

# ACCELERATOR SEMINAR

**Kei Sugita**

GSI

**Thursday, 20. April 2023 at 4 pm**

**Seminarraum Theorie (SB3 3.170a)**

Participation is also possible via Zoom: ID: 646 5547 3994 / PW: 073846

## **Super-FRS superconducting magnets and testing**

The first experiment at newly constructed FAIR accelerator facility will be conducted with a beam provided through the Super Fragment Separator (Super-FRS) as FAIR Early Science program. S-FRS superconducting magnets having a large aperture are key elements, which determine performance of the separator. 15 dipole magnets and 20 multiplets are required for the High Energy Branch of S-FRS for execution of Early Science program. The dipole magnet is a super-ferric type magnet with a H-shape warm iron yoke, providing 1.6 T for about 3 m. Various combinations of quadrupole, sextupole, octupole, and steering dipole magnets, integrated in a cryostat are the multiplets generating magnetic fields fulfilling beam optics requirements. Production of the dipole magnets as well as the multiplets are ongoing and produced magnets are being delivered and tested at a cryogenic test facility at CERN. This presentation gives an overview of the superconducting magnets in S-FRS with the features, and the testing at CERN with the highlights.



Coordinator: Claude Krantz, Janet Schmidt

Secretary: Larissa Birli

<https://indico.gsi.de/event/15974/>

