Nordic Particle Accelerator School, NPAS2017

Monday, 14 August 2017 - Tuesday, 22 August 2017

LTH

Scientific Programme

Introduction to basic accelerator physics including classical mechanics, electrodynamics and special relativity;

Description of linear accelerators, synchrotrons, storage rings for generating electromagnetic radiation, and Spallation sources and colliders;

Overview of microwave systems, resistive and superconducting magnets, normal conducting and superconducting RF cavities, cryogenic equipment, vacuum systems, power supplies, beam diagnostics;

Particle Beam Physics: Longitudinal and transverse beam dynamics, synchrotron radiation, nonlinear radiation physics, the magnetic system of storage rings, calculation methods for radiation physics;

Use of accelerator technology in nuclear and particle physics, materials science, medicine and biology;

Overview of new accelerator technologies based on powerful lasers in plasma.