Seminars

May 22nd 2024, 10:30-12:30 - Room C, Engineering Teaching Complex

"Optical Transport Systems for the Next Decade", Marco Bertolini, *ON System Product Manager, Optical Networks, Network Infrastructure, Nokia*

The seminar reviews recent evolution of optical transmission technologies, including latest and upcoming coherent DSPs and integrated C+L systems, with special focus on sustainability solutions in optical networking, IP networking, and fixed fiber access. It will further outline potential development avenues for optical networks towards ever high capacity and lower power consumption per bit.

Marco Bertolini is the Product Manager for all Systems in Nokia's Optical Networks portfolio. He oversees a team of product managers responsible for all hardware platforms and its embedded software. He joined Alcatel-Lucent (now Nokia) in 2010 to work on development of DSP for 100G applications and beyond. Prior to the current position, he held different roles in Product Management, ranging from consultancy on design of coherent optical systems to the management of the high-speed interfaces and photonic modules for 1830 PSS. He has authored or co-authored more than 40 papers for multiple conferences and peer-reviewed journals. Marco holds a BS/MS in Telecommunication Engineering and a Ph.D. degree in Information Technologies from University of Parma, Italy. His research on nonlinear effects in phase-modulated WDM systems with coherent detection. During his Ph.D. he was a visiting student of Université Laval (Quebec, CA) and Bell Labs France.

"Bridging Technology and Sustainability: Fiber Sensing and Optical Transponders in Industry and Society", Matteo Lonardi, *Product Line Manager, Nokia*

The seminar examines fiber sensing technologies, focusing on optical transponder applications in network management and environmental monitoring. It will highlight the latest innovations and research, offering insights on leveraging these technologies for telecommunication, industry, and society.

Matteo Lonardi earned his MSc in Communications Engineering in 2016 and his PhD in Information Technology in 2020 from the University of Parma. In 2016, he worked as a researcher at CNIT in Parma, Italy, where he contributed to the ROAM project by characterizing linear and nonlinear coupling in orbital angular momentum multi-mode fibers. During his Ph.D., he spent half of his time at Nokia Bell Labs in Paris, France. After completing his Ph.D., he worked as a Research Scientist at Nokia Bell Labs from 2019 to 2024. He then joined Nokia as a product line manager for optical network automation software. His primary area of interest is the estimation and monitoring of transmission quality in optical transmissions and networks, with a focus on the applicability of artificial intelligence and machine learning.