

Title: Mr.

Lecturer: Luca Bottura

Date and Times:

- Friday 22nd July from 11:15 am to 12:00 am

Summary of the proposed talk: Superconducting Magnets

The development of high-energy accelerators heavily relies on the use of applied superconductivity. Superconducting magnets and cavities, superconducting leads, and large scale cryogenics, have made it possible to build the largest instruments in human history: Tevatron, HERA, RHIC, and, ultimately, the LHC. Similarly, future accelerator projects will require further development in these enabling technologies. The lecture provides basic phenomenology of superconductivity, some elements of superconducting material science, and an overview of applied superconductivity for accelerator magnets.

Prerequisite knowledge and references:

Electromagnetism, thermodynamics, basic material science will help

Biography

Brief CV:

- Nuclear engineer, Ph.D. in modeling of physical systems (numerical mathematics).
- From 1986 till 1995 worked on superconducting magnet technology for fusion reactors (NET, ITER).
- At CERN since 1995, working on superconducting materials and magnets, superconductors and magnet testing, field measurement methods and field mapping for the LHC.

Publications: None