

RAUL MUÑOZ

ONTC secretary Candidate
IEEE Optical Networking Technical Committee

POSITION STATEMENT

The optical network, spanning from access to the core, serves as the backbone of our modern digital society, playing a pivotal role in keeping education, businesses, and society at large connected and operational. Throughout my 20-year professional career, I have been fully dedicated to the research and development of optical networks. During this time, I have engaged in various activities aimed at advancing the positioning and promotion of optical networks for 5G/6G. In particular, I was elected academic member at the Board of the 5G Infrastructure Association (5GIA), the Steering Board of the Wireless World Research Forum (WWRF), and the Networld2020 European Technology Platform (ETP) from January 2015 to September 2017. I have also served as editor of the optical networks chapter in the Networld Europe's Strategic Research and Innovation Agenda (SRIA) in 2016 and 2022, and contributed in the elaboration of white papers on 5G in Europe, positioning the optical networks in the fronthaul/backhaul.

If elected, I will focus my efforts to:

- Do the utmost to strengthen the collaboration with the ONTC approved conferences to increase the number of submissions and revert the trend of the last years.
- Energize ONTC activities to increase the participation of the academy and industry.
- Closely monitor emerging topics and new trends in optical networks, to promptly turning them into concrete opportunities for ONTC
- Find effective ways to increase the collaboration with other technical committees, looking for synergies and multidisciplinary research.
- Engage students and early-career professionals in ONTC activities, enable sharing scientific information and stimulating research interests for students in the field of optical networking.
- Continue Promoting equality and diversity, making every effort to eliminate discrimination, and creating equal opportunities between different people in the ONTC activities.

SUMMARY

Raul Muñoz is graduated in telecommunications engineering in 2001 and received a Ph.D. degree in telecommunications in 2005, both from Universitat Politècnica de Catalunya (UPC), Spain. After working as undergraduate researcher at Centro Studi e Laboratori Telecomunicazioni (CSELT) (Turin, Italy) in 2000, where he developed his engineering degree's final project, he worked as Assistant Professor at the UPC, giving the course of optical communications lab in the telecommunications engineering degree In 2001. In 2002, he joined the Centre Tecnològic de Telecomunicacions de Catalunya (CTTC). Currently, he is Research Director (since January 2021), Head of the Optical Networks and Systems (ONS) Department (since April 2013), and Manager of the Communication Networks Division (since April 2013). The Optical Networks and Systems (ONS) department is composed of 8 permanent Senior Researchers, and several Research Assistants associated to research projects, reaching a team around 15 people. Previously, He was the Coordinator of the Optical Networking Area (2005-2013), leading the creation of the new research group, and of the ADRENALINE testbed© (2002-2009), leading its design and development from scratch. He was also giving support to the CTTC direction in the management of European proposals and was the CTTC representative and elected academic member at the Board of the 5G Infrastructure Association (5GIA)¹, the Steering Board of the Wireless

¹<https://5g-ia.eu>

World Research Forum (WWRF)², and the Network2020 European Technology Platform (ETP)³ from January 2015 to September 2017. During this period, he was involved in different activities and groups that generated several white papers and positioning papers on 5G in Europe. He is now member of the Huawei European Optical Communication Advisory Board.

