



Research Frontiers in Optical Communications: Scaling Capacity and Expanding the Role of Fiber Networks

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Abstract: Since the COVID-19 pandemic communication networks have provided an essential lifeline for work, school, our health, information, and entertainment at a level which has no historical precedent. In addition, the current AI supercycle has provided even more challenges to communication from the machines that are doing work on our behalf. These trends are driving the industry to address growth of communication networks by 100%/yr with higher optical cable capacity to petabit per second rates, higher reliability, lower cost/bit, lower energy/bit, lower latency, lower latency jitter and more. This in turn is placing new challenges on the devices and material systems used to enable this rapidly evolving network. During the talk we will review the challenge as well as the research Nokia Bell Labs is performing in novel III-V devices, integrated systems, novel sensing technologies, and new system architectures to meet these new exciting (but challenging!) requirements.

Wednesday, October 14th | 2:00pm-3:15pm | Science Hall 126 & Zoom

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