Photonic Integrated Circuits

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State-of-the art technology platforms and ecosystems for photonic integrated circuits will be introduced. Basic functional building blocks and selected design tools as well as approaches to build circuits based on components will be discussed. Applications and selected products building on PIC technology will be analyzed.

Niels Quack received the M. Sc. degree from Ecole Polytechnique Fédérale de Lausanne (EPFL), Switzerland, in 2005, and the Dr. Sc. degree from Eidgenössische Technische Hochschule Zürich (ETH), Switzerland, in 2010. From 2011 to 2015 he was Postdoctoral Researcher and Visiting Scholar at University of California, Berkeley, CA, USA, within the Integrated Photonics Laboratory at the Berkeley Sensor and Actuator Center. From 2014 to 2015 he was Senior MEMS Engineer with sercalo Microtechnology, Neuchâtel, Switzerland. He is currently SNSF Assistant Professor at Ecole Polytechnique Fédérale de Lausanne (EPFL), Lausanne, Switzerland. Research interests include Photonic Micro- and Nanosystems, with an emphasis on Diamond Photonics and Silicon Photonic MEMS. He is Senior Member of IEEE, Steering Committee Member of the IEEE International Conference on Optical MEMS and Nanophotonics (OMN), General Chair of the IEEE OMN 2018, Member of OSA and SPIE, and he has authored and co-authored more than 50 papers in leading technical journals and conferences.