Since 2000, he has participated in over 50 RD projects funded by the European Commission's Framework Programmes (Horizon Europe, H2020, FP7, FP6, FP5, CELTIC and ITEA) and the Spanish National research programmes (UNICO-5G, Retos Investigación I+D+i, Proyectos de Investigación Fundamental no orientada, Proyectos I+D, Redes Temáticas, CENIT, PROFIT). In particular, it is worth highlighting the participation in several H2020 5GPPP and Horizon Europe SNS projects dealing with 5G/6G infrastructures (packet/optical transport and distributed cloud/edge computing) and services (NFV network services and network slicing for verticals) since 2014 such as HEXA-X-II (Task Leader), FLEX-SCALE (WP leader), INSPIRE-5G+ (WP leader), 5GCroCo (Barcelona Trial coordinator), or blueSPACE (WP leader). He has been the Principal Investigator of nine European projects (HE HEXA-X-II and FLEX-SCALE, H2020 INSPIRE-5G+ and blueSPACE, FP7 IDEALIST, STRONGEST, and BONE, and FP6 NOBEL2 and NOBEL). He has been the Project Coordinator of five Spanish research projects (Proyectos I+D/Retos/UNICO-5G): 6G-OPENSEC (TSI-063000-2021-58, TSI-063000-2021-60, TSI-063000-2021-61), RELAMPAGO (PID2021-127916OB-I00), AUORAS (RTI2018-099178-B-I00), DESTELLO (TEC2015-69256-R), FARO (TEC2012-38119), DORADO (TEC2009-07995) and RESPLANDOR (TEC2006-12910/TCM); and one International Complementary Action (ACI) with the National Institute of Information and Communications Technology – NICT from Japan (GAUDI project, PCI2006-A7-0715). He has also been the Project Coordinator of two European projects, the coordinated EU-Japan STRAUSS project (608528) within FP7, and the Marie Skłodowska-Curie Innovative Training Networks (MSCA-ITN) ONFIRE project (765275) within the H2020 framework programme. He has also participated and/or led several research projects with the industry (KDDI Research, Telefónica I+D, etc).

He has served as General Chair (ONDM2020 and WWRF39), as Technical Programme Committee (TPC) Chair (ONDM 2019, ECOC 2015, and NOC 2012), as Symposium Track Chairs (ICC 2023 Optical Networks and Systems) and as Technical Track Chair (IEEE WFIoT 2021, EUCNC 2014) in major conferences. He has also participated in the organization of industry panels, and workshops (EUCNC 2015, EUCNC 2017, ONDM 2019, ONDM 2020). He has been TPC member of various networking conferences (ECOC, ICC, GLOBECOM, IPOP, ONDM, and EUCNC), member of the ONDM steering board (2019-), as well as reviewer of top-leading journals and magazines in the field such as IEEE/OSA journal of Lightwave Technologies (JLT), IEEE/OSA Journal of Optical Communications and Networking (JOCN), IEEE Communications magazine, and IEEE Network Magazine. He also served as Associate/Guest editor for the JLT ECOC2015 special issue, JOCN ONDM2020 special issue and Springer Photonic Network Communications Journal ONDM2019 special issue. He has served as evaluator for the National research agencies of Spain (ANEP, Comisiones TEC-TCM, CDTI CPI), and Luxemburg (FNR).

His research interests include control and service management architectures (SDN, NFV, MEC) for future optical networking and communications. He has successfully supervised 5 PhD thesis. He has published 90 JCR journal papers (71 in Q1), 275 international conference papers (including 40 invited papers in prestigious conferences such as OFC, ECOC, ONDM, OECC/PSC, IEEE Photonics summer topicals meeting series, ICTON), and three patents in this field. The total number of citations is 5847/4158, with a H-index of 38/31. (Source: Google Scholar⁴ and Scopus⁵ respectively, updated on 19/07/2023). He is IEEE Senior Member since 2012, and member of the IEEE communications society. Since April 2021 he has the accreditation issued by AQU Catalunya⁶ to apply for the contractual

²<https://www.wwrf.ch/>

³<https://www.network2020.eu/>

⁴<https://scholar.google.com/citations?user=pB5RinkAAAAJhl>

⁵<https://www.scopus.com/authid/detail.uri?authorId=14032184500>

⁶<https://www.aqu.cat/en/teaching-staff/Assessment-of-the-teaching-staff/Accreditation-of-research>

category of Full Professor in the Catalan University System.

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⁸<https://www.scopus.com/authid/detail.uri?authorId=14032184500>

⁹<https://publons.com/researcher/4510208/raul-munoz/>