TECHNISCHE UNIVERSITÄT DRESDEN

Faculty of Physics

PHYSICS COLLOQUIUM

Speaker: **Dr. Thomas Kormoll**
Radiation Physics Group
Institute of Nuclear and Particle Physics
Technische Universität Dresden

Topic: **Information Preserving Measurement Technologies for Ionizing Radiation**
Introduction for habilitation

Time and place: Tuesday, October 17, 2023, **2:50 pm** – hybrid event
The colloquium will be held in REC/C213.
Online participation possible:
Zoom-Meeting: Meeting-ID: 631 3817 8900 / passcode: PC-WiSe23
https://tu-dresden.zoom-x.de/j/63138178900?pwd=am9nSzYyeUh3SWxMdnNBWkpUaXl5UT09

Host: Prof. Michael Kobel

Abstract: Ionizing radiation is able to penetrate deeply into the human body and cause damage either deterministically or stochastically and latently with severe consequences possibly decades after an exposition. But the radiation field also carries important information on its source, be it an accelerator or of natural origin. Sensitive and quantitative detection methods are required to keep this information and make it accessible. This talk will set the context of radiation measurement and information extraction from a personal perspective and present the technology development and research activities of the Radiation Physics Group. This includes research in radiation protection dosimetry, verification technologies of tumour irradiation, advanced measurement technologies for nuclear dismantling and dedicated electronics and material development. Especially time resolved techniques are able to preserve valuable information, e.g., the operation mode of an accelerator, but also require the highest technological effort.

Bio: Thomas Kormoll started to study physics in Dresden in 2003. After two years he left for Stockholm and got in touch with medical radiation physics at the Karolinska hospital. After one semester oceanography in Rostock, he returned to Dresden and finished his diploma at the newly founded OncoRay in 2009 under the supervision of Wolfgang Enghardt, who also became his doctoral thesis supervisor. After the PhD defence in 2013, he became a researcher at OncoRay. Since 2016, he is back at the Institute of Nuclear and Particle Physics and since 2019 head of the Radiation Physics Group.