 2016.
- C3 **A. Marotta** and L. M. Correia. A model to evaluate C-RAN architectures deployment impact in urban scenarios. In *2016 International Conference on Broadband Communications for Next Generation Networks and Multimedia Applications (CoBCom)*, pages 1–6, 2016.
- C4 **A. Marotta**, K. Kondepu, F. Giannone, S. Doddikrinda, D. Cassioli, C. Antonelli, L. Valcarenghi, and P. Castoldi. Performance evaluation of CoMP coordinated scheduling over different backhaul infrastructures: A real use case scenario. In *2016 IEEE International Conference on the Science of Electrical Engineering (ICSEE)*, pages 1–5. IEEE, 2016.
- C5 A. Colarieti, **A. Marotta**, M. Mpervarakis, L. Pomante, and V. Tsolkas. QoE provisioning over mobile networks: The CASPER perspective. In *2017 IEEE 22nd International Workshop on Computer Aided Modeling and Design of Communication Links and Networks (CAMAD)*, pages 1–5. IEEE, 2017.
- C6 K. Kondepu, A. Giorgetti, F. Giannone, **A. Marotta**, F. Cugini, P. Castoldi, and L. Valcarenghi. SDN-enabled latency-guaranteed dual connectivity in 5G ran. In *Asia Communications and Photonics Conference*, pages M3B–4. Optical Society of America, 2017.
- C7 E. Liotou, **A. Marotta**, L. Pomante, and K. Ramantas. A middleware architecture for QoE provisioning in mobile networks. In *2017 IEEE 22nd International Workshop on Computer Aided Modeling and Design of Communication Links and Networks (CAMAD)*, pages 1–5. IEEE, 2017.
- C8 **A. Marotta**, K. Kondepu, S. Doddikrinda, D. Cassioli, C. Antonelli, L.M. Correia, and L. Valcarenghi. Software defined 5G converged mobile access networks: Energy efficiency considerations. In *2017 Asia Communications and Photonics Conference (ACP)*, pages 1–3. IEEE, 2017.
- C9 **A. Marotta**, F. Giannone, K. Kondepu, D. Cassioli, C. Antonelli, L. Valcarenghi, and P. Castoldi. Reducing CoMP control message delay in PON backhauled 5G networks. In *European Wireless 2017; 23th European Wireless Conference*, pages 1–5. VDE, 2017.
- C10 **A. Marotta**, K. Kondepu, F. Giannone, D. Cassioli, C. Antonelli, L. Valcarenghi, and P. Castoldi. Impact of CoMP VNF placement on 5G coordinated scheduling performance. In *2017 European Conference on Networks and Communications (EuCNC)*, pages 1–6. IEEE, 2017.

- C11 C. Antonelli, D. Cassioli, F. Franchi, F. Graziosi, **A. Marotta**, M. Pratesi, C. Rinaldi, and F. Santucci. The city of L'Aquila as a living lab: The INCIPICT project and the 5G trial. In *2018 IEEE 5G World Forum (5GWF)*, pages 410–415. IEEE, 2018.
- C12 F. Barletta, F. Massimiani, F. Pierangeli, M. R. Spada, **A. Marotta**, and F. Graziosi. 5G networks. An overall perspective for the innovation management. In *2018 IEEE 4th International Forum on Research and Technology for Society and Industry (RTSI)*, pages 1–4, 2018.
- C13 U. Bucci, **A. Marotta**, K. Kondepu, C. Antonelli, L. Valcarenghi, and D. Cassioli. Experimental demonstration of flexible TDM-PON fronthauling. In *Asia Communications and Photonics Conference*, pages Su1E–4. Optica Publishing Group, 2018.
- C14 S. Doddikrinda, **A. Marotta**, D. Cassioli, C. Antonelli, K. Kondepu, and L. Valcarenghi. Exploiting core-switching to minimize fronthaul degradation using multicore fiber. In *Asia Communications and Photonics Conference*, pages Su2A–253. Optical Society of America, 2018.
- C15 F. Franchi, F. Graziosi, **A. Marotta**, and C. Rinaldi. The INCIPICT project and the 5G trial: a living lab for the city of L'Aquila. In *2018 International Conference on Computational Science and Computational Intelligence (CSCI)*, pages 519–524. IEEE, 2018.
- C16 **A. Marotta**, D. Cassioli, K. Kondepu, C. Antonelli, and L. Valcarenghi. Efficient management of flexible functional split through software defined 5G converged access. In *2018 IEEE International Conference on Communications (ICC)*, pages 1–6. IEEE, 2018.
- C17 **A. Marotta**, K. Kondepu, D. Cassioli, C. Antonelli, Luís M Correia, and L. Valcarenghi. Software defined 5G converged access as a viable techno-economic solution. In *2018 Optical Fiber Communications Conference and Exposition (OFC)*, pages 1–3. IEEE, 2018.
- C18 C. Calcaterra, A. Carmenini, **A. Marotta**, and D. Cassioli. Hadoop performance evaluation in software defined data center networks. In *2019 International Conference on Computing, Networking and Communications (ICNC)*, pages 56–61. IEEE, 2019.
- C19 L. D'Errico, F. Franchi, F. Graziosi, **A. Marotta**, C. Rinaldi, M. Boschi, and A. Colarieti. Structural health monitoring and earthquake early warning on 5G URLLC network. In *2019 IEEE 5th World Forum on Internet of Things (WF-IoT)*, pages 783–786. IEEE, 2019.
- C20 F. Franchi, **A. Marotta**, C. Rinaldi, F. Graziosi, and L. D'Errico. IoT-based disaster management system on 5G URLLC network. In *2019 International Conference on Information and Communication Technologies for Disaster Management (ICT-DM)*, pages 1–4, 2019.
- C21 G. Le, **A. Marotta**, S. Ferdousi, S. Xu, Y. Hirota, Y. Awaji, M. Tornatore, and B. Mukherjee. Logical network mapping with content connectivity against multiple link failures in optical metro networks. In *2019 IEEE International Conference on Advanced Networks and Telecommunications Systems (ANTS)*, pages 1–3. IEEE, 2019.
- C22 F. Franchi, F. Graziosi, **A. Marotta**, and C. Rinaldi. Structural health monitoring over 5G URLLC network. In *European Workshop on Structural Health Monitoring*, pages 60–68. Springer, 2020.
- C23 R. S. Luís, B. J. Puttnam, G. Rademacher, **A. Marotta**, C. Antonelli, F. Graziosi, A. Mecozzi, T. Hayashi, T. Nakanishi, S. Shinada, et al. Evaluation of dynamic skew on spooled and deployed multicore fibers using o-band signals. In *Optical Fiber Communication Conference*, pages T4J–4. Optical Society of America, 2020.
- C24 M. Mazur, N. K. Fontaine, R. Ryf, **A. Marotta**, H. Chen, T. Hayashi, T. Nagashima, T. Nakanishi, T. Morishima, F. Graziosi, A. Mecozzi, and C. Antonelli. Transfer matrix characterization of field-deployed mcfs. In *2020 European Conference on Optical Communications (ECOC)*, pages 1–4, 2020.
- C25 B.J. Puttnam, R.S. Luis, G. Rademacher, **A. Marotta**, C. Antonelli, A. Mecozzi, F. Graziosi, T. Hayashi, T. Nakanishi, Y. Awaji, et al. Dynamic skew measurements in a deployed 4-core fiber. In *CLEO: Science and Innovations*, pages STu4R–1. Optical Society of America, 2020.

