

PROGRAMME

➤ WEDNESDAY, AUG 28

17:00 – 19:00 Registration (hotel lobby)

➤ THURSDAY, AUG 29

08:00 – 08:30 Registration (hotel lobby)

08:30 – 08:40 Welcome speech (conference hall)

• SESSION T-I: Space and Aerospace Applications

Chair: Muralidhar Miryala

08:40 – 09:00 **(T-I-1) J. Lévêque**, *Université de Lorraine, France*
Superconducting motor and generator for aircraft application

09:00 – 09:20 **(T-I-2) J. L. Pérez Díaz**, *Universidad de Alcalá, Spain*
Qualification of High Temperature Superconductors for Space

09:20 – 09:40 **(T-I-3) W. Yang**, *Beihang University, China*
Low Frequency Rotational Loss in HTS Bearings and Summary of its Applications in Micro-thrust Measurement of Space Propulsion

09:40 – 10:00 **(T-I-4) J. Navarro-Zafra**, *MAG SOAR SL, Spain*
LEVISOLATOR: Superconductive Magnetic Suspension for cryogenic instruments

10:00 – 10:30 **Coffee Break**

• SESSION T-II: Innovations in REBCO bulks

Chair: Frank N. Werfel

10:30 – 10:50 **(T-II-1) D. K. Namburi**, *University of Cambridge, UK*
Dense, strong and silver-reinforced (RE)BCO single-grain bulk superconductors via infiltration and growth

10:50 – 11:10 **(T-II-2) M. R. Koblishka**, *Saarland University, Germany*
Second generation of superconducting YBCO foams

11:10 – 11:30 **(T-II-3) X. Yao**, *Shanghai Jiao Tong University, China*
Novel approaches developed for growing REBCO crystals

11:30 – 11:45 **(T-II-4) J. V. J. Congreve**, *University of Cambridge, UK*
The effect of addition of silver on the distribution of Y-211 inclusions in Y-Ba-Cu-O bulk single grains

11:45 – 12:00 **(T-II-5) A. Aydiner**, *Karadeniz Technical University, Turkey*
Investigation of Excess Conductivity in Welded and Ring Shaped TSMG YBCO Superconductors

12:00 – 13:30 **Lunch**

- **SESSION T-III: Applications of REBCO bulks**

Chair: José Luis Pérez Díaz

- 13:30 – 13:50 **(T-III-1) F. N. Werfel**, *Adelwitz Technologiezentrum GmbH, Germany*
Bulk Superconductors: Engineering Advances in System Technology
- 13:50 – 14:10 **(T-III-2) M. Calvi**, *Paul Scherrer Institute, Switzerland*
A GdBCO bulk staggered array undulator
- 14:10 – 14:30 **(T-III-3) H. Fujishiro**, *Iwate University, Japan*
A new mechanical reinforcement structure for REBaCuO bulks during field-cooled magnetization to achieve higher trapped fields without fracture
- 14:30 – 14:45 **(T-III-4) T. Nakamura**, *RIKEN, Japan*
Observation of high-resolution NMR by multi-shim coil in superconducting BULK magnet
- 14:45 – 15:00 **(T-III-5) T. Oka**, *Shibaura Institute of Technology, Japan*
Formation of Uniform Magnetic Flux Distribution for NMR Magnets with Use of HTS Bulk Magnets Activated by Pulsed-Field
- 15:00 – 15:30 **Coffee Break**

- **SESSION T-IV: Processing and characterization of REBCO bulks**

Chair: Pavel Diko

- 15:30 – 15:50 **(T-IV-1) T. Motoki**, *Aoyama-Gakuin Univ., Japan*
Greatly enhanced oxygen diffusion in REBCO melt-textured bulks by annealing under oxygen atmosphere including water vapour
- 15:50 – 16:05 **(T-IV-2) F. Antončík**, *ICT Prague, Czech Republic*
Radial and axial stiffness of superconducting bearings based on YBCO single domain bulks processed with artificial holes
- 16:05 – 16:20 **(T-IV-3) V. Antal**, *Institute of Experimental Physics SAS, Slovakia*
Influence of Al₂O₃ and BaAl₂O₄ on thermal properties of YBCO
- 16:20 – 16:35 **(T-IV-4) K. Y. Huang**, *University of Cambridge, UK*
Trapped field and mechanical properties of thin-wall YBCO bulk superconductors
- 16:35 – 16:50 **(T-IV-5) W. Yang**, *Shaanxi Normal University, China*
The Effect of Buffer Layer on the Fabrication of Larger Size Single Domain YBCO Bulks by Y+011 TSIG Process
- 16:50 – 17:00 **(Commercial presentation) K. Faller**, *Intelline, Canada*
Layered Geometry Pulse Tube Cryocoolers – Affordable and Scalable

- **POSTER SESSION (“Smetana” meeting room – 6th floor)**

Chair: Vilém Bartůněk

- 17:30 – 18:30 **All posters**
Posters will be presented during this session, but will also be available during the conference dinner
- 19:00 – 21:00 **CONFERENCE DINNER – hotel restaurant (Sponsored by Intelline)**

