

39th International Symposium on Superconductivity (ISS2026)

OFFICIAL PROGRAM BOOK

December 1-3, 2026

Toyama International Conference Center, Toyama, Japan

Program information as of November 16, 2026
All times are Japan Standard Time (JST, UTC+9).

About This Program Book

This official Program Book provides reliable access to the ISS2026 program when the online program service is unavailable during nighttime hours in Japan.

The program is arranged in the following order: Plenary Lectures, Oral Presentations by date and technical field (PC, ED, AP, and WB), and Poster Presentations by date.

Last-minute changes may be announced separately by the ISS2026 Secretariat. All times are Japan Standard Time (JST, UTC+9).

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Opening, Closing and Banquet

Opening Session

The Opening Session will be held on Tuesday, **December 1, from 8:20 to 8:30 a.m**. in **Room A (Main Hall).**

Registration will open at 8:05 a.m. at the registration desk on the 1st floor of the Toyama International Conference Center.

At the registration desk, your name badges will be arranged in alphabetical order by family name. Please pick up your own name badge, and then collect a neck strap and conference bag. After registration, please take the escalator to the 3rd floor.

*Please note that **food and beverages are strictly prohibited in the Main Hall.** Anyone who fails to comply with this rule may be charged the actual cost of cleaning.*

*Accordingly, no food or beverages are permitted anywhere on the 3rd floor. In addition, **participants are not permitted to move between floors while carrying food or beverages.** We kindly ask all participants to strictly observe these rules.*

Closing Session

The Closing Session will begin at **5:05 p.m. on Thursday, December 3.**

During the session, the recipients of the **ISS Best Student Award** and **ISS Best Presentation Award** will be announced, followed by the presentation of commemorative gifts and a photo session.

Following the award ceremony, ISS2026 Chair Akira Fujimaki will give a summary of ISS2026. Finally, we will introduce ISS2027, the 40th ISS.

Banquet

The banquet will be held from **6:30 p.m. on Wednesday, December 2**, at the Toyama Denki Building.

We hope you will enjoy the banquet!

Plenary Lectures

8:30-9:15 PL1 | Plenary

Room A (Main Hall, 3rd Floor)

PL1
8:30-9:15

Toward a Complete Ab Initio Description of Superconducting States: From Critical Temperature to Fundamental Length Scales

*Ryotaro Arita 1,2
1. University of Tokyo (Japan), 2. RIKEN (Japan)

8:30-9:15 PL2 | Plenary

Room A (Main Hall, 3rd Floor) Chair: Gen Nishijima (National Institute for Materials Science(NIMS))

PL2
8:30-9:15

New Frontiers in Next-Generation REBCO Coated Conductors: From Machine Learning-Enabled Electromagnetic Characterization and Scalable Manufacturing to Low-Resistance Joining Technologies

*Takanobu Kiss 1
1. Kyushu University (Japan)

17:15-18:00 PL3 | Plenary

Room A (Main Hall, 3rd Floor) Chair: Hiroyuki Ohsaki (NIMS)

PL3
17:15-18:00

Can Superconductivity Marry Liquid Hydrogen? - Building a 20 K Cryogenic Space and Rethinking Superconductivity for a Better Society -

*Tsuyoshi WAKUDA 1
1. Hitachi, Ltd. (Japan)

8:30-9:15 PL4 | Plenary

Room A (Main Hall, 3rd Floor) Chair: Yutaka Tabuchi (RIKEN)

PL4
8:30-9:15

Rise of Superconducting Quantum Circuits

*Jaw-Shen Tsai Tsai 1
1. National Yang Ming Chiao Tung University (Taiwan)

Oral Presentation Program

Tuesday, December 1, 2026

Physics and Chemistry (PC)

9:45-12:00 PC1 | Iron-based

Room A (Main Hall, 3rd Floor) Chair: Bai Yang Wang (Stanford University), Tsuyoshi Tamegai (The University of Tokyo)

PC1-02-INV 10:15-10:45
Pure Nematic Quantum Criticality in FeSe-based superconductors
*Kousuke Ishida 1
1. Department of Advanced Materials Science, University of Tokyo (Japan)

PC1-03-INV 10:45-11:15
Interface Superconductivity in Ultrathin FeSe/STO Films Grown by PLD
*Tomoki Kobayashi 1
1. Dept. of Phys. The University of Osaka (Japan)

PC1-04 11:15-11:30
Ionic Liquid Gating-Induced High-Temperature Superconductivity in Iron Chalcogenide Thin Films
*Yu Nagai 1 , Tetsu Nakamura 1 , Yoshinobu Nakamura 1 , Tomoki Kobayashi 2 , Atsutaka Maeda 1 , Hikaru Okuma 1 , Kazunori Ueno 1
1. Univ. Tokyo (Japan), 2. Osaka Univ (Japan)

PC1-05 11:30-11:45
Unveiling the orbital upper critical field in FeSe 0.5 Te 0.5 by measuring vortex motion and flux-flow at microwave frequencies
*Enrico Silva 1,2 , Andrea Alimenti 1,2 , Valeria Braccini 3 , Alessandro Magalotti 1,2 , Pietro Manfrinetti 4 , Nicola Pompeo 1,2 , Kostiantyn Torokhtii 1
1. University Roma Tre (Italy), 2. INFN-Roma Tre Section (Italy), 3. CNR-SPIN (Italy), 4. University of Genoa (Italy)

PC1-06 11:45-12:00
Defect Engineering and Vortex Pinning Anisotropy in CaKFe 4 As 4 - A Comparative Study of Chemical Doping and Particle Irradiation.
*Anastasiya Duchenko 1 , Andrea Masi 1 , Achille Angrisani Armenio 1 , Luigi Muzzi 1 , Nicola Pompeo 2 , Yangsong Chen 6 , Lei Wang 3 , Francesca Varsano 4 , Mario Scuderi 5 , Tsuyoshi Tamegai 6
1. ENEA, NUC-FUSEN-COND (Italy), 2. Department of Industrial, Electronic and Mechanical Engineering, Roma Tre University (Italy), 3. Key Laboratory of Applied Superconductivity, Institute of Electrical Engineering Chinese Academy of Sciences (China), 4. ENEA, C.R. Casaccia (Italy), 5. Institute for Microelectronics and Microsystems (IMM), National Research Council of Italy (CNR) (Italy), 6. Institute for Solid State Physics, The University of Tokyo (Japan)

PC1-01-INV 9:45-10:15
Stoichiometric FeTe is a Superconductor
*Cui-Zu Chang 1
1. Department of Physics, Pennsylvania State University (USA)

15:15-16:46 PC2 | Vortex 1

Room A (Main Hall, 3rd Floor) Chair: Alejandro V. Silhanek (University of Liege), Gianluca Ghigo (Politechnico di Torino)

PC2-01-INV 15:15-15:45
TDGL Simulations of Vortex States in Mesoscopic Superconductors: An Experimentalist's Perspective
*Akinobu Kanda 1
1. Univ. Tsukuba (Japan)

PC2-02-INV 15:45-16:15
Critical Temperature and Vortices in a Nano-sized Dirty Superconductor
*Masaru Kato 1 , Yoichi Higashi 1 , Terukazu Nishizaki 2
1. National Institute of Advanced Industrial Science and Technology (AIST) (Japan), 2. Kyushu Sangyo University (Japan)

PC2-03 16:15-16:30
Correlated vortex pinning effects in an intrinsic quasi-periodic superconductor
*SOURAV KARAN 1
1. Indian Institute of Technology-Kanpur (India)

PC2-04 16:30-16:31
Withdrawn

PC2-05 16:31-16:46
Vortex core scanning tunneling spectroscopy reveals a Lifshitz transition in a high-temperature cuprate superconductor
*Ivan Maggio-Aprile 1 , Tejas Singar 1 , Christoph Renner 1
1. University of Geneva - DQMP (Switzerland)

16:46-17:01 PC3(1) | Novel phenomena

Room A (Main Hall, 3rd Floor) Chair: Alejandro V. Silhanek (University of Liege), Gianluca Ghigo (Politechnico di Torino)

PC3-01 16:46-17:01
THz Spectroscopic Gap Extraction in Superconducing NbN Thin Film: Experimental Validation and Thickness-Dependent Simulations
*KM SHIVANGI SHUKLA 1 , G. ANTONIO 1 , S. MANGIN 2 , T. HAUET 2 , CHIARA CICCARELLI 1
1. UNIVERSITY OF CAMBRIDGE (UK), 2. JEAN LAMOUR INSTITUTE - UNIVERSITE DE LORRAINE (France)

Electronic Devices (ED)

9:45-12:00 ED1 | Digital I

Room D (203, 2nd Floor) Chair: Masamitsu Tanaka (Nagoya University), Ilkwon Byun (Kyusyu Univ.)

ED1-02-INV
10:15-10:45
Fabrication process for superconducting digital circuits in Qufab/AIST
*Mutsuo Hidaka 1
1. AIST (Japan)

ED1-03
10:45-11:00
Design and Implementation of a Boost Buffer for Direct-Coupled Adiabatic-Quantum-Flux-Parametron Circuits
*Yuta Hasegawa 1 , Yuki Yamanashi 1,2 , Nobuyuki Yoshikawa 1,2
1. Department of Electrical and Computer Engineering, Yokohama National University (Japan), 2. Institute of Advanced Sciences, Yokohama National University (Japan)

ED1-04
11:00-11:15
Design and Characterization of a Bipolar Digital-Analog Converter Using Superconducting Current-Steering Switches
*Kazushi Kuwabara 1 , Hiroshi Shimada 1 , Yoshinao Mizugaki 1,2
1. Department of Engineering Science, Graduate School of Informatics and Engineering, The University of Electro-Communications (Japan), 2. Quantum Future Creative Device Development Center, The University of Electro-Communications (Japan)

ED1-05
11:15-11:30
Design and Evaluation of a Superconducting Stochastic Memory Using Multiple-Flux-Quantum Storage and Frequency Synchronization
*Taito Tagawa 1 , Nobuyuki Yoshikawa 1,2,3 , Yuki Yamanashi 1,2,3
1. Yokohama National Univ. (Japan), 2. YNU IAS (Japan), 3. YNU IMS (Japan)

ED1-06
11:30-11:45
Superconducting electrical readout of a magnetic memory bit
*Jackson Miller 1 , William Holmes-Hewett 1 , Atif Islam 1 , Ben Wylie-van Eerd 1 , Catherine Pot 1 , Martin Markwitz 1 , Simon Granville 1 , Ben Ruck 1
1. Victoria University of Wellington (New Zealand)

ED1-07
11:45-12:00
Evaluation of Josephson Balanced Comparator With Variable Characteristics by Using dc-SQUID Modulation
*Haruka Asano 1 , Yuki Yamanashi 1 , Nobuyuki Yoshikawa 1
1. Yokohama National University (Japan)

ED1-01-INV
9:45-10:15
Noise-Driven Superconducting Computing with SFQ Brownian Logic Circuits
*Satoshi Satoshi Kawakami 1
1. Kyushu University (Japan)

15:15-17:00 ED2 | Quantum Information I

Room D (203, 2nd Floor) Chair: Yutaka Tabuchi (RIKEN)

ED2-01-INV
15:15-15:45
Post-fabrication frequency trimming of resonators and transmons to improve yield in tunable-coupler quantum processor architectures
*Santiago Valles Sanclemente 1 , Sean L. M. van der Meer 1 , Tim H. F. Vroomans 1 , Marc W. Beekman 2 , Lucas A. Hak 1 , Anand Kamlapure 1 , Kishore K. Thiyagarajan 1 , Bas D. L. Koerts 1 , Matvey Finkel 1 , Leonardo DiCarlo 1
1. Delft University of Technology (Netherlands), 2. Netherlands Organisation for Applied Scientific Research (Netherlands)

ED2-02-INV
15:45-16:15
Scalable Nitride-based Superconducting Qubits with Novel Structures
*Taro Yamashita 1
1. Department of Applied Physics, Graduate School of Engineering, Tohoku University (Japan)

ED2-03-INV
16:15-16:45
Electromechanics based on ultra-high stressed titanium nitride membrane
*Yuki Matsuyama 1 , Shotaro Shirai 2,1 , Hirotaka Terai 3 , Yuji Hishida 3 , Atsushi Noguchi 1,2,4
1. Komaba Institute for Science in University of Tokyo (Japan), 2. RIKEN Center for Quantum Computing (Japan), 3. NICT (Japan), 4. InaRIS (Japan)

ED2-04
16:45-17:00
Hamiltonian engineering of ultrastrongly coupled superconducting quantum circuit for infomation proceccing and sensing
*Akiyoshi Tomonaga 1
1. AIST (Japan)

17:15-18:30 ED3 | SQUID

Room D (203, 2nd Floor) Chair: Mutsuo Hidaka (National Institute of Advanced Industrial Science and Technology (AIST))

ED3-01-INV
17:15-17:45
Application of HTS-SQUIDs to the resource and energy industry for contribution to GX
*Tsunehiro Hato 1 , Hironori Wakana 1 , Yusaku Nishi 1 , Tatsuya Irisa 1 , Muhammad Abiyyu 1 , Nagi Yamashita 1 , Toshihiro Kodaka 1 , Keiichi Tanabe 1
1. Superconducting Sensor Technology Corporation (Japan)

ED3-02-INV
17:45-18:15
Nanoscale wireframe SQUIDs on cantilevers for magnetic microscopy
*Hans Hilgenkamp 1
1. University of Twente (Netherlands)

ED3-03
18:15-18:30
dc-SQUID series array current sensors for fast optical photon counting TESs
Kenji Sakai 1 , *Joern Beyer 1 , Tetsuya Tsuruta 2 , Fuminori Hirayama 2 , Daiji Fukuda 2
1. Physikalisch-Technische Bundesanstalt (PTB) (Germany), 2. National Institute of Advanced Industrial Science and Technology (AIST) (Japan)

Applications (AP)

9:45-12:00 AP1 | Rotating Machines and Electric Propulsion

Room B (201, 2nd Floor) **Chair: Min Zhang (University of Strathclyde), Taketsune Nakamura (Kyoto University)**

AP1-02-INV 10:15-10:45
High-temperature Superconducting Induction/Synchronous Motors for Liquid Hydrogen Pump Applications
*Taketsune Nakamura 1
1. Kyoto University (Japan)

AP1-03-INV 10:45-11:15
The potential of HTS technology for electric propulsion for space
*Nicholas Joseph Long 1 , Jakub Glowacki, Max Goddard-Winchester, Sebastian Hellmann, Xiyong Huang, Ben Mallett, Betina Pavri, Cameron Shellard, Nick Strickland, Emile Webster, Randy Pollock
1. Victoria University of Wellington (New Zealand)

AP1-04 11:15-11:30
A superconducting turbogenerator demonstrator for aviation applications
*Grant Lumsden 1 , Rupert Power 2 , James Lonsdale 3 , Nic RogersRehn 4 , Lukas Hamm 5 , James Storey 1 , Trevor Hughes 3 , Duleepa Thrimawithana 2 , Zhenan Jiang 1
1. Victoria University Wellington (New Zealand), 2. University of Auckland (New Zealand), 3. Alr New Zealand (New Zealand), 4. Openstar Technologies (New Zealand), 5. Transfluid (Germany)

AP1-05 11:30-11:45
Entropy generation issues in compact and energy-efficient High Temperature Superconducting (HTS) motors and generators
*Sangkwon Jeong Jeong 1 , Zhenan Jiang 2 , Grant Lumsden 2 , Alan Caughley 3 , Michael Gschwendtner 4 , Sarat Singamneni 4
1. KAIST (Korea), 2. Victoria University Wellington (New Zealand), 3. University of Canterbury (New Zealand), 4. Auckland University of Technology (New Zealand)

AP1-06 11:45-12:00
An analytical torque equation for the HTS machine with stacked-tape architecture rotor
*Andrés Antonio Yenes Sepúlveda 1 , Tabea Arndt 1
1. Karlsruhe Institute of Technology (Germany)

AP1-01-INV 9:45-10:15
Superconducting Motors for Aircraft Applications
*Min Zhang 1 , Weijia Yuan 1 , Alexander Shchukin 1 , Ercan Ertekin 1
1. University of Strathclyde (UK)

15:15-17:00 AP2 | High-Field Magnets and Superconducting Power Applications

Room B (201, 2nd Floor) **Chair: Yu Suetomi (NHMFL), Sadanori Iwai (Kyoto Fusioneering)**

AP2-01-INV 15:15-15:45
Ultra-High-Field MRI Magnets: Current Situation and Future Plans
*Pierre Vedrine 1
1. Université Paris-Saclay, CEA, Institut de recherche sur les lois fondamentales de l'Univers, 91191, Gif-sur-Yvette, France. (France)

AP2-02-INV 15:45-16:15
Screening-Current-Induced Stress and Strain in High-Field REBCO Pancake Coils: Experimental Observations and Numerical Analysis
*Yu Suetomi 1 , Shannon Griffin 1 , Kwangmin Kim 1 , Hongyu Bai 1 , Jun Lu 1 , Aniket Ingrole 1 , Iain Dixon 1
1. National High Magnetic Field Laboratory (USA)

AP2-03 16:15-16:30
Status of the KIT EnergyLab Hydrogen Integration Platform (HIP) and relevance to HTS
*Tabea Arndt 1 , Michael J Wolf 1 , Mira Wehr 1 , Giovanni de Carne 1 , Nils Nemsow 1
1. KIT ITEP (Germany)

AP2-04 16:30-16:45
Acceptable tolerances for material properties in a DC power transmission cable assessed by numerical modelling
Eugen Seiler 1 , Marek Mošať 1 , *Fedor Gömöry 1 , Antonio Morandi 2 , Mattia Simonazzi 2 , Beate West 3 , Arnaud Allais 4
1. Institute of Electrical Engineering, Slovak Academy of Sciences (Slovakia), 2. Department of Electrical, Electronic and Information Engineering "Guglielmo Marconi" of the University of Bologna (Italy), 3. Nexans Deutschland (Germany), 4. Nexans France (France)

