

## HTS for Accelerators – Status, Needs and Perspective

Luca Bottura

CERN, Geneva, Switzerland

E-mail: [luca.bottura@cern.ch](mailto:luca.bottura@cern.ch)

***Abstract***—HTS is a game changer for many applications of superconductivity, not last particle accelerators and detectors. This talk relates the potential of HTS, and in particular REBCO coated conductors, to the needs and evolution of superconducting magnets for accelerators. HTS already have a spectacular current carrying ability at high field, demonstrated and available on relevant lengths. The main perceived challenges are rather associated with magnet mechanics and quench management. Most important, beyond the ability to reach a field range higher than what is possible with LTS, HTS offers an extended range of operating temperature, with large margin. This can be exploited to obtain higher availability and better cryogenic efficiency, a must for the future of sustainable large scale research infrastructures such as particle accelerators.

***Keywords (Index Terms)***—High Temperature Superconductor (HTS), accelerator magnets, high energy physics

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