➤ **FRIDAY, AUG 30**

• **SESSION F-I: MgB₂ bulks - Processing and Applications**

Chair: Ignacio Valiente Blanco

- 08:30 – 08:50 **(F-I-1) S. C. Speller**, *University of Oxford, UK*
 Manufacture and Characterisation of MgB₂ bulks optimised for operation at 27K
- 08:50 – 09:10 **(F-I-2) J. G. Noudem**, *Normandie Univ., France*
 Magnetic levitation measurements of MgB₂ and stacking YBCO tapes
- 09:10 – 09:30 **(F-I-3) A. Yamamoto**, *Tokyo Univ. of Agriculture and Tech., Japan*
 Dense MgB₂ bulks prepared by Mg vapour transport (MVT) process and simple non-destructive technique for detecting internal defects
- 09:30 – 09:45 **(F-I-4) A. Sai Srikanth**, *Shibaura Institute of Technology, Japan*
 Effect of high energy ultra-sonicated Boron on superconducting properties in solid state sintered bulk MgB₂
- 09:45 – 10:00 **(F-I-5) S. Namba**, *Iwate University, Japan*
 A Hybrid Trapped Field Magnet Lens (HTFML) consisting of an MgB₂ cylinder and GdBaCuO magnetic lens
- 10:00 – 10:30 **Coffee Break**

• **SESSION F-II: Innovative Applications of superconducting bulks**

Chair: Jacques Noudem

- 10:30 – 10:45 **(F-II-1) H. Nadendla**, *Brunel University London, UK*
 High performance Infiltration and Growth processed MgB₂ superconductors
- 10:45 – 11:00 **(F-II-2) L. Gozzelino**, *Politecnico di Torino, Italy*
 Passive magnetic shielding by machinable MgB₂ bulks and its modulation by ferromagnetic shield addition
- 11:00 – 11:15 **(F-II-3) P. Vanderbemden**, *University of Liege, Belgium*
 Hollow bulk superconductors subjected to a stray magnetic field: how does the non-uniformity of the field affect the magnetic shielding properties?
- 11:15 – 11:30 **(F-II-4) C. G. Huang**, *Northwestern Polytechnical University, China*
 Methods to improve the dynamic stability for superconducting maglevs under external disturbances
- 11:30 – 11:45 **(F-II-5) Z. Deng**, *Southwest Jiaotong University, China*
 The Third-Generation High-Temperature Superconducting Maglev Vehicle Developed in Chengdu, China
- 11:45 – 13:15 **Lunch**

- **SESSION F-III: Progress in REBCO bulks**

Chair: Jean Leveque

13:15 – 13:35 **(F-III-1) M. Muralidhar**, *Shibaura Institute of Technology, Japan*
Recent progress in production of MT and IG processed bulk RE-123

13:35 – 13:55 **(F-III-2) D. A. Cardwell**, *University of Cambridge, UK*
Research progress in the growth and superconducting properties of REBCO(Ag) single grains at the Cambridge Bulk Superconductivity Group

13:55 – 14:00 **Short Break**

- **SESSION F-IV: Activation of superconducting bulks**

Chair: Michael Koblishka

14:00 – 14:20 **(F-IV-1) M. D. Ainslie**, *University of Cambridge, UK*
Optimising pulse field magnetisation for higher trapped fields in bulk high-temperature superconductors

14:20 – 14:40 **(F-IV-2) T. Hirano**, *Iwate University, Japan*
Flux jumps and stress concentration in REBaCuO ring bulks with inhomogeneous $J_c(B, T)$ profiles during pulsed-field magnetization

14:40 – 14:55 **(F-IV-3) Y. Tsui**, *University of Cambridge, UK*
Optimisation of Pulsed Field Magnetisation of Bulk High-Temperature Superconductors for a Portable Magnet System

14:55 – 15:10 **(F-IV-4) D. A. Moseley**, *University of Cambridge, UK*
Optimising Pulsed Field Magnetisation in MgB_2

15:10 – 15:40 **Coffee Break**

- **SESSION F-V: Characterization of superconducting bulks**

Chair: Devendra Namburi

15:40 – 16:00 **(F-V-1) S. Brialmont**, *University of Liege, Belgium*
Non-destructive measurement of the magnetic moment of bulk GdBCO samples using a torque magnetometer designed for large size samples

16:00 – 16:15 **(F-V-2) A. Koblishka-Veneva**, *Saarland University, Germany*
Secondary phase particles in bulk, infiltration-growth processed YBCO investigated by t-EBSD and TEM

16:15 – 16:30 **(F-V-3) Q. Nouailhetas**, *Saarland University, Germany*
Exploring the flux pinning performance of bulk FeSe by electron irradiation

16:30 – 16:45 **(F-V-4) V. Bartůněk**, *ICT Prague, Czech Republic*
Influence of Neutron and gamma radiation on YBCO and GdBCO/Ag superconducting bulks

16:45 – 17:00 **(F-V-5) J. Srpčič**, *University of Cambridge, UK*
Flux vortex dynamics in bulk (RE)-Ba-Cu-O superconductors

17:00 **Closing speech**

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