



FUSION FuseNet

High-Temperature Superconducting Magnets

open an accelerated path to fusion energy

Wednesday, April 7th
19:00 Prague

Zoom in **LIVE** at
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Research sponsored by Commonwealth Fusion Systems

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Title: High-Temperature Superconducting Magnets

Speaker: Erica Salazar

When: 2021-04-07 19:00:00

Abstract: High temperature superconductors (HTS) have the ability to revolutionize the fusion energy industry by enabling tokamak fusion devices, such as the SPARC fusion device, to be smaller, lower cost, and faster to build. All fusion-class devices built to date have used either low temperature superconductors (LTS) or copper to generate magnetic fields to control and drive the plasma in a fusion device. In contrast to LTS, HTS magnets can withstand and generate significantly higher magnetic fields--leading to smaller and lower cost tokamak devices. However, introducing a new HTS material will bring new scientific challenges and risks. This presentation will highlight the risk reduction strategies and test results of the VIPER cable (a HTS cable designed by MIT and Commonwealth Fusion Systems) such as fabrication feasibility testing, load cycling, strain testing, and quench testing in SPARC-relevant conditions.

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