AP2-05 16:45-17:00
AC loss comparison in 1 MVA HTS transformers: effect of using transposed and non-transposed cables.
*Chenxi Tian 1 , Wenjuan Song 3 , Jin Fang 2 , Nicholas J Long 1 , Zhenan Jiang 1
1. Robinson Research Institute, Victoria University of Wellington, New Zealand (New Zealand), 2. School of Electrical Engineering, Beijing Jiaotong University (China), 3. CryoElectric Research Lab, Propulsion, Electrification & Superconductivity Group, James Watt School of Engineering, University of Glasgow (UK)

17:15-18:30 AP3 | AC losses

Room B (201, 2nd Floor) **Chair: Enric Pardo (Slovak Academy of Sciences), Kazuhiro Kajikawa (Sanyo-Onoda City University)**

AP3-01-INV 17:15-17:45
Modelling of AC loss and electrothermal stability of high-temperature superconducting motors for electric aircraft propulsion
*Enric Pardo 1 , Anang Dadhich 1 , Arif Hussain 1 , Alexandre Colle 2 , Remi Dorget 2 , Mohamed Essam Ahmed 2
1. Institute of Electrical Engineering SAS (Slovakia), 2. AIRBUS UpNext (France)

AP3-02-INV 17:45-18:15
AC Loss Evaluation of HTS Coils for High Field Magnets Wound with Two-ply Bundle Conductors
*Kazuhiro Kajikawa 1
1. Sanyo-Onoda City University (Japan)

AP3-03 18:15-18:30
AC loss study of a 300 kW fully HTS synchronous wind generator considering winding heads

*Yue Wu 1 , Sebastian Lengsfeld 2 , Jannis Sindram 2 , Nick Thönelt 1 , Zhenan Jiang 3 , Francesco Grilli 1
1. Karlsruhe Institute of Technology (Germany), 2. Fraunhofer Institute for Energy Economics and Energy System Technology (Germany), 3. Victoria University of Wellington (New Zealand)

Wires and Bulk Materials (WB)

9:45-11:45 WB1 | Bulk I

Room C (202, 2nd Floor) Chair: Hiroshi Ikuta (Nagoya University), Takanori Motoki (AIST)

WB1-02-INV 10:15-10:45
Hybrid magnetic screens as scalable 'quasi-bulk' superconductors: understanding their optimal position under high, inhomogeneous applied fields
*Nicolas Rotheudt 1 , Tomas Hlasek 2,3 , Jan Plechacek 2 , Philippe Vanderbemden 1
1. University of Liège (Department of Electrical Engineering and Computer Science) (Belgium), 2. CAN Superconductors, s.r.o. (Czech Republic), 3. University of Chemistry and Technology Prague (3Department of Inorganic Chemistry) (Czech Republic)

WB1-03-INV 10:45-11:15
Impurity engineering for enhanced functionality in SDMG-processed REBCO bulks
*Takanori Motoki 1 , Jun-ichi Shimoyama 2 , Hiraku Ogino 1
1. National Institute of Advanced Industrial Science and Technology (AIST) (Japan), 2. Aoyama Gakuin Univ. (Japan)

WB1-04-INV 11:15-11:30
Statistical Analysis of Material Variability and Defects in REBCO Bulk Superconductors
*Kévin Berger 1 , Frederic Trillaud 2,1 , Santiago Guijosa 1 , Víctor Rolando Jara-González 2 , Román Anselmo Mora-Gutiérrez 3
1. Université de Lorraine, GREEN (France), 2. Universidad Nacional Autónoma de México (Mexico), 3. Universidad Autónoma Metropolitana (Mexico)

WB1-05 11:30-11:45
Compact MgB 2 Cryo-Magnets: Achieving Record-High Trapped Magnetic Fields
*Muralidhar Miryala 1 , Tomoyuki Naito 2 , Jacques Noudem 3
1. Shibaura Institute of Technology (Japan), 2. Iwate University (Japan), 3. Université de Caen Normandie (France)

WB1-01-INV 9:45-10:15
Superconducting Bulk Magnets that Realize the Practical Application of NMR/MRI
*Takashi NAKAMURA 1
1. RIKEN (Japan)

15:15-16:55 WB2 | High Field Characterization I

Room C (202, 2nd Floor) Chair: Arnaud Badel (G2ELab, CNRS), Yuji Tsuchiya (Tohoku University)

WB2-01-INV 15:15-15:40
Using the SuperCurrent Ic measurement system to map the operational space of HTS wire
*Nicholas Joseph Long 1 , Nick Strickland 1 , Olly Pantoja 1
1. Victoria University of Wellington (New Zealand)

WB2-02-INV 15:40-16:05
Commercial REBCO Conductors for High-Field Magnets: Transport Anisotropy, Mechanical Integrity and Design Limits
*Carmine Senatore 1,2 , Romain Babouche 1 , Celia Lucas 1 , Damien Zurmuehle 1 , Bernardo Bordini 3 , Luca Bottura 3 , Tatsunori Okada 4 , Yuji Tsuchiya 4 , Satoshi Awaji 4
1. Department of Quantum Matter Physics, University of Geneva (Switzerland), 2. Department of Nuclear and Particle Physics, University of Geneva (Switzerland), 3. CERN (Switzerland), 4. Institute for Materials Research, Tohoku University (Japan)

WB2-03-INV 16:05-16:30
High-Field Characterization of REBCO Coated Conductors.
*Jan Jaroszynski 1
1. NHMFL (USA)

WB2-04-INV 16:30-16:55
Testing Technologies for Superconducting Wires & Tapes at ASIPP
*Yunhao Liu 1 , Peng Gao 1 , Fang Liu 1
1. Institute of Plasma Physics, Chinese Academy of Sciences (China)

17:15-18:30 WB3 | High Field Characterization II

Room C (202, 2nd Floor) Chair: Satoshi Awaji (Tohoku University), Carmine Senatore (University of Geneva)

WB3-01-INV 17:15-17:40
Recent development of Ic characterization in the French SupraFusion program
*Arnaud Badel 1 , Xavier Chaud 1
1. CNRS (France)

WB3-02-INV 17:40-18:05
Multi-Parameter Transport I c (B , T , θ , ε) of REBCO Tapes for Ultra-High-Field Magnet Design
*Yuji Tsuchiya 1 , Shohei Nojima 1 , Shunsuke Kume 1 , Hitoki Suzuki 1 , Junyi Luo 1 , Alexandre Zampa 2 , Hugo Sourice 2 , Arnaud Badel 2 , Jaeheon Kim 3 , Yoshimitsu Kohama 3 , Akira Matsuo 3 , Koichi Kindo 3 , Kenichiro Mizuno 4 , Satoshi Awaji 1
1. IMR, Tohoku Univ. (Japan), 2. Univ. Grenoble Alpes, G2Elab / Néel Institute, CNRS (France), 3. ISSP, Univ. of Tokyo (Japan), 4. MTL Corp. (Japan)

WB3-03-INV 18:05-18:30
Prospects for Superconductors in Pulsed Fields using thermodynamic and critical current measurements
*Boris Maiorov 1
1. National High Magnetic Field Laboratory, Los Alamos National Laborary (USA)

Oral Presentation Program

Wednesday, December 2, 2026

Physics and Chemistry (PC)

16:45-17:00 PC3(2) | Novel phenomena

Room C (202, 2nd Floor) **Chair: Akinobu Kanda (University of Tsukuba), Haruhisa Kitano (Aoyama Gakuin University)**

PC3-02
16:45-17:00

Emergence of thermally activated phase-slip behavior in a three-dimensional superconducting Nb wire

*Syuma Yasuzuka 1 , Keigo Takata 1 , Mikoto In 1 , Kazuya Endo 1 , Noriyuki Hatakenaka 2

1. Hiroshima Institute of Technology (Japan), 2. Hiroshima University (Japan)

9:45-12:15 PC4 | Nickelate

Room C (202, 2nd Floor) **Chair: Shinichiro Ideta (Hiroshima University), Kosuke Ishida (Department of Advanced Materials Science, University of Tokyo)**

PC4-02-INV
10:15-10:45

Electronic structure of compressively strained bilayer nickelate thin film

*BaiYang Wang 1,2 , Sebastien N Abadi 1,2 , Yidi Liu 1,2 , Yu Zhang 3 , Yong Zhong 1,2 , Yijun Yu 1,2 , Berit H Goodge 4 , Xiaoliang Zhang 3 , Yi-Ming Wu 1 , Ruohan Wang 1,2 , Jiarui Li 1,2 , Yaoju Tarn 1,2 , Eun Kyo Ko 1,2 , Vivek Thampy 2 , Chun Lin 2 , Makoto Hashimoto 2 , Donghui Lu 2 , Young S Lee 1,2 , Thomas P Devereaux 1,2 , Chunjing Jia 3 , Harold Y Hwang 1,2 , Zhi-Xun Shen 1,2

1. Stanford University (USA), 2. SLAC National Laboratory (USA), 3. University of Florida (USA), 4. Max Planck Institute for Chemical Physics of Solids (Germany)

PC4-03-INV
10:45-11:15

High T c Superconductivity of Nickelate Bulk

*Li Feiyu 1

1. Qingdao University of Science and Technology (China)

PC4-04-INV
11:15-11:45

Oxygen Nonstoichiometry and Defects in La 3 Ni 2 O 7

*Hiroya Sakurai 1

1. National Institute for Materials Science (Japan)

PC4-05
11:45-12:00

Superconducting Properties of Pr doped La3Ni2O7 under high pressure

*Yoshihiko Takano 1,2 , Ryo Matsumoto 1 , Hiroya Sakurai 1

1. National Institute for Materials Science (NIMS) (Japan), 2. Univ. of Tsukuba (Japan)

PC4-06
12:00-12:15

Transport properties of hybrid Ruddlesden-Popper nickelate La 5 Ni 3 O 11

*Masamichi Nakajima 1 , Zhehong Liu 1,2 , Arata Iwama 3 , Chieko Terakura 1 , Markus Kriener 1 , Kosuke Karube 1 , Shunsuke Kitou 4 , Taka-hisa Arima 1,4 , Yasujiro Taguchi 1,2 , Yoshinori Tokura 1,3,5

1. RIKEN Center for Emergent Matter Science (Japan), 2. RIKEN Baton Zone Program (Japan), 3. Department of Applied Physics, The University of Tokyo (Japan), 4. Department of Advanced Materials Science, The University of Tokyo (Japan), 5. Tokyo College, The University of Tokyo (Japan)

PC4-01-INV
9:45-10:15

Strain–Pressure Control of Superconductivity in Bilayer Nickelate Thin Films

*Motoki Osada 1

1. University of Tokyo (Japan)

15:15-16:45 PC5 | Vortex 2

Room C (202, 2nd Floor) **Chair: Akinobu Kanda (University of Tsukuba), Haruhisa Kitano (Aoyama Gakuin University)**

PC5-01-INV
15:15-15:45

Magnetic landscape of superconducting resonators under radio-frequency excitation

*Alejandro Vladimiro Silhanek 1 , Julia Baumgarten 1 , Nicolas Lejeune 1 , Lukas Nulens 2 , Ivo Cools 3 , Joris Van de Vondel 2

1. Physics Department, Université de Liège (Belgium), 2. Department of Physics and Astronomy, KU Leuven (Belgium), 3. Department of Microtechnology and Nanoscience, Chalmers University of Technology (Sweden)

PC5-02-INV
15:45-16:15

Microwave analysis of ion-irradiation effects in superconductors

*Gianluca Ghigo 1 , Ivan De Carlo 2 , Michela Fracasso 1 , Matteo Fretto 2 , Roberto Gerbaldo 1 , Laura Gozzelino 1 , Cristian Pira 3 , Mario Scuderi 4 , Daniele Torsello 1

1. Politecnico di Torino and INFN Sez. Torino (Italy), 2. INRIM Torino (Italy), 3. INFN Laboratori Nazionali di Legnaro (Italy), 4. CNR-IMM, Catania (Italy)

PC5-03
16:15-16:30

Wide-field magnetic imaging of shielding-current-driven vortex rearrangement under local heating using diamond quantum sensors

*Ryoei Ota 1 , Shunsuke Nishimura 1 , Koki Honda 2 , Takeyuki Tsuji 3 , Taro Yamashita 2 , Takayuki Iwasaki 4 , Mutsuko Hatano 4 , Kento Sasaki 1 , Kensuke Kobayashi 1

1. The University of Tokyo (Japan), 2. Tohoku University (Japan), 3. NIMS (Japan), 4. Science Tokyo (Japan)

PC5-04
16:30-16:45

Vortex pinning of Ba 0.62 K 0.38 BiO 3 observed via magneto-optical Kerr effect

Soichiro Yamane 1 , Sota Nakamura 1 , *Atsutoshi Ikeda 1 , Dayu Zhai 2 , Siddarth Gorregattu 2 , Xing He 2 , Sudarshan Sharma 2 , Yipeng Cai 3 , Yasutomo J. Uemura 3 , Martin Greven 2 , Shingo Yonezawa 1

1. Kyoto University (Japan), 2. University of Minnesota (USA), 3. Columbia University (USA)

Electronic Devices (ED)

9:45-11:46 ED4 | Metorology, Novel devices, Materials and Fabrication

Room D (203, 2nd Floor) Chair: Hirotake Yamamori (National Institute of Advanced Industrial Science and Technology (AIST)), Teruo Ono (Kyoto Univ.)

ED4-02-INV 10:15-10:45
Superconducting diode effect and supercurrent-induced phase transition
*Teruo Ono 1
1. Kyoto University (Japan)

ED4-03 10:45-11:00
Coherent Phonon Blocking in Superlattices
*Joshua Shipman 1 , Anil Erol 1 , Xiang Hua 1 , Kirby Myers 1 , Lawrence Friedman 1 , Alexander Marakov 1 , Melissa Loving 1 , Arsha Mamoozadeh 1 , Sarah Millen 1 , Ronald Warzoha 1 , Jeremy Clarke 1 , Robert Young 1
1. Northrop Grumman (USA)

ED4-04 11:00-11:01
Withdrawn

ED4-05 11:01-11:16
Investigating the influence of surface termination on the electronic properties of Josephson junctions: Linking DFT predictions to realized Nb/Gd(N)/Nb devices.
*William Freeman Holmes-Hewett 1 , Feng Li 2 , Jackson M Miller 1 , Atif Islam 1 , Simon Granville 1 , Martin Markwitz 1 , Masamitsu Tanaka 2 , Akira Fujimaki 2 , Ben J Ruck 1
1. Victoria University of Wellington (New Zealand), 2. Nagoya University (Japan)

ED4-06 11:16-11:31
Investigation of PdNi Ferromagnetic Alloy Thin Films as Resistive Layer for Millikelvin Superconducting Digital Circuits
*Feng Li 1 , Ryo Ogura 1 , Kenshin Inagaki 1 , Akira Fujimaki 1 , Masamitsu Tanaka 1
1. Nagoya University (Japan)

ED4-07 11:31-11:46
Analysis of Josephson Transport in Helium-Ion-Irradiated YBa 2 Cu 3 O 7−δ Weak Links
*Tetsuro Misawa 1 , Shigeyuki Ishida 1 , Hiroshi Eisaki 1 , Yukinori Morita 1 , Shinichi Ogawa 1 , Chiharu Urano 1
1. National Institute of Advanced Industrial Science and Technology (Japan)

ED4-01-INV 9:45-10:15
Metrological applications of Josephson-based quantum voltage standards
*Ralf Behr 1 , Stephan Bauer 1 , Rinis Ferizaj 1 , Timo Glebe-Märklin 1 , Oliver Kieler 1 , Luis Palafox 1
1. Physikalisch-Technische Bundesanstalt (PTB) (Germany)

15:15-17:00 ED5 | Digital II

Room D (203, 2nd Floor) Chair: Satoshi Kawakami (Kyusyu Univ.), Ali Bozbey (TOBB ETU)

ED5-01-INV 15:15-15:45
Superconducting Digital Electronics for Control and Readout of Quantum Processors
*Ali Bozbey 1
1. TOBB University of Economics and Technology (Turkey)

ED5-02-INV 15:45-16:15
Superconducting Computer Architecture: From Classical to Quantum
*Ilkwon Byun 1
1. Kyushu University (Japan)

ED5-03 16:15-16:30
Design of a Binarized Neural Network Using Rapid Single-Flux-Quantum and Adiabatic Quantum-Flux-Parametron Logic Families
*Yudai Nakai 1 , Wenhui Luo 2 , Nobuyuki Yoshikawa 1,2 , Naoki Takeuchi 3
1. Yokohama National Univ. (Japan), 2. Institute of Advanced Sciences (Japan), 3. Tohoku Univ. (Japan)

ED5-04 16:30-16:45
Design and Evaluation of a Superconducting Stochastic Number Generator Without Individual Operating-Point Adjustment
*Ken Narita 1 , Ryota Fukuzaki 1 , Nobuyuki Yoshikawa 1 , Yuki Yamanashi 1
1. Yokohama National University (Japan)

ED5-05 16:45-17:00
Programmable Reset Potential in a Superconducting Spiking Neuron with Flux-Quantized State Representation
*Zeyu Han 1 , Nobuyuki Yoshikawa 1,2,3 , Yuki Yamanashi 1,2,3
1. Institute for Multidisciplinary Sciences, Yokohama National University (Japan), 2. Institute of Advanced Sciences, Yokohama National University (Japan), 3. Department of Electrical and Computer Engineering, Yokohama National University (Japan)