- C26 R. Ryf, **A. Marotta**, M. Mazur, N. K. Fontaine, H. Chen, T. Hayashi, T. Nagashima, T. Nakanishi, T. Morishima, F. Graziosi, A. Mecozzi, and C. Antonelli. Transmission over randomly-coupled 4-core fiber in field-deployed multi-core fiber cable. In *2020 European Conference on Optical Communications (ECOC)*, pages 1–4, 2020.
- C27 **A. Marotta**, D. Cassioli, M. Tornatore, Y. Hirota, Y. Awaji, and B. Mukherjee. Reliable slicing with isolation in optical metro-aggregation networks. In *Optical Fiber Communication Conference*, pages M4D–3. Optica Publishing Group, 2020.
- C28 C. Centofanti, **A. Marotta**, C. Rinaldi, F. Franchi, D. Cassioli, and F. Graziosi. Improved dash video streaming performance by MEC-enabled optical access. In *2021 Asia Communications and Photonics Conference (ACP)*, pages 1–3. IEEE, 2021.
- C29 G. Le, S. Ferdousi, **A. Marotta**, S. Xu, Y. Hirota, Y. Awaji, M. Tornatore, and B. Mukherjee. Reliable provisioning for dynamic content requests in optical metro networks. In *Optical Fiber Communication Conference*, pages W1F–2. Optical Society of America, 2021.
- C30 R. S. Luís, B. J. Puttnam, G. Rademacher, **A. Marotta**, C. Antonelli, F. Graziosi, A. Mecozzi, T. Hayashi, T. Nakanishi, S. Shinada, et al. Dynamic skew in multi-core fibers: from lab measurements to field trials. In *Optical Fiber Communication Conference*, pages W7B–1. Optica Publishing Group, 2021.
- C31 M. Mazur, R. Ryf, N. K. Fontaine, **A. Marotta**, E. Börjeson, L. Dallachiesa, H. Chen, T. Hayashi, T. Nagashima, T. Nakanishi, et al. Real-time MIMO transmission over field-deployed coupled-core multi-core fibers. In *Optical Fiber Communication Conference*, pages Th4B–8. Optica Publishing Group, 2022. **Post-deadline**
- C32 R. Ryf, M. Mazur, N. K. Fontaine, L. Dallachiesa, H. Chen, **A. Marotta**, A. Mecozzi, and C. Antonelli. Transmission over Coupled-Core Multicore Fibers. In *Optica Advanced Photonics Congress 2022*, Technical Digest Series, paper SpM4I.2, Optica Publishing Group, 2022. **Invited**
- C33 L. F. F. Reyes, F. Smarra, R. Ryf, T. Hayashi, **A. Marotta**, C. Antonelli, A. D’Innocenzo, Data-driven efficient digital signal processing over a field trial space-division multiplexed fiber-optic transmission. In *2022 International Conference on Computer Communications and Networks (ICCCN)*
- C34 RS Luís, G. Rademacher, BJ Puttnam, G. Di Sciullo, **A. Marotta**, R. Emmerich, N. Braig-Christophersen, R. Stolte, F. Graziosi, A. Mecozzi, C. Schubert, G. Ferri, F. Achten, P. Sillard, R. Ryf, L. Dallachiesa, S. Shinada, C. Antonelli, H. Furukawa. Demonstration of a spatial super channel switching SDM network node on a field deployed 15-mode fiber network. In *European Conference on Optical Communication (ECOC) 2022*, paper Th3C.5., Optica Publishing Group, 2022. **Post-deadline**
- C35 G. Rademacher, R. S. Luís, B. J. Puttnam, G. Di Sciullo, R. Emmerich, N. Braig-Christophersen, **A. Marotta**, L. Dallachiesa, R. Ryf, A. Mecozzi, C. Schubert, P. Sillard, F. Achten, G. Ferri, J. Sakaguchi, C. Antonelli, and H. Furukawa. Characterization of the First Field-Deployed 15-Mode Fiber Cable for High Density Space-Division Multiplexing In *European Conference on Optical Communication (ECOC) 2022*, paper Th3B.1., Optica Publishing Group, 2022. **Post-deadline**
- C36 C. Centofanti, **A. Marotta**, D. Cassioli, F. Graziosi, N. Sambo, L. Valcarengi, C. Bernard, and H. Roberts. Slice Management in SDN PON Supporting Low-Latency Services In *European Conference on Optical Communication (ECOC) 2022*, paper Tu5.64, Optica Publishing Group, 2022.
- C37 N. Sambo, A. Nespola, A. Sgambelluri, **A. Marotta**, L. Dallachiesa, R. Ryf, P. Castoldi, A. Mecozzi, C. Antonelli, T. Hayashi, and A. Carena. Field trial of SDN-controlled probabilistic constellation shaping supporting multiple rates over a coupled-core multi-core fiber In *European Conference on Optical Communication (ECOC) 2022*, paper Th3A.4, Optica Publishing Group, 2022. **Post-deadline**

- C38 W. Tiberti, E. Di Fina, **A. Marotta**, D. Cassioli, Impact of Man-in-the-Middle Attacks to the O-RAN Inter-Controllers Interface In *2022 IEEE Future Networks World Forum (FNWF)*
- C39 G. Castorio, C. Centofanti, **A. Marotta**, F. Graziosi, On P4-based Reliability: Path Protection for Programmable Data Planes In *2022 IEEE International Conference on Advanced Networks and Telecommunications Systems (ANTS)*
- C40 C. Centofanti, **A. Marotta**, V. Gudepu, D. Cassioli, F. Graziosi, H. Roberts, C. Bernard, K. Kondepu End-to-end Slicing of RAN based on Next Generation Optical Access Network In *2022 IEEE International Conference on Advanced Networks and Telecommunications Systems (ANTS)*
- C41 P. Parolari, A. Gatto, R. S. Luis, G. Rademacher, B. J. Puttnam, R. Emmerich, C. Schubert, G. Ferri, F. Achten, P. Sillard, P. Martelli, G. Di Sciullo, F. Graziosi, **A. Marotta**, A. Mecozzi, C. Antonelli, and P. Boffi Demonstration of Multi-Hop Mode-Group Routing in a Field-Deployed Multi-Mode Fiber Network In *Optical Fiber Communication Conference (OFC) 2023*, paper M4G.3, Optica Publishing Group, 2023
- C42 A. Gatto, P. Parolari, R. S. Luis, G. Rademacher, B. J. Puttnam, R. Emmerich, C. Schubert, G. Ferri, F. Achten, P. Sillard, P. Martelli, G. Di Sciullo, F. Graziosi, **A. Marotta**, A. Mecozzi, C. Antonelli, and P. Boffi Partial MIMO-based Mode Division Multiplexing Transmission over the First Field-Deployed 15-Mode Fiber in Metro Scenario In *Optical Fiber Communication Conference (OFC) 2023*, paper M2B.3, Optica Publishing Group, 2023
- C43 C. Centofanti, **A. Marotta**, D. Cassioli, F. Graziosi, V. Gudepu, and K. Kondepu End-to-End Slicing via O-RAN and Software Defined Optical Access In *Optical Fiber Communication Conference (OFC) 2023*, paper W3F.4, Optica Publishing Group, 2023
- C44 R. S. Luis, G. Di Sciullo, G. Rademacher, B. Puttnam, **A. Marotta**, R. Emmerich, N. Braig-Christophersen, R. Stolte, F. Graziosi, A. Mecozzi, C. Schubert, T. Hayashi, T. Nagashima, C. Antonelli, and H. Furukawa Colorless and Directionless ROADM for Meshed Coupled-Core Multicore Fiber Networks In *Optical Fiber Communication Conference (OFC) 2023*, paper Th4C.3, Optica Publishing Group, 2023. **Post-deadline**
- C45 L. Dallachiesa, R. Ryf, N. K. Fontaine, M. Mazur, H. Chen, P. Sillard, G. Ferri, F. Achten, A. Carena, A. Nespola, **A. Marotta**, A. Mecozzi, and C. Antonelli Mode-Group-Division Multiplexing over a Deployed 15-Mode-Fiber Cable In *Optical Fiber Communication Conference (OFC) 2023*, paper M2B.4, Optica Publishing Group, 2023
- C46 M. Mazur, R. Ryf, N. Fontaine, H. Chen, L. Dallachiesa, D. Neilson, T. Hayashi, A. Mecozzi, C. Antonelli, **A. Marotta** Field transmission performance of coupled/uncoupled multicore fiber In *2023 SPIE Opto*
- C47 M. Mazur, N. K. Fontaine, R. Ryf, L. Dallachiesa, H. Chen, D. T. Neilson, **A. Marotta**, T. Hayashi, T. Nagashima, T. Nakanishi, F. Graziosi, D. Blumenthal, M. Harrington, F. Quinlan, A. Mecozzi, C. Antonelli Characterization of phase stability and core-to-core delays in a field-deployed uncoupled-core multi-core fiber cable In *European Conference on Optical Communication (ECOC) 2023*, Optica Publishing Group, 2023
- C48 M. Mazur, N. Fontaine, L. Dallachiesa, R. Ryf, H. Chen, D. Neilson, **A. Marotta**, P. Sillard, G. Ferri, F. Achten, F. Graziosi, A. Mecozzi, C. Antonelli Broadband characterization of field-deployed 15-mode graded-index multi-mode fiber cable In *European Conference on Optical Communication (ECOC) 2023*, Optica Publishing Group, 2023
- C49 C. Centofanti, W. Tiberti, **A. Marotta**, F. Graziosi, D. Cassioli Latency-Aware Kubernetes Scheduling for Microservices Orchestration at the Edge In *2023 IEEE 9th International Conference on Network Softwarization (NetSoft)*, Madrid, Spain, 2023, pp. 426-431

