

Photonic sensing technologies: Status and Outlook

Scope of the session is to give some inside in the perspectives of photonic sensing systems for point of care diagnose system. We will discuss different photonic approaches and the related figures of merit of the sensing systems. We will see, which approaches made it to a working prototype or to a product. Then we will have a closer look on systems, which are based on photonic integrated circuits. Explaining the basic sensing principles used and try to understand the status of these systems, recent progress, and eventual difficulties to overcome from an engineering perspective.

CV

Georg Pucker studied Technical Chemistry at the TU-Graz, Austria where he became Dipl. Ing. in 1993 and Dr. Tec. In 1996 working on optical spectroscopy and structure of lanthanide doped glasses. From 1996 to 2000 he was with the Department of Physics at the University of Trento, Italy studying optical properties lanthanide doped materials and growth and properties of silicon nanocrystals. In 2001 he joined ITC-IRST in Trento – now Fondazione Bruno Kessler (FBK) – contributing to the development of radiation hard detectors and research on solar cells. Since 2009 his research is focusing on photonic integrated circuits and quantum optics. He is head of the research unit Integrated and Quantum Optics (IQO). He is author or coauthor of more than 100 scientific publications. Currently, he is head of the research unit on integrated and quantum optics of FBK.