11:46-12:01 ED6(2) | Detector

Room D (203, 2nd Floor) Chair: Hirotaka Terai (National Institute of Information and Communications Technology (NICT))

ED6-06 11:46-12:01
Cosmic ray TES detectors as anticoincidence for CMB, X-ray or rare particle physics events
*Lorenzo Ferrari Barusso 1,2 , Flavio Gatti 3,2 , Edvige Celasco 3,2 , Kifayat Ullah Khan Niazi 3 , Manuela Rigano 3 , Farwa Shaukhat 3,2 , Claudio Macculi 4 , Matteo D'Andrea 4 , Giacomo Gorla 4 , Federico Bianco 5 , Matteo De Gerone 2
1. INAF Brera (Italy), 2. INFN Genova (Italy), 3. Genova Univ. (Italy), 4. INAF IAPS (Italy), 5. Roma La Sapienza Univ. (Italy)

Applications (AP)

9:30-12:00 AP4 | Fusion Magnets

Room B (201, 2nd Floor) Chair: Erica Salazar (Commonwealth Fusion Systems), Naoko Nakamura (NIFS)

AP4-02-INV 10:15-10:45
Construction Status of the DTT Magnets
*Simonetta Turtu 1

1. ENEA (Italy)

AP4-03-INV 10:45-11:15
SULTAN and EDIPO Test Facilities: Overview and HTS Sample Testing
*Kamil Sedlak 1 , Pierluigi Bruzzone, Marek Buran 1 , Nikolay Bykovskiy 1 , Jack Greenwood 1 , Thomas Nes 1 , Georg Siroky 1 , Xabier Sarasola 1
1. EPFL-SPC (Switzerland)

AP4-04 11:15-11:30
A Numerical Analysis of Field Leakage and Homogeneity in an HTS Levitated Dipole Magnet
*Emily-Kei Brewerton 1 , Sriharsha Venuturumilli 1 , Joshua Ellingham 1 , Nancy Zhou 1 , Joseph Jones 1 , Joe Todd 1 , Adam Francis 1 , Zvonko Lazić 1 , Theodore Wordsworth 1 , Rodney Badcock 1 , Darren Garnier 1 , Ratu Mataira 1
1. OpenStar Technologies Ltd (New Zealand)

AP4-05 11:30-11:45
Performance Evaluation of Solder-Impregnated HTS Coils with Integrated Metallic FBG for Cryogenic Thermal and Electrical Stability
*Xiyong Huang Huang 1 , Sriharsha Venuturumilli 2 , Raymond Hu 2 , Rod Badcock 1,2,3 , Yukai Qiao 1 , Cameron Shellard 1 , Ben Parkinson 1 , Nick Long 1 , Nick Strickland 1
1. Robinson Research Institute, Victoria University of Wellington (New Zealand), 2. OpenStar Technologies (New Zealand), 3. Dodd-Walls Centre for Photonic and Quantum Technologies (New Zealand)

AP4-06 11:45-12:00
Electro-thermal-mechanical stabilization of HTS STARS conductors for high-field stellarators
*Xiaodong Li 1,2 , Nagato YANAGI 1 , Raiymbekov Yessimzhan 1
1. National Institute of Fusion Science (Japan), 2. Technical University of Munich (Germany)

AP4-07 9:30-9:45
Preliminary Designs of SCSC Sub-Cables for CS Conductors in Tokamaks
*Naoyuki Amemiya 1
1. Kyoto University (Japan)

AP4-01-INV 9:45-10:15
Transforming the Fusion Energy Roadmap with High Temperature Superconductors
*Erica Salazar 1 , Ashleigh Francis 1 , Robert Davis 1 , Charlie Sanabria 1 , Cody Dennett 1
1. Commonwealth Fusion Systems (USA)

15:00-17:00 AP5 | K-Program: Advanced Superconducting Technologies

Room A (Main Hall, 3rd Floor) Chair: Kohei Higashikawa (Kyushu University), Naoki Hirano (NIFS)

AP5-01-INV 15:00-15:30
Superconducting Technologies Enabling Applications to Diverse Devices and Systems: An Overview of the R&D Project
*Toshiya Doi 1
1. Kyoto University (Japan)

AP5-02-INV 15:30-16:00
HTS-Core Project: Toward Unlocking the Full Potential of HTS Wires
*Hiroyuki Ohsaki 1 , Akihiro Kikuchi 1 , Gen Nishijima 1 , Junichi Shimoyama 2 , Tomoyuki Naito 3 , Takanobu Kiss 4 , Kohei Higashikawa 4 , Yutaka Terao 5 , Yusuke Sogabe 5 , Masayoshi Ohya 6 , Hiroshi Ueda 7 , Seokbeom Kim 7 , Tsuyoshi Yagai 8 , Yuji Tsuchiya 9 , Satoshi Awaji 9 , Michinaka Sugano 10 , Yoshinori Yanagisawa 11
1. National Institute for Materials Science (Japan), 2. Aoyama Gakuin University (Japan), 3. Iwate University (Japan), 4. Kyushu University (Japan), 5. Kyoto University (Japan), 6. Kwansei Gakuin University (Japan), 7. Okayama University (Japan), 8. Sophia University (Japan), 9. Tohoku University (Japan), 10. KEK (Japan), 11. RIKEN (Japan)

AP5-03-INV 16:00-16:30
Development of Enabling Technologies for Cost-Effective Realization of Three-Dimensional Superconducting Magnets – K-Program Overall Plan -
*Naoki Hirano 1 , Toshiyuki Mito 1 , Yoshimitsu Hishinuma 1 , Shinji Hamaguchi 1 , Shun Miura 1 , Yuta Onodera 1 , Akihiko Kikuchi 2 , Yayuo Iijima 2 , Tsuyoshi Tamegai 2 , Shuuichi Ooi 2 , Minoru Tachiki 2 , Tatsushi Nakamoto 3 , Xudong Wang 3 , Michinaka Sugano 3 , Kento Suzuki 3 , SeokBeom Kim 4 , Akifumi Kawagoe 5 , Naoki Takata 6
1. National Institute for Fusion Science (Japan), 2. National Institute for Materials Science (Japan), 3. High Energy Accelerator Reseerch Organization (Japan), 4. Okayama University (Japan), 5. Kagoshima University (Japan), 6. Nagoya University (Japan)

AP5-04-INV 16:30-17:00
Research and Development Concept for High-Current-Density Magnets and Dynamic-Excitation Magnets Using Insulated Assembled Conductors
*Shohei Takami 1 , Shigeki Takayama 1 , Taizo Tosaka 1 , Toru Kuriyama 1 , Satoshi Fukui 2 , Naoyuki Amemiya 3
1. Toshiba Corporation (Japan), 2. Niigata Univ. (Japan), 3. Kyoto Univ. (Japan)

12:00-12:15 AP8 | AP8(2)

Room B (201, 2nd Floor) Chair: Yutaka Terao (Kyoto University)

AP8-07 12:00-12:15
Electrical Characterization of Coils Wound with SCSC Cables in Temperature Range Below 77.3 K
*Yusuke Sogabe 1 , Kazuki Yasutake 1 , Takehiro Sugimoto 1 , Shota Sonobe 1 , Hiiragi Uegaki 1 , Naoyuki Amemiya 1
1. Kyoto University (Japan)

Wires and Bulk Materials (WB)

9:45-12:00 WB4 | REBCO Industrial Manufacturing

Room A (Main Hall, 3rd Floor) Chair: Venket Selvamanickam (University of Houston), Yasuhiro Iijima (Fujikura Ltd.)

WB4-02-INV 10:15-10:45
Recent Developments in REBCO Coated Conductor Technologies at Fujikura Ltd.
*Masaki Ohsugi 1 , Shinji Fujita 1 , Naonori Nakamura 1 , Yutaka Adachi 1 , Tetsuo Takemoto 1 , Ryo Kikutake 1 , Yasuhiro Iijima 1 , Masanori Daibo 1
1. Fujikura Ltd. (Japan)

WB4-03-INV 10:45-11:15
Recent Industrial and R&D Advances in REBCO Coated Conductors at Shanghai Superconductor Technology Co., Ltd

*Jiamin ZHU 1 , Sikan CHEN 1 , Zhonghe GAO 1 , Chao ZHANG 1 , Shuiliang ZHEN 1 , Xiaohui LIN 1 , Pei BAI 1 , Xuefeng WANG 1 , Junhao ZHANG 1 , Ye HUANG 1 , Bai SONG 1 , Yiyang TONG 1
1. Shanghai Superconductor Technology Co., Ltd. (China)

WB4-04-INV
11:15-11:45

Manufacturing and development of REBCO HTS tape at SuperPower

*Hisaki Sakamoto 1 , Yifei Zhang 1 , Gene Carota 1 , Takao Hirai 1 , Hirotsugu Nagata 1
1. SuperPower Inc. (USA)

WB4-05
11:45-12:00

Recent Advances in the Optimization of MIRAI and ELECTRA HTS tapes at Faraday Factory Japan.

*Roman Valikov 1 , Anton Markelov 1 , Simon Hartlaub 1 , Marat Gaifullin 1 , Valery Petrykin 1 , Alexander Molodyk 1 , Sergey Samoilenkov 1 , Sergey Lee 1
1. LLC Faraday Factory Japan (Japan)

WB4-01-INV
9:45-10:15

Recent Progress in High Throughput Process Control in HTS 2G Wire Production at SuNAM

*Seung Hyun . Moon 1
1. SuNAM Co. Ltd. (Korea)

15:15-17:00 WB5 | Pinning and Irradiation Effects

Room B (201, 2nd Floor) **Chair: Joffre Gutierrez (Institut de Ciencia de Materials de Barcelona, CSIC), Ryo Teranishi (Kyushu University)**

WB5-01-INV
15:15-15:45

Vortex pinning and electronic structure in Transient Liquid Assisted Growth (TLAG) Coated Conductors

*Joffre Gutierrez Royo 1 , Aiswarya Kethamkuzhi 1 , Ona Mola 1 , Kapil Gupta 2 , Mahel Antoine Voulhoux 1 , Carla Torres 1 , Emma Ghiara 1 , Roxana Vlad 1 , Vittorio Bertini 1 , Elzbieta Pach 1,5 , Victor Fuentes 1,5 , Cornelia Pop 1 , Susagna Ricart 1 , Ramon Yanez 3 , Jordi Farjas 4 , Eduardo Solano 5 , Laura Simonelli 5 , Xavier Obradors 1 , Teresa Puig 1
1. Institut de Ciencia de Materials de Barcelona, ICMAB - CSIC (Spain), 2. Institut Català de Nanociència i Nanotecnologia, ICN2 (Spain), 3. Departament de Quimica, Universitat Autonoma de Barcelona (Spain), 4. GRMT, Department of Physics, University of Girona (Spain), 5. ALBA Synchrotron (Spain)

WB5-02
15:45-16:00

Natural vortex pinning in YBCO coated conductors produced by Faraday Factory Japan

*Marat B. Gaifullin 1 , Vladimir Vyatkin 1 , Ivan Veshchunov 1 , Roman Valikov 1 , Yuji Tsuchiya 2 , Satoshi Awaji 2 , Valeri Petrykin 1 , Sergey Lee 1
1. Faraday Factory Japan (Japan), 2. Institute for Materials Research, Tohoku University (Japan)

WB5-03
16:00-16:15

Longitudinal Magnetic-Field Hysteresis in Critical Current of REBCO Coated Conductors

*Tatsunori Okada 1 , Shinnosuke Oda 1 , Daisuke Sakai 1 , Toji Nakashima 1 , Haruki Miyashita 1 , Aoi Kira 1 , Daiki Mino 1 , Kyosuke Sakurai 2 , Satoshi Awaji 2
1. Kyutech (Japan), 2. Tohoku Univ. (Japan)

WB5-04-INV
16:15-16:45

Understanding radiation damage mechanisms in REBCO coated conductors for fusion applications

*Kirk Adams 1 , Jarrod Lewis 1,2 , Matthew Coulson 1 , James Tufnail 1 , Will Iliffe 3 , Carlo Cazzaniga 4 , Maria Kastriotou 4 , Chris Mizzi 5 , Fred Allars 2 , Boris Maiorov 5 , Sofia Diaz-Moreno 2 , Chris Frost 4 , Chris Grovenor 1 , Susannah Speller 1
1. Department of Materials, University of Oxford, Oxford (UK), 2. Diamond Light Source, Rutherford-Appleton Laboratory, Harwell (UK), 3. United Kingdom Atomic Energy Authority, Culham (UK), 4. ISIS Neutron and Muon Source, Rutherford-Appleton Laboratory, Harwell (UK), 5. Los Alamos National Laboratory, Los Alamos, New Mexico (USA)

WB5-05
16:45-17:00

Change of pinning in REBCO coated conductors after fast neutron irradiation

Florian semper 1 , Raphael Unterrainer 2 , Alexander Bodenseher 1 , *Michael Eisterer 1
1. TU Wien (Austria), 2. CERN (Switzerland)

Oral Presentation Program

Thursday, December 3, 2026

Physics and Chemistry (PC)

9:45-12:00 PC6 | Cuprate

Room C (202, 2nd Floor) **Chair: Masahiro Naritsuka (Riken), Yuki Itahashi (Riken)**

PC6-02-INV
10:15-10:45
Enhanced Superconducting Gap in the Outer CuO 2 Plane of the Hg-Based Trilayer Cuprate
*Masafumi Horio 1
1. The University of Tokyo (Japan)

PC6-03-INV
10:45-11:15
Nodal metal and interlayer coupling in triple-layer cuprate superconductor, Bi2223
*Shin-ichiro Ideta 1
1. Hiroshima University (Japan)

PC6-04
11:15-11:30
Effect of Uniform Bond-Charge Order on Longitudinal Spin Susceptibility Jump at a Superconducting Instability Inside a Magnetic Phase
*Sher Baz 1,2 , Hiroyuki Yamase 2,1
1. Department of Condensed Matter Physics, Graduate School of Science, Hokkaido University, Sapporo 060-0810, Japan (Japan), 2. Research Center for Materials Nanoarchitectonics (MANA), National Institute for Materials Science (NIMS), Tsukuba 305-0047, Japan (Japan)

PC6-05-INV
11:30-12:00
Effect of Oxygen Deficiency in the Cu-O Chains on the Superconducting Transition Temperature in REBa 2 Cu 3 O y
*Akira Fujiwara 1 , Masatsune Kato 1 , Taro Yamashita 1
1. Tohoku univ. (Japan)

PC6-01-INV
9:45-10:15
Record Ambient-Pressure Superconductivity in HgBa 2 Ca 2 Cu 3 O 8+δ and Pressure-Quench Mechanisms
*Liangzi Deng 1
1. University of Houston (USA)

13:15-14:45 PC7 | Novel materials 1

Room C (202, 2nd Floor) **Chair: Masafumi Horio (The Univeristy of Tokyo), Hiroya Sakurai (NIMS)**

PC7-01-INV
13:15-13:45
Discovering New Superconductors Through Arsenic Chemistry
*Minoru Nohara 1
1. Hiroshima University (Japan)

PC7-02
13:45-14:00
Enhancement of T c by partial element substitution in layered BiS 2 -based compound La(O,F)(Bi,Sn)S 2
*Yuto Miyake 1 , Tadataka Watanabe 1 , Satoshi Demura 1
1. Nihon Univ. (Japan)

PC7-03
14:00-14:15
Pressure-induced Giant Critical Current Peak in Kagome Superconductor RbV 3 Sb 5
*Wenyan Wang 1,2 , Lingfei Wang 1,2 , Tsz Fung Poon 1 , Zheyu Wang 1,2 , Chun Wai Tsang 1 , Xinyou Liu 1 , Shanmin Wang 3 , Kwing To Lai 1 , Wei Zhang 1 , Jeffery L. Tallon 4 , Youichi Yamakawa 5 , Hiroshi Kontani 5 , Rina Tazai 6 , Swee K. Goh 1,2
1. Department of Physics, The Chinese University of Hong Kong (Hong Kong), 2. State Key Laboratory of Quantum Information Technologies and Materials, The Chinese University of Hong Kong (Hong Kong), 3. Department of Physics, Southern University of Science and Technology (China), 4. Robinson Institute, Victoria University of Wellington (New Zealand), 5. Department of Physics, Nagoya University (Japan), 6. Yukawa Institute for Theoretical Physics, Kyoto University (Japan)

PC7-04-INV
14:15-14:45
Quantum and classical superconducting metamaterials with novel electrodynamic properties
*Steven Anlage 1 , Jingnan Cai 1
1. University of Maryland (USA)

15:00-16:45 PC8 | Novel materials 2

Room C (202, 2nd Floor) **Chair: Minoru Nohara (Hiroshima University), Steven Anlage (University of Maryland)**

PC8-01-INV
15:00-15:30
Superconductivity controlled by twist angle in monolayer NbSe 2 on graphene
*Masahiro Naritsuka 1
1. RIKEN Center for Emergent Matter Science (Japan)

PC8-02-INV
15:30-16:00
Layer-selective Fulde–Ferrell–Larkin–Ovchinnikov phase and diode effect in misfit layered superconductor
*Yuki Itahashi 1
1. RIKEN, CEMS (Japan)

PC8-03
16:00-16:15
Synthesis and Physical Properties of the La-Site-Substituted Misfit Layered Compound (LaS) 1+ δ (NbS 2)
*Dan Mouri 1 , Masanori Nagao 1 , Satoshi Watauchi 1 , Yuki Maruyama 1
1. Yamanashi Univ. (Japan)

PC8-04
16:15-16:30
Transport signatures of protonation-induced quasi-2D behaviour in the bulk 2 H -NbSe 2
*Shek Hei CHUI 1 , Zhiyu ZHANG 1 , Tsz Fung POON 1 , Siu Tung LAM 1 , Xirun SUN 2 , Desheng WU 2 , Swee Kuan GOH 1