- C50 A. Nespola, M. Amirabadi, R. Ryf, M. Mazur, N. Fontaine, L. Dallachiesa, T. Hayashi, M. Kahaei, S. Nezamalhosseni, **A. Marotta**, A. Mecozzi, C. Antonelli, A. Carena Rate Optimized Probabilistic Shaping-Based Transmission Over Field Deployed Coupled-Core 4-Core-Fiber In *2023 Conference on Lasers and Electro-Optics Europe & European Quantum Electronics Conference (CLEO/Europe-EQEC)*, IEEE, 2023
- C51 D. Xenakis, C. Centofanti, C. Rinaldi, **A. Marotta**, C. Verikoukis, N. Passas, S. Tennina, D. Cassioli OPTIMIST: Optimised Video Content Delivery Chains over Joint Multi-Access Edge Computing and 5G Radio Network Infrastructures In *2023 26th Euromicro Conference on Digital System Design (DSD)*, IEEE, 2023
- C52 **A. Marotta**, C. Rinaldi, C. Centofanti, K. Kondepu, D. Cassioli, F. Graziosi O-RAN Neutral Hosting as a Viable Solution for First Responders Seamless Connectivity In *2023 International Conference on Information and Communication Technologies for Disaster Management (ICT-DM)*, IEEE, 2023
- C53 L. Valcarenghi, **A. Marotta**, C. Centofanti, F. Graziosi, K. Kondepu A Cooperative Energy Saving Scheme for NG-PON2-Based 5G X-Haul In *2023 International Conference on Photonics in Switching and Computing (PSC)*, IEEE, 2023
- C54 M. Scatà, A. La Corte, **A. Marotta**, F. Graziosi, D. Cassioli A 6G Function Placement Framework Based on Complex Networks and Evolutionary Dynamics In *2023 2nd International Conference on 6G Networking (6GNet)*, IEEE, 2023
- C55 F. Martusciello, C. Centofanti, C. Rinaldi, **A. Marotta** Edge-Enabled Spatial Audio Service: Implementation and Performance Analysis on a MEC 5G Infrastructure In *2023 4th International Symposium on the Internet of Sounds*, IEEE, 2023
- C56 M. Giordano, C. Rinaldi, C. Centofanti, **A. Marotta** On the perception of urgency in audition: sound design of an early warning alarm In *2023 4th International Symposium on the Internet of Sounds*, IEEE, 2023
- C57 **A. Marotta**, K. Kondepu, C. Centofanti, S. Arnaout, A. Bhattacharyya, C. Rinaldi, F. Graziosi, D. Cassioli Performance Evaluation of MEC-enabled Fiber To The Room Architecture In *2023 IEEE International Conference on Advanced Networks and Telecommunications Systems (ANTS)*, IEEE, 2023
- C58 R. Tella, **A. Marotta**, P. Castoldi, L. Valcarenghi, K. Kondepu Enhancing UAV Systems via Task Offloading at the EDGE In *2023 IEEE International Conference on Advanced Networks and Telecommunications Systems (ANTS)*, IEEE, 2023
- C59 **A. Marotta**, L. Valcarenghi, K. Kondepu, C. Centofanti, C. Rinaldi, F. Graziosi, D. Cassioli Fiber To The Room Challenges and Opportunities In *2024 16th International Conference on COMMunication Systems & NETWORKS (COMSNETS)*, IEEE, 2024
- C60 V. Gudepu, R. Tella, C. Centofanti, J. Santos, **A. Marotta**, K. Kondepu, Demonstrating the Energy Consumption of Radio Access Networks in Container Clouds In *2024 IEEE/IFIP Network Operations and Management Symposium (NOMS)*, IEEE, 2024
- C61 C. Antonelli, A. Mecozzi, **A. Marotta**, F. Graziosi, G. Di Sciuillo, D. Ribezzo, M. Mazur, N. Fontaine, L. Dallachiesa, R. Ryf, et al. Field Transmission Performance of Multi-core and Few-Mode Fibers In *Optical Fiber Communication Conference (OFC) 2024*, paper W3J-1, Optica Publishing Group, 2024
- C62 A. Pacini, A. Sgambelluri, C. Centofanti, **A. Marotta**, E. Paolini, A. Giorgetti, L. Valcarenghi Hierarchical Software-Defined Control for Coordinated RAN and PON-based Transport Scaling In *2024 IEEE Network Operations and Management Symposium (NOMS)*, IEEE, 2024
- C63 **A. Marotta**, C. Centofanti, D. Cassioli, F. Graziosi, A. Pagano, N. Sambo, L. Valcarenghi Dynamic Spatial Aggregation for Energy-Efficient Passive Optical Networks In *2024 International Conference on Optical Network Design and Modeling (ONDM)*, IEEE, 2024, **Invited**

