CARL VON OSSIETZKY universität OLDENBURG
Institut für PHYSIK

PHYSICAL COLLOQUIUM

INVITATION

Monday, 07.12.2020, 4.15 p.m.,

speaks

Prof. Dr. Thorsten Kamps,

AG Hochbrillante Elektronenstrahlen (HBB), Institut für Physik,

Humboldt-Universität zu Berlin

Institut für Beschleunigerphysik, Helmholtz-Zentrum Berlin

about

"High Brightness Electron Beams for Energy-Recovery Linac Applications"

Energy Recovery Linacs open up a new paradigm: They promise to generate intense electron beams of superior quality for future light sources. In 2009, an intensive R&D program was initiated to address the challenges related to a Superconducting Radio-Frequency Photoelectron injector (SRF Photoinjector) as the electron injector for the Energy Recovery Linac (ERL) test facility bERLinPro. The goal of bERLinPro (short for the "berlin ERL Project") is to probe the feasibility of ERL for future X-ray light sources. This requires an electron source which pushes brightness and average current above today's limits. The superconducting RF (SRF) photoinjector development program for bERLinPro sets out to achieve this target. It tackles the main challenges related to the beam dynamics of SRF photoinjectors, the incorporation of high quantum efficiency photocathodes and the suppression of unwanted beam generation. The talk report reports on the overall progress of the project and sets out to discuss possible applications for bERLinPro for electron scattering experiments, Compton and THz radiation generation.

Short Bio:

In 2000 PhD in Physics from Humboldt-Universität zu Berlin. Dissertation on beam instrumentation development for the TELSA Test Facility Free Electron Laser. From 2000 to 2003 PostDoc at Royal Holloway University of London working on laser based beam diagnostics for the TESLA Linear Collider. Since 2003 Senior Scientist at BESSY (now Helmholtz-Zentrum Berlin) with the focus on electron beam generation and beam diagnostics. Since 2018 professor of physics at the Humboldt-Universität zu Berlin and leader of the High Brightness Electron Beams working group, focused on the development and future applications of the SRF photoinjector for the energy-recovery linac bERLinPro.

All interested persons are cordially invited.

Sgd. Prof. Dr. Caterina Cocchi