1. The Chinese University of Hong Kong (Hong Kong), 2. Quantum Science Center of Guangdong-Hong Kong-Macao Greater Bay Area (Guangdong) (China)

PC8-05
16:30-16:45

Unconventional Superconductivity in Correlated Noncentrosymmetric Systems

*Tsuyoshi Imazu 1 , Katsunori Kubo 1
1. Japan Atomic Energy Agency (Japan)

Electronic Devices (ED)

9:45-11:45 ED6 | Detector

Room A (Main Hall, 3rd Floor) Chair: Hirotaka Terai (National Institute of Information and Communications Technology (NICT)), Yoshinori Uzawa (NAOJ)

ED6-02-INV
10:15-10:45

Development of Superconducting Receiver Technologies Supporting Radio Astronomy

*Yoshinori Uzawa 1
1. National Astronomical Observatory of Japan (Japan)

ED6-03-INV
10:45-11:15

Development of Photon-Number-Resolving Superconducting Nanostrip Detectors with CPW- and Microstrip-Based Impedance-Matching Tapers

*Hiroki Kutsuma 1 , Yoshihiro Fujita 1 , Masahiro Yabuno 2 , Shigehito Miki 2 , Taro Yamashita 1
1. Department of Applied Physics, Graduate School of Engineering, Tohoku University (Japan), 2. National institute of Information and Communications Technology (NICT) (Japan)

ED6-04
11:15-11:30

First fabricatoin of superconducting tunnel junction X-ray detector on silicon-on-insulator substrate

*Shigetomo Shiki 1 , Go Fujii 1
1. National Institute of Advanced Industrial Science and Technology (Japan)

ED6-05
11:30-11:45

Crystalline Orientation Mapping of FeS 2 Natural Single Crystals via Neutron Transmission Imaging with a Delay Line Current-Biased Kinetic-Inductance Detector

*Hiroaki Shishido 1 , The Dang Vu 2 , Kazuya Aizawa 3 , Kenji M Kojima 4,1 , Kenichi Oikawa 3 , Masahide Harada 3 , Takayuki Oku 3 , Kazuhiko Soyama 3 , Shigeyuki Miyajima 5 , Takekazu Ishida 1
1. Osaka Metropolitan University (Japan), 2. Ho Chi Minh City University of Technology and Engineering (Viet Nam), 3. Japan Atomic Energy Agency (Japan), 4. University of British Columbia (Canada), 5. National Institute of Information and Communications Technology (Japan)

ED6-01-INV
9:45-10:15

Latest Advances in Superconducting Strip Photon Detectors at SIMIT-CAS

*Lixing YOU 1
1. Shanghai Institute of Microsystem and Information Technology, Chinese Academy of Sciences (SIMIT, CAS) (China)

13:15-14:45 ED7 | Quantum Information II

Room A (Main Hall, 3rd Floor) Chair: Taro Yamashita (Tohoku Univ.)

ED7-01-INV
13:15-13:45

High-fidelity quantum-gate operations based on superconducting electronics at millikelvin temperatures

*Zhirong Lin 1
1. Shanghai Institute of Microsystem and Information Technology, CAS (China)

ED7-02-INV
13:45-14:15

Cryogenic System Design and Engineering for Superconducting Quantum Computers

*Yu Zhou 1,2 , Daiyu Kondo 1,2 , Norinao Kouma 1,2 , Yoshiyasu Doi 1,2 , Shintaro Sato 1,2
1. Fujitsu Limited (Japan), 2. RIKEN Center for Quantum Computing (Japan)

ED7-03-INV
14:15-14:45

Development of superconducting quantum computing systems

*Yong-Ho Lee 1
1. Korea Research Institute of Standards and Science (Korea)

15:00-16:30 ED8 | High frequency devices, System application

Room A (Main Hall, 3rd Floor) Chair: Keita Sakuma (University of Yamanashi), Seiichir Ariyoshi (Toyohashi University of Technology)

ED8-01-INV
15:00-15:30

Gain Analysis and Experimental Evaluation of a Fishbone-Type Kinetic-Inductance Traveling-Wave Parametric Amplifier at 4 K

*Masanori Takeda 1 , Ayumi Tanaka 1 , Yudai Tagami 1 , Hiroki Kutsuma 2 , Sho Masui 3 , Hirotaka Terai 4 , Yasunobu Nakamura 5,6
1. Shizuoka Univ. (Japan), 2. Tohoku Univ. (Japan), 3. NAOJ (Japan), 4. NICT (Japan), 5. RIKEN (Japan), 6. Univ. of Tokyo (Japan)

ED8-02-INV
15:30-16:00

Microscopic Theory of Superconducting Devices: From Vortex Penetration to Nonequilibrium Nonlinear Electrodynamics

*Takayuki Kubo 1,2
1. High Energy Accelerator Research Organization (KEK) (Japan), 2. The Graduate University for Advanced Studies (Sokendai) (Japan)

ED8-03
16:00-16:15

TiN/Fe(Se,Te) Multilayer Architecture for Haloscope

*Antonella Mancini 1,2 , Andrea Masi 1,3 , Achille Angrisani Armenio 1 , Laura Piperno 1 , Violetta Poletto Dotsenko 4 , Anastasyia Duchenko 1 , Alessandro Rufoloni 1 , Angelo Vannozzi 1,2 , Andrea Alimenti 2,4 , Alessandro Magalotti 2,4 , Enrico Silva 2,4 , Kostiantyn Torokhtii 4 , Nicola Pompeo 2,4 , Gianluca Ghigo 5,6 , Giuseppe Celentano 1
1. Superconductivity Laboratory ENEA, C.R. Frascati, 00044 Frascati, Italy (Italy), 2. INFN Sezione Roma Tre, 00146, Roma, Italy (Italy), 3. INFN Laboratori Nazionali di Frascati, 00044, Frascati, Italy (Italy), 4. Dept. of Industrial, Electronic and Mechanical Engineering, University Roma Tre, 00146 Roma, Italy (Italy), 5. Dept. of Applied Science and Technology, Politecnico di Torino, 10129 Torino, Italy (Italy), 6. INFN Sezione Torino, 10125 Torino, Italy (Italy)

ED8-04
16:15-16:30

Magnetic resonance measurement system based on intrinsic Josephson junctions THz emitter with superconducting magnetic shields

*Daiki Matsumaru 1,2 , Michitaka Maruyama 2 , Takanari Kashiwagi 1,3
1. Univ. of Tsukuba (Japan), 2. AIST (Japan), 3. Osaka Metropolitan Univ. (Japan)

Applications (AP)

9:45-12:00 AP6 | Accelerator Magnets

Room D (203, 2nd Floor) Chair: Tatsushi Nakamoto (KEK), Tengming Shen (Lawrence Berkeley National Laboratory)

AP6-02-INV
10:15-10:45

Application of High T c Superconductor in Accelerators

*Amalia Ballarino 1
1. CERN, European Organization for Nuclear Research (Switzerland)

AP6-03-INV
10:45-11:15

Status of development and construction of superconducting magnets for accelerator applications in Japan

*Tatsushi Nakamoto 1
1. High Energy Accelerator Research Organization (Japan)

AP6-04-INV
11:15-11:45

Fabrication and Performance of Racetrack Coils based on REBCO SCSC cables

*Tengming Shen 1 , Marek Mosat 1 , Ye Yang 1 , David Greene 1 , Yufan Yan 1 , Xiaorong Wang 1 , Febin Kurian 2 , Mithlesh Kumar 2 , Ramesh Gupta 2 , Hiiragi Uegaki 3 , Yusuke Sogabe 3 , Naoyuki Amemiya 3 , Haruka Asada 4 , Kento Suzuki 4 , Michinaka Sugano 4 , Toru Ogitsu 4 , Tatsushi Nakamoto 4
1. Lawrence Berkeley National Lab (USA), 2. Brookhaven National Lab (USA), 3. Kyoto University (Japan), 4. KEK (Japan)

AP6-05
11:45-12:00

Cosine-Theta HTS Magnets for FCC-ee Short Straight Sections: From Demonstrator to Prototype

*Kirtana Puthran 1 , Jaap Kosse 1 , Jürgen Schmidt 1 , Alejandro Carlón Zurita 1 , André Brem 1 , Michał Duda 1 , Douglas Martins Araujo 1 , Bernhard Auchmann 2
1. Paul Scherrer Institute (Switzerland), 2. European Organization for Nuclear Research (Switzerland)

AP6-01-INV
9:45-10:15

Superconducting Magnet R&D at the Paul Scherrer Institute (PSI) within the Swiss Center for Accelerator Research and Technology (CHART)

*Douglas Araujo 1 , Bernhard Auchmann 2 , André Brem 1 , Michal Duda 1 , Jaap Kosse 1 , Jungtae Lee 1 , Christian Lindner 1 , Thomas Michlmayr 1 , Colin Müller 1 , Kirtana Puthran 1 , Sasha Röthlisberger 1 , Dmitry Sotnikov 1 , Anna Stampfli 1 , Joep Van den Eijnden 3,1 , Ines S. P. P. Yoshizawa 1 , Alejandro C. Zurita 1 , Matteo Crescenti 1,4
1. Paul Scherrer Institute (Switzerland), 2. CERN (Switzerland), 3. ETH Zürich (Switzerland), 4. University of Geneva (Switzerland)

13:15-14:45 AP7 | Magnetic Levitation and Bulk Applications

Room D (203, 2nd Floor) Chair: Tetsuo Oka (Shibaura Institute of Technology), Toshihiko Sugiura (Keio University)

AP7-01-INV
13:15-13:45

Excitation Amplitude Dependence of Data-Driven Prediction of Nonlinear Combination Resonance in Superconducting Magnetic Levitation Systems

*Toshihiko Sugiura 1
1. Mechanical Engineering, Keio University (Japan)

AP7-02
13:45-14:00

Development of a Motor System Supported by Layered REBCO Superconducting Magnetic Bearings and Evaluation of Its Fundamental Characteristics

*Yutaka Terao 1
1. Kyoto University (Japan)

AP7-03
14:00-14:15

Experimental Characterization of mW-Level Energy Loss in a 400-mm-Diameter SMB-Based Rotation Mechanism below 15 K for CMB Polarimetry

*Ryosuke Akizawa 1,2 , Giulia Barbieri Ripamonti 3,4 , Paolo de Bernardis 3,4 , Fabio Columbro 2 , Mitsuharu Kusama 5 , Asuka Maeda 2 , Silvia Masi 3,4 , Tomotake Matsumura 2 , Jun Nakagawa 2 , Hiroyuki Ohsaki 2,6 , Satsuki Okumura 7
1. Department of Physics, The University of Tokyo (Japan), 2. Kavli Institute for the Physics and Mathematics of the Universe (IPMU), The University of Tokyo (Japan), 3. Sapienza University of Rome (Italy), 4. National Institute for Nuclear Physics (INFN) (Italy), 5. Advanced Engineering Services (AES) (Japan), 6. National Institute for Materials Science (NIMS) (Japan), 7. Tohoku university (Japan)

AP7-04
14:15-14:30

Magnetic Field Distribution of Monopolar Bulk Magnet by Pulsed Field Magnetization for TD-NMR

*Tetsuo Oka 1,2 , Masato Takahashi 2 , Takashi Nakamura 2 , Kazuya Yokoyama 3 , Naomichi Sakai 1
1. Shibaura Institute of Technology (Japan), 2. RIKEN (Japan), 3. Ashikaga University (Japan)

AP7-05
14:30-14:45

External current in HTS coils for counteracting flux creep in Superconducting Magnetic Bearings

*Luke Porteous 1,2 , James Storey 1,2 , Sebastian Hellman 1
1. Robinson Research Institute (New Zealand), 2. The MacDiarmid Institute (New Zealand)

15:00-16:45 AP8 | Magnet Technologies

Room D (203, 2nd Floor) Chair: Itaru Abe (Toshiba), Yutaka Terao (Kyoto University)

AP8-01
15:00-15:15

Design, robotic winding, and testing of a non-planar REBCO coil for rotating electrical machines.

*Jianghong Wan 1 , Mathias Noe 1 , Magnus Dam 1 , Tabea Arndt 1
1. Institute for Technical Physics (ITEP), Karlsruhe Institute of Technology (KIT) (Germany)

AP8-02
15:15-15:30

The STAR Machine: A Jointless Stacked Tape Architecture Rotor

*Roberto André Henrique de Oliveira 1 , Tabea Arndt 1 , Andrés Yenes 1 , Matthias Eisele 1 , Marion Klaeser 1
1. Karlsruher Institut für Technologie (Germany)

AP8-03

Underpinning MW-level fully superconducting motors for aviation applications

15:30-15:45
*Zhenan Jiang 1 , Grant Lumsden 1 , James Storey 1 , Bart Ludbrook 1 , Dominic Moseley 1 , Yueming Sun 1 , Alan Caughley 2 , Sangkwon Jeong 3 , Duleepa Thrimawithana 4 , Sarat Singamneni 5 , Rodney Badcock 6 , Nicholas Long 1
1. Robinson Research Institute, Victoria University of Wellington (New Zealand), 2. University of Canterbury (New Zealand), 3. Korea Advanced Institute of Science & Technology (KAIST) (Korea), 4. University of Auckland (New Zealand), 5. Auckland University of Technology (New Zealand), 6. OpenStar Technologies (New Zealand)

AP8-04
15:45-16:00
Development and Assessment of a Stack-Based HTS Conductor for Future Korean Nuclear Fusion Magnets
*Byung Su LIM 1 , Kyungmo KIM 1 , Sangjun OH 2 , Sanghyun Je 3 , Jaehwan Park 3 , Jongseo Lee 1
1. Korea Institute of Energy Technology (Korea), 2. Korea Institute of Fusion Energy (Korea), 3. KAT (Korea)

AP8-05
16:00-16:15
Current Redistribution in a Large-Current No-Insulation UROCOIC REBCO Coil for Fusion Magnet Applications
*Yoshiro Narushima 1,2 , Yuta Onodera 1 , Shinji Hamaguchi 1,2 , Tomosumi Baba 1 , Nagato Yanagi 1,2 , Hirotaka Chikaraishi 1,2 , Junichi Miyazawa 3 , Hiroki Chikuma 3 , Hitoshi Tamura 3 , Takuya Goto 3
1. National Institute for Fusion Science (Japan), 2. SOKENDAI (Japan), 3. Helical Fusion Co., Ltd. (Japan)

AP8-06
16:15-16:30
Floating a half-tonne Donut: Levitation Control System of OpenStar's Junior
*Joshua Patrick Maxwell Ellingham 1 , Darren Garnier 1 , Emerson Swanson-Dobbs 1 , Benjy Smith 1 , Leif Jessen 1 , Craig Chisholm 1
1. OpenStar Technologies Ltd (New Zealand)

AP8-08
16:30-16:45
Self-protecting HTS coils with vanadium-oxide smart insulation: an electro-thermal–magnetic quench model
*Mattia Ortino 1 , H Monroe 2
1. Université de Lorraine (France), 2. École Polytechnique Fédérale de Lausanne (EPFL), Swiss Plasma Center (SPC), (Switzerland)

Wires and Bulk Materials (WB)

9:45-12:00 WB6 | Advanced Conductors

Room B (201, 2nd Floor) Chair: SeungHyun Moon (SuNAM), Hisaki Sakamoto (Furukawa Electric Co., Ltd.)

WB6-02
10:15-10:30
Progress in R&D and industrialization of second-generation high-temperature superconducting tape at SuperMag Technology
*Shiwei Xu 1 , Guangyu Jiang 1 , Yue Wu 2 , Anna Wang 1 , Shae Yu 1
1. SuperMag Technology (Shanghai) Co., Ltd. (China), 2. Shanghai Jiao Tong University (China)

WB6-03
10:30-10:45
The research and industrialization progress of 2G-HTS based on MOCVD technology in China
*Yushan Wang 1 , Man Li 1 , Guodong Zhang 1 , Hongwei Gu, Zijun Ye 1
1. Eastern Superconducting Technology (Suzhou) Co. ,Ltd. (China)

WB6-04
10:45-11:00
Continuous Reel-to-Reel Laser Scribing of REBCO Coated Conductors with Fine Grooves and High Critical-Current Retention
*Hishiro T. Hirose 1 , Takato Machi 1 , Kamil Etxagibel Begic 1 , Ivan Veshchunov 1 , Vladimir Vyatkin 1 , Konstantin Vereshchagin 1 , Steven Candelaria 1 , Miyuki Nakamura 1,2 , Sergey Samoilenkov 1 , Valery Petrykin 1 , Sergey Lee 1
1. Faraday Factory Japan LLC (Japan), 2. Kyushu University (Japan)

WB6-05
11:00-11:15
Development of Cu-, Sn-, and Ag-Coated Mono- and Multifilamentary IMD MgB 2 Superconducting Wires
*Ali Gençer 1,2 , C. Guo 3 , F. Almokdad 4 , F. Ervuz 1 , H. Koralay 5 , Y. Oznal 1,8 , S. Safran 1,2 , S. Salahi 6 , A. Seçkin 7 , K. Sonmez 1,4 , S. C. Taskin 1 , D. Wang 3 , Y. Ma 3
1. Ankara University, Superconductivity Technologies Application and Research Center (Turkey), 2. Ankara University, Science Faculty, Physics Department (Turkey), 3. Chinese Academy of Sciences, Institute of Electrical Engineering, Key Laboratory of Applied Superconductivity (China), 4. Ankara University, Graduate School of Natural and Applied Sciences (Turkey), 5. Gazi University, Science Faculty, Physics Department (Turkey), 6. Gazi University, Department of Metallurgical and Materials Engineering, (Turkey), 7. Gazi University, Basic and Engineering Sciences Central Laboratory Application and Research Center (GUTMAM) (Turkey), 8. Ankara University, Elmadag Vocational School, Electronics and Automation Department (Turkey)

WB6-06
11:15-11:30
The handling of Rutherford cables made of ultrafine wire rope strands with opposing twist direction
*Ian Pong 1 , Akihiro Kikuchi 2 , Andy Lin 1
1. Lawrence Berkeley National Laboratory (USA), 2. National Institute for Materials Science (Japan)

WB6-07-INV
11:30-12:00
Advances in high performance iron-based superconducting wires
*Yanwei Ma 1
1. Institute of Electrical Engineering, Chinese Academy of Sciences (China)

WB6-01-INV
9:45-10:15
Progress in Advanced REBCO Conductor Development
*Venkat Selvamanickam 1,2
1. Department of Mechanical Engineering, Advanced Manufacturing Institute, Texas Center for Superconductivity, University of Houston (USA), 2. AMPeers (USA)

13:15-14:45 WB7 | Data-Driven Approaches II

Room B (201, 2nd Floor) Chair: Fumitake Kametani (Florida State University), Yutaka Yoshida (Nagoya University)

WB7-01-INV
13:15-13:45
Topochemical and data-driven design of advanced iron-based superconducting materials
*Akiyasu Yamamoto 1 , Nur Rahmawati Ayukaryana 1 , Fumiya Shimoyama 1 , Ichiro Mizuto 1 , Nodoka Shimizu 1 , Goro Kitano 1 , Kotomi Ogi 1 , Yu Homma 1 , Osuke Kinouchi 1 , Kota Hanzawa 2 , Yusuke Shimada 3 , Yoshimitsu Hishinuma 4 , Takafumi Hatano 5 , Shunya Tomioka 6 , Hiroshi Ikuta 6
1. Tokyo University of Agriculture and Technology (Japan), 2. Institute of Science, Tokyo (Japan), 3. Kyushu University (Japan), 4.