- C64 L. Valcarenghi, **A. Marotta**, C. Centofanti, F. Graziosi, K. Kondepu Energy-Efficient Integrated O-RAN/PON Access Network In *ICC 2024 - IEEE International Conference on Communications*, IEEE, 2024, pp. 4967–4972
- C65 C. Centofanti, V. Gudepu, J. Santos, R. R. Tella, **A. Marotta**, F. Graziosi, K. Kondepu An Energy Measurement Framework for 5G RAN Using USRP and Real-Time Monitoring. In *IEEE International Conference on Advanced Networks and Telecommunications Systems (ANTS) 2024*, pp. 1-5
- C66 E. Harshitha, V. Gudepu, B. Chirumamilla, C. Centifonti, **A. Marotta**, K. Kondepu Assessing Datasets for O-RAN RICs: Hoarding vs Choosing. In *IEEE International Conference on Advanced Networks and Telecommunications Systems (ANTS) 2024*, pp. 1-6
- C67 S. A. Ratti, A. Piccioni, **A. Marotta**, M. N. S. Velivela, D. Cassioli, F. Graziosi Enhancing Mobile Network Security through O-RAN: Architectural Solutions for Physical Layer Attack Detection. In *IEEE International Conference on Advanced Networks and Telecommunications Systems (ANTS) 2024*, pp. 1-3
- C68 S. Hinic, R. A. Bakar, **A. Marotta**, F. Paolucci Wire-speed DDoS Attack Mitigation using Hardware Acceleration of Programmable DPUs. In *IEEE Global Communications Conference (GLOBECOM) 2024*, pp. 1197-1202
- C69 A. Piccioni, **A. Marotta**, P. Di Marco, F. Graziosi Performance Evaluation of Multi-Connectivity for Massive-URLLC in Emergency Scenarios. In *International Conference on Information and Communication Technologies for Disaster Management (ICT-DM) 2024*, pp. 1-5
- C70 A. Piccioni, **A. Marotta**, C. Rinaldi, F. Graziosi Exploiting 6G Networks for Urban Air Mobility Connectivity. In *2024 IEEE Future Networks World Forum (FNWF)*, pp. 760-764
- C71 C. Antonelli, A. Mecozzi, **A. Marotta**, F. Graziosi, G. Di Sciullo, D. A. Shaji, Q. Wu, D. Ribezzo, M. Mazur, N. Fontaine, L. Dallachiesa, R. Ryf, R. Luís, B. Puttnam, H. Furukawa, G. Rademacher, R. Emmerich, C. Schubert, T. Hayashi, T. Nakanishi, T. Nagashima, P. Sillard, D. Bacco, A. Zavatta, M. Zahidy, L. Oxenløwe, M. Cappelletti, D. Orsuti, L. Palmieri, P. Parolari, A. Gatto, M. Fasano, P. Boffi, N. Sambo, A. Carena, A. Nespola, S. Guerrier, C. Dorize, J. Renaudier, N. Hoghooghi, F. Quinlan Space-Division Multiplexed Transmission from the Lab to the Field. In *ECOC 2024; 50th European Conference on Optical Communication*, pp. 337-340
- C72 F. Cugini, K. Vlachos, E. Riccardi, M. Quagliotti, L. Serra, A. Piat, M. Agus, A. Rossaro, J. Pedro, N. Costa, C. Pinho, A. Nunes, J. M. Rivas-Moscoso, A. Melgar, Ó. González, J. Hernández, D. Larrabeiti, A. Macián, R. Casellas, L. Nadal, R. Martínez, C. Antonelli, S. Tennina, **A. Marotta**, C. Centofanti, S. Barmounakis, V. Tsekenis, V. Karunakaran, A. Autenrieth, R. Magri, G. Gambari, L. Velasco, M. Ruiz, J. Comellas, S. Barzegar, J. Prat, S. Ghasrizadeh, A. Napoli, C. Castro, G. Doooms, R. Berozashvili, J. Fischer, B. Shariati Node design in Self-Managed Sustainable High-Capacity Optical Networks (SEASON). In *2024 12th International Workshop on Fiber Optics in Access Networks (FOAN)*, pp. 1-4
- C73 S. A. Ratti, **A. Marotta**, W. Tiberti, C. Centofanti, D. Cassioli, F. Graziosi Integrating O-RAN and SIEM for Unified Detection of IT and Mobile Network Attacks. In *IEEE Consumer Communications & Networking Conference (CCNC) 2025*, pp. 1-2
- C74 I. M. Ramadan, C. Centofanti, **A. Marotta**, F. Graziosi Evaluating Kubernetes Distributions: Insights from Stress Testing Scenarios. In *International Conference on COMMunication Systems & NETWORKS (COMSNETS) 2025*, pp. 13-18
- C75 S. A. Ratti, A. Tuzi, A. Piccioni, **A. Marotta**, D. Cassioli, F. Graziosi Exploiting O-RAN as an Effective Solution for Malicious User Localization. In *International Conference on COMMunication Systems & NETWORKS (COMSNETS) 2025*, pp. 301-307

- C76 R. S. Luis, G. Di Sciullo, M. van den Hout, R. Emmerich, N. Braig-Christophersen, Q. Wu, B. J. Puttnam, D. A. Shaji, F. Graziosi, A. Mecozzi, **A. Marotta**, C. Schubert, T. Hayashi, T. Nagashima, C. Okonkwo, G. Rademacher, C. Lasagni, P. Serena, A. Nespola, C. Antonelli, H. Furukawa 19.2 THz S+C+L Transmission in a Field Deployed, Randomly-Coupled, Multicore Fiber. In *European Conference on Optical Communication (ECOC) 2025*, pp. 1-4
- C77 G. Di Sciullo, D. A. Shaji, L. A. Zischler, R. S. Luis, R. Emmerich, M. van den Hout, C. Lasagni, P. Serena, A. Bononi, T. Hayashi, C. Schubert, C. Okonkwo, L. Palmieri, M. Shtaif, **A. Marotta**, A. Mecozzi, C. Antonelli Experimental Characterization of Stimulated Raman Scattering in Field-Deployed Coupled-Core Multi-Core Fibers. In *European Conference on Optical Communication (ECOC) 2025*, pp. 1-4
- C78 Q. Wu, D. Ribezzo, G. Di Sciullo, S. Cocchi, D. A. Shaji, L. A. Zischler, R. S. Luis, P. Serena, C. Lasagni, A. Bononi, T. Hayashi, A. Gagliano, P. Martelli, A. Gatto, P. Parolari, P. Boffi, D. Bacco, A. Zavatta, Y. Zhu, W. Hu, Z. Xu, M. Shtaif, **A. Marotta**, F. Graziosi, A. Mecozzi, C. Antonelli Field Demonstration of Quantum Key Distribution Coexisting with 110-Tb/s Classical Transmission over Multi-Core Fibers. In *European Conference on Optical Communication (ECOC) 2025*, pp. 1-4
- C79 Q. Wu, D. Ribezzo, G. Di Sciullo, S. Cocchi, D. A. Shaji, L. A. Zischler, R. S. Luis, P. Serena, C. Lasagni, A. Bononi, T. Hayashi, A. Gagliano, P. Martelli, A. Gatto, P. Parolari, P. Boffi, D. Bacco, A. Zavatta, Y. Zhu, W. Hu, Z. Xu, M. Shtaif, **A. Marotta**, F. Graziosi, A. Mecozzi, C. Antonelli Co-Existence of Quantum-Key Distribution and Classical Transmission in Space-Division Multiplexed Fiber-Optic Systems: Modelling and Validation Over Field-Deployed Multi-Core Fibers. In *European Conference on Optical Communication (ECOC) 2025*, pp. 1-4
- C80 M. Zenadocchio, G. Battisti, **A. Marotta**, V. Di Nino, G. De Vincentiis, A. Rabuffo Converging Computer Vision and Deep Learning for Adaptive Printing on Irregular 3D Surfaces. In *International Conference on Information and Communication Technology Convergence (ICTC) 2025*, pp. 1041-1042
- C81 **A. Marotta**, C. Centofanti, G. Di Sciullo, C. Antonelli, F. Graziosi, L. Valcarenghi A Resilient Passive Optical Network Architecture Based on Dynamic Spatial Aggregation. In *International Conference on Transparent Optical Networks (ICTON) 2025*, pp. 1-4
- C82 Z. Ali, W. Tiberti, **A. Marotta**, D. Cassioli A Lightweight Intrusion Detection System for IoT Based on Deep Transfer Learning at the Edge. In *IEEE Forum on Research and Technologies for Society and Industry (RTSI) 2025*, pp. 1-6
- C83 A. Piccioni, **A. Marotta**, C. Rinaldi, D. Cassioli, F. Graziosi Multi-Hop THz-Backhaul for Enhanced Urban Air Mobility Communications. In *IEEE 102nd Vehicular Technology Conference (VTC2025-Fall) 2025*, pp. 1-6
- C84 Z. Ali, **A. Marotta**, W. Tiberti, O. Odoardi, D. Cassioli, P. Di Marco Enhancing IIoT Security: BERT-Driven Intrusion Detection with MLP in Industrial Networks. In *IEEE World Forum on Internet of Things (WF-IoT) 2025*, pp. 1-7
- C85 **A. Marotta**, C. Centofanti, F. Graziosi, M. Quagliotti, M. Agus Coherent Point-to-Multipoint as a Viable Techno-Economic Solution for Mobile Network Fronthaul. In *2025 International Conference on Optical Network Design and Modeling (ONDM)*
- C86 **A. Marotta**, C. Centofanti, F. Graziosi, M. Quagliotti, M. Agus On the techno-economic viability of coherent P2MP DSCM for mobile network fronthaul. In *Photonic Networks and Devices, Optica Advanced Photonics Congress 2025*, paper NeW4B.3
- C87 C. Centofanti, **A. Marotta**, F. Graziosi, L. Valcarenghi Enhancing Energy Efficiency in PON Deployment via NETCONF-Controlled Dynamic Spatial Aggregation. In *2025 30th OptoElectronics and Communications Conference (OECC)*

