

Holger Neumann



Dr. Holger Neumann is divisional head of cryogenics at the Institute for Technical Physics (ITEP) of the Karlsruhe Institute of Technology (KIT) in Germany. He received his Diploma in Mechanical Engineering in 1993 and his PhD in 1997 at the Ruhr-University Bochum. He started to work in cryogenics as a young scientist promoted by the Helmholtz-Association at the research centre Karlsruhe (now KIT) also in 1997. In 1999 he became group leader of the cryogenic infrastructure and since 2003 he is divisional head of cryogenics at the Institute for Technical Physics (ITEP) of the Karlsruhe Institute of Technology (KIT). Since 2013 he is board member of the German refrigeration and climate technology association (DKV). In 2016 he was elected Vice president of this association and received a guest professorship at Zhejiang University in Hangzhou, China.

In 2018 he became board member of the ICEC. Since 2004 he leads the cryogenic seminar for the association of German engineers (VDI) and since 2010 he organized this course also in English. For the training facility association, house of technics he organized the course cryostat design which is held every year since 2005.

He also gives lectures in thermodynamic since 2001 at the Dual College of Baden-Württemberg in Karlsruhe and cryogenics at the Dual College of Baden-Württemberg in Mannheim since 2016. He has also given a lecture in cryogenics the University of Karlsruhe from 2009 to 2013.

His area of research focussed on the development of cryostat systems for superconductive applications. This includes cryogenic cycles and cooling methods for the superconductive components, e.g. bath cooling with He at 4 K but also with He II at 1.8 K and forced convection cooling. A special research is the development of thermal insulation concepts for these cryostat systems. For all these investigations he also investigates and develops cryogenic sensors for temperature, liquid level and displacement transducers. In his division he tests these cryogenic systems in cooperation with other divisions responsible for the superconductive components.