National Institute for Fusion Science (Japan), 5. Hokkaido University (Japan), 6. Nagoya University (Japan)

WB7-02-INV
13:45-14:15

Data-Driven Correlation Analysis between Deposition Parameters Including Ablation Plumes and Superconducting Properties of PLD-Grown REBCO Thin Films

*Yusuke Ichino 1,5 , Shuhei Funaki 1 , Yoshiyuki Seike 1 , Tatsuo Mori 1 , Keiichi Horio 2,5 , Ataru Ichinose 3,5 , Tomoya Horide 4,5 , Kaname Matsumoto 4,5 , Yutaka Yoshida 4,5
1. Aichi Inst. of Technol. (Japan), 2. Kyushu Inst. of Technol. (Japan), 3. Central Research Inst. of Electric Power Industry (Japan), 4. Nagoya University (Japan), 5. JST-CREST (Japan)

WB7-03
14:15-14:30

Automated Analysis and Machine-Learning Prediction of Critical Current Density in YBCO Coated Conductors

*Vladimir Vyatkin 1 , Ashat Shaik 1 , Naing Yati 1 , Hoa Dao 1 , Ivan Veshchunov 1 , Konstantin Vereshchagin 1 , Maki Okube 1 , Marat Gaifullin 1 , Sergey Samoilenkov 1 , Valery Petrykin 1 , Sergey Lee 1
1. Faraday Factory Japan (Japan)

WB7-04
14:30-14:45

Spatially Resolved Characterization of Superconducting Properties in REBCO Combinatorial Films Deposited by Inkjet Printing and Transient Liquid-Assisted Growth

*Zeyu Wu 1 , Kohei Higashikawa 1 , Albert Queraltó 2 , Emma Guiara 2 , Cornelia Pop 2 , Kapil Gupta 2 , Xavier Obradors 2 , Teresa Puig 2 , Takanobu Kiss 1
1. Kyushu University (Japan), 2. Institut de Ciència de Materials de Barcelona (Spain)

15:00-16:31 WB8 | Structural Characterization and Joints

Room B (201, 2nd Floor) Chair: Akiyoshi Matsumoto (National Institute for Materials Science(NIMS)), Yasunori Mawatari (National Institute of Advanced Industrial Science and Technology (AIST))

WB8-01-INV
15:00-15:30

Nanostructural Origins of J c Variability in REBCO Coated Conductors for Low-Temperature, High-Field Applications

*Fumitake Kametani 1,2 , A. Xu 1 , Y. Xin 3 , C. Watson 1,4 , J. Lee 1,4 , J. Bang 1 , D. V. Abraimov 1 , J. J. Jaroszynski 3 , R. Ries 1 , I. Wyrsta 5 , R. Karam 5 , D. C. Larbalestier 1,2,4
1. Applied Superconductivity Center, National High Magnetic Field Laboratory, Florida State University (USA), 2. Department of Mechanical Engineering, FAMU-FSU College of Engineering, Florida State University (USA), 3. National High Magnetic Field Laboratory, Florida State University (USA), 4. Department of Materials Science and Engineering, FAMU-FSU College of Engineering, Florida State University (USA), 5. High Temperature Superconductors Inc. (USA)

WB8-02-INV
15:30-15:31

Withdrawn

WB8-03
15:31-15:46

Microstructural analysis of thickened YBa 2 Cu 3 O y multifilament films using Substrate-Encoded Filamentation

*Ryo Teranishi 1 , Seiya Hirayama 1 , Taiki Wada 1 , Akiyoshi Matsumoto 2 , Masayoshi Inoue 3 , Takumi Ikenoue 4 , Yusuke Sogabe 4
1. Kyushu Univ. (Japan), 2. National Institute for Materials Science (Japan), 3. Fukuoka Institute of Technology (Japan), 4. Kyoto Univ. (Japan)

WB8-04
15:46-16:01

Measurement and Modeling of the Temperature Dependence of Joint Resistivity in Solder-Free Sonic-Welded REBCO Lap Joints

*Shinya Sera 1 , Takanobu Kiss 1,2 , Zeyu Wu 1 , Kohei Higashikawa 1,2
1. Dept. of Electrical Engineering, Kyushu Univ. (Japan), 2. Research Institute of Superconductor Science and Systems, Kyushu Univ. (Japan)

WB8-05
16:01-16:16

Dynamic inductive resistance measurement of high-current, ultra-low-resistance superconducting joints

*Petr Zagura 1 , J. Winger 1 , C. R. M. Grovenor 1 , S. C. Speller 1
1. Department of Materials, University of Oxford (UK)

WB8-06
16:16-16:31

Estimation of delamination mechanisms in YBCO coated conductors based on microstructural observation of delaminated surfaces

*Yusuke Kawagishi 1 , Shintaro Kawashima 1 , Ryo Teranishi 1
1. Kyushu Univ. (Japan)

Poster Presentation Program

Tuesday, December 1, 2026

Physics and Chemistry Posters (PCP)

13:15-14:45 PCP1 | PCP1

3FS-PC (3F Foyer South) Chair: Hiraku Ogino (National Institute of Advanced Industrial Science and Technology (AIST)), Akira Iyo (National Institute of Advanced Industrial Science and Technology (AIST)), Tsutomu Nojima (Tohoku University)

PCP1-01
13:15-14:45
Vacuum Hierarchy and Real Space topological object in multi-component superconductor
*Kihiro Tanaka 1 , Yasumoto Tanaka 2 , Kazuyasu Tokiwa 2 , Taichiro Nishio 1
1. Department of Physics, Graduate School of Science, Tokyo University of Science (Japan), 2. Faculty of Industrial Science and Technology, Tokyo University of Science (Japan)

PCP1-02
13:15-14:45
Normal and Anomalous Self-Energy of Optimally Doped La 2-x Sr x CuO4 extracted from ARPES spectra
*Rikito Saiki 1 , Yitong Chen 1 , Daiki Ootsuki 2 , Teppei Yoshida 1
1. Kyoto University (Japan), 2. Okayama University (Japan)

PCP1-03
13:15-14:45
The influence of the La/Sr ratio on the superconducting properties of TFA-MOD La 2-x Sr x CuO 4 films
*Seishiro Nagaba 1 , Kosuke Masuda 1 , Ryusei Kaji, Yuki Ogimoto 1 , Masashi Miura 1,2
1. Seikei University (Japan), 2. JST-FOREST (Japan)

PCP1-04
13:15-14:45
The effect of carrier concentration on the superconducting properties of (Y 1- x Ca x)Ba 2 Cu 4 O 8 films
*Katsuki Kondo 1 , Ryoya Nagaura 1 , Yuki Ogimoto 1 , Shuhei Funaki 2 , Serena Eley 3 , Masashi Miura 1,4
1. Seikei University (Japan), 2. Aichi Institute of Technology (Japan), 3. University of Washington (USA), 4. JST-FOREST (Japan)

PCP1-05
13:15-14:45
Optical Contrast Analysis of Single-Crystal Bi2212 and Establishment of a Non-Destructive Thickness Measurement Method
*JIRANTHANIN KASEAN 1 , Yoshitaka Nakamura 1 , Takaharu Kamada 1
1. National Institute of Technology(KOSEN), Hachinohe College (Japan)

PCP1-06
13:15-14:45
Enhancement of Effective Mass and Non-Fermi Liquid Behavior in Cr/Mn Substituted KFe 2 As 2
*Kentaro Mori 1 , Shunsuke Yamamoto 1 , Shiro Kawachi 1 , Akira Yamaguchi 1 , Hisao Kobayashi 1 , Shigeki Miyasaka 1
1. Graduate School of Science, University of Hyogo (Japan)

PCP1-07
13:15-14:45
Effects of He and Au ion irradiation on the superconducting properties of iron-based superconductors
Ibuki Washitani 1 , Atsushi Fujita 1 , Sogo Kubota 1 , Tatsuya Higashi 1 , Takafumi Hatano 2 , Toshinori Ozaki 3 , Kazumasa Iida 4 , *Hiroshi Ikuta 1,5
1. Department of Materials Physics, Nagoya University (Japan), 2. Department of Physics, Hokkaido University (Japan), 3. School of Engineering, Kwansei Gakuin University (Japan), 4. College of Industrial Technology, Nihon University (Japan), 5. Research Center for Crystalline Materials Engineering, Nagoya University (Japan)

PCP1-08
13:15-14:45
Propionic Acid-Assisted Synthesis and Characterization of Bilayer and Trilayer Lanthanum Nickelates
*JHAOWEI SU 1,2 , Ryo Matsumoto 1 , Yoshihiko Takano 1,2
1. National Institute for Materials Science (NIMS) (Japan), 2. University of Tsukuba (Japan)

PCP1-09
13:15-14:45
Crystal Growth and Superconductivity of 3 R -TaSe 2- x Te x without Spatial Inversion Symmetry
*Kazuki Okada 1 , Takao Sasagawa 1
1. Materials and Structures Laboratory, Institute of Science Tokyo (Japan)

PCP1-10
13:15-14:45
Pressure-tuned critical current in thin flake 2 H -NbSe 2
*Chenzhong Feng 1 , Che-hsuan Ku 1 , Tsz Fung Poon 1 , Zheyu Wang 1 , Xirun Sun 2 , Desheng Wu 2 , Swee Kuan Goh 1,3
1. The Chinese University of Hong Kong (Hong Kong), 2. Quantum Science Center of Guangdong-Hong Kong-Macao Greater Bay Area (China), 3. State Key Laboratory of Quantum Information Technologies and Materials (Hong Kong)

PCP1-11
13:15-14:45
Sn substitution effects in BiS 2 -based superconductors Ln (O,F)BiS 2
*Yuta Takahashi 1 , Ryoya Tanabe 1 , Takeru Nishimura 1 , Yuto Miyake 1 , Shogo Kuwahara 1 , Satoshi Demura 1
1. CST, Nihon University (Japan)

PCP1-12
13:15-14:45
T c Enhancement in AuCu 3 -Type BaBi 3 through Na Substitution
*Terunari Koshinuma 1 , Yoshihisa Kamiya 1 , Hiroshi Fujihisa 2 , Yoshito Gotoh 2 , Izumi Hase 2 , Shigeyuki Ishida 2 , Hiraku Ogino 2 , Hiroshi Eisaki 2 , Kenji Kawashima 2 , Akira Iyo 2
1. IMRA JAPAN Co., Ltd. (Japan), 2. National Institute of Advanced Industrial Science and Technology (Japan)

PCP1-13
13:15-14:45
Enhanced Superconductivity and structural phase transition in the Solid Solution Rh 1- x Pt x Sb
*Akira Iyo 1 , Hiroshi Fujihisa 1 , Izumi Hase 1 , Shigeyuki Ishida 1 , Hiroshi Eisaki 1 , Hiraku Ogino 1 , Kenji Kawashima 2
1. National Institute of Advanced Industrial Science and Technology (AIST) (Japan), 2. IMRA JAPAN R&D Co., Ltd. (Japan)

PCP1-14
13:15-14:45
Electronic Structure, Phonon Instability and Nonsymmorphic Dirac Nodal Line in New Superconductor Rh 1-x Pt x Sb
*Izumi Hase 1 , Akira Iyo 1 , Yoichi Higashi 1 , Kenji Kawashima 1,2
1. National Institute of Advanced Industrial Science and Technology (AIST) (Japan), 2. IMRA JAPAN (Japan)

PCP1-15
13:15-14:45
Superconducting and Vortex Properties near the Structural Phase Transition in Rh 1- x Pt x Sb
*Shigeyuki Ishida 1 , Hiroshi Fujihisa 1 , Izumi Hase 1 , Hiraku Ogino 1 , Hiroshi Eisaki 1 , Akira Iyo 1 , Kenji Kawashima 2
1. AIST (Japan), 2. IMRA JAPAN Co., Ltd. (Japan)

Electronic Devices Posters (EDP)

13:15-14:45	EDP1 | Digital, Detector, High-frequency Devices
3FS-ED (3F Foyer South)	Chair: Hirotaka Terai (National Institute of Information and Communications Technology (NICT))
EDP1-01 13:15-14:45	**Test Set Generation Method for Timing Faults in RSFQ Circuits Composed of Clockless Gates** *Masaki Oiwa 1 , Nobutaka Kito 1 1. Chukyo University (Japan)
EDP1-02 13:15-14:45	**Evaluation of Operating Speed of High-Speed Superconductive Random Number Generator Using an Autocorrelation Calculation Circuit** *Yoshinobu Tomitaka 1 , Nobuyuki Yoshikawa 2,3,4 , Yuki Yamanashi 2,3,4 1. Graduate School of Yokohama National University (Japan), 2. Faculty of Engineering Yokohama National University (Japan), 3. Institute of Advanced Sciences Yokohama National University (Japan), 4. Institute for Multidisciplinary Sciences Yokohama National University (Japan)
EDP1-03 13:15-14:45	**Implementation of an SFQ Spiking Neural Network Using SFQ ReLU Neurons for Dataset Classification** *Yuto Ueno 1 , Zeyu Han 2 , Nobuyuki Yoshikawa 2,3 , Yuki Yamanashi 2,3 1. Yokohama National Univ. (Japan), 2. Yokohama National Univ. IMS (Japan), 3. Yokohama National Univ. IAS (Japan)
EDP1-04 13:15-14:45	**Design of a reconfigurable adiabatic quantum-flux-parametron logic gate** *Aoto Tanaoka 1 , Nobuyuki Yoshikawa 1,2,3 , Yuki Yamanashi 1,2,3 1. Yokohama National University (Japan), 2. Institute of Advanced Sciences, Yokohama National University (Japan), 3. Institute for Multidisciplinary Sciences, Yokohama National University (Japan)
EDP1-05 13:15-14:45	**R&D of Josephson Voltage Standard Systems and Their Applications** *Michitaka Maruyama 1 , Kaho Koyanagi 1 , Daiki Matsumaru 1 , Hirotake Yamamori 1 , Nobu-Hisa Kaneko 1 1. National Metrology Institute of Japan (NMIJ), National Institute of Advanced Industrial Science and Technology (AIST) (Japan)
EDP1-06 13:15-14:45	**Effect of Reduced Operating Temperature on the Noise Performance of HTS SQUIDs** *Takeyoshi Ohtani 2 , Saburo TANAKA 1 1. Toyohashi University of Technology (Japan), 2. Nikka Densok Limited (Japan)
EDP1-07 13:15-14:45	**Data Augmentation for High-Resolution Microwave Frequency Identification Using Bias-Tuned Superconducting Transmission Lines** *Yuta Yasutani 1 , Masato Naruse 1 , Hiroaki Myoren 1 1. Saitama University (Japan)
EDP1-08 13:15-14:45	**Design and evaluation of HTS Bulk Resonator Antenna with Fabry-Perot Resonator for Wireless Power Transfer** *IKUTO SHINDO 1 , Takumu Suzuki 1 , Yamato Kobayashi 1 , Haruto Niida 2 , Atsushi Saito 1 1. Graduate school of science and Engineering, Yamagata University (Japan), 2. Fuji Electric Co., LTD (Japan)
EDP1-09 13:15-14:45	**Development of a Low-Temperature Measurement System for an Aluminum MKID for Solar Electron-Neutrino Observation** *Kento Kakinoki 1 , Taichi Fukushima 1 , Hirokazu Ishino 1 , Ryota Takaku 1 , Hirotake Yamamori 2 1. Okayama Univ. (Japan), 2. AIST (Japan)
EDP1-10 13:15-14:45	**Estimations of kinetic inductance in YBCO coplanar waveguides** *HISASHI SHIMAKAGE 1 , Masaru Furukawa 1 , Ibuki Takahashi 1 1. Ibaraki University (Japan)

Applications Posters (APP)