- C88 C. Antonelli, A. Mecozzi, **A. Marotta**, F. Graziosi, G. Di Sciullo, D. A. Shaji, L. A. Zischler, Q. Wu, M. Mazur, N. Fontaine, L. Dallachiesa, R. Ryf, R. Luís, B. Puttnam, D. Orsuti, H. Furukawa, G. Rademacher, R. Emmerich, C. Schubert, T. Hayashi, T. Nakanishi, T. Nagashima, P. Sillard, D. Ribezzo, D. Bacco, A. Zavatta, M. Zahidy, L. Oxenløwe, M. Cappelletti, L. Palmieri, P. Parolari, A. Gatto, P. Martelli, M. Fasano, P. Boffi, N. Sambo, A. Carena, A. Nespola, S. Guerrier, C. Dorize, J. Renaudier, N. Hoghooghi, F. Quinlan Space-Division Multiplexed Transmission in Deployed Fibers. In *2025 30th OptoElectronics and Communications Conference (OECC)*
- C89 M. Ibrahimi, P. Lobaccaro, G. Di Sciullo, G. S. Sticca, F. Musumeci, R. S. Luís, **A. Marotta**, C. Antonelli, M. Tornatore Data-Driven Failure Localization in Multi-Core Optical Networks. In *2025 30th OptoElectronics and Communications Conference (OECC)*
- C90 **A. Marotta**, G. Di Sciullo, C. Antonelli, M. Ibrahimi, G. S. Sticca, F. Musumeci, *et al.* Experimental Insights on Fault Localization and Energy Efficiency in Multi-Core Fiber Systems. In *2025 Asia Communications and Photonics Conference (ACP)*, pp. 1-3
- C91 G. Di Sciullo, L. A. Zischler, D. A. Shaji, R. S. Luís, R. Emmerich, M. van den Hout, C. Lasagni, P. Serena, A. Bononi, T. Hayashi, C. Schubert, C. Okonkwo, L. Palmieri, M. Shtauf, **A. Marotta**, A. Mecozzi, C. Antonelli Stimulated Raman Scattering in Field-Deployed Coupled-Core Multi-Core Fibers. In *Frontiers in Optics 2025*, paper FTu1E.1
- C92 A. Naveed, **A. Marotta**, W. Tiberti, F. Santucci, P. Di Marco Ensemble Learning-Based Anomaly Detection for Automotive in-Vehicle Networks. In *2025 IEEE World AI IoT Congress (AllIoT)*, pp. 18-23
- C93 I. M. Ramadan, C. Centofanti, **A. Marotta**, F. Graziosi Low Latency in Containerized Environments: A Performance Analysis with DPDK and Kubernetes. In *2025 IEEE Future Networks World Forum (FNWF)*, pp. 1-6
- C94 A. K. Subudhi, A. Piccioni, **A. Marotta**, F. Graziosi, R. M. Hegde, K. Kondepu Mobility-Aware Resource Allocation in 5G O-RAN using ns-3. In *2025 IEEE Future Networks World Forum (FNWF)*, pp. 1-6
- C95 C. Aouiche, A. Aouiche, Z. Ali, Y. Alkhrijah, S. Hamdi, A. Gaidi, **A. Marotta**, *et al.* Improving 6G Network Performance with Linear Regression and Stacking GBM. In *2025 International Conference on Recent Advances in Mathematics and Informatics*
- C96 A. Kaceli, M. Zenadocchio, C. Centofanti, F. Graziosi, **A. Marotta** Deployment Strategies for AI-based Computer Vision in Industrial Quality Control. In *IEEE International Conference on Advanced Networks and Telecommunications Systems (ANTS) 2025*, pp. 1-6
- C97 A. Kaceli, M. Zenadocchio, C. Centofanti, F. Graziosi, **A. Marotta** Deployment Strategies for AI-based Computer Vision in Industrial Quality Control. In *IEEE Consumer Communications & Networking Conference (CCNC) 2026*, pp. 1-2
- C98 P. Terzano, K. Kondepu, C. Centofanti, G. Battisti, **A. Marotta** Beyond Accuracy: Practical Aspects of Machine Learning for Early Detection of Optical Network Failures. In *International Conference on Telecommunications (ICT) 2026*, pp. 221-226
- C99 A. Alyosef, R. Juha, R. Hamdan, **A. Marotta**, R. Valentini A Framework for Reliable Cell-Free mmWave Massive MIMO Networks Under Human Blockage. In *International Conference on Telecommunications (ICT) 2026*, pp. 427-432
- C100 A. Piccioni, C. Rinaldi, C. Centofanti, **A. Marotta**, P. Di Marco, F. Graziosi Bridging 5G and 6G for Multimedia IoT: Structural Limitations and Architectural Directions. In *IFIP Networking Conference 2026*, pp. 1-6
- C101 M. Ibrahimi, G. S. Sticca, M. Tibaldini, M. Milione, F. Musumeci, G. Di Sciullo, **A. Marotta**, C. Antonelli, M. Tornatore A Network-Wide Power Analysis of Cladding-Pumped Amplification in Multi-Core Optical Networks. In *Optical Fiber Communication Conference (OFC) 2026*, pp. 1-3

