

Academia-Industry Matching Event on Superconductivity for Accelerators for Medical Applications



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Superconducting technology for next generation accelerators

Thursday 24 November 2016 14:40 (20 minutes)

Meanwhile LHC is exploring the energy frontier of particle physics, CERN with CIEMAT and other numerous Laboratories and Institutions is developing new technologies for next generation colliders. The High Luminosity LHC is now near construction with Superconducting magnet capable of 12 T field, made with advanced Nb3Sn technology, while for FCC a new R&D phase just started to be able to reach magnetic field of 15-16 tesla. Even the 20 T range seems not impossible thanks to novel HTS based magnets. In addition, superconducting cavities (SRF) are greatly advancing, with more efficient and high gradient RF systems, and developing new devices like the HiLumi Lhc crab cavities that are able to deflect or rotate each single bunch. The talk will illustrate the advance in all these technologies, including high current (> 100 kA) SC links, and the possible strong impact on the future of medical accelerators.

Presenter: ROSSI, Lucio (CERN)

Session Classification: Introductory session