

## Tutorial Speaker

Full Name	Xiang Liu
Affiliation	Huawei
Presentation Title	Optical access technologies for 5G wireless

### Biography

Dr. Xiang Liu is the Senior Director of Optical Access Network Research at Huawei USA, focusing on broadband optical access network technologies. He had been with Bell Labs, New Jersey, working on high-speed optical fiber transport technologies. He has authored/coauthored over 330 journal/conference papers, and holds over 70 US patents. Dr. Liu is a Fellow of the IEEE and the OSA. He is serving as a Deputy Editor of Optics Express, a Co-Editor of IEEE Communications Magazine's optical communications series, and a General Co-Chair of OFC 2018.

### 200 words abstract

This tutorial aims to provide an up-to-date overview of the emerging optical communication technologies, particularly optical access technologies, for next-generation wireless networks such as 5G. It is intended to help the attendees to broaden their knowledge on the emerging applications of optical networks in future wireless networks, deepen their understanding of the state-of-the-art optical access technologies, and explore new R&D opportunities in the field of converged fixed-mobile networks.

Recent advances on the common public radio interface (CPRI), the Ethernet-based CPRI (eCPRI), and the next-generation fronthaul interface (NGFI) will be introduced. Promising applications of optical communication technologies in future 5G wireless networks will be discussed. Emerging optical communication technologies such as 100+Gb/s coherent, low-cost IM/DD transmission, and associated DSP techniques for high-throughput and low-latency wireless fronthaul and backhaul networks will be reviewed. Furthermore, emerging network architectures and design tradeoffs among various optical transport and access systems for better converged fiber/wireless networks will be presented.