13:15-14:45	APP1 | APP1
3FE-AP (3F Foyer East)	Chair: Hiroshi Miyazaki (Kyushu University)
APP1-01 13:15-14:45	**Design aspects of a megawatt-level rotor employing REBCO saddle coils** *James Storey 1 , Bart Ludbrook 1 , Michael Southon 1 , Grant Lumsden 1 , Zhenan Jiang 1 1. Victoria University of Wellington (New Zealand)
APP1-02 13:15-14:45	**Torque Improvement of an HTS Induction Motor Using a Double-Rectangular-Coil Armature and a Dual-Diameter Rotor** *Miyatada Murasaki 1 , Rentarou Suenaga 1 , Koya Hori 1 , Kohei Yoshida 1 , Hayato Toda 1 , Tomohiro Inoue 1 , Hiroshi Miyazaki 1 , Masataka Iwakuma 1 1. Kyushu University (Japan)
APP1-03 13:15-14:45	**Effects of Rotor Eccentricity and Axial Displacement on Electromagnetic Force and Torque in High-temperature Superconducting Induction Motor** *Guangwei Xu 1 , Taketsune Nakamura 1 1. Kyoto University (Japan)
APP1-04 13:15-14:45	**3D Nonlinear Electromagnetic Field Analisys of a High-Thrust, Several-Kilowatt-Class Tubular High-Temperature Superconducting Linear Induction Motor** *Tatsuya Matsumura 1 , Taketsune Nakamura 1 1. Kyoto University Electrical, Electronic, and Digital Science and Engineering (Japan)
APP1-05 13:15-14:45	**Experimental Evaluation on Circulating Current Reduction in a Four-Parallel Saddle-Shaped Full-Pitch Coil with Symmetric Strand Arrangement under Rotating Magnetic Field** *Tomohiro Inoue 1 , Goki Kawasaki 2 , Miyatada Murasaki 1 , Asato Kobun 2 , Shun Miura 3 , Hiroshi Miyazaki 1 , Koichi Yoshida 1 , Akifumi Kawagoe 4 , Masataka Iwakuma 1

1. Kyushu University (Japan), 2. National Institution of Technology, Miyakonojo College (Japan), 3. National Institution for Fusion Science (Japan), 4. Kagoshima University (Japan)

APP1-06
13:15-14:45
From industrial power electronic devices to a 77 K power converter
Yanis LAÏB 1 , Marceline MANYONG KAPEND 1 , Kevin BERGER 1 , Stephane RAEL 1 , *Jean LEVEQUE 1
1. Université de Lorraine, GREEN, F-54000 Nancy, France (France)

APP1-07
13:15-14:45
Improving GFM-to-GFL Handover in Renewable-Energy Microgrids with Fast SMES Support
*YUCONG YANG 1 , Kohei Higashikawa 1 , Takanobu Kiss 1
1. Kyushu University (Japan)

APP1-08
13:15-14:45
Development of a High-Speed Physics-Based Simulation Model for Autonomous Predictive Maintenance of SMES Superconducting Coils
*Satsuki Okumura 1 , Yoh Nagasaki 1 , Makoto Tsuda 1
1. Tohoku University (Japan)

APP1-09
13:15-14:45
A novel application for HTS coated conductors: pulsed high-voltage spiral generators
Thor Wens 1 , Jean Francois Fagnard 1 , Christophe Greffe 2 , *Philippe Vanderbemden 1
1. University of Liege (Belgium), 2. GeneriX SRL (Belgium)

APP1-10
13:15-14:45
Superconductor and normal-conductor currents in RE123 tape during short-circuit current experiments, analyzed with LTspice
*KOKI SHINTANI 1 , MASAE KANDA 1 , SATARO YAMAGUCHI 1
1. Chubu University (Japan)

APP1-11
13:15-14:45
Numerical study on current distribution of two-layer REBCO assembled conductors during AC inductive energization
*Takumi Gotomyo 1 , Masayoshi Ohya 1
1. Kwansei Gakuin University (Japan)

APP1-12
13:15-14:45
SS-Armored CORC Bend
*LINLI GUO 1
1. Shanghai Jiao Tong University (China)

APP1-13
13:15-14:45
Compression characteristics of high-temperature superconducting spirally assembled conductors
*Soya Okabe 1 , Mio Yoshizaki 1 , Masayoshi Ohya 1
1. Kwansei Gakuin University (Japan)

APP1-14
13:15-14:45
Effect of surface condition on cooling stability of REBCO wires cooled by liquid hydrogen
*Takuma Obuchi 1 , Daiki Nakashima 1 , Masayoshi Ohya 1 , Shinnosuke Matsunaga 2 , Yuta Onodera 3 , Naoko Nakamura 3 , Naoki Hirano 3
1. School of Engineering, Kwansei Gakuin University (Japan), 2. National Institute of Technology, Gifu College (Japan), 3. National Institute for Fusion Science (Japan)

APP1-15
13:15-14:45
Effect of Outer Pipe Surface Materials on the Thermal Insulation Performance of Cryogenic Pipes
*Hiroaki Kobayashi 1 , Masae Kanda 1 , Sataro Yamaguchi 1 , hirofumi Watanabe 1
1. Chubu University (Japan)

APP1-16
13:15-14:45
Optimization of Condenser Design for a Hydrogen Thermosyphon Cooling System in HTS Applications
*Haruki Wakita 1 , Kota Yamaguchi 1 , Keita Tsuzuki 2
1. National Institute of Technology, Toba college (Japan), 2. National Institute of Technology, Toyota college (Japan)

APP1-17
13:15-14:45
Status of the FASUM project Forty Tesla All Superconducting User Magnet
*Philippe Fazilleau 1 , Xavier Chaud 2 , Jung-Bin Song 2 , Thibault Lécrevisse 1
1. CEA Saclay (France), 2. CNRS-LNCMI Grenoble (France)

APP1-18
13:15-14:45
Trapping High Magnetic Field in Tubular Stacked Coated Conductors by pulsed field
*Cheng Yu 1 , Yuji Tsuchiya 2 , Yoshimitsu Kohama 1
1. Tokyo Univ. (Japan), 2. Tohoku Univ. (Japan)

APP1-19
13:15-14:45
Evaluation of a Wind & Shape HTS Tape Undulator Considering Anisotropic Critical-Current Characteristics
*Takuto Fukui 1 , Ryota Kinjo 1 , Sohki Murakami 1 , Marco Calvi 2 , Alexandre Arsenault 2
1. Osaka Institute of Technology (Japan), 2. Paul Scherrer Institute (Switzerland)

APP1-20
13:15-14:45
Post-mortem analysis of a Metal-as-Insulation Double Racetrack REBCO coil after multiple quenches
*Thibault Lecrevisse 1 , Antomne Caunes 1 , Guillaume Campagna 1 , Audren Blondelle 1 , Philippe Fazilleau 1 , Franco Julio Mangiarotti 2 , Algirdas Baskys 2 , Amalia Ballarino 2
1. CEA-Université Paris-Saclay / Irfu (France), 2. CERN, European Organisation for Nuclear Research (Switzerland)

Wires and Bulk Materials Posters (WBP)

13:15-14:45	WBP1a | WBP1
204-WB (204, 2nd Floor)	Chair: Ohsugi Masaki (Fujikura), Nick Long (Victoria University of Wellington)

WBP1-01
13:15-14:45
Research on the Application Performance of Superconducting Composite Cables for Tokamak Magnets
*Shaotao Dai 1 , Yangyang Shi 1 , Tao Ma 1 , Bangzhu Wang 1
1. Beijing Jiaotong University (China)

WBP1-02
13:15-14:45
Scaling up IBAD Buffer tape manufacturing for 2G-HTS at Faraday Factory Japan
*John Wilfred Lopez Aclan 1 , Konstantin Vereshchagin 1 , Alexey Mankevich 1 , Deniz Sanal 1 , Vladimir Vyatkin 1 , Ivan Veshchunov 1 , Alexander Molodyk 1 , Valery Petrykin 1 , Sergey Samoylenkov 1 , Sergey Lee 1
1. Faraday Factory Japan LLC (Japan)

WBP1-03 13:15-14:45
Development of Low-AC Loss REBCO Spiral Conductors with multifilamentary REBCO tapes
*Shinji Fujita 1 , Shogo Muto 1 , Ryusei Takahashi 1 , Naonori Nakamura 1 , Ryuichi Okubo 1 , Yasuhiro Iijima 1 , Masanori Daibo 1 , Yasunori Mawatari 2
1. Fujikura Ltd. (Japan), 2. National Institute of Applied Industrial Science and Technology (AIST) (Japan)

WBP1-04 13:15-14:45
Withdrawn

WBP1-05 13:15-14:45
Investigation of Boron Feedstock Effects in MgB 2 Wires Using a Mixed-Isotope Approach
*Hiroki Hoashi 1 , Yusuke Shimada 1 , Yoshimitsu Hishinuma 2 , Yasuhito Kawahara 1 , Hongye Gao 1 , Satoshi Hata 1
1. Kyushu University (Japan), 2. National Institute for Fusion Science (Japan)

WBP1-06 13:15-14:45
Measurement of AC losses on Filamentized REBCO tapes
*Achille Angrisani Armenio 1 , Andrea Masi 1 , Gianluca de Marzi 1 , Laura Piperno 1 , Alessandro Rufoloni 1 , Anastasiya Duchenko 1 , Luigi Muzzi 1 , Angelo Vannozzi 1
1. Superconductivity Laboratory, Nuclear Department, ENEA (Italy)

WBP1-07 13:15-14:45
AC Loss reduction in REBCO coil assemblies with superconducting shielding coils and magnetic flux diverters
*Yueming Sun 1 , Ben George Koshy 1 , Taotao Huang 2 , Zhenan Jiang 1
1. Paihau-Robinson Research Institute, Victoria University of Wellington (New Zealand), 2. HTS-110 (New Zealand)

WBP1-08 13:15-14:45
Simulation on Transport AC Loss Reduction in Multifilamentary HTS Coated Conductors/CORC Cables
*YUKAI QIAO 1 , Yueming SUN 1 , Grant Lumsden 1 , Zhenan Jiang 1
1. Robinson Research Institute, Victoria University of Wellington (New Zealand)

WBP1-09 13:15-14:45
Numerical Comparison of AC Loss Characteristics in MgB 2 wires Under Transverse Standing-Wave and Uniform Rotating Magnetic Fields at 20K
*Zhe Wang 1,2 , Yukai Qiao 1 , Yueming Sun 1 , Mark Ainslie 3 , Grant Lumsden 1 , Nick Strickland 1 , Jin Fang 2 , Zhenan Jiang 1
1. Victoria Univ. of Wellington (New Zealand), 2. Beijing Jiaotong Univ. (China), 3. King's College London (UK)

WBP1-10 13:15-14:45
Experimental and Numerical Study of Magnetisation Loss in Bi-2212 Wires at 65 K and 77 K
*Ben George Koshy 1 , Nicholas Strickland 1 , Grant Lumsden 1 , Shengnan Zhang 2 , Qingbin Hao 2 , Xueqian Liu 2 , Zhenan Jiang 1
1. Robinson Research Institute, Victoria University of Wellington (New Zealand), 2. 2 Northwest Institute for Nonferrous Metal Research (China)

WBP1-11 13:15-14:45
Investigation of screening and coupling currents in non-twisted non-transposed HTS REBCO conductors for high-field applications
*Yessimzhan Raiymbekov 1 , Xiaodong Li 2,3 , Nagato Yanagi 1,2 , Shun Miura 1,2 , Yoshiro Narushima 1,2
1. SOKENDAI (The Graduate University for Advanced Studies) (Japan), 2. National Institute for Fusion Science (Japan), 3. Technische Universität München (Germany)

WBP1-12 13:15-14:45
Study on the Stable AC Current Limit of Stacked REBCO Conductors
*Akifumi Kawagoe 1 , Tetsuya Tanoue 1 , Genki Fujisaki 1 , Haruto Nagayama 1
1. Kagoshima University (Japan)

WBP1-13 13:15-14:45
Contact Resistance Characteristics of Differently Processed REBCO Coated Conductors Using a Mechanically Controlled Soldered Joint Method
*Michael Bihasa De Leon 1 , Richard Pascua 1 , Hyung-Seop Shin 1
1. Department of Mechanical Design Engineering, Gyeongkuk National University (Korea)

WBP1-14 13:15-14:45
Effect of Current Transfer Between Superconducting and Normal-Conducting Layers on the Current-Voltage Characteristics of Superconducting Tape Conductors
*Fuki Sakugawa 1 , Ken Arita 1 , Futo Inada 1 , Soji Edmund Otabe 1 , Yasunori Mawatari 2
1. Kyushu Institute of Technology (Japan), 2. National Institute of Advanced Industrial Science and Technology (Japan)

WBP1-15 13:15-14:45
Automatic Process for Manufacturing of PbSn-Soldered HTS Lap Joints: Critical Current Retention, Joint Resistance, Dimensional Consistency, and Repeatability
*William Stefanus Wirawan 1 , John Thomas East 1 , Calvin Manzo Guerrero 1 , Sergey Samoilenkov 1
1. Faraday Factory Japan LLC (Japan)

WBP1-16 13:15-14:45
Joint resistance and current distribution of novel REBCO wire joints for spirally assembled conductors
*Taisei Suzuki 1 , Kotarou Okamoto 1 , Masayoshi Ohya 1
1. Kwansei Gakuin University, School of Engineering (Japan)

13:15-14:45 WBP1b | WBP1

2FS-WB (2F Foyer South) **Chair: Takashi Nakamura (RIKEN), Shiv Singh (Institute of High Pressure Physics, Polish Academy of Sciences)**

WBP1-17 13:15-14:45
Evaluation of Pulsed Field Magnetization Characteristics Using the Advanced FAVS Method
*Kaoru Ishibashi 1 , Tetsuo Oka 2 , Kazuya Yokoyama 1
1. Ashikaga University (Japan), 2. Shibaura Institute of Technology (Japan)

WBP1-18 13:15-14:45
Effect of Holmium Oxide Addition on Superconducting Properties and Flux Pinning of MgB 2
*Padma Saini 1 , Muralidhar Miryala 1
1. Materials for Energy and Environmental Laboratory, Graduate School of Engineering and Science, Shibaura Institute of Technology, 307 Sentanken, Fukasaku, Minuma-Ku, Saitama 337-8570, Japan (Japan)

WBP1-19 13:15-14:45
Evaluation of the Magnetization Process During Pulsed Field Magnetization of a REBCO Bulk Magnet
*Kazuya Yokoyama 1 , Kaoru Ishibashi 1 , Tetsuo Oka 2
1. Ashikaga University (Japan), 2. Shibaura Institute of Technology (Japan)

WBP1-20
13:15-14:45

Fabrication of A 3 C 60 superconducting bulk and their critical current density

*Hiroki Hasegawa 1 , Akira Iyo 2 , Shigeyuki Ishida 2 , Hiroshi Eisaki 2 , Hiraku Ogino 2 , Kenji Kawashima 2,3 , Mariko Murayama 1 , Taichiro Nishio 1,2
1. Tokyo University of Science (Japan), 2. AIST (Japan), 3. IMRA Japan (Japan)

WBP1-21
13:15-14:45

Magnetically Driven Thermal Oscillation in Bulk Superconductor-Metal Joint System

*Poonam Rani 1
1. Tokyo Metropolitan University (Japan)

WBP1-22
13:15-14:45

Deep-Learning-Based Single-Filament Detection for Anomaly Identification in MgB 2 Multifilamentary Wires

*Kotomi Ogi 1 , Daito Fukui 1 , Kosuke Ando 1 , Yusuke Shimada 2 , Motomune Kodama 3 , Hideki Tanaka 3 , Akiyasu Yamamoto 1
1. Tokyo University of Agriculture and Technology (Japan), 2. Kyushu University (Japan), 3. Hitachi, Ltd. (Japan)

WBP1-23
13:15-14:45

Search for new 122-type superconductors with FeSi layer

*Nodoka Shimizu 1 , Mao Sato 1 , Yoshimitsu Hishinuma 2 , Akiyasu Yamamoto 1
1. Tokyo University of Agriculture and Technology (Japan), 2. National Institute for Fusion Science (Japan)

WBP1-24
13:15-14:45

Influence of growth parameters on the crystallinity and superconducting properties of HoBa2Cu3Oy thin films fabricated by the VLS growth mode

*Kazuya Ogasawara 1 , Ryunosuke Oketani 1 , Keiya Nishigaki 1 , Shuhei Funaki 1 , Yoshiyuki Seike 1 , Tatsuo Mori 1 , Ataru Ichinose 2 , Yusuke Ichino 1
1. Aichi Inst. of Technol. (Japan), 2. Central Research Inst. of Electric Power Industry (Japan)

WBP1-25
13:15-14:45

Explolation for Conditions to Suppress La/Ba Substitution in LaBa 2 Cu 3 O y Thin Films Prepared by Pulsed Laser Deposition

*Takumi Takamura 1 , Sousuke Suzuki 1 , Shuichi Togao 1 , Shuhei Funaki 1 , Yoshiyuki Seike 1 , Tatsuo Mori 1 , Yusuke Ichino 1,5 , Keiichi Horio 2,5 , Ataru Ichinose 3,5 , Tomoya Horide 4,5 , Kaname Matsumoto 4,5 , Yutaka Yoshida 4,5
1. Aichi Institute of Technology (Japan), 2. Kyushu Inst. of Technol (Japan), 3. Cent. Res. Inst. of Elect. Power Ind. (Japan), 4. Nagoya Univ (Japan), 5. JST CREST (Japan)

WBP1-26
13:15-14:45

The superconducting properties of TFA-MOD (Y 0.77 Gd 0.23)Ba 2 Cu 3 O y films with various carrier concentrations

*Ryuga Matsuhira 1 , Tatsuki Sato 1 , Takumi Hirose 1 , Kosei Nakajima, Ryona Fujimoto, Yuki Ogimoto 1 , Masashi Miura 1,2
1. Seikei University (Japan), 2. JST-FOREST (Japan)