- C102 **A. Marotta**, P. A. Robles, P. González, L. D'Errico, I. Babiker, C. Centofanti, G. Di Sciullo, C. Antonelli, L. Velasco, S. Tennina, S. Parker, M. Quagliotti, E. Riccardi, O. G. De Dios, F. Cugini, A. Sgambelluri End-to-End Orchestration across MCF Infrastructure: Field Trial of Spatial PON and Metro Convergence with O-RAN for AR/VR Services with Edge Offload. In *Optical Fiber Communication Conference (OFC) 2026*
- C103 R. Morro, R. Mercinelli, A. Pagano, A. C. Piat, E. Riccardi, **A. Marotta**, C. Centofanti, R. Casellas, F. Cugini, A. Sgambelluri Dynamic Control of Multi-Technology Optical Access Networks with PON and Coherent P2MP. In *Optical Fiber Communication Conference (OFC) 2026*
- C104 G. Di Sciullo, R. S. Luis, M. van den Hout, Q. Wu, P. Sillard, F. Achten, R. Emmerich, N. Braig-Christophersen, B. J. Puttnam, D. A. Shaji, L. A. Zischler, **A. Marotta**, F. Graziosi, C. Lasagni, P. Serena, A. Bononi, G. Rademacher, C. Okonkwo, C. Schubert, R. Freund, J. Sakaguchi, A. Mecozzi, H. Furukawa, C. Antonelli Petabit-per-Second C+L Band Transmission Over a Field-deployed 15-Mode Fiber Link. In *Optical Fiber Communication Conference (OFC) 2026*
- C105 A. Piccioni, **A. Marotta**, C. Rinaldi, D. Cassioli, F. Graziosi Enabling Reliable and Scalable Urban Air Mobility Communications Through 6G Network Slicing. In *IEEE Wireless Communications and Networking Conference (WCNC) 2026*
- C106 M. Bakro, **A. Marotta**, W. Tiberti, O. Odoardi, I. Salvatore, P. Di Marco Real-Time Intrusion Detection in IIoT/OT Networks Via Traffic-Feature Forecasting: A Testbed Study. In *IEEE International Conference on Factory Communication Systems (WFCS) 2026*
- C107 A. Piccioni, **A. Marotta**, C. Rinaldi, G. Battisti, D. Cassioli, F. Graziosi 6G Vehicular-Aware Ran Strategies for Urban Air Mobility Communications. In *International Conference on Wireless On-demand Network Systems and Services (WONS) 2026*, pp. 53-56

Book Chapters

- B1 F. Franchi, F. Graziosi, **A. Marotta**, C. Rinaldi, The City of L'Aquila as a Living Lab: The INCIPICT Project and the 5G Trial, In *Smart Governance for Cities: Perspectives and Experiences*, Springer, Cham, Germany, 2020.
- B2 S. Subramaniam, K. Kondepu, **A. Marotta**, Cross-layer Design, In *Springer Handbook of Optical Networks*, Springer Nature Switzerland AG, Basel, Switzerland, 2020.

Other Publications

- O1 C. Antonelli, **A. Marotta**, F. Graziosi, A. Mecozzi, Towards Space-Division Multiplexed Transmission: The World-Wide First and Unique Testbed with Deployed Special Fibers for the Photonics Community, In *IEEE Photonics Society News*, Apr. 2020.
- O2 F. Cugini, M. Tornatore, N. Sambo, C. Rottondi, **A. Marotta**, *Optical Networks evolution: from programmability to Machine Learning and Spatial Division Multiplexing*, In *CNIT Technical Report Network Programmability: a (r)evolutionary approach*, Nov. 2020.
- O3 L. Valcarenghi, **A. Marotta**, C. Centofanti, F. Graziosi, J. C. Borromeo, and K. Kondepu, *Optical Access for 5G and B5G*, In *CNIT Technical Report Advances in Optical Communications: from Integrated Photonics to Optical Systems and Network*, Dec. 2023.

Editorial and Conference activities

Editorial Activities

- 2023 – **Topic Editor**, *Frontiers in Communications and Networks (ISSN: 2673-530X) Frontiers*.
present
- 2022 – **Editor**, *Wireless Networks (ISSN: 1022-0038, 1572-8196) Springer*.
present
- 2022 – **Member of the Topical Advisory Panel**, *Photonics (ISSN: 2304-6732) MDPI*.
present

2022 – **Member of the Reviewer Board**, *Sensors*, (ISSN 1424-8220), MDPI.
present

Reviewer Activities

2023 – **Reviewer**, *Nature*, Scientific Reports, Scientific Data.
present

2019 – **Reviewer**, *Elsevier*, Computer Networks, Computer Communications, Optical Switching and
present Networking, Optical Fiber Technology .

2019 – **Reviewer**, *MDPI*, Photonics, Sensors, Energies, Applied Sciences, Future Internet.
present

2019 – **Reviewer**, *Optica*, Journal of Optical Communications and Networking, Journal of Lightwave
present Technology.

2018 – **Reviewer**, *Springer*, Wireless Networks, Memetic Computing, Journal of Supercomputing.
present

2017 – **Reviewer**, *IEEE*, IEEE Communication Letters, IEEE Access, IEEE Transactions on Network-
present ing, IEEE Transactions on Communications, IEEE Transactions on Mobile Computing, IEEE
Transactions on Network and Service Management.

2015 – **Reviewer**, *Wiley*, Transactions on Emerging Telecommunications Technologies.
present

Conference Activities

2026 **Workshop Chair**, 1st Workshop on Experimental Research on Networking (ERN) held in
conjunction with 17th International Conference on Network of the Future (NoF) 2026.

2026 **Organizing Committee Member**, Italian Conference on Optics and Photonics 2026 (ICOP
2026).

2025 **Demo Chair**, IEEE International Symposium on the Internet of Sounds (IS2 2025).

2024 **Workshop Chair**, Next-Generation Multimedia Services at the Edge: Leveraging 5G and Beyond
Colocated with the 29th IEEE Symposium on Computers and Communications (ISCC 2024).

2023 **Symposium Chair**, 9th Int. Symposium on Engineering Energy Efficient InternetWorked Smart
seNsors (E3WSN) Colocated with the 37th International Conference on Advanced Information
Networking and Applications (AINA-2023).

2021 – **Technical programme committee member**, IEEE Global Communications Conference (GLOBE-
present COM) — NGNI, CQRM, MWN Symposia and Workshops.

2022 – **Technical programme committee member**, IEEE International Conference on Communications
present (ICC) — NGNI, MWN, IoT Symposia and Workshops.

2022 – **Technical programme committee member**, IEEE Conference on Standards for Communications
present and Networking (CSCN).

2023 – **Technical programme committee member**, International Workshop on Edge Network Soft-
present warization (ENS), colocated with the IEEE International Conference on Network Softwarization
(NetSoft).

2025 – **Technical programme committee member**, IEEE International Conference on Advanced
present Networks and Telecommunications Systems (ANTS).

2025 – **Technical programme committee member**, International Conference on Optical Network
present Design and Modelling (ONDM).

2026 – **Technical programme committee member**, International Conference on Wireless On-demand
present Network Systems and Services (WONS).

2026 **Technical programme committee member**, International Wireless Communications and Mobile
Computing Conference (IWCMC) — IoDA Symposium.

- 2026 **Technical programme committee member**, International Conference on Information and Communication Technologies for Disaster Management (ICT-DM).
- 2026 **Technical programme committee member**, Workshop on Next-Generation Multimedia Services at the Edge (NGMSE), colocated with the IEEE Symposium on Computers and Communications (ISCC).
- 2019 – 2021 **Technical programme committee member**, IEEE 5G World Forum (WF-5G).
- 2018 – 2019 **Technical programme committee member**, IEEE International Forum on Research and Technologies for Society and Industry (RTSI).
- 2019 **Session chair**, IEEE International Conference on Computing, Networking and Communications (ICNC).
- 2018 **Session chair**, IEEE International Conference on Communications (ICC).

Awards

- 2023 **Best Student Paper Award**, *1st International Workshop on Networked Immersive Audio*, F. Martusciello, C. Centofanti, C. Rinaldi, A. Marotta, Edge-Enabled Spatial Audio Service: Implementation and Performance Analysis on a MEC 5G Infrastructure.

