

PHOTONIC SYSTEMS FOR MASSIVE COMMUNICATION

Dr. Tolga Tekin, Group Manager Photonic & Plasmonic Systems,
Fraunhofer Institute for Reliability and Microintegration (IZM)

March 23, 2021 @ 9:00 AM | <https://bluejeans.com/956721052>

Abstract: The talk considers photonic system integration approaches for massive communication applications, such as datacenters, 5G, and next generation computing. Main bottleneck to the realization of next generation massive communication systems for all big-, secure- data applications/industries, incl. System-in-Package and System-on-Chip, is the lack of off-chip interconnects with low latency, low power, high bandwidth, high density. The solution to overcome these challenges and leverage low-latency and high-bandwidth communication is the use of optical interconnects.



Bio: Tolga Tekin, has received the Ph.D. degree in electrical engineering and computer science from the Technical University of Berlin, Germany. He was a Research Scientist with the Optical Signal Processing Department, Fraunhofer HHI, where he was engaged in advanced research on optical signal processing, 3R-regeneration, all-optical switching, clock recovery, and integrated optics. He was a Postdoctoral Researcher on components for O-CDMA and terabit routers with the University of California. He worked at Teles AG on phased-array antennas and their components for skyDSL. At the Fraunhofer Institute for Reliability and Microintegration (IZM), he then led projects on optical interconnects and silicon photonics packaging. At the Technical University of Berlin, he then engaged in microsystems, photonic integrated system-in-package, photonic interconnects, and 3-D heterogeneous integration research activities. He is group manager of Photonics and Plasmonic Systems at Fraunhofer IZM. He has been coordinator of European Flagship project on optical interconnects 'FP7-PhoxTroT', 'H2020-L3MATRIX' and is currently coordinating and 'H2020-MASSTART'.

Host: Professor Muhannad Bakir, mbakir@ece.gatech.edu

