Southampton

ZEPLER INSTITUTE

Low-power consumption integrated photonics for datacom applications

Di Liang, Research Scientist Hewlett Packard Enterprise Labs

Abstract

Large-scale computer installations are now severely limited by network bandwidth constraints and energy costs arising from architectural designs originally based on copper interconnects. Hewlett Packard Enterprise (HPE), formerly HP, joins the global effort to develop high-quality optical interconnects with our focuses on low-cost integration platform and minimal power consumption for our datacenter and supercomputer business. In this talk, I will review our effort in developing novel heterogeneous IIIV-on-silicon light sources and photodetectors, silicon microring modulators, SiGe avalanche photodetectors, and integration with CMOS drivers.

The lecture will be followed by opportunities for questions.

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Biography

Di Liang is currently a leading research scientist at Hewlett Packard Enterprise Labs to develop heterogeneous III-V-onsilicon photonics platform. His research interests include diode lasers, III-V and silicon photonics, heterogeneous material integration and nanofabrication technology.

He has authored and coauthored over 140 journal and conference papers, 5 book chapters, and was granted for 7 patents (multiple regions) with another 40+ pending. He received his B.S. degree in Optical Engineering from the Zhejiang University, China, and Ph.D. degree in Electrical Engineering from the University of Notre Dame, USA. He is a senior member of IEEE and a member of OSA.