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## Lumped Parameter Model for Simulation of HTS Cables in Power System Simulators

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Due the integration of superconducting technologies into electrical networks around the world, its precise simulations in power grids are increasingly becoming a desirable outcome. Sophisticated methods have been used to model superconducting power cables and, in this way, predict its behavior under different conditions. Most of the available models, however, are not advisable to be used and embedded in power system simulators. In this work, we focus on the development of a method for modelling superconducting cables in traditional power grid simulators. Besides considering the heat transfer conduction in the solid layers, the model also incorporates the transient behavior of the cooling media, which is mandatory for such cables. It has been observed that the proposed model requires less computational effort and is able to deliver accurate results when compared to more advanced methods.

### Topic

Innovative methods and tools for modelling large-scale HTS systems

**Primary author:** BATISTA DE SOUSA, Wesley Tiago (Karlsruhe Institute of Technology)

**Presenter:** BATISTA DE SOUSA, Wesley Tiago (Karlsruhe Institute of Technology)

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