



CHATS-AS 2017

CHATS on Applied Superconductivity Workshop

Sendai, Japan

December 10 – 12, 2017

FIRST ANNOUNCEMENT AND CALL FOR PAPERS

INTRODUCTION: The CHATS-AS 2017 Workshop will be held at the Institute for Materials Research, Tohoku University in Sendai, Japan, on December 10 – December 12, 2017, jointly hosted by Tohoku University, High Energy Accelerator Research Organization (KEK), and Kyoto University. The workshop will take place just before ISS 2017 (<http://iss2017.tokyo/>).

OBJECTIVE AND TOPICS: CHATS-AS 2017 will be the twelfth in a series of international workshops that have followed the advancements in the state-of-the-art of modeling of superconducting systems, from cables to magnets and other devices used for power generation and transmission, fusion, high-energy physics as well as other applications. The focus in CHATS-AS is on novel principles and tools in engineering design and analysis of superconducting systems. The Workshop also aims at building bridges between analysis and experiments, in order to validate the sophisticated analysis tools available with proper data sets. The CHATS-AS 2017 Workshop welcomes contributions fitting this scope, with a specific interest in the following topics:

- Quench simulation and analysis for all classes of LTS and HTS magnets (e.g. accelerator, fusion, MRI/NMR, and other applications) and devices (e.g. power cables).
- Quench detection and protection of HTS magnets: novel concepts, models and experiments.
- Electro-mechanical modeling of Nb₃Sn and HTS magnets.
- Multi-scale modeling of cables and magnets made of LTS and HTS materials, and their relation to the strand or short-sample performance.
- Simulation and optimization of large-scale superconducting and cryogenic systems, covering the combination of thermo-hydraulics, AC loss, current distribution, field quality, and operating margin calculations.
- Modeling in support of the design and development of cryocoolers, and conduction-cooled superconducting devices.

KEY DATES AND DEADLINES

MAY 29, 2017: Web site available for abstract submission (<https://indico.cern.ch/event/640250/>)

July 21, 2017: Deadline for abstract submission

August 11, 2017: Notification of abstract acceptance

November 10, 2017: Registration deadline

PUBLICATION: paper presented at the conference will appear in a special issue of *Cryogenics*. Publication will follow the standard peer review and editorial procedure.

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Local Organizing Committee: Daisuke Miyagi (Chair, Tohoku University), Naoyuki Amemiya (Kyoto University), Kento Suzuki (KEK), Satoshi Awaji (Tohoku University), Makoto Tsuda (Tohoku University)

Program Steering Committee: Naoyuki Amemiya (Kyoto University, Japan), Luca Bottura (CERN, Switzerland), Marco Breschi (University of Bologna, Italy), Reinhard Heller (KIT, Germany), Cesar Luongo (ITER Organization, France), Philippe Masson (University of Houston, USA), Daisuke Miyagi (Tohoku University, Japan)

General information on CHATS-AS: <http://chats-as.web.cern.ch/chats-as/welcome.html>

Information of the 2017 Workshop: <https://indico.cern.ch/event/640250/>