Research activities

Research Projects

- Jul. 2026 – present **Local-PI**, *OPTIM-EE - Ottimizzazione Energetica tramite Intelligenza Artificiale*, Abruzzo Region.
- Jul. 2026 – present **Researcher**, *AEGIS - Advanced Ecosystem of Garments and Innovative Sensoring*, Abruzzo Region.
- Jul. 2026 – present **Researcher**, *2SW - Smart Wearable for Safer Workers*, Abruzzo Region.
- Sep. 2025 – Feb. 2026 **Researcher**, *EDIHAMO European Digital Innovation Hub Abruzzo Molise*, Ministry of Enterprises and Made in Italy.
- Apr. 2025 – present **Principal Investigator**, *MERITO - Monitoraggio dell'energia in openRAN tramite trasporto intelligente e ottimizzazione di x/rApps*, Indian Ministry of Science and Technology and Italian Ministry of Foreign Affairs.
- Mar. 2024 – Dec. 2026 **Local-PI**, *SPRINT - Supporting Project to Restart on Intelligent Networks for Telecommunications*, Cascade Call Programma PE RESTART - RESearch and innovation on future Telecommunications systems and networks, to make Italy more smART.
- Mar. 2024 – Dec. 2026 **Researcher**, *TRIBOLETTO - Three research activities boosting up RIGOLETTO*, Cascade Call Programma PE RESTART - RESearch and innovation on future Telecommunications systems and networks, to make Italy more smART.
- Dec. 2023 – Nov. 2025 **Local-PI, Co-PI**, *GASTON - Green, Autonomic, and reSilienT Optical multi-core Networks*, Progetti di Rilevante Interesse Nazionale (PRIN).
- Jul. 2022 – Feb. 2026 **Work Package Leader**, *VITALITY Innovation, digitalisation and sustainability for the diffused economy in Central Italy*, European Union - NextGenerationEU under the Italian Ministry of University and Research (MUR) National Innovation Ecosystem grant.
- May. 2020 – July 2025 **Work Package Leader**, *OPTIMIST OPTIMised video content delivery chains leveraging data analysis over joint multi-access edge computing and 5G radio network infrastructures*, MSCA-RISE-2019 - Research and Innovation Staff Exchange, grant 872866.
- Feb. 2020 – Dec. 2024 **Researcher**, *FIRST Fiber Infrastructure for Research on Space-Division Multiplexed Transmission*, Progetti di Rilevante Interesse Nazionale (PRIN).

- May. 2018 – **Researcher**, *CYBERTRAINER*, supported by Abruzzo Region POR FESR Abruzzo 2014-2020 –
 Nov. 2021 Asse I Determinazione n. 35 DPG013 del 30/11/2017.
- Jul. 2017 – **Researcher**, *INCUBANDO INCUBate and DO*, supported by the Italian Ministry of Foreign
 Jul. 2020 Affairs and Israeli Ministry of Science, Technology and Space.
- Mar. 2017 – **Researcher**, *Italian 5G Trial*, promoted by the Ministry for the Economic Development.
 June 2020
- Jan. 2016 – **Researcher**, *CASPER A user-Centric middleware Architecture for advanced Service Provisioning*
 Dec. 2019 *in futurE netwoRks*, MSCA-RISE-2014 - Marie Skłodowska-Curie Research and Innovation Staff
 Exchange (RISE), grant 645393.
- Nov. 2015 – **Researcher**, *INCIPICT Innovating City PlannIng through Information and Communications*
 Jun. 2024 *Technologies*, supported by the Italian Government under CIPE resolution no. 135 (December
 21, 2012).
- Nov. 2015 – **Researcher**, *ROAD-NGN Optical Frequency/Wavelength Division Multiple Access Techniques*
 Feb. 2016 *For Next Generation Networks*, Progetti di Rilevante Interesse Nazionale (PRIN).
- Innovation, Technology Transfer and Corporate Partnerships**
- Jul. 2026 – **Insitutional Referent**, *Italian National Cybersecurity Agency (ACN)*, Convention.
 present Convention between ACN and the University of L'Aquila for curricular internships at the Italian National
 Cybersecurity Agency.
- Jul. 2026 – **Scientific Responsible**, *Quantum Bridge Technologies EU S.r.l.*, Third-party research contract.
 present Secure Deployment and High-Performance Networking for Multi-Backbone VPN Architecture.
- Apr. 2026 – **Co-founder**, *NexTrainE S.r.l.*, Academic Spin-off, University of L'Aquila.
 present IoT data management, Edge-to-Cloud intelligence and Industrial AI. nextrain.com
- Feb. 2025 – **Scientific Responsible**, *RaiWay S.p.A.*, Framework Agreement.
 present Open Radio Access Networks; broadcasting over mobile networks; edge computing, network slicing and
 advanced networking paradigms; multimedia applications and services; networks and technologies for
 advanced mobility.
- Mar. 2024 – **Scientific Responsible**, *Selmec S.r.l.*, Third-party research contract.
 Jun. 2025 OT Cybersecurity.

Teaching

Teaching Activities

- 2nd Sem. **Design of Access, Metro, and Core Networks**, *ING-INF/03*, Course offered to Master's degree
 A.Y. students in Telecommunications Engineering, University of L'Aquila.
 2025/2026 (60 hours)
- 2nd Sem. **Design of Access, Metro, and Core Networks**, *ING-INF/03*, Course offered to Master's degree
 A.Y. students in Telecommunications Engineering, University of L'Aquila.
 2024/2025 (60 hours)
- 2nd Sem. **Design of Access, Metro, and Core Networks**, *ING-INF/03*, Course offered to Master's degree
 A.Y. students in Telecommunications Engineering, University of L'Aquila.
 2023/2024 (60 hours)
- 2nd Sem. **Advanced and Software Defined Networks**, *ING-INF/03*, Course offered to Master's degree
 A.Y. students in Telecommunications Engineering and Computer Engineering, University of L'Aquila.
 2023/2024 (30 hours)
- 2nd Sem. **Design of Access, Metro, and Core Networks**, *ING-INF/03*, Course offered to Master's degree
 A.Y. students in Telecommunications Engineering, University of L'Aquila.
 2022/2023 (60 hours)

- 2nd Sem. **Advanced and Software Defined Networks**, *ING-INF/03*, Course offered to Master's degree students in Telecommunications Engineering and Computer Engineering, University of L'Aquila.
2022/2023 (60 hours)
- 2nd Sem. **Design of Access, Metro, and Core Networks**, *ING-INF/03*, Course offered to Master's degree students in Telecommunications Engineering, University of L'Aquila.
2021/2022 (60 hours)
- 2nd Sem. **Advanced and Software Defined Networks**, *ING-INF/03*, Course offered to Master's degree students in Telecommunications Engineering and Computer Engineering, University of L'Aquila.
2021/2022 (30 hours)
- Apr. 2021 – **Ph.D. Course: Optical Wireless Convergence**, *University of L'Aquila*, L'Aquila, Italy.
Jun. 2021 (30 hours)

[Ph.D. Advising](#)

- XL cycle **Advisor**, *Mhamad Bakro*, Curriculum System Engineering, telecommunications and HW/SW platforms, Cybersecurity for Operational Technology.
- XL cycle **Advisor**, *Matteo Zenadocchio*, Curriculum System Engineering, telecommunications and HW/SW platforms, AI-assited fraud detection.
- XL cycle **Co-Advisor**, *Stefano Hinic*, Curriculum System Engineering, telecommunications and HW/SW platforms, In-Network QoE Monitoring and Root-Cause Attribution for OTT Video Services.
- XXXVIII cycle **Co-advisor**, *Steve Azarsh Ratti*, Curriculum System Engineering, telecommunications and HW/SW platforms, Open RAN Security.
- XXXVIII cycle **Co-advisor**, *Anjum Naveed*, Curriculum System Engineering, telecommunications and HW/SW platforms, Intelligent Transport Systems Security.
- XXXVIII cycle **Co-advisor**, *Ali Zeeshan*, Curriculum System Engineering, telecommunications and HW/SW platforms, Cloud Security.