WBP1-27
13:15-14:45

Effects of Multi-Step Post-Deposition Annealing on the Superconducting Properties of Bi-2223 Films Fabricated by Aerosol Deposition

*Marina Mercedes Mendoza 1 , Haruto Okiura 1 , Shinzo Yoshikado 1 , Kenji Sakai 1 , Yuuki Sato 1
1. Doshisha University (Japan)

WBP1-28
13:15-14:45

Effect of Prolonged Interim Heat Treatment on BaZrO 3 -Doped (Y,Gd)Ba 2 Cu 3 O y Coated Conductors Fabricated by TFA-MOD Method via Multi-Coating technique

*Ryuji Yoshida 1,2 , Koichi Nakaoka 2 , Takeharu Kato 1 , Teruo Izumi 2 , Masashi Miura 2,3
1. Japan Fine Ceramics Center (Japan), 2. Seikei Univ. (Japan), 3. JST-FOREST (Japan)

WBP1-29
13:15-14:45

Optimization of Co-doped RE214 and B M O artificial pins for improved flux pinning properties into FF-MOD Gd123 thin films

*Yuzuya Horiuchi 1 , Seiya Tarumizu 1 , Ryota Ishii 1,2 , Toshinori Ozaki 3 , Osuke Miura 1
1. Tokyo Metropolitan University (Japan), 2. Seikei University (Japan), 3. Kwansei Gakuin University (Japan)

WBP1-30
13:15-14:45

Functionalized Nanodiamond Introduction in YBCO: effect on film properties

*VALENTINA PINTO 1 , Michela Salamone 2 , Rocco Carcione 3 , Alessia Cemmi 3 , Andrea Masi 1 , Angelo Vannozzi 1 , Achille Angrisani Armenio 1 , Alessandro Rufoloni 1 , Anastasiya Duschenko 1 , Giuseppe Celentano 1 , Valentina Rossi 2,1 , Vanessa Colasanti 4,1 , Cristian Vendittozzi 4 , Silvia Orlanducci 2
1. ENEA, Superconductivity Laboratory, Nuclear Department (Italy), 2. Tor Vergata University, Department of Chemical Sciences and Technologies (Italy), 3. ENEA, Gamma Irradiation Facility Laboratory, Nuclear Department (Italy), 4. Sapienza University of Rome, Department of Chemical, Materials and Environmental Engineering, DICMA (Italy)

WBP1-31
13:15-14:45

Withdrawn

Poster Presentation Program

Wednesday, December 2, 2026

Physics and Chemistry Posters (PCP)

13:15-14:45	PCP2 | PCP2
3FS-PC (3F Foyer South)	Chair: Hiraku Ogino (National Institute of Advanced Industrial Science and Technology (AIST)), Tsutomu Nojima (Tohoku University), Akira Iyo (National Institute of Advanced Industrial Science and Technology (AIST))
PCP2-01 13:15-14:45	**Revisiting Vortex–Antivortex States in Mesoscopic Superconductors: A Numerical Study** Futa Kato 1 , Takumi Mataba 1 , Masahiko Hayashi 2 , *Akinobu Kanda 1 1. Univ. Tsukuba (Japan), 2. Akita Univ. (Japan)
PCP2-02 13:15-14:45	**High-frequency vortex motion in artificial superconducting LCO-LSCO superlattices: two-band signatures and vortex pinning.** *Enrico Silva 1,2 , Andrea Alimenti 1,2 , Antonio Bianconi 3,4 , Gaetano Campi 3,4 , Gennady Logvenov 5 , Alessandro Magalotti 1,2 , Nicola Pompeo 1,2 , Kostiantyn Torokhtii 1 1. University Roma Tre (Italy), 2. INFN-Roma Tre Section (Italy), 3. Institute of Crystallography, CNR (Italy), 4. RICMASS (Italy), 5. Max Planck Institute for Solid State Research (Italy)
PCP2-03 13:15-14:45	**Position dependence of MRF inclination in LDT-MRF** *Muhammad Afiq AHMED 1 , K.G.P.P Kahagalla 1 , Shintaro Adachi 1 , Fumiko Kimura 1 , Noriyuki Hirota 2 , Tohru Suzuki 2 , Tetsuo Uchikoshi 2 , Shigeru Horii 1 1. Kyoto Univ. Adv. Sci. (Japan), 2. NIMS (Japan)
PCP2-04 13:15-14:45	**Measurement and Calculation of Surface Resistance of High-Temperature, Superconducting Thin Films under Magnetic Fields** *HIROTAKA ISHITANI 1 , Ryuga Kunii 1 , Koutarou Banno 1 , Atsushi Saito 1 1. Graduate school of science and Engineering, Yamagata University (Japan)
PCP2-05 13:15-14:45	**Withdrawn**
PCP2-06 13:15-14:45	**Realization of Freestanding Iron Based Superconducting Films Using Sacrificial Layers** *Zhuoyue Jia 1,2 , Jonas Wawra 1,2 , Nicolas Perez 1 , Kornelius Nielsch 1,2 , Ruben Huhne 1 1. IFW Dresden (Germany), 2. TU Dresden (Germany)
PCP2-07 13:15-14:45	**Effects of Samarium and Other Rare-Earth Substitutions on Pressure-Induced Superconductivity in Ruddlesden-Popper-Type Bilayer La 3 Ni 2 O y** *Shintaro Adachi 1 , Ryo Matsumoto 2 , Shigeru Horii 1 , Yoshihiko Takano 2 1. Kyoto University of Advanced Science (KUAS) (Japan), 2. National Institute for Materials Science (NIMS) (Japan)
PCP2-08 13:15-14:45	**First-Principles Study of the Electronic Structure and Structural Stability of La 2 C 3 at Ambient and High Pressures** *Kenji Kawashima 1 , Masaaki Yoshikawa 1 , Terunari Koshinuma 1 , Ryo Matsumoto 2 , Yoshihiko Takano 2 1. IMRA JAPAN Co., Ltd (Japan), 2. National Institute for Materials Science (NIMS) (Japan)
PCP2-09 13:15-14:45	**Searching for superconductivity in bilayer kagome metal YNb 6 Sn 6** *Chun Wai Tsang 1 , Hao Zheng 1 , Swee Kuan Goh 1 1. The Chinese University of Hong Kong (Hong Kong)
PCP2-10 13:15-14:45	**Anisotropy of the Upper Critical Field in the Ta-Substituted Kagome Superconductor Cs(V 1-x Ta x) 3 Sb 5 with Completely Suppressed Charge Density Wave** *Moye Chen 1 , Kenta Maekawa, Atsutoshi Ikeda 1 , Yongkai Li 2 , Yugui Yao 2 , Zhiwei Wang 2 , Shingo Yonezawa 1 1. Kyoto University (Japan), 2. Beijing Institute of Technology (China)
PCP2-11 13:15-14:45	**Impurity-Induced Collapse of Internally Protected Pair-Density-Wave Superconductivity** *Yoichi Higashi 1 , Ryoga Miwa 2 , Izumi Hase 1 1. National Institute of Advanced Industrial Science and Technology (AIST) (Japan), 2. Osaka University (Japan)
PCP2-12 13:15-14:45	**Anisotropic supercurrent flow in Corbino disk consisting of Nb and [Nb/V/Ta] n superconductors** *Makoto Igarashi 1 , Utane Nagata 1 , Chen Moye 1 , Susumu Hirata 2 , Ryo Ohshima 1,3 , Teruo Ono 2,3 , Shingo Yonezawa 1 , Masashi Shiraishi 1,3 1. Dept. of Eng., Kyoto Univ (Japan), 2. ICR, Kyoto Univ. (Japan), 3. CSRN, Kyoto Univ. (Japan)
PCP2-13 13:15-14:45	**Theory on the spatial dependence of the linear absorption spectrum in Josephson junctions** *Takanobu Jujo 1 1. Division of Materials Science, Graduate School of Science and Technology, Nara Institute of Science and Technology (Japan)
PCP2-14 13:15-14:45	**Performance evaluation of jointless thermal diode fabricated using Pb superconducting wire** *Masayuki Mashiko 1 , Poonam Rani 1 , Yuto Watanebe 1 , Yoshikazu Mizuguchi 1 , Daisuke Takegami 1 1. Tokyo Metropolitan Univ. (Japan)

Electronic Devices Posters (EDP)

13:15-14:45	EDP2 | Digital, Novel devices, Materials and Fabricaion, System applications
3FS-ED (3F Foyer South)	Chair: Hiroki Kutsuma (Tohoku Univ.)

EDP2-01 13:15-14:45
A Design Method for Area-Efficient Generation of Multiple Constant Stochastic Numbers Using an SFQ Stochastic-Number Splitter
*Yuto Wakiya 1
1. Chukyo University (Japan)

EDP2-02 13:15-14:45
Comparison of Logic-Threshold Offsets in Adiabatic Quantum Flux Parametron Circuits Fabricated Using Josephson Processes with Different Critical Current Densities
*Yutaro Kashiwagi 1 , Yuki Yamanashi 1 , Nobuyuki Yoshikawa 1
1. Yokohama National Univ. (Japan)

EDP2-03 13:15-14:45
Design of Stochastic Integer Multiplication Circuits Using Output Probability Synchronization
*Ryota Fukuzaki 1 , Kaito Asaka 1 , Nobuyuki Yoshikawa 1,2,3 , Yuki Yamanashi 1,2,3
1. Yokohama National Univercity (Japan), 2. Yokohama National Univ. IAS (Japan), 3. Yokohama National Univ. IMS (Japan)

EDP2-04 13:15-14:45
Withdrawn

EDP2-05 13:15-14:45
Rectifying and Ohmic Transport Characteristics of BSCCO/Oxide Semiconductor Heterojunctions Prepared via MOD Method
*Yasuyuki Yamada 1
1. National Institute of Technology,Oyama College (Japan)

EDP2-06 13:15-14:45
Fabrication of BSCCO intrinsic Josephson junction devices using double-sided patterning process
*Hikaru Kiuchi 1 , Hisashi Shimakage 1
1. Ibaraki University (Japan)

EDP2-07 13:15-14:45
Withdrawn

EDP2-08 13:15-14:45
Voltage-Gated Adiabatic Quantum-Flux-Parametron Logic Using Gate-Tunable Josephson Junctions
*KuoZhong Zhang 1 , Kaveh Delfanazari 2 , Nobuyuki Yoshikawa 1
1. Yokohama National University (Japan), 2. University of Glasgow (UK)

EDP2-09 13:15-14:45
Virtual Experiments and Optimization of NbN Thin-Film Growth Conditions Using a Machine Learning Model
*Hirotake Yamamori 1,2 , Daiki Matsumaru 1 , Kaho Koyanagi 1 , Michitaka Maruyama 1 , Kazumasa Makise 1,2 , Hirokazu Ishino 3
1. National Institite of Advanced Industrial Science and Technology (Japan), 2. National Astronomical Observatory of Japan (Japan), 3. Okayama University (Japan)

EDP2-10 13:15-14:45
Development of a Tear-and-Stack System for Moiré 2D Superconducting Device Fabrication
*Yoshitaka Nakamura 1 , Yuto Kawamura 1 , Kasean Jiranthanin 1 , Takaharu Kamada 1
1. National Institute of Technology, Hachinohe College (Japan)

EDP2-11 13:15-14:45
Evaluation of Improved AC Waveforms Generated from FM Josephson Voltage Standard Using I/Q Modulation
*Kaho Koyanagi 1 , Wataru Kokuyama 1 , Michitaka Maruyama 1 , Hirotake Yamamori 1 , Daiki Matsumaru 1 , Nobu-Hisa Kaneko 1
1. National Institute of Advanced Industrial Science and Technology (Japan)

Applications Posters (APP)

13:15-14:45 APP2 | APP"

3FE-AP (3F Foyer East) Chair: Hiroshi Miyazaki (Kyushu University)

APP2-01 13:15-14:45
Screening Current-Induced Field Analysis for Plasma Confinement and Heating in HTS Electron Cyclotron Resonance Ion Source
*Tsun Him Chong 1
1. RIKEN (Japan)

APP2-02 13:15-14:45
CONCEPTUAL AND PRELIMINARY ENGINEERING DESIGN OF A 16 T ALL-HTS CABLE-IN-CONDUIT CONDUCTOR TEST MAGNET AT CFEC
*Zijia Zhao 1 , Xiaoqiang Lai 1 , Jiaxin Zuo 1 , Xiaoming Li 1 , Chundong Wan 1 , Ji Wan 1 , Xianrui Lv 1 , Zhan'ao Chen 1 , Xinbo Hu 1
1. China Fusion Energy Company (China)

APP2-03 13:15-14:45
High Field HTS Cable Electromagnet Development for Levitated Dipole Fusion Reactors
*Kalen Richardson 1 , Theo Wordsworth 1 , Tom Simpson 1 , Emily-Kei Brewerton 1 , Josh Ellingham 1 , Adam Francis 1 , Jerome Guterl 1 , Robert Jakobsson 1 , Matthew Seabright 1 , Nancy Zhou 1 , Rod Badcock 1 , Darren Garnier 1 , Ratu Mataira 1
1. OpenStar Technologies (New Zealand)

APP2-04 13:15-14:45
Demountable joint testing for high-current HTS cables towards fusion magnets: Stack edge joint
*Diego Armando Garfias Davalos 1 , Sonja Schlachter 1 , Rainer Gehring 1 , Mathias Noe 1 , Tommaso Bagni 2 , Albrecht Herrmann 2 , Neil Mitchell 2
1. Karlsruhe Institute of Technology (Germany), 2. Gauss Fusion GmbH (Germany)

APP2-05 13:15-14:45
Investigation of Surface Characteristics and Joint Performance of REBCO Tapes Treated by Atmospheric-Pressure Plasma for Faro Shuffle Joints
*Yuta Onodera 1 , Yoshiro Narushima 1,2 , Tomosumi Baba 1 , Shinji Hamaguchi 1,2 , Nagato Yanagi 1,2 , Hirotaka Chikaraishi 1,2 , Junichi Miyazawa 3 , Hiroki Chikuma 3 , Hitoshi Tamura 3 , Takuya Goto 3

1. National Institute for Fusion Science (Japan), 2. SOKENDAI (Japan), 3. Helical Fusion Co., Ltd. (Japan)

APP2-06
13:15-14:45
Three-Dimensional Electromagnetic Analysis of Current Distribution and Joule Loss in a HTS Twisted Stacked-Tape Cable under Pulsed Excitation
*Shun Endo 1 , Takanobu Mato 1 , Ryota Inoue 2 , So Noguchi 1
1. Hokkaido Univ. (Japan), 2. Okayama Univ. (Japan)

APP2-07
13:15-14:45
E - I Characteristic of damaged REBCO tapes at high load factor
*Shinsaku Imagawa 1 , Masayoshi Ohya 2 , Hamaguchi Shinji 1 , Shirai Yasuyuki 3 , Iwamoto Akifumi 4 , Kobayashi Hiroaki 5
1. National Institute for Fusion Science (Japan), 2. kwansei Gakuin University (Japan), 3. Kyoto University, (Japan), 4. The University of Osaka (Japan), 5. Japan Aerospace Exploration Agency (Japan)

APP2-08
13:15-14:45
Quantitative Investigation of Non-uniform Voltage Characteristics in D-Shaped High-Temperature Superconducting No-Insulation Coils
*Xueliang Wang 1 , Jie Sheng 2 , Xinbo Hu 1 , Zhijian Jin 2
1. China Fusion Energy Co.,Ltd (China), 2. Shanghai Jiao Tong University (China)

APP2-09
13:15-14:45
PROGRESS OF HTS MAGNET RESEARCH AT CFEC
*Zijia Zhao 1 , Xiaoqiang Lai 1 , Jiaxin Zuo 1 , Chundong Wang 1 , Xueliang Wang 1 , Xinbo Hu 1
1. China Fusion Energy Company (China)

APP2-10
13:15-14:45
Parallelisation of Jc(B) Flux Pumps: Phase, Loading, and Quench Behaviour Progress Towards a 7.7 kA Flux Pump Architecture
*Samuel Schimanski 1 , Kent Hamilton 1 , Bradley Leuw 1 , Mohammad Siamaki 1 , Reuben Wilson 1,2
1. OpenStar Technologies (New Zealand), 2. Robinson Research Institute (New Zealand)

APP2-11
13:15-14:45
Stress Evolution and Control in Circular REBCO Coils During Winding and Cool-Down
*Wei Ren 1
1. Karlsruhe Institute of Technology (Germany)

APP2-12
13:15-14:45
Coil-to-Coil Connections Suitable for Reducing Thermal Stress during Cooling of Stacked REBCO Pancake Coils
*Yoh Nagasaki 1 , Taiga Aoto 1 , Koya Itahashi 1 , Satsuki Okumura 1 , Makoto Tsuda 1
1. Tohoku University (Japan)

APP2-13
13:15-14:45
Self-protecting behaviors of an intra-layer no-insulation (LNI) REBCO coil with resistance-controlled interfaces under liquid helium cooling
*Yuya Tanaka 1,2 , Syouon Imanishi 1,2 , Kanna Yamada 1,2 , Tomoaki Takao 1 , Kazuya Nakamura 1 , Prashant Kumar 2 , Naohiro Kobayashi 2 , Renzhong Piao 2 , Kensuke Kobayashi 2 , Toshio Yamazaki 2 , Yoshinori Yanagisawa 2
1. Sophia University (Japan), 2. RIKEN (Japan)

APP2-14
13:15-14:45
Bypass Current–Based Quench Detection for Superconducting Applications
*YingZhe Li 1 , Xiao-Fen Li 1
1. Shanghai Jiao Tong University (China)

