Special Sessions

Plenary Speakers

The plenary speakers at OFC typically include an industrial leader and a research leader, both covering topics related to the technical core of the conference, and a visionary speaker linking topics outside OFC's focus to the conference.

Patricia Obo-Nai
Chief Executive Officer, *Vodafone Ghana, West Africa*

Harnessing Digitalization for Effective Social Change

Digitalization is a potent driver of progress in the modern world, particularly in Africa. The increased use of mobile phones has given it the momentum it needs across Africa. However, much more work is required. This talk will touch on what needs to be done to ensure that everyone, especially the most vulnerable, reaps the benefits of the global digital movement.

Jayshree V. Ullal
President and Chief Executive Officer, *Arista Networks*

The Road to Petascale Cloud Networking

As the future application demands and compute performance evolve, the network needs to adapt for exponential growth in traffic, connecting tens of thousands of processors with Petabits of bandwidth. As a pioneer in cloud networking, Arista has become synonymous with elastic scaling and programmable provisioning delivering modern data-driven platforms. Arista believes Moore's law is alive and will enable next-generation 100-Terabit switching and multi-terabit optics. A networking and Silicon Valley veteran, Jayshree Ullal will discuss the trends, evolution, and impact of petascale and AI-driven networking technologies ahead.

Wendell P. Weeks
Chairman and Chief Executive Officer, *Corning Incorporated, USA*

Capacity to Transform

This presentation will highlight the industry's growth drivers and breakthrough innovations in product and process, and the importance of connecting the unconnected with glass thinner than a human hair. Mr. Weeks will also share how optical fiber, invented more than 50 years ago, is contributing to greener solutions – benefiting our shared and more sustainable future.

Symposia

Beyond the Hype of Network Analytics: Use Cases, Feasibility, and Barriers

This symposium will specifically aim to identify, beyond the hype, the main optical network analytics use cases, their feasibility, barriers, and related R&D efforts. Invited speakers from data center operators, telecom networks, system and technology providers and academia will review the advancements and debate the important next steps.

Quantum Information and Optical Communication Networks: Emerging Research Areas, Challenges and Opportunities

Session I will provide broad overviews of emerging research areas in quantum for optical communications. Topics covered may include quantum enhanced security technologies in optical transmission systems, wavelength conversion and quantum computer/memory interfaces, quantum repeater network architectures for multi-partite entanglement distribution and teleportation, and quantum sensor networks and distributed quantum applications.

Session II will go into greater depth on specific research problems within the broad areas discussed in Session I. Talks will include areas such as measurement device independent quantum key distribution and novel security architectures, specific quantum memory technologies and architectures for quantum repeaters, quantum network routing algorithms, long baseline interferometry or similar quantum enhanced sensor networks, and error correction coding for quantum optical communications.

The Crucial Role of Photonics in Achieving the United Nation's Sustainability Development Goals (SDGs): Learnings and Opportunities

Crucial to meeting the UN SDGs in a timely manner, it is imperative that future optical communication systems and networks are integrated in the society ensuring environmental sustainability as they evolve. This symposium aims to: (a) reflect on the smart city predictions made by OFCity 2015 competition teams towards sustainability, (b) discuss related recent R&D efforts and future opportunities towards achieving SDGs from data center network operators, telecom network operators, system and technology providers, and academia and (c) highlight next steps for the OFC community to focus on in the next years.

Special Sessions

High Performance Networks for Future Data Center and Computing Applications

This session will discuss emerging trends in the design and build of networks that can scale AI supercomputers without exploding the overall power consumption and cost. Focusing on challenges and opportunities for photonics, topics covered may include: (1) Composable systems with disaggregated resources (GPUs, CPUs, storage/memory) being co-located as a pool that is accessed via a local network, (2) reconfigurable network topologies to provision bandwidth on demand.

Ultra-Stable Frequency Sources and their Future Applications in Telecom

Optical fiber communications has resulted in commodity technologies including optical fiber and other components, that have also benefited other disciplines. Now, the outcomes of these other disciplines in-turn can benefit fiber communications. The objective of this session is to bring together researchers from the distinct disciplines of fiber communications, environmental sensing, precision metrology and spectroscopy, atomic clocks and stabilized lasers and quantum sensing, to bridge communications between these different areas and explore common research grounds and solutions.

Photonics for Visible Wavelengths

This session will begin by covering mature and emerging applications of visible light photonics, why visible light is needed and the benefits compared to working in the more traditional telecommunication range. It will also explain how mature the current applications are and what systems, if any, are used in the field. It will also cover the state of the art of visible light devices such as lasers, detectors and fibers, as well as foundry processes and packaging needs. The session will also highlight the outstanding needs in this emerging field.

Rump Session

Is the Silicon Photonics Platform about to be Standardized, Diversified or Supplanted?