

Workshop Speaker

Full Name	Antonio Teixeira
Affiliation	Universidadede Aveiro
Presentation Title	Coherent path towards metro-access

Biography

Antonio Teixeira, got his PhD from university of Aveiro in 1999, partly developed at the University of Rochester. He holds an EC in management and leadership from MIT Sloan School and a post graduation in quality management in the field of Higher Education. He has been a professor at the University of Aveiro from 1999, being actually Associate professor with “Agregação”. He has worked from 2009-13 in Nokia Siemens Networks and in Coriant (2013/14) as a standardization expert in the field of optical access (In FSAN, ITU-T, IEEE 802.3). From 2014, he is the Dean of the University of Aveiro Doctoral School aggregating 50 PhD programs and 1300 students. He has published more than 440 papers (more than 130 in journals), has edited three books and contributed to several other. Holds 6 patents, and tutored successfully more than 60 MsC’s and 14 PhD’s, having participated in more than 35 projects (national, European and international). In 2014 he co-founded PICadvanced, a startup focused on providing solutions based on optical assemblies targeting biotech and optical networking (including access networks). He has served the ECOC TPC from 2008-15 in the SC for subsystems, having chaired it in 2010/11/15. He has served the access subcommittee in OFC from 2011-14, and has been General Chair of ICTON 09, Networks 2014. He is a Senior Member of OSA and a member of IEEE and IEEE standards association.

200 words abstract

Coherent is a technology that is clearly very relevant and performant. It surpasses in performance, without much effort, the IM/DD systems. Our team and others have demonstrated several ultra-high capacity systems based on coherent techniques, with or without carrier, with or without local oscillators, simplified or fully DSP enabled. From spacings of 2.5GHz between 10Gb/s channels up to ultra-high capacity “single” channels everything is possible and most of what is needed has already been at least proven or demonstrated in lab. However it has been also very clear that IM/DD are accepted easily in the standards and therefore the industry. Also, they have been performing, and we see at the short reach data rates exceeding the 400G and even at the middle range or extended range 40Gb/s and even more being worked out in the standards for the point to multipoint, and 80km easily accessed at a medium low cost even for the point to point 80-100km. we will discuss the changes and small steps required to try and make the match between the coherent benefits with the IM/DD cost/ simplicity.