APP2-15
13:15-14:45
Physics-Assisted Machine Learning for Magneto-Optical Response Estimation toward Non-Contact Magnetic-Field Measurement of Superconducting Devices
*Haruna Takaki 1 , Ryota Kinjo 1 , Eiji Uchibe 1
1. Osaka Institute of Technology (Japan)

APP2-16
13:15-14:45
Characteristics of trapped magnetic field at the top and bottom by pulsed-field magnetization of melt-textured GdBCO bulk
*Tetsuya Ida 1 , Saori Yokohari 1 , Mitsuru Izumi 1
1. Tokyo University of Marine Science and Technology (Japan)

APP2-17
13:15-14:45
Parameter Dependence of Electromagnetic Loss in Superconducting Magnetic Bearing
*Satsuki Okumura 1 , Hiroyuki Ohsaki 2,3 , Ryosuke Akizawa 3 , Shinichi Onaga 3 , Tomotake Matsumura 3 , Fabio Columbro 3 , Giulia Barbieri Ripamonti 4
1. Tohoku University (Japan), 2. NIMS (Japan), 3. Kavli IPMU (Japan), 4. La Sapienza (Italy)

APP2-18
13:15-14:45
Two-Layer Geometry and Topology Optimization of V-Shaped Permanent Magnet Guideways for High-Temperature Superconducting Maglev
*Jie Zheng 1 , Zigang Deng 1 , Gino D'Ovidio 2
1. State Key Laboratory of Rail Transit Vehicle System, Southwest jiaotong university (China), 2. Department of Civil, Construction-Architectural and Environmental Engineering, University of L'Aquila (Italy)

APP2-19
13:15-14:45
Genetic Algorithm-Based Progressive Optimization of Levitation Force Performance of HTS Maglev Electromagnetic Turnouts
*Guobin Zhang 1 , Can Peng 2 , Bin He 1 , Zigang Deng 1
1. State Key Laboratory of Rail Transit Vehicle System, Southwest Jiaotong University (China), 2. College of Advanced Interdisciplinary Studies, National University of Defense Technology (China)

APP2-20
13:15-14:45
The cryogenic polarization modulator for LiteBIRD space mission: engineering challenges and technology development
*Fabio Columbro 1 , Ryosuke Akizawa 2 , Giulia Barbieri Ripamonti 3,4 , Paolo de Bernardis 3,4 , Mitsuharu Kusama 5 , Asuka Maeda 1 , Silvia Masi 3,4 , Tomotake Matsumura 1 , Jun Nakagawa 1 , Hiroyuki Ohsaki 1,6 , Satsuki Okumura 7
1. Kavli IPMU, Kashiwa (Japan), 2. The University of Tokyo, Kashiwa (Japan), 3. Sapienza University of Rome, Rome (Italy), 4. INFN Roma 1, Rome (Italy), 5. AES, Tsukuba (Japan), 6. NIMS, Tsukuba (Japan), 7. Tohoku University, Sendai (Japan)

Wires and Bulk Materials Posters (WBP)

13:15-14:45	WBP2a | WBP2
204-WB (204, 2nd Floor)	Chair: Nicolas Rotheudt (Univ. Liege), Yusuke Ichino (Aichi Institute of Technology)
WBP2-01 13:15-14:45	**Effects of Ablation Plume Height Control and Target-Substrate Distance on HoBCO Thin Film Fabrication by Pulsed Laser Deposition** *Yuto Tanaka 1 , Kota Adachi 1 , Kohei Ieshita 1 , Shuhei Funaki 1 , Yoshiyuki Seike 1 , Tatsuo Mori 1 , Yusuke Ichino 5,1 , Keiichi Horio 5,2 , Ataru Ichinose 5,3 , Tomoya Horide 5,4 , Kaname Matsumoto 5,4 , Yutaka Yoshida 5,4 1. Aichi Institute of Technology (Japan), 2. Kyushu Inst. of Technol. (Japan), 3. Cent. Res. Inst. of Elect. Power Ind. (Japan), 4. Nagoya Univ. (Japan), 5. JST-CREST (Japan)
WBP2-02 13:15-14:45	**Attempt at Hole Doping of AE-Cu-O Thin Films by Alkali Metal Doping** *Haruto Uchida 1 , Koji Kagohashi 1 , Yuki Iwase 1 , Yoshiyuki Seike 1 , Tatsuo Mori 1 , Shuhei Funaki 1 , Toshinori Ozaki 2 , Yusuke Ichino 1 1. Aichi Inst. of Technol. (Japan), 2. Kwansei Gakuin Univ. (Japan)
WBP2-03 13:15-14:45	**The influence of IHT temperature on the transport properties of TFA-MOD (Y 0.77 Gd 0.23)Ba 2 Cu 3 O y +BaHfO 3 coated conductors** *Yuki OGIMOTO 1 , Tatsuki SATO 1 , Junya KAWANAMI 1 , Ryuji YOSHIDA 1,2 , Takeharu KATO 2 , Koichi NAKAOKA 1 , Teruo IZUMI 1 , Masashi MIURA 1,3 1. Seikei University (Japan), 2. JFCC (Japan), 3. JST-FOREST (Japan)
WBP2-04 13:15-14:45	**Refinement of RE 2 CuO 4-X artificial pins by Co-Doping strategy for Higher J C - B in FF-MOD GdBa 2 Cu 3 O 7-δ Thin Films** *Seiya Tarumizu 1 , Ryota Ishii 1,2 , Mitsufumi Saito 1 , Toshinori Ozaki 3 , Osuke Miura 1 1. Tokyo Metropolitan Univ. (Japan), 2. Seikei Univ. (Japan), 3. Kwansei Gakuin Univ. (Japan)
WBP2-05 13:15-14:45	**Modulation of Preformed BHO Nanoparticle Size in Industrial MOD-Derived REBa2Cu3O7-delta Thick Films** *JING CHEN 1,2,3 , Rongtie Huang 1,2 , Zhiyong Liu 1,2 , Chuanbing Cai 1,2 1. Shanghai Key Laboratory of High Temperature Superconductors, Shanghai University (China), 2. Shanghai Creative Superconductor Technologies Co., Ltd. (China), 3. Institute of Materials, Shanghai University (China)
WBP2-06 13:15-14:45	**Withdrawn**
WBP2-07 13:15-14:45	**Enhancement of high J c by significant refinement of B M O nanoparticles via combined UTOC process and multi-species co-doping in FF-MOD Gd123 thin films** *Taki Arai 1 , Seiya Tarumizu 1 , Ryota Ishii 1 , Toshinori Ozaki 2 , Osuke Miura 1 1. Tokyo Metropolitan University (Japan), 2. Kwansei Gakuin University (Japan)
WBP2-08 13:15-14:45	**Efficient Optimization of Spark Plasma Sintering Parameters for Y-Doped Ba 0.6 K 0.4 Fe 2 As 2 Using Surrogate-Filtered Bayesian Optimization** *Nur Rahmawati Ayukaryana 1 , Ichiro Mizuto 1 , Goro Kitano 1 , Akiyasu Yamamoto 1 1. Tokyo University of Agriculture and Technology (Japan)
WBP2-09 13:15-14:45	**Determination of Magnetic Anisotropy in RE123 and RE124 Superconductors through Real-Time Magnetic Alignment Dynamics** *Pamoda Piyumali Kahagalla Kahagalla Gamaralalage 1 , Fumiko Kimura 1 , Shintaro Adachi 1 , Tsunehisa Kimura 1 , Noriyuki Hirota 2 , Tohru S Suzuki 2 , Tetsuo Uchikoshi 2 , Shigeru Horii 1 1. Kyoto Univ. Adv. Sci. (Japan), 2. NIMS (Japan)
WBP2-10 13:15-14:45	**Optimization of Flux Pinning and Superconducting Properties in Bulk MgB 2 by Pr 6 O 11 Addition** *Sai Teja Kolli 1 , Muralidhar Miryala 1 1. Materials for Energy and Environmental Laboratory, Graduate School of Engineering and Science, Shibaura Institute of Technology, 307 Sentanken, Fukasaku, Minuma-Ku, Saitama 337-8570, Japan (Japan)
WBP2-11 13:15-14:45	**Development of an apparatus for tensile tests under a magnetic field generated by a Gd-Ba-Cu-O superconductor bulk** *Tomoyuki Naito 1 , Hiroto Hakoishi 1 , Takashi Nozawa 2 , Taichiro Kato 2 , Hiroyasu Tanigawa 2 1. Iwate Univ. (Japan), 2. QST (Japan)
WBP2-12 13:15-14:45	**High-Precision Evaluation of Magnetic-Field Homogeneity in Polycrystalline Superconducting Bulks Using NMR** *Ichiro Mizuto 1 , Takashi Nakamura 2 , Shinjiro Kikuchi 1 , Natsume Ohno 1 , Rika Tanaka 1 , Akiyasu Yamamoto 1 1. Tokyo University of Agriculture and Technology (Japan), 2. RIKEN (Japan)
WBP2-13 13:15-14:45	**Modification of Vortex Pinning and Second Magnetization Peak Behavior in YBCO by Femtosecond Laser Patterning** F. Al-Mokdad 1 , S B Guner 2,3 , *Ali Gençer 2,3 , S Safran 2,3 , J Rivera-Sahun' 4 , E Martínez 4 , L Porta-Velilla 4 , A Badía-Majós 4 , L A Angurel 4 , G F de la Fuente 4 1. Ankara University, Graduate School of Natural and Applied Sciences, (Turkey), 2. Center of Excellence for Superconductivity Research, Ankara University (Turkey), 3. Science Faculty, Physics Department, Ankara University (Turkey), 4. Instituto de Nanociencia y Materiales de Aragón (INMA), CSIC-University of Zaragoza (Spain)
WBP2-14 13:15-14:45	**Biaxial magnetic alignment of (Y 1- x Dy x)Ba 2 Cu 3 O y in various dispersed media** *Shigeru Horii 1 , Hayate Tameshita 1 , Futo Fukuyama 1 , Shintaro Adachi 1 , K.G.P.P Kahagalla 1 , Fumiko Kimura 1 , Noriyuki Hirota 2 , Tetsuo Uchikoshi 2 , Toru S Suzuki 2 1. Kyoto University of Advanced Science (Japan), 2. NIMS (Japan)

13:15-14:45 WBP2b | WBP2

2FS-WB (2F Foyer South) Chair: Kirk Adams (University of Oxford), Yuji Tsuchiya (Tohoku University)

WBP2-15
13:15-14:45
Enhancement of Transport Critical Current by Flux Trapping in Sn-Pb Solder
*Takumi Ichikawa 1 , Gen Nishijima 2 , Yuya Hattori 1 , Yoshikazu Mizuguchi 1
1. Tokyo Metropolitan Univ. (Japan), 2. NIMS (Japan)

WBP2-16
13:15-14:45
Transport Critical Current Performance and Anisotropy of SS/Ag-sheathed Ba 1-x K x Fe 2 As 2 Tapes at Various Temperatures for Applications
*JUNYI LUO 1 , Meng Han 2 , Yuji Tsuchiya 1 , Yanwei Ma 2 , Satoshi Awaji 1
1. Tohoku Univ. (Japan), 2. Chinese Acad. of Scis. (China)

WBP2-17
13:15-14:45
Longitudinal Magnetic-Field Hysteresis of Critical Current in Commercial REBCO Coated Conductors
*Shinnosuke Oda 1 , Daisuke Sakai 1 , Toji Nakashima 1 , Haruki Miyashita 1 , Aoi Kira 1 , Daiki Mino 1 , Kyosuke Sakurai 2 , Satoshi Awaji 2 , Tatsunori Okada 1
1. Kyutech (Japan), 2. Tohoku Univ. (Japan)

WBP2-18
13:15-14:45
Toward Improved Sample-Temperature Determination for Reliable Transport Critical-Current Measurements in Pulsed Magnetic Fields
*Jaeheon Kim 1 , Alexandre Zampa 2,1 , Yuji Tsuchiya 3 , Yoshimitsu Kohama 1
1. Tokyo Univ. (Japan), 2. Université Grenoble Alpes (France), 3. Tohoku Univ. (Japan)

WBP2-19
13:15-14:45
High Transverse Uniformity of In-Field Critical Current in 12-mm REBCO Coated Conductors
Ashat Shaik 1 , Naing Yati 1 , Marwin Elento 1 , *Ivan Veshchunov 1 , Konstantin Vereshchagin 1 , Vladimir Vyatkin 1 , Deniz Sanal 1 , Marat Gaifullin 1 , Hoa Dao 1 , Maki Okube 1 , Alexey Mankevich 1 , Sergey Samoilenkov 1 , Valery Petrykin 1 , Sergey Lee 1
1. Faraday Factory Japan (Japan)

WBP2-20
13:15-14:45
Study on the Superconducting Properties of Mixed RE-Ba-Cu-O Thin Films as a Function of R2R PLD Process Parameters
*Yujeong Lee 1 , Minji Kim 1 , Insung Park 1 , Gwantae Kim 1 , Jeongtae Kim 1 , Hongsoo Ha 1
1. Korea Electrotechnology Research Institute (Korea)

WBP2-21
13:15-14:45
Current Transport Properties of REBaCuO Thin Films with Nb Stripes Formed on SrTiO 3 Substrates
*Rin Takajo 1 , Shinya Sekito 1 , Akiyoshi Matsumoto 2 , Minoru Tachiki 2 , Ryo Teranishi 3 , Takumi Ikenoue 4 , Yusuke Sogabe 4 , Masayoshi Inoue 1
1. Fukuoka Institute of Technology (Japan), 2. National Institute for Materials Science (Japan), 3. Kyushu University (Japan), 4. Kyoto University (Japan)

WBP2-22
13:15-14:45
Bending-like stress induced by solder joint under uniaxial tensile testing in 2G-HTS tapes: Impact and optimization approach
*Yue Wu 1 , Dean Liu 1 , xiaofeng li 1 , Yue Zhao 1
1. Shanghai Jiao Tong University (China)

WBP2-23
13:15-14:45
Effects of Slit-Edge Geometry on Delamination Strength of PLD-Processed REBCO-Coated Conductors Under Transverse Tension Using Anvil Method
Richard Pascua 1 , Michael de Leon 1 , *Hyung-Seop Shin 1
1. Gyeongkuk National University (Korea)

WBP2-24
13:15-14:45
Effects of Micro-Interference in Stainless-Steel Armoring on the Mechanical and Superconducting Performance of CORC Cables
*XIANYING WANG 1
1. SHANGHAI YIXI TECHNOLOGY DEVELOPMENT CO., LTD. (China)

WBP2-25
13:15-14:45
Mechanical strength of a novel REBCO wire joint for long-length high-temperature superconducting spiral assembled conductors
*Shunto Yamamoto 1 , Taisei Suzuki 1 , Masayoshi Ohya 1
1. School of engineering, Kwansei Gakuin University (Japan)

WBP2-26
13:15-14:45
Continuous Non-Destructive Measurement of Thickness and Width for Geometric Uniformity Evaluation of Long-Length 2G HTS Wires
*Insung Park 1 , Gwantae Kim 1 , Jeongtae Kim 1 , Minji Kim 1 , Yujeong Lee 1 , Hongsoo Ha 1
1. Korea Electrotechnology Research Institute(KERI) (Korea)

WBP2-27
13:15-14:45
Direct Determination of Transverse Resistance in Filamentized Coated Conductor Tapes
*Martin Kucharovic 1 , Fedor Gomory 1 , Tomas Kujovic 1 , Michal Bennar 1
1. Institute of Electrical Engineering, Slovak Academy of Sciences (Slovakia)

WBP2-28
13:15-14:45
Multimodal analysis of bending-induced critical current degradation region in coated conductor using scanning hall probe microscopy and scanning electron microscopy
*Takeharu KATO 1 , Junko Ariga 1 , Daisaku Yokoe 1 , Yasutoshi Mizuta 1 , Zeyu Wu 2 , Takanobu Kiss 2
1. Japan Fine Ceramics Center (Japan), 2. Kyushu University (Japan)

WBP2-29
13:15-14:45
Radiation Hardness of REBCO film: the challenge of in - situ characterization during gamma irradiation
*VALENTINA PINTO 1 , Rocco Carcione 2 , Rosa Freda 1 , Alessia Cemmi 2 , Jessica Scifo 2 , Marcello Marchetti 1 , Babak Taheri 1 , Andrea Masi 1 , Gabriele Colombo 1 , Ilaria Di Sarcina 2 , Adriano Verna 2 , Achille Angrisani Armenio 1 , Giuseppe Celentano 1
1. ENEA, Superconductivity Laboratory, Nuclear Department (Italy), 2. ENEA, Gamma Irradiation Facility Laboratory, Nuclear Department (Italy)

WBP2-30
13:15-14:45
Observation and Role of Epitaxial BaCu 3 O 4 Phase in Ultrahigh-Rate EuBa 2 Cu 3 O 7−δ Film Growth via Industrial Pulsed Laser Deposition
*Haoliang Xiang 1 , Yue Wu 1 , Dean Liu 1 , Zhao Yue 1

1. School of Electrical Engineering, Shanghai Jiao Tong University (China)

WBP2-31
13:15-14:45

Deep Learning-Based Image Analysis for Microstructural Investigation of REBCO Coated Conductors

*Yuri Hoshino 1 , Kotomi Ogi 1 , Daito Fukui 1 , Fumitake Kametani 2 , Tetsuhiro Obana 3 , Takanobu Mato 4 , So Noguchi 4 , Akiyasu Yamamoto 1

1. Dept. of Biomedical Systems Eng., Tokyo Univ. of Agricul. and Technol. (Japan), 2. National High Magnetic Field Laboratory, Florida State Univ. (USA), 3. NIFS (Japan), 4. Faculty of information Science and Technology, Hokkaido Univ. (Japan)