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## FCC-hh and THE HIGH FIELD MAGNET R&D ROADMAP

*Friday 27 August 2021 18:45 (1 hour)*

In order to reach 100 Tera-electron volts (TeV) or even beyond in proton-proton collisions, an active world-wide R&D on novel high field supraconductor magnets is underway. This will be presented in this lecture together with the presentation of: the FCC-hh (the SppC project in China will be presented in the keynote by Jie GAO (IHEP).

This lecture will also mention the importance of the R&D on the High Field magnets for other fields of application such as Medical application (see also NEUROSPIN lecture by Dr. Cyril POUPON on Saturday Aug. 28), the FUSION (see keynote by Dr. Jean JACQUINOT on Aug 31) and the new developments for the use of WAVE POWER (see keynote by Dr. Luis TABARES GARCIA, on Aug. 31).

Pierre Vedrine is the Head of the Department of Accelerators, Cryogenics and Magnets (DACM) at the CEA-IRFU. He led the work of his Department on the construction of the Toroidal Magnet for the ATLAS experiment at LHC-CERN, the construction of the 11.7 T Magnet (Highest field magnet so far in the world) for MRI at NEUROPSIN (see lecture by Cyril Poupon on Saturday 28). He is currently working on the R&D for new high field magnets in particular for the FCC-hadron-hadron collider at 100 TeV.

**Presenter:** Dr VEDRINE, Pierre (Department of Accelerators, Cryogenics and Magnets, CEA-IRFU, FR)

**Session Classification:** INTRODUCTION TO ACCELERATORS