[Master's Theses and Bachelor's Theses](#)

- 2026 **Co-Advisor**, *Ayham Alyosef*, Analytical Study of Cell-Free Millimeter-Wave Massive MIMO Networks Under Human Blockage , M.Sc. Telecommunications Engineering.
- 2026 **Co-Advisor**, *Ramah Juha*, Load Balancing and Bandwidth Allocation in Integrated Access and Backhaul Multi-Hop Networks: A Distributed and Scalable Stackelberg Model , M.Sc. Telecommunications Engineering.
- 2025 **Advisor**, *Marco Di Domenica*, eBPF-based Security Techniques: Design and Analysis of Observability and Detection Mechanisms , M.Sc. Computer Engineering.
- 2025 **Advisor**, *Lucia Torlone*, Distributed AI Workload Orchestration for a Wildlife Detection and Notification System , M.Sc. Telecommunications Engineering.
- 2025 **Advisor**, *Angelo Kaceli*, Deployment Strategies for AI-Based Computer Vision Systems in Industrial Quality Control , M.Sc. Telecommunications Engineering.
- 2024 **Advisor**, *Mehdi Mekhatria*, Anomaly Detection in Mobile Networks with O-RAN , M.Sc. Telecommunications Engineering.
- 2024 **Co-Advisor**, *Francesca Ciccarelli*, Strategic Weighing for Cybersecurity Risk Assessment: Methodologies for Evaluation and Visualization , M.Sc. Applied Data Science.
- 2024 **Advisor**, *Antonio Aristotile*, Analysis of Anomalies Related to Malware, Data Availability Threats and Data Exfiltration via Machine Learning in SIEM environment, M.Sc. Computer Engineering.
- 2024 **Advisor**, *Stefano Hinic*, DDoS Attack Mitigation using Hardware Acceleration of DPUs , M.Sc. Telecommunications Engineering.
- 2023 **Advisor**, *Omar Moukawim*, A Security Information and Event Management architecture for connected vehicles, M.Sc. Computer and Automation Engineering.

- 2023 **Advisor**, *Mohammed Kheir*, An ORAN Handover Strategy Implementation in ONOS SD-RAN Environment, M.Sc. Telecommunications Engineering.
- 2023 **Advisor**, *Alessio Perozzi*, A Framework for Cyber Crisis Exercises: Analysis, Design, and Implementation, M.Sc. Computer and Automation Engineering.
- 2023 **Advisor**, *Sandra Arnaout*, Performance Evaluation of FTTR Architecture, M.Sc. Telecommunications Engineering.
- 2022 **Advisor**, *Omar Mayou*, Hardware Implementation of a Reliability Strategy for Programmable Data Planes, M.Sc. Telecommunications Engineering.
- 2022 **Co-advisor**, *Marco Cianca*, Approccio basato su SIEM per l'individuazione di cyber attacchi nei sistemi di trasporto intelligenti, M.Sc. Computer and Automation Engineering.
- 2022 **Co-advisor**, *Gioacchino Castorio*, Study and Implementation of reliability strategies for Programmable Data Plane Networks, M.Sc. Telecommunications Engineering.
- 2022 **Co-advisor**, *Stefano Hinic*, Controllo Software Defined di una Rete Ottica Passiva, B.Sc. Information Engineering.
- 2021 **Advisor**, *Marco De Luca*, Studio e implementazione di aspetti di availability in ambiente OSM per un servizio video, B.Sc. Information Engineering.
- 2021 **Advisor**, *Lorenzo D'Amico*, Studio e implementazione di aspetti di workload management in ambiente OSM per un servizio video, B.Sc. Information Engineering.
- 2021 **Co-advisor**, *Riccardo Prosperococco*, Simulazione di comunicazioni ad alta affidabilità e bassa latenza in ambito 5G, B.Sc. Information Engineering.
- 2021 **Co-advisor**, *Alessia Mammarella*, Studio del protocollo DASH su rete 5G, B.Sc. Information Engineering.
- 2021 **Co-advisor**, *Umberto Impicciatore*, Tecnologie e protocolli per comunicazioni ad ampio raggio in ambito IoT, B.Sc. Information Engineering.
- 2021 **Co-advisor**, *Lucia Torlone*, Analisi e sviluppo di un sistema di spazializzazione sonora basato su 5G, B.Sc. Information Engineering.
- 2020 **Co-advisor**, *Giammarco Di Sciullo*, Radio Access Network Slicing con OpenairInterface e FlexRAN, B.Sc. Information Engineering.

Service Activities to the Atheneum

- 2026 – present **Member of the Atheneum Third Mission Committee**, *University of L'Aquila*.
- 2025 – present **Member of the Department Third Mission, Social Impact and Territorial Relations Committee**, *DISIM department*.
- 2021 – 2025 **Member of the Departmet Committee for Orientation and Relations with Schools**, *DISIM department*.
- 2023 – present **Local Coordinator**, *Juniper Networks University Program*.
- 2022 – present **Local Coordinator**, *Splunk Workplus University Program*.
- 2022 – present **Event organization**, *Organization of the event "Your Future in Cybersecurity" for B.Sc. and M.Sc. students*.
- 2022 – present **Internship Tutoring**, *Tutoring of students during their internships in IT companies in the areas of Networking and Cybersecurity*.
- 2021 – present **Member of the Orientation and Placement committee**, *DISIM, Information Engineering area*.
- 2021 – 2024 **Secretary of the Didactic Area Council**, *Telecommunications Engineering course*.

- 2021 – 2025 **Teacher of Network Security**, *Cyberchallenge National Initiative*.
- 2021 – present **Seminar organization**, *Seminars on Optical Networking, 5G and Beyond, Cybersecurity offered to B.Sc. and M.Sc. students*.
- 2016 – 2017 **International Students Tutoring**, *Erasmus+ Programme*.

Training

- 2026 **AWS Certified Instructor**, AWS.
- 2026 **AWS Certified Cloud Practitioner**, AWS.
- 2024 **Getting started with cloud**, Juniper.
- 2023 **O-RAN System Training**, Intelefy.
- 2021 **Splunk 7.x Fundamentals Part 2**, Splunk.
- 2021 **Splunk 7.x Fundamentals Part 1**, Splunk.
- 2017 **Summerschool on Network Programmability**, Jacob T. Schwartz International School for Scientific Research.
- 2016 **5G NORMA Summerschool**, 5G NORMA EU project.
- 2013 **Professional Course "Instrumentation and control systems for industrial facilities"**, ENEA Italian National Agency for new technologies, energy and sustainable economic development, Rome, Italy.
- 2013 **Certified associate in project management training course**, PMI Rome Chapter, L'Aquila, Italy.
- 2012 **Professional course "Introduction to the development of mobile applications on the android platform"**, University of L'Aquila, L'Aquila, Italy.
- 2012 **Professional course "Remote services of electrical networks, water, and gas: local automation, distributed control, and communication networks"**, Itaco Systems srl, Rome, Italy.
- 2011 **Cisco networking academy course CCNA exploration: network fundamentals**, University of L'Aquila, L'Aquila, Italy.

Other Professional Experiences

- Sep. 2025 – Mar. 2026 **Consultant**, *Muchcolours srl*, Working group for the realization of an industrial printing process based on surface recognition using Artificial Intelligence.
- Oct. 2024 – July 2025 **Court-Appointed Technical Consultant**, *Tax Court of Second Instance, Marche*.
- Dec. 2021 – Dec. 2022 **Senior Consultant**, *Invitalia S.p.a.*, Working group in support of the Special Commissioner for Reconstruction within the scope of interventions financed by the Recovery Fund, measure "Safe, sustainable, and connected cities and towns".

Networks and memberships

- 2015 – current **IEEE - Institute of Electrical and Electronics Engineers**.
IEEE Communications Society Membership; IEEE Computer Society Membership; IEEE Young Professionals; IEEE Women in engineering