Date:	Tuesday, 27 November 2018
Time:	16:30 - 17:50
Speaker:	Christian ENSS
Institution:	Kirchhoff Institute for Physics, Heidelberg University

## Title:

## Metallic Magnetic-Calorimeters a Novel Key Technology for Low Energy Astro-Particle Physics

## Abstract:

Metallic magnetic calorimeters (MMCs) are state of the art cryogenic particle detectors which belong to the most sensitive devices to measure the energy of single quanta. Their universal applicability for particles and radiation as well as their high resolving power makes them a popular choice in many different experiments. Current fields of applications include X-ray spectroscopy, neutrino physics, material analysis, mass spectrometry and nuclear forensic. We will discuss the operating principle of MMCs, the basic material science behind their realization, as well as the status of development and recent applications. Here we will focus on the ECHo project, which uses MMCs to measure the electron capture spectrum of 163 Ho for the determination of the electron neutrino mass and discuss possible applications of such detectors in axion searches.

## Notes: