Sunday, September 21, 2025

Short Course
09:00 - 17:30 R3

Large Scale Short Course

Laura Savoldi, Politecnico di Torino, Torino, Italy
Rémi Dorget, Airbus UpNext, Toulouse, France

Short Course
09:00 - 17:30 R4

Materials Short Course

Damian Hampshire, Durham University, United Kingdom
Milorad Milosevic, University of Antwerp, Belgium
Daniele Torsello, Politecnico di Torino, Torino, Italy

Short Course
09:00 - 17:30 R7

Electronics Short Course

Pascal Febvre, University Savoie Mont Blanc, Le Bourget du Lac, France
Vittorio Pizzella, University of Chieta-Pescara, Italy

Short Course
09:00 - 17:30 R8

AI Short Course

Mohammad Yazdani-Asrami, University of Glasgow, Glasgow, United Kingdom
Ana Maria Madureira, ISEP/P.PORTO, Porto, Portugal

Ancillary Meeting
14:00 - 17:00 Ribeira II

ESAS Board Meeting (by invitation only)

Luca Bottura, CERN, Switzerland

Social & Networking
18:30 - 20:00

Welcome Reception

Monday, September 22, 2025

Plenary
08:30 - 09:30 R1

Critical properties of HTS beyond *Jc* to become THE material for high-field magnets

Anna Kario, CERN, Switzerland

Awards
09:30 - 09:50 R1

IEEE Awards

Focus
10:05 - 11:20 R1

Bridging the Gap: Advancing Superconductivity Technologies as a Key Solution for the Energy Transition

Oral
10:05 - 11:20 R2

Bi-2212 Wires

ANDREA MALAGOLI, CNR-SPIN, Italy
Shaon Barua, National High Magnetic Field Laboratory, Tallahassee, FL, United States

1-MO-BI.1	**Effect of the doping state and of the pseudo-gap on the inter- and intra-grain properties of Bi-2212 round wires** Chiara Tarantini, Applied Superconductivity Center - National High Magnetic Field Laboratory, Tallahassee, U States	10:05 - 10:20
1-MO-BI.2	**Improved performance of recent Bi-2212 round wires** Jianyi Jiang, Florida State University, Tallahassee, United States	10:20 - 10:35
1-MO-BI.3	**Recent development of Bi-based high temperature superconducting wires in NIN** Shengnan Zhang, Northwest Institute for Non-ferrous Metal Research, China	10:35 - 10:50
1-MO-BI.4	**Compression test and post-deformation imaging analysis of Bi-2212 Rutherford cable stack.** Alessio D'Agliano, Lawrence Berkeley National Laboratory, Berkeley, United States	10:50 - 11:05
1-MO-BI.5	**The properties recovery of the reacted Bi-2212 wire after mechanical damage** Zhenchuang Zhang, Institute of Plasma Physics, Hefei Institutes of Physical Science, Hefei City, China	11:05 - 11:20

Oral
10:05 - 11:20 R3

Advances in Nb3Sn Development and Characterisation

Morteza Asiyaban, TU Wien, Vienna, Austria
Pierluigi Bruzzone, EPFL, Villigen PSI, Switzerland

1-MO-NB.1	**Critical Current Scaling of Nb3Sn Wires over an Extended Field Range Combining Magnetisation and Transport Data**	10:05 - 10:20

Simon C. Hopkins, CERN, Geneva, Switzerland

1-MO-NB.2	**Challenges and Solutions for Implementing Internal Oxidation in Internal Tin Rod-in-Tube Wires for High Energy Physics Applications** Francesco Lonardo, University of Geneva, Geneva, Switzerland	10:20 - 10:35
1-MO-NB.3	**Update on making long length APC Nb_3Sn superconductors by using internal oxidation** Matt Rindfleisch, Hyper Tech Research, United States	10:35 - 10:50
1-MO-NB.4	**Combination of Ti addition to Nb and Zn addition to Cu matrix in Nb_3Sn layer formation** Nobuya Banno, National Institute for Materials Science, Tsukuba, Japan	10:50 - 11:05
1-MO-NB.5	**Explicit evidence that Cu additions depress H_{c2} in binary and alloyed Nb_3Sn** Chiara Tarantini, Applied Superconductivity Center - National High Magnetic Field Laboratory, Tallahassee, U States	11:05 - 11:20

Oral
10:05 - 11:20 R4

General Superconductor Materials Science

Guillaume Matthews, University of Oxford, Oxford, United Kingdom
Hongye Zhang, The University of Edinburgh, Edinburgh, United Kingdom

1-MO-MS.1I	**Spontaneous time-reversal symmetry breaking Josephson effect in mesoscopic single-crystal Sr_2RuO_4 devices** Kaveh Lahabi, Leiden University, Leiden, Netherlands	10:05 - 10:35
1-MO-MS.2	**Inhomogeneity effects in superconducting materials** Marina Putti, Università degli Studi di Genova, Genova, Italy	10:35 - 10:50
1-MO-MS.3	**Increase of critical current density of GdBCO coated conductors by high pressure - high temperature treatment under oxygen atmosphere** Tetiana Prikhna, V. Bakul Institute for Superhard Materials of the National Academy of Sciences of Ukraine, K Ukraine	10:50 - 11:05
1-MO-MS.4	**Epitaxial Effect on Niobium Superconductivities for Quantum Computing Devices Application** Zuhawn Sung, Fermi National Accelerator Laboratory, United States	11:05 - 11:20

Oral
10:05 - 11:20 R5

Critical Current and Flux Pinning (1)

Joffre Gutierrez Royo, Institut de Ciencia de Materials de Barcelona, Barcelona, Spain
Assistant Prof. Serena Eley, University of Washington, Shoreline, WA, United States

1-MO-CF1.1	**Non-monotonous $J_c(H,T)$ and Relaxation Phenomena in $BaFe_2(As_{1-x}P_x)_2$** Armando Galluzzi, University of Salerno, Fisciano (SALERNO), Italy	10:05 - 10:20

1-MO-CF1.2	**The role of growth rate in tailoring the superconducting critical currents of REBCO films grown by TLAG** Ona Mola Bertran, Institut of Materials Science of Barcelona (ICMAB-CSIC), Bellaterra, Spain	10:20 - 10:35
1-MO-CF1.3	**Optimization of transport critical currents at 4.2K – 20K at magnetic fields up to 31T for MOCVD REBCO conductors with variable Zr and growth conditions** Dmytro Abraimov, FSU, NHMFL, Tallahassee, United States	10:35 - 10:50
1-MO-CF1.4	**The biaxial strain dependence of critical current density J_C in HTS REBCO tapes at 77 K and 65 K in applied fields up to 0.7 T** Daniel Scobbie, Durham University, Durham, United Kingdom	10:50 - 11:05
1-MO-CF1.5	**Pinning Mechanisms, Lengthwise Critical Current Fluctuations, and Flux Jumps in REBCO Coated Conductors: A Torque Magnetometry Study up to B = 45** Jan Jaroszynski, National High Magnetic Field Laboratory, Tallahassee, United States	11:05 - 11:20

Oral
10:05 - 11:20 R6

Nanowire Detectors + MKID (1)

Dmitry Morozov, University of Glasgow, United Kingdom

1-EO-ND1.1	**BULLKID-DM: searching for light WIMP with monolithic arrays of superconductive Kinetic Inductance Detectors** Davide Quaranta, Sapienza University of Rome, Rome, Italy	10:05 - 10:20
1-EO-ND1.2	**THz Harmonic Mixing with $YBa_2Cu_3O_{7-\delta}$ nanowires** Núria Alcalde-Herraiz, Chalmers University of Technology, Göteborg, Sweden	10:20 - 10:35
1-EO-ND1.3	**Towards Multilayer Superconducting Nanowire Single-Photon Detectors using Plasma-Enhanced Atomic Layer Deposition** Ciaran Lennon, Oxford Instruments, Bristol, United Kingdom	10:35 - 10:50
1-EO-ND1.4	**Spontaneous Parametric Down Conversion source multi-photon component reduction via Photon-Number-Resolving Detector** Ciro Bruscino, Università degli Studi di Napoli Federico II, Napoli, Italy	10:50 - 11:05
1-EO-ND1.5	**Analysis of structure and optical properties on atomic layer deposition and sputtered thin films for cutting-edge single-photon detectors** Nidhi Choudhary, University of Glasgow, Glasgow, United Kingdom	11:05 - 11:20

Oral
10:05 - 11:20 R8

Digital Circuits: Quantum-based Circuits for Qubit Applications

Igor Vernik, SEEQC, Inc., Elmsford, United States
AKIRA FUJIMAKI, Nagoya University, Nagoya, Japan

1-EO-QC.1I	**Streaming Superconducting Delay Line Architecture for Qubit Syndrome Processing** Georgios Tzimpragos, University of Wisconsin-Madison, United States	10:05 - 10:20

1-EO-QC.2	**Scaling up of SFQ Qubit Control Circuit** Jie Ren, Shanghai Institute of Microsystem and Information Technology, SIMIT, China	10:20 - 10:35
1-EO-QC.3	**Adiabatic quantum-flux-parametron cell library using a 1 kA/cm^2 niobium fabrication process for qubit interface circuits and stochastic electronics** Taiki Yamae, National Institute of Advanced Industrial Science and Technology (AIST), Japan	10:35 - 10:50
1-EO-QC.4	**Temperature dependence of adiabatic quantum flux parametron current sensitivities** Gregor Oelsner, Leibniz Institute of Photonic Technology, Jena, Germany	10:50 - 11:05
1-EO-QC.5	**Demonstration of superconductor shift registers with energy dissipation below the Landauer's thermodynamic limit $k_BT\cdot ln2$** Sergey K. Tolpygo, Lincoln Laboratory, Massachusetts Institute of Technology, Lexigton, MA, United States	11:05 - 11:20

Social & Networking
11:20 - 12:00 West

Exhibition & Refreshments

Poster
12:00 - 13:15 East

Other Wires, Tapes, Composites

Amalia Ballarino, CERN, Geneva, Switzerland
Gaia Grimaldi, CNR - National Research Council, SALERNO, Italy

1-MP-OW.1I	**Fabrication of High-Performance $PbMo_6S_8$-Based Bulk Materials and Wires** Zhenyu Chen, Northwest Institute for Non-ferrous Metal Research, China	12:00 - 12:00
1-MP-OW.2I	**Impact of Metallic Sheaths and Innovative Architectures on BaK122 Superconducting Wires for high magnetic field applications** Alessandro Leveratto, CNR-SPIN, Genova, Italy	12:00 - 12:00
1-MP-OW.3	**AC Loss of a Novel HTS Cable Woven by Transpositional REBCO Tapes** Heng Zhang, North China Electric Power University, China	12:00 - 12:00
1-MP-OW.4	**Development of low AC loss, high purity aluminum (HPAL) conductors and magnets to enable high power density motors and generators** Matt Rindfleisch, Hyper Tech Research, United States	12:00 - 12:00
1-MP-OW.5	**Multiphysical Simulation of High Temperature Superconductors** Lennard Langerbein, TU Darmstadt Institute for Accelerator Science and Electromagnetic Fields, Darmstadt,	12:00 - 12:00
1-MP-OW.6	**Development of Ba122 powders and P.I.T-processed tapes: a study of granulometry and superconducting, structural and morphological properties** Matteo Bordonaro, University of Genoa, Genoa, Italy	12:00 - 12:00
1-MP-OW.7I	**Correlative structure – property relationship of Nb-Zr-Pt-Ti high entropy alloy superconducting bulk**	12:00 - 12:00

Nitin Srivastava, Indian Institute of Technology Delhi, New Delhi, India

Poster
12:00 - 13:15 East

Posters

Poster
12:00 - 13:15 East

Accelerator Magnets (1)

Ian Pong, Lawrence Berkeley National Laboratory, Berkeley, United States
Alessandra Pampaloni, INFN, Genova, Italy

1-LP-AM1.2	**Subscale Stress-Managed Asymmetric Common Coil Design** Ines Santos Perdigao Peixoto, Paul Scherrer Institute, Switzerland	12:00 - 12:00
1-LP-AM1.3	**Design, fabrication, and performance test of LPF3-U: a hybrid superconducting dipole magnet with the magnetic field towards 16 T** Chengtao Wang, Institute of High Energy Physics, Chinese Academy of Sciences (IHEP, CAS), Beijing, China	12:00 - 12:00
1-LP-AM1.4	**Experimental Analysis of the Mechanical Mockup for 12 T Nb3Sn Cosθ Dipole Magnet of the Falcon D Project** Alessio Dellacasagrande, Istituto Nazionale di Fisica Nucleare, Genoa, Italy	12:00 - 12:00
1-LP-AM1.5	**Research on the Design Method of Coil for the Cos-theta High-Field Low-Temperature Superconducting Magnet With Small Round Superconducting Cable** MingZhi Guan, Institute of modern physics, China	12:00 - 12:00
1-LP-AM1.6	**Hybrid Block Type Dipoles for use in High Field Particle Accelerators** Michael A. Green, Lawrence Berkeley National Laboratory, Berkely CA 94020, United States	12:00 - 12:00
1-LP-AM1.8	**Development of the CCT superconducting magnets for the STCF interaction region** Shaoqing Wei, Institute of Plasma Physics (IPP), Chinese Academy of Sciences (CAS), Hefei, China	12:00 - 12:00
1-LP-AM1.9	**Effect of Thermomagnetic Instabilities in 16-T Hybrid Common Coil Dipole Magnet** Wei Li, Institute of High Energy Physics (IHEP), Chinese Academy of Sciences (CAS), China	12:00 - 12:00
1-LP-AM1.10	**Multiphysics modeling of superconducting magnets using the open-source finite element software elmerfem** Frederic Trillaud, Universidad Nacional Autónoma de México, Ciudad de México, Mexico	12:00 - 12:00
1-LP-AM1.11	**Upgrade of the Periodic HTS Quadrupole Magnet for Operation Beyond 1 kA** Samira Fatehi, Karlsruhe Institute of Technology, Karlsruhe, Germany	12:00 - 12:00

Poster
12:00 - 13:15 East

SMES, Flywheels, WPT, Flux Pump Charging and Storage Applications

Zhenan Jiang, Victoria University of Wellington, LOWER HUTT, New Zealand
Naoki Hirano, National Institute for Fusion Science, Toki, Japan

1-LP-CS.1I	**Parallel Winding of REBCO Coated Conductor for High Current Capacity and Variable Inertia Function of SMES Cable** Kohei Higashikawa, Kyushu University, Japan	12:00 - 12:00
1-LP-CS.3I	**Modeling Methodology for the Full-Wave HTS Transformer-Rectifier Flux Pump** Gengyao Li, Tianjin University, China	12:00 - 12:00
1-LP-CS.4I	**Demonstration of Charging HTS magnet by REBCO superconducting diode** Yuji Tsuchiya, Tohoku University, Sendai, Japan	12:00 - 12:00
1-LP-CS.5	**Theoretical considerations for improving storage in SMES using tailored HTS tape screens to channel the magnetic field.** Pilar Suárez, University of Extremadura, Spain	12:00 - 12:00
1-LP-CS.6	**Researches on Superconducting Flywheel Energy Storage Systems with higher Energy Storage Density** Guomin Zhang, The Institute of Electrical Engineering, Chinese Academy of Sciences, China	12:00 - 12:00
1-LP-CS.7	**NUMERICAL ANALYSIS OF IRON INTEGRATION IN DYNAMO FLUX PUMPS** Tommaso Marzocchi, University of Bologna, Bologna, Italy	12:00 - 12:00
1-LP-CS.8	**Simulation of HTS Dynamo Based on Equivalent Circuit Model** Yuechen Bai, University of glasgow, Glasgow, United Kingdom	12:00 - 12:00
1-LP-CS.9	**A New 3D Analytical Method for Calculating the Distribution of Critical Current Density in a High-Tc Superconducting Dynamo Using the Critical State Model** Asma Azzouza, University of Boumerdes, Boumerdes, Algeria	12:00 - 12:00
1-LP-CS.10	**The Parameter Design of Self-rectifier Flux Pump in Superconducting Electromagnetic Suspension** Ruixiang Wang, Huazhong University of Science and Technology, China	12:00 - 12:00
1-LP-CS.11	**Intelligent design optimization of an HTS Flux Pump for a Superconducting Magnet in Applied Field-Magnetoplasmadynamic Thruster** Giacomo Russo, Alma Mater Studiorum - University of Bologna, Bologna, Italy	12:00 - 12:00
1-LP-CS.12	**Power transmission characteristics of the wireless power transmission system using multiple HTS coils and copper coils** Ryota Inoue, Okayama University, Okayama, Japan	12:00 - 12:00

Poster
12:00 - 13:15 East

Device Fabrication and Metrology

Andrea Giachero, University of Milano-Bicocca, Milano, Italy
Sherman Peek, Google, United States

1-EP-FM.1I **Attojoule superconducting thermal logic and memories** 12:00 - 12:00
Hui Wang, Technische Universiteit Delft, Delft, Netherlands

1-EP-FM.2I **Development of Fabrication Process for Nb/Al-AlO$_x$/Nb Superconducting Digital Integrated Circuits** 12:00 - 12:00
Liliang YING, Shanghai Institute of Microsystem and Information Technology (SIMIT), Shanghai, China

1-EP-FM.3 **Phase Nanoengineering via Direct Laser Writing and Thermal-Scanning Probe Lithography for Functional Oxide Thin Films** 12:00 - 12:00
Valerio Levati, Politecnico di Milano, Milano, Italy

1-EP-FM.4 **Fabrication of vertical high critical temperature superconducting Josephson junctions** 12:00 - 12:00
Faouzi Boussaha, LUX, Observatoire de Paris, Université PSL, Sorbonne Université, CNRS, Paris, France

1-EP-FM.5 **Sputtering mode diagram for the precise growth of NbN superconductor films** 12:00 - 12:00
Mengfan Zhang, Nanjing University, Nanjing, China

Poster
12:00 - 13:15 East

Basic Properties

Alexandre ZAMPA, The University of Tokyo, Kashiwa, Japan
Xiaowei Song, Huazhong University, China

1-MP-BP.15 **An Open and Collaborative Database of Properties of Materials for High-Temperature Superconducting-Based Devices** 12:00 - 12:00
João João Murta-Pina, NOVA School of Science and Technology, Portugal

1-MP-BP.2 **Mesoscopic S/F/S trilayers in parallel magnetic fields** 12:00 - 12:00
Mikhail Belogolovskii, Comenius University Bratislava, Bratislava, Slovakia

1-MP-BP.3 **On Doping Dependence of the Charge Carrier Mass in YBCO from Bipolaronic Model** 12:00 - 12:00
Bakhram Yavidov, Nukus State Pedagogical Institute named after Ajiniyaz, Nukus, Uzbekistan

1-MP-BP.4 **Investigation of Flux Flow Instability and Order Parameter Nature in NbRe Thin Films** 12:00 - 12:00
Zahra Makhdoumi Kakhaki, Braunschweig University, Braunschweig, Germany

1-MP-BP.6 **Synchrotron-Based Investigation of Selective Oxygen Electromigration in Superconducting YBCO Devices** 12:00 - 12:00
Caio C. Quaglio-Gomes, Universidade Federal de São Carlos, São Carlos, Brazil

1-MP-BP.7 **Point-contact Andreev reflection spectroscopy of disordered superconducting heterostructures** 12:00 - 12:00
Maros Gregor, Comenius University Bratislava, Bratislava, Slovakia

1-MP-BP.8	**Computational and analytic solutions for the effective upper critical magnetic field of superconducting filaments with coatings of arbitrary resistance** Yahya Nasir, Durham University, Durham, United Kingdom	12:00 - 12:00
1-MP-BP.10	**Superconducting properties of TFA-MOD $(La_{2-x}Sr_x)CuO_4$ films** Kosuke Masuda, Seikei University, Tokyo, Japan	12:00 - 12:00
1-MP-BP.11	**The effect of Ca content on the superconducting properties of $(Y_{1-x}Ca_x)Ba_2Cu_4O_8$ films** Ryoya Nagaura, Seikei University, Tokyo, Japan	12:00 - 12:00
1-MP-BP.12	**Hole concentration dependence of superconducting properties for TFA-MOD $(Y_{0.77}Gd_{0.23})Ba_2Cu_3O_y$ films** Takumi Hirose, Seikei University, Tokyo, Japan	12:00 - 12:00
1-MP-BP.13	**Introduction of Magnetic Field Inhomogeneity via a Non-Magnetic Polymer in Au/$YBa_2Cu_3O_{7-x}$ Heterofilms** Michal Bennár, Institute of Electrical Engineering Slovak Academy of Sciences, Bratislava, Slovakia	12:00 - 12:00
1-MP-BP.14	**Towards superconducting silicon: Tuning the phononic properties** Christoph Bergmann, self employed, Germany	12:00 - 12:00
1-MP-BP.15	**Comparative study of the dependence of Tc on the pattern variables through models and experiments on Ir/Au bilayer** Simone Passaglia, Università di Genova, Genova, Italy	12:00 - 12:00

Poster
12:00 - 13:15 East

Neuromorphic Computing

Andrea Giachero, University of Milano-Bicocca, Milano, Italy
Sherman Peek, Google, United States

1-EP-NC.1	**Demonstration of Neuromorphic Algorithms Running on Programmable Superconducting Circuits** Evan Golden, Massachusetts Institute of Technology, United States	12:00 - 12:00
1-EP-NC.2	**Time Division Multiplexing Probabilistic Computing Using True Random Number Generator Based on Superconducting Memory Cells** Yue Wang, Shanghai Institute of Microsystem and Information Technology (SIMIT), Chinese Academy of Scien (CAS), Shanghai, China	12:00 - 12:00
1-EP-NC.3	**Rotation-Induced Vortex Dynamics in Superconductors: Theoretical Framework and Applications in Neuromorphic Computing** Surbhi Singla, Thomas Jefferson High School for Science and Technology, United States	12:00 - 12:00
1-EP-NC.4	**Neuromorphic Computing with Superconductors: Spiking Behavior and Phase Transitions** Khalil Harrabi, King Fahd University of Petroleum and Minerals, Saudi Arabia	12:00 - 12:00

Poster
12:00 - 13:15 East

Microwave Devices and Novel Electronics (1)

Andrea Giachero, University of Milano-Bicocca, Milano, Italy
Sherman Peek, Google, United States

1-EP-NE1.1I	**Experimental characterization of noise mechanisms hindering quantum-limited amplification in a Josephson meta-material** Andrea Celotto, Polytechnic University of Turin, Turin, Italy	12:00 - 12:00
1-EP-NE1.2	**Edge supercurrents in Josephson junctions involving normal metal-ferromagnet multilayers** Ivan P. Nevirkovets, Northwestern University, Evanston, United States	12:00 - 12:00
1-EP-NE1.3	**Flux-driven Josephson Parametric Amplifier Terminated by an RF SQUID** Keith Krause, Auburn University, Auburn, United States	12:00 - 12:00
1-EP-NE1.5	**Simulation Framework for the Automated Search of Optimal Parameters Using Physically Relevant Metrics in Nonlinear Superconducting Quantum Circuits** Emanuele Palumbo, Polytechnic University of Turin, Turin, Italy	12:00 - 12:00

Poster
12:00 - 13:15 East

Superconducting Quantum Bits (2)

Andrea Giachero, University of Milano-Bicocca, Milano, Italy
Sherman Peek, Google, United States

1-EP-QB2.3	**Quantum Tomography of Parametric Amplifier Entangled States** Marcio C de Andrade, Naval Information Warfare Center Pacific, San Diego, United States	12:00 - 12:00
1-EP-QB2.4	**Properties of Josephson traveling wave parametric amplifiers with non sinusoidal current-phase relation** Sergio Pagano, University of Salerno, Salerno, Italy	12:00 - 12:00
1-EP-QB2.5	**Investigating the performance of RPM JTWPAs by optimizing LC-resonator elements** Marc Gali Labarias, Advanced Industrial Science and Technology (AIST), Tsukuba, Japan	12:00 - 12:00
1-EP-QB2.6	**Niobium-trilayer-based Dimer Josephson Junction Array Amplifier** Bhoomika Ravi Bhat, Physikalisch-Technische Bundesanstalt, Germany	12:00 - 12:00
1-EP-QB2.7	**Performance optimization of Josephson parametric amplifiers for quantum state readout** Gahyun Choi, Korea Research Institute of Standards and Science, Korea, Republic of	12:00 - 12:00
1-EP-QB2.7	**High-quality superconducting Josephson junctions on $LiNbO_3$ electro-optical crystals.** Saba Kousar, University of Naples, Federico-ii, Naples, Italy	12:00 - 12:00

Poster
12:00 - 13:15 East

Electronic Devices

Andrea Giachero, University of Milano-Bicocca, Milano, Italy
Sherman Peek, Google, United States

1-EP-ED.1I **Design Automation Systems for Superconducting Digital Logic** 12:00 - 12:00
Shucheng Yang, Shanghai Institute of Microsystem and Information Technology, Chinese Academy of Science Shanghai, China

1-EP-ED.2 **LinCore: a quantum flux parametron processor core** 12:00 - 12:00
Alex Wynn, Massachusetts Institute of Technology, Lexington & Cambridge, MA, United States

1-EP-ED.3 **4-bit Multiplier with Modernized Algorithm Implemented in Adiabatic Quantum-Flux-Parametron** 12:00 - 12:00
Yu Hoshika, Yokohama National University, Yokohama, Japan

1-EP-ED.4 **Demonstration of an AQFP Circuits for the Readout of Josephson Parametric Oscillator States** 12:00 - 12:00
Hongxiang Shen, Yokohama national university, Japan

1-EP-ED.5 **Design and demonstration of an input interface of single flux quantum circuit based on 10 kA/cm^2 fabrication process for a superconducting nanostrip single photon detector** 12:00 - 12:00
Shigeyuki Miyajima, National Institute of Information and Communications Technology, Kobe, Japan

1-EP-ED.6 **Programmable Bistable Vortex Logic for Scalable Superconductor Electronics** 12:00 - 12:00
Beyza Zeynep Ucpinar, University of Southern California, Los Angeles, United States

1-EP-ED.7 **Ferroelectric-Superconducting Quantum Memristors** 12:00 - 12:00
Maria Badarne, Technion–Israel Institute of Technology, Haifa, Israel

1-EP-ED.8 **Travelling waves in Josephson transmission lines: the shocks, the kinks, and the solitons** 12:00 - 12:00
Eugene Kogan, Bar-Ilan University, Ramat-Gan, Israel

1-EP-ED.9 **Negative Coupling for Asynchronous SFQ Logic With Zero Static Power** 12:00 - 12:00
Yasemin Kopur, University of Southern California, Los Angeles, United States

1-EP-ED.10 **Design and Implementation of Energy-Efficient Physical Unclonable Functions Based on Adiabatic Superconductor Devices** 12:00 - 12:00
Olivia Chen, Kyushu Univerity, Fukuoka, Japan

Poster
12:00 - 13:15 East

Mechanical Properties

Tommaso Bagni, Gauss Fusion GmbH, GARCHING B. MUNCHEN, Germany
Donghui Liu, Lanzhou University, Lanzhou, China

1-MP-MP.2 **Numerical analysis of Nb_3Sn wires during Rolling and under transverse stress** 12:00 - 12:00
Michela Bracco, Università degli studi di Genova, Italy

1-MP-MP.3	**Mechanical Characterisation of Carbon Fibre Polybenzoxazine Composites Containing Embedded YBCO Tape and h-BN and CNT Additives** Gokhan Sancak, University of Bristol, Bristol, United Kingdom	12:00 - 12:00

Poster
12:00 - 13:15 East

Characterization Techniques

Cornelia Pop, Institut de Ciències de Materials de Barcelona, ICMAB-CSIC, Campus UAB, Bellaterra, Barcelona, Spain
Morteza Asiyaban, TU Wien, Vienna, Austria

1-MP-CT.1	**A Metod for Simultaneous Measurement of Heat Capacity and Thermal Conductivity in Superconducting Materials, Wires, and Tapes.** Antonio Leo, CNR-SPIN, Fisciano, Italy	12:00 - 12:00
1-MP-CT.2	**Current-Limiting and Fast Interrupting Characteristics of a New Superconducting Fuse** Bin Xiang, Xi'an Jiaotong University, Xi'an, China	12:00 - 12:00
1-MP-CT.3	**Ultrafast Magnetic Field Mapping Characterisation Setup for Large Size Bulk Superconductors at Low Temperatures and Fields up to 9 T** Kévin Berger, Université de Lorraine, GREEN, Nancy, France	12:00 - 12:00
1-MP-CT.4	**Measurements of thermal resistance between metallic surfaces for high current HTS Cable-in-Conduit Conductor** Simone Severo, Politecnico di Torino, Torino, Italy	12:00 - 12:00
1-MP-CT.5	**Comprehensive Thermodynamic, Electrical and Magnetic Characterization of Superconducting Nb-47Ti Foil** Harshil Goyal, Auburn University, Auburn, United States	12:00 - 12:00
1-MP-CT.6	**Normal zone propagation velocity in undoped and BZO-doped YBCO thin films** Samuel Mejia, University of Turku, Turku, Finland	12:00 - 12:00
1-MP-CT.7	**Hydrogen Exposure Effects on REBCO-based Coated Conductors (2G HTS)** Mira Wehr, Karlsruhe Institute of Technology (KIT), Germany	12:00 - 12:00
1-MP-CT.8	**Novel setup for measuring lapped insulation at cryogenic temperature** Luhan Zu, ESPCI, Paris, France	12:00 - 12:00

Poster
12:00 - 13:15 East

REBCO Coated Conductors: Other Properties

Guilherme Telles, Institute of Materials Science of Barcelona (ICMAB - CSIC), Spain
Enric Pardo, Institute of Electrical Engineering SAS, Bratislava, Slovakia

1-MP-OP.1	**Laser structuring of standard and tinned coated conductors for DUDA coils**	12:00 - 12:00

Rainer Nast, Karlsruhe Institute of Technology, Karlsruhe, Germany

1-MP-OP.2	**Current transfer length and interface resistance of KC^4 REBCO tapes** Nadezda Bagrets, KIT, Germany	12:00 - 12:00
1-MP-OP.3	**Manufacturing Process Study on HTS Stacks-In-Conduit Conductors for Fusion Applications** Sanghyeun Je, KAT, Daejeon, Korea, Republic of	12:00 - 12:00
1-MP-OP.4	**Reversible and Irreversible 'Breaking Points' in REBCO Coated Conductors** Caida Fu, Institute of Electrical Engineering, Chinese Academy of Sciences, Beijing, China	12:00 - 12:00
1-MP-OP.5	**Evaluation on electro-magnetic properties of YBCO multifilament prepared on substrates with Zr stripes** Ryo Teranishi, Kyushu University, Japan	12:00 - 12:00
1-MP-OP.6	**Evaluation of REBCO superconducting tapes for railway cable application** Taiki Onji, Railway Technical Research Institute, Japan	12:00 - 12:00
1-MP-OP.7	**Observation of cracks and delamination after repeated torsion tests for REBCO coated conductors** Masayoshi Inoue, Fukuoka Institute of Technology, Fukuoka, Japan	12:00 - 12:00
1-MP-OP.8	**Dynamic resistance characteristics of multi-filamentary HTS tapes under perpendicular alternating magnetic fields** Bin Feng, University of Bristol, United Kingdom	12:00 - 12:00
1-MP-OP.9	**Investigation of non-superconductivity of YBCO films on substrate with Zr-stripes in multifilamentary structures using microstructural and magnetic observations** Hiroki Fujimoto, Kyushu university, Japan	12:00 - 12:00
1-MP-OP.10	**Strain gauge measurement of HTS tape during short-circuit current** Masae Kanda, Chubu University, Kasugai, Aichi, Japan	12:00 - 12:00
1-MP-OP.11	**Fabrication and performance of HTS 2G wire stacked conductors** hongsoo Ha, Korea Electrotechnology Research Institute, changwon, Korea, Republic of	12:00 - 12:00

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REBCO Coated Conductors: Preparation, Microstructure Characterisation

Cornelia Pop, Institut de Ciències de Materials de Barcelona, ICMAB-CSIC, Campus UAB, Bellaterra, Barcelona, Spain
Ruslan Popov, Karlsruhe Institute of Technology, Eggenstein-Leopoldshafen, Germany

1-MP-PM.1I	**Derivable potential of RE123 films prepared by FF-MOD method** Jun-ichi Shimoyama, Aoyama Gakuin University, Sagamihara, Japan	12:00 - 12:00
1-MP-PM.2	**Data assimilation between experimental and crystal growth simulation on REBCO thin films** Yusuke Ichino, Aichi Institute of Technology, Toyota, Japan	12:00 - 12:00

1-MP-PM.3	**Studies for cost-effective Coated Conductors(CC) by using Transient Liquid Assisted Growth (TLAG-CSD)** Roxana Vlad, ICMAB-CSIC, Bellaterra, Spain	12:00 - 12:00
1-MP-PM.4	**Towards large area growth of superconducting REBCO Coated Conductors by Transient Liquid Assisted Growth (TLAG)** Vittorio Bertini, ICMAB-CSIC, Bellaterra, Spain	12:00 - 12:00
1-MP-PM.5	**Revealing Hidden Structure-Performance Relationships in 2G-HTS Tapes Using Automated XRD and Microstructure Analysis** Vladimir Vyatkin, Faraday Factory Japan LLC, Tokyo, Japan	12:00 - 12:00
1-MP-PM.6	**Microstructure and superconducting properties of YBCO thin film with patterned substrates for Ultra-fine Multi-filaments** Akiyoshi Matsumoto, National Institute for Materials Science, Tsukuba, Japan	12:00 - 12:00
1-MP-PM.7	**Evolution of microstructure and phase composition of YBCO thin films during PLD manufacturing of 2G-HTS wires.** Roman Valikov, Faraday Factory Japan, Sagamihara, Japan	12:00 - 12:00
1-MP-PM.8	**Cross-sectional microstructure observation of YBCO multifilament films fabricated on Nb and Zr stripes** Taiki Wada, Kyushu University, Fukuoka, Japan	12:00 - 12:00
1-MP-PM.9	**Structural Analysis of High-Temperature Superconductor Fabrication based on Stacked in Conduit Conductor Design** Kyung Mo Kim, Korea Institute of Energy Technology (KENTECH), Naju, Korea, Republic of	12:00 - 12:00

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REBCO Coated Conductors: Irradiation Effects

Nick Strickland, Victoria University of Wellington, Lower Hutt, New Zealand
Valentina Pinto, ENEA, Frascati (Rome), Italy

1-MP-IE.1I	**Investigating the effect of 2 MeV He^+ ion irradiation on the anisotropy and high-field performance of $GdBa_2Cu_3O_{7-\delta}$ coated conductors** James Tufnail, University of Oxford, Oxford, United Kingdom	12:00 - 12:00
1-MP-IE.2	**Characterising Irradiation Damage of REBCO Coated Conductors using Polarised Cu K-edge EXAFS and X-ray Diffraction** Akhil Gupta, Oxford University, Oxford, United Kingdom	12:00 - 12:00
1-MP-IE.3	**Building a picture of the atomic-scale structural changes induced by radiation damage in REBCO coated conductors with multi-element EXAFS** Joseph Fihosy, University of Oxford, Oxford, United Kingdom	12:00 - 12:00

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REBCO Coated Conductors: Critical Currents

BOGDAN DABROWSKI, Institute of Physics, Polish Academy of Sciences, Warsaw, Poland
Nick Strickland, Victoria University of Wellington, Lower Hutt, New Zealand

1-MP-CC.2	**Process Optimization of Artificial Pinning Center Added $YBa_2Cu_3O_7$ Films by Bayesian Optimization Aiming for High Performance in Low-Temperature Magnetic Fields** Yutaka Yoshida, Nagoya university, Japan	12:00 - 12:00
1-MP-CC.3	**Critical current properties of co-doped Y123 thin films prepared by FF-MOD method starting from oxides** Kazutoyo Sagara, Aoyama Gakuin Univ., Sagamihara, Japan	12:00 - 12:00
1-MP-CC.4	**Optimization of pinning anisotropy in magnetic fields in Y-rich YBCO coated conductor through structural design** Shin Okumura, Nagoya University, Nagoya, Japan	12:00 - 12:00
1-MP-CC.5	**A Possible Approach to Improve Angular Dependent Critical Current Characteristic of REBCO Coated Conductors by Face-to-Face Double Stacked Architecture** Miyuki Nakamura, Faraday Factory Japan LLC, Zama, Japan	12:00 - 12:00
1-MP-CC.6	**Non-stoichiometry in BMO-doped REBCO coated conductors for enhanced performance in low-temperature magnetic fields** Shunta Ito, Nagoya University, Japan	12:00 - 12:00
1-MP-CC.7	**Influence of Rare Earth (RE) Mixing in $REBa_2Cu_3O_{7-x}$ Thin Films on Low Temperature, High Field Critical Current Density** Ingon Kim, University of Cambridge, Cambridge, United Kingdom	12:00 - 12:00
1-MP-CC.9	**Flux Pinning in REBCO SCS4050-HM Tapes from SuperPower: Insights into High-Field Performance** Yuji Tsuchiya, Tohoku University, Sendai, Japan	12:00 - 12:00
1-MP-CC.10	**Flux Pinning Landscape Effects in REBCO Coated Conductors** Masood Rauf Khan, CNR SPIN Salerno, Italy	12:00 - 12:00
1-MP-CC.11	**Co-Doping with $BaSnO_3$ and $BaHfO_3$ by Ultra-high Rate PLD Enabling Formation of High-density Nanocolumns in $EuBa_2Cu_3O_{7-\delta}$ Films** Yue Wu, Shanghai Jiao Tong University, China	12:00 - 12:00
1-MP-CC.12	**In-field critical current and microstructure of REBCO CCs fabricated by PLD** Yu-Ri Lee, SuNAM Co., Ltd., Korea, Republic of	12:00 - 12:00

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Joints and Mechanical Properties

Giuseppe Celentano, ENEA, Frascati, Italy
Giovanni Mangiulli, Politecnico di Torino, Torino, Italy

1-LP-JM.1I	**Continuous Laser Welding of Steel Jacket of Fusion-Size Superconductors** Kamil Sedlak, EPFL, Villigen PSI, Switzerland	12:00 - 12:00
1-LP-JM.2I	**Testing of joint concept for high-current HTS cables** Diego Garfias-Dávalos, Karlsruhe Institute of Technology, Germany	12:00 - 12:00
1-LP-JM.3I	**HTS Cable Termination and Interface Coating Development for the STEP Remountable Magnet Joints** Yannik Dieudonné, UK Atomic Energy Authority, United Kingdom	12:00 - 12:00
1-LP-JM.4	**Dependence of Joint Resistance on Conductor Arrangement for Mechanical Edge Joint in Remountable HTS Fusion Magnets** Motohiko Himura, Tohoku University, Sendai, Japan	12:00 - 12:00
1-LP-JM.5	**Long-term evaluation of joint resistance in lap joints of REBCO tapes with indium depending on pre-joint process and storage temperature** Reo Tamura, Tohoku university, Sendai, Japan	12:00 - 12:00
1-LP-JM.6	**Experimental and Numerical Analysis on Terminal Joint and Current Distribution of the REBCO Stacked Cable** Jiho Lee, Pusan National University, Busan, Korea, Republic of	12:00 - 12:00
1-LP-JM.7	**Construction and test of REBCO CICC joints under high background magnetic field at 4.2 K** Chuanyi Zhao, Institute of Plasma Physics Chinese Academy of Sciences, China	12:00 - 12:00
1-LP-JM.8	**AC Losses, Circulating Currents, and Stability in PIT-VIPER Joints** Dylan Kolb-Bond, Commonwealth Fusion Systems, Devens, United States	12:00 - 12:00
1-LP-JM.9	**Comparative study of ultrasonic-C scan and Micro-computed tomography scan in the assessment of brazed transition for IVC feedthrough** Yongsheng Wu, Institute of Plasma Physics, Hefei Institutes of Physical Science, Chinese Academy of Science China	12:00 - 12:15
1-LP-JM.10	**Completion of Mechanical Testing on ITER Reduced Scale Pre-Compression Rings** Paolo Rossi, ENEA, Via E. Fermi 45, 00044 Frascati (Roma), Italy	12:15 - 12:15

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Modelling Techniques for HTS Cables and Coils

Daniele Torsello, Politecnico di Torino, Torino, Italy
Laura Savoldi, Politecnico di Torino, Torino, Italy

1-LP-MT.31	**Towards a 3D Thermal-Electrodynamic Simulation of Non-Insulated ReBCO Coils** Bernardo BORDINI, CERN, Geneva, Switzerland	12:00 - 12:00
1-LP-MT.4	**Parametric Design and Optimization of High-Temperature Superconducting Stellarator Magnets** Mikhail Khalizov, Proxima Fusion GmbH, Germany	12:00 - 12:00

1-LP-MT.5	**Identification of lumped-parameter model of a NI HTS coil** Bruno Douine, Université de Lorraine, Vandoeuvre-les-Nancy, France	12:00 - 12:00
1-LP-MT.6	**Coupled magnetoquasistatic-thermal thin-shell formulation in simulating quench in HTS-cable applications** Janne Ruuskanen, Quanscient Oy, Tampere, Finland	12:00 - 12:00
1-LP-MT.7	**Recent advancements in the Berkeley Lab Finite Element Framework** Christian Messe, Lawrence Berkeley National Laboratory, Berkeley, United States	12:00 - 12:00
1-LP-MT.8	**Reformulating the Simultaneous Multi-Scale Method with H-Phi Thin-Shell Model for Efficient Stacked HTS Coil Simulation** Benoît Vanderheyden, University of Liège, Liège, Belgium	12:00 - 12:00
1-LP-MT.9	**Electro-thermal modeling of trapped field behavior in HTS Gourd-Shape magnets with multi-field magnetization** Ziqing Meng, North China Electric Power University, China	12:00 - 12:00
1-LP-MT.10	**Simplified calculation method of screening-current-induced magnetic field for optimal shape design of compact REBCO magnets** Takuya Imai, Okayama University, Okayama, Japan	12:00 - 12:00
1-LP-MT.11	**Partial homogenization methods to simulate HTS tapes using the H and T-A formulations** Ines Santos Perdigao Peixoto, Paul Scherrer Institute, Switzerland	12:00 - 12:00

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Motors, Generators and Other Rotating Machines

Luís F.D. Bucho, IDMEC, Instituto Superior Técnico, Universidade de Lisboa, Lisbon, Portugal
João F. P. Fernandes, IDMEC, Instituto Superior Técnico, Universidade de Lisboa, Lisbon, Portugal

1-LP-RM.1I	**A Hybrid Excitation System Of Superconducting Field CoilS For Wind Turbine Rotors** jiafu wei, The University of Edinburgh, Edinburgh, United Kingdom	12:00 - 12:00
1-LP-RM.2I	**The development of 100kW fully superconducting axial flux motor and test results** Alexander Shchukin, Strathclyde University, Glasgow, United Kingdom	12:00 - 12:00
1-LP-RM.3	**Numerical Study on AC Loss of two types of C-GEN Air-cored Fully HTS Wind Turbine Generators** Shuangrong You, The University of Edinburgh, Edinburgh, United Kingdom	12:00 - 12:00
1-LP-RM.4	**Shortened REBCO saddle-shaped field coil end design for fully superconducting synchronous motors using generalized planar curvature** Reo Konishi, Kyushu University, 744, Motooka, Nishi-ku, Fukuoka-shi, Fukuoka, Japan	12:00 - 12:00
1-LP-RM.5	**Design and Analysis of Rotor Structure Support for Spoke Type Superconducting Motor** Feng Xiong, Huazhong University of Science and Technology, China	12:00 - 12:00

1-LP-RM.6	**Loss Calculation and Analysis in Armature Windings for Superconducting Electric Machines** Othman Taalibi, Karlsruhe Institute of Technology / Institute for technical physics, Karlsruhe, Germany	12:00 - 12:00
1-LP-RM.7	**Development of a New Superconducting Machine Configuration with Persistent Current Rotor Coils.** Fernando Jorge Monteiro Dias, Universidade do Estado do Rio de Janeiro, Rio de Janeiro, Brazil	12:00 - 12:00
1-LP-RM.8	**Enhancing the Stability of No-Insulation HTS Field Coil-Based Electrical Rotating Machines using a Flux Damper** Young Jin Hwang, Korea Maritime & Ocean University, Busan, Korea, Republic of	12:00 - 12:00
1-LP-RM.9	**Evaluation of the Effectiveness of the Transposed Parallel conductor Method for Six-Parallel Conductors in Armature Coils of Superconducting Rotating Machines Using REBCO Tapes** Goki Kawasaki, Kyushu University, Japan	12:00 - 12:00
1-LP-RM.10	**Torque Measurement of Air Core Superconducting Squirrel Cage Rotor for Induction Motor** Akifumi Kawagoe, Kagoshima University, Japan	12:00 - 12:00
1-LP-RM.11	**High-Power-Density Partially Superconducting Machines** Roberto Oliveira, Karlsruhe Institute of Technology, Eggenstein-Leopoldshafen, Germany	12:00 - 12:00
1-LP-RM.13	**A Novel Brushless Superconducting Machine with the Utilization of Composite Bulk Superconductor for Airborne Applications** Xinhong Gao, Huazhong University of Science and Technology, China	12:00 - 12:00
1-LP-RM.14	**EVALUATION OF HYSTERESIS LOSSES IN HTS COILS FOR ROTATING ELECTRICAL MACHINES** Deborah Buonafine, OCEM Power Electronics, Bologna, Italy	12:00 - 12:00

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Electrical Insulation Materials and Systems

Jie Sheng, Shanghai Jiaotong University, China

1-LP-EI.1	**Vacuum Conditions Analysis of Electrical Breakdown Characteristics of GHe and Insulation Design for Preventing Quench in Superconducting Coils** Bonhyuk Ku, Korea National University of Transportation, Chungju-si, Chungcheongbuk-do, Korea, Republic o	12:00 - 12:00

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Non-insulated HTS Coils

Enric Pardo, Institute of Electrical Engineering SAS, Bratislava, Slovakia
Mohammad Yazdani-Asrami, University of Glasgow, Glasgow, United Kingdom

1-LP-NI.1	**Measurement and numerical analysis on the current distribution of parallel co-wound no-insulation REBCO coils** Mianjun Xiao, Tsinghua University, Beijing, China	12:00 - 12:00
1-LP-NI.3	**Tuning the Characteristic Time of HTS Pancake and Racetrack Coils**	12:00 - 12:00

	with the Remove-And-Replace (RAR) Method	
1-LP-NI.4	**Numerical investigation on the structure of no-insulation bundle REBCO conductors for HTS magnets with high current density and thermal stability** Hiroshi Ueda, Okayama University, Okayama, Japan	12:00 - 12:00
1-LP-NI.5	**Optimizing Operating Frequency for Charging No-Insulated HTS Magnets Using Transformer-Rectifier Flux Pumps** Zhipeng Huang, University of Cambridge, United Kingdom Qi Wang, University of Cambridge, Cambridge, United Kingdom	12:00 - 12:00
1-LP-NI.6	**Study on the Electromagnetic Properties of HTS No-Insulated Coils Cured with Low-Melting-Point Alloys** Ma Rui, the Institute of High Energy and Physics(IHEP), China	12:00 - 12:00
1-LP-NI.7	**Ramping Behaviour of Parallel-wound No-insulation High Temperature Superconducting Magnet for a Single Silicon Crystal Growth System.** Pai Peng, Shanghai Jiao Tong University, China	12:00 - 12:00
1-LP-NI.8	**The no-insulation HTS floating coil of the APEX levitated dipole trap** Adam Deller, Max-Planck-Institut für Plasmaphysik, Garching bei München, Germany	12:00 - 12:00
1-LP-NI.9	**Manufacturing process of solder-impregnated NI HTS solenoids at PSI-Paul Scherrer Institute** Henrique Garcia Rodrigues, PSI - Paul Scherrer Institute, Villigen, Switzerland	12:00 - 12:00
1-LP-NI.10	**Design and construction of a small-scale layer-wound no-insulation (LW-NI) insert magnet with REBCO coated conductors operating in a background magnetic field exceeding 15 T** J. H Wan, Institute Of Plasma Physics Chinese Academy Of Sciences, China	12:00 - 12:00
1-LP-NI.11	**Development of a 10 kA and 10 T Multi-Tapes Co-Wound No-Insulation HTS Magnet** Zijia Zhao, Southwestern Institute of Physics (SWIP), Chengdu, China	12:00 - 12:00
1-LP-NI.12	**Establishment of the Inductance Matrix of Uninsulated Superconducting Windings with Different Shapes and the Treatment of Their Singular Value Problems** Lingfeng Lai, Beijing Eastforce Superconducting Technology Co., Ltd., China	12:00 - 12:00
1-LP-NI.13	**Advancements in Non-Insulated Superconducting Coils for Pulsed Fusion Reactors: Enhanced Thermal Stability and Modular Maintenance** Yasha Nikulshin, nT-Tao, Hod Hasharon, Israel	12:00 - 12:00

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Superconductivity in Transportation (1)

Ercan Ertekin, The University of Strathclyde, Glasgow, United Kingdom
Emelie Nilsson, Airbus UpNext, Toulouse, France

1-LP-TP1.1	**Investigation of Thermal Conductivity of Thermal Pastes in Cryogenic Electric Powertrain.** Mingxuan Sui, University of Bath, Bath, United Kingdom	12:00 - 12:00
1-LP-TP1.2	**An improved method for detecting turn-to-turn resistivity without destruction and predicting all operating conditions in full-scale REBCO coils** Qiyu Wang, Shanghai Jiao Tong University, Shanghai, China	12:00 - 12:00
1-LP-TP1.3	**Development and flight verification of high temperature superconducting motor prototype** Jinxing Zheng, Institute of Plasma Physics, Chinese Academy of Sciences, China	12:00 - 12:00
1-LP-TP1.4	**Maximizing Power Density and Efficiency of a 20 MW-class High Temperature Superconducting Induction/Synchronous Motor for Propulsion Systems using a Self-assembling Design Method** Masayoshi Yamamoto, Kyoto University, Kyoto, Japan	12:00 - 12:00
1-LP-TP1.5	**Review of liquid-hydrogen-cooled superconducting motor concepts for electric aircraft propulsion** Dong Liu, LUT University, Lahti, Finland	12:00 - 12:00
1-LP-TP1.6	**Mapping of T.E.A.M stresses encountered during the operation of a superconductor based permanent magnet synchronous motor for aircraft propulsion.** Srinivas Lakshmi Narayana Gudi, Norwegian University of Science and Technology, Trondheim, Norway	12:00 - 12:00
1-LP-TP1.7	**A conceptual design of fully superconducting AC homopolar motors for electric aircraft propulsion** Dong Liu, LUT University, Lahti, Finland	12:00 - 12:00
1-LP-TP1.8	**Research on Topology Selection for High Power Density in Aviation Superconducting Motor** Ronghai Qu, Huazhong University of Science and Technology, Wuhan, China	12:00 - 12:00
1-LP-TP1.9	**A Novel Design of High-Power-Density HTS Armature Motor for Aviation Applications** Mingyuan Liu, Huazhong University of Science and Technology, WuHan, China	12:00 - 12:00
1-LP-TP1.10	**Partially HTS axial flux superconducting machine for zero emission aviation** Muhammad Bin Younas, University of Strathclyde, United Kingdom	12:00 - 12:00
1-LP-TP1.11	**Serial arc risk analysis in HTS tapes for electric aircraft** Cecile Weulersse, Airbus SAS, Blagnac, France	12:00 - 12:00
1-LP-TP1.12	**Analysis and evaluation of DC interruption characteristics of ReBCO tapes for superconducting aircraft electrical system** Edwin CALDERON MENDOZA, Airbus UpNext, Toulouse, France	12:00 - 12:00
1-LP-TP1.13	**A high-field magnetoplasmadynamic thruster for the nuclear-powered propulsion system** Zehua Liu, Technical University of Munich, Garching B. Munich, Germany	12:00 - 12:00
1-LP-TP1.14	**Finite Element Modeling of Superconducting Magnetic Bearings**	12:00 - 12:00

with a Fixed Mesh Based on J-A Formulation
Elias Paakkunainen, TU Darmstadt, Germany

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Magnet Design and Analysis

Qing Shao, CRRC Changchun Railway Vehicles Co., Ltd., Changchun, China
Vyacheslav Solovyov, Brookhaven Technology Group, Stony Brook, United States

1-LP-MD.2I	***Structural Optimisation and Analytical Modelling of a Stress-Managed, Ramped and Conduction Cooled Cos-theta Superconducting Magnet for a Novel Ion Gantry*** Gabriele Ceruti, CERN, Geneva, Switzerland	12:00 - 12:00
1-LP-MD.3	**Study on the effect of stress-dependent turn-to-turn contact resistance on electromagnetic properties of pancake coils** Dongfeng Wei, Lanzhou University, China	12:00 - 12:00
1-LP-MD.4	**Ultra-thin glass fibre insulation co-wound as insulation in to a potted REBCO pancake coil** Owain Atkins, Southampton University, Southampton, United Kingdom	12:00 - 12:00
1-LP-MD.5	**Design and Simulation Analysis of a 5T Conduction-Cooled Magnet for the Quantum Materials Resonant Scattering Experimental Station** Pengcheng Huang, High Magnetic Field Laboratory, Hefei Institutes of Physical Science, Chinese Academy of China	12:00 - 12:00
1-LP-MD.6	**Design and analysis of a hybrid LTS/HTS 20T solenoid magnet** Aldo Di Zenobio, ENEA, Frascati (RM), Italy	12:00 - 12:00

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Integrated Systems

Lauro Ferreira, Université Paris-Saclay, CentraleSupélec, 91192, Gif-sur-Yvette, France
Christian Barth, CERN, Geneva, Switzerland

1-LP-IS.1	**Development of a high-capacity cryogen-free dilution refrigerator for the superconducting quantum computer with more than 1,000 quantum bits** Haizheng Dang, Shanghai Institute of Technical Physics, Chinese Academy of Sciences, Shanghai, China	12:00 - 12:00
1-LP-IS.2	**Cooling Design for the Rotor of a 200kW Aviation Superconducting Motor** Fulang liu, Huazhong University of Science and Technology, wuhan, China	12:00 - 12:00
1-LP-IS.3	**Enhancing temperature sensing in superconducting powertrain: Analysis of Fiber Bragg Grating sensor installation and sensitivity challenges at cryogenic temperatures** Irina Jimenez, Airbus up next, France	12:00 - 12:00
1-LP-IS.4	**Scaling laws of fully superconducting H-bridge converter** Mathias Noe, Karlsruhe Institute of Technology (KIT), Germany	12:00 - 12:00

1-LP-IS.5	**Comparison of SiC and GaN boost converter associated to cryogenic coil** Tanguy PHULPIN, CentraleSupélec, PARIS, France	12:00 - 12:00
1-LP-IS.6	**High-Temperature Superconducting Busbar for Energy-Efficient Power Distribution in Next-Generation Data Centres** Mihai Mesteru, University of Cambridge, United Kingdom	12:00 - 12:00
1-LP-IS.7	**Dynamic Behavior Analysis of Hydrogen Fuel Cell System in Superconducting Hydrogen-Electric Aircraft with SFCL Integration** Changqi WANG, Anhui University of Science and Technology, Hefei, China	12:00 - 12:00
1-LP-IS.8	**Superconducting DC Distribution Network for Zero-Emission Electric Propulsion Aircraft** Xiaoze Pei, University of Bath, United Kingdom	12:00 - 12:00
1-LP-IS.9	**Investigation into the Cooling Architecture of Cryogenic Hydrogen Fuel Pump Drive Motors for Aviation Applications** Zhenglin Li, Huazhong University of Science and Technology, Wuhan, China	12:00 - 12:00
1-LP-IS.10	**Study of a cryogenic diode rectifier for a DC traction substation** Yasmine Baazizi, Université Paris-Saclay, CentraleSupélec, 91192, Gif-sur-Yvette, France	12:00 - 12:00
1-LP-IS.11	**Investigation of the Quench Behavior of High-Temperature Superconducting REBCO Stacked Tape Cables for Space Solar Power Stations** Pai Peng, Shanghai Jiao Tong University, China	12:00 - 12:00
1-LP-IS.12	**Dynamic Characterization by Double Pulse Testing of Si Power MOSFETs and IGBTs at Cryogenic Temperature for Superconducting Applications** Yanis Laïb, Université de Lorraine, GREEN, Nancy, France	12:00 - 12:00
1-LP-IS.13	**Analysis on Operational Coordination of SFCL with Smart Inverter in Power Distribution System** Su-Hyeon Kim, Soongsil University, Seoul, Korea, Republic of	12:00 - 12:00
1-LP-IS.14	**Study on Twist Performance of Superconducting Charging Gun Cable** Xiangde Zhang, Shanghai Jiao Tong University, Shanghai, China	12:00 - 12:00
1-LP-IS.15	**An Advanced Energy Management Algorithm for Hybrid Storage Systems Integrating SMES, Batteries, and Fuel Cells** chonghao yan, shanghai jiao tong university, China	12:00 - 12:00

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IBS and BSCCO Cables and Coils

1-LP-IB.2	**Research on the Performance of Iron-Based Superconducting Coils Fabricated by Hot Isostatic Pressing** Xiao Liu, Institute of Plasma Physics, Chinese Academy of Sciences, Hefei, People's Republic of China, China	12:00 - 12:00
1-LP-IB.3	**Optimization Design and Mechanical Analysis of a 5 T Iron-Based**	12:00 - 12:00

Superconducting Insert Coil for High Field Application

Hangwei Ding, High Magnetic Field Laboratory, Hefei Institutes of Physical Science, Chinese Academy of Scie China

1-LP-IB.4 **Design, Fabrication and Preliminary Test of the Bi2212 CICC Sample for High-field Applications** 12:00 - 12:00

Wenge Chen, High Magnetic Field Laboratory, Hefei Institutes of Physical Science, Chinese Academy of Scien China

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Novel Materials

Jens Hänisch, Karlsruhe Institute of Technology, Eggenstein-Leopoldshafen, Germany
Anastasiya Duchenko, Roma Tre University, Italy

1-MP-NM.1I **Discovery of new Superconductor $La_4Ni_3O_{10}$ Under High Pressure** 12:00 - 12:00

Yoshihiko TAKANO, National Institute for Materials Science (NIMS), Tsukuba, Japan

1-MP-NM.2 **Phonon and Critical Temperature Evaluation of a Superconducting Chromium Hydride** 12:00 - 12:00

Maria-Iulia Zai, University of Bucharest, Magurele, Romania

1-MP-NM.3 **Optimal physicochemical parameters for high-temperature ternary superhydrides** 12:00 - 12:00

Artur Durajski, Czestochowa University of Technology, Czestochowa, Poland

1-MP-NM.5 **Phase stability and electrical transport properties of PdH_x (x<1) thin films grown by RF-sputtering at room temperature** 12:00 - 12:00

Victor Leca, "Horia Hulubei" National Institute for R&D in Physics and Nuclear Engineering, Magurele, Roman

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Test Facilities for Magnet Systems (1)

Daniel Novelli, Sapienza University of Rome, Rome, Italy

1-LP-TF1.3 **Status of installation of a new superconducting magnet test facility: Frascati Coil Cold Test Facility (FCCTF)** 12:00 - 12:00

Babak Taheri, National Agency for New Technologies, Energy and Sustainable Economic Development (ENEA Frascati, Italy

1-LP-TF1.4 **High Field Magnet Test Facility and Superconducting Magnet Activities at PPPL** 12:00 - 12:00

Yuhu Zhai, Princeton Plasma Physics Laboratory, United States

1-LP-TF1.5 **Development progress of the NDE laboratory of CRAFT** 12:00 - 12:00

Yongsheng Wu, Institute of Plasma Physics, Hefei Institutes of Physical Science, Chinese Academy of Science China

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HTS Cables (1)

Rémi Dorget, Airbus UpNext, Toulouse, France
Dag Willén, NKT Technology R&D, Copenhagen, Denmark

1-LP-HT.1I	**First Thermal Cycling Test and Analysis on a Bi-2212 Cable-in-Conduit Conductor for Fusion Application.** mengliang zhou, Hefei Institute of Physical Science, Chinese Academy of Science, China	12:00 - 12:00
1-LP-HT.2	**Voltage-current curve measurement of spiral-coated-conductor cables** Guangwei Xu, Kyoto University, Kyoto, Japan	12:00 - 12:00
1-LP-HT.3	**Contact resistance measurements in two-layer spiral-coated-conductor cable** Guangwei Xu, Kyoto University, Kyoto, Japan	12:00 - 12:00
1-LP-HT.4	**80 kA class conductors and joints for large HTS fusion magnets** Andrey Mednikov, JSC NIIEFA (The D.V. Efremov Institute), Russian Federation	12:00 - 12:00
1-LP-HT.5	**Structural optimization and mechanical performance enhancement of 10kA-class Tenon-Mortise Modularized Conductors (TMMC)** Bin Zhao, Institute of Plasma Physics, Hefei Institutes of Physical Science, Chinese Academy of Sciences, Chi	12:00 - 12:00
1-LP-HT.6	**Mechanical Behavior Analysis and Critical Current Measurement of Rutherford Cable Fabricated by HTS Quasi-Isotropic Strands** Ziqing Meng, North China Electric Power University, China	12:00 - 12:00
1-LP-HT.7	**Numerical Analysis of Composite Stacked-Tape Cables for High-Field Fusion Magnets** Lei Hu, Beijing Jiaotong University, China	12:00 - 12:00
1-LP-HT.8	**Design of 100kA HTS cable and demountable joint** Michele Bombardieri, ENEA, Frascati, Italy	12:00 - 12:00

Poster
12:00 - 13:15 East

Thin Films

Alexander Bodenseher, TU Wien, Vienna, Austria
Laura Piperno, ENEA, Italian National Agency for New Technologies, Energy and Sustainable Economic Development, Frascati, Rome, Italy

1-MP-TF.1	**Characterization of cutting-edge materials with superconducting microwave resonators within B-NGO project.** Elena Ferri, INFN Milano Bicocca, Italy	12:00 - 12:00
1-MP-TF.2	**Superconducting thin films for Quantum: Fast and conformal NbTiN by ALD** Dmytro Besprozvannyy, Oxford Instruments Plasma Technology, Bristol, United Kingdom	12:00 - 12:00
1-MP-TF.3	**Probing N/I/S/I/S heterostructures by an extended BTK approach** Elena Zhitlukhina, Comenius University Bratislava, Bratislava, Slovakia	12:00 - 12:00

1-MP-TF.4	**Epitaxial $SrTiO_3$/Fe/Nb Heterostructures for Electrostatic Control of the Superconductor-Ferromagnet Proximity Effect.** Stijn Reniers, KU Leuven, Leuven, Belgium	12:00 - 12:00
1-MP-TF.5	**Deposition of amorphous molybdenum silicide MoSi superconducting thin films via magnetron co-sputtering** Luize Dipane, Institute of Solid State Physics, University of Latvia, Riga, Latvia	12:00 - 12:00
1-MP-TF.6	**Pulsed laser deposition of ultrathin epitaxial superconducting NbN films from NbN target** Marianna Španková, Institute of Electrical Engineering Slovak Academy of Sciences, Bratislava, Slovakia	12:00 - 12:00
1-MP-TF.7	**Novel 30 mm wide IBAD-MgO REBCO coated conductors developed at the KC^4 facility** Sukanya Baruah, Karlsruhe Institute of Technology, Karlsruhe, Germany	12:00 - 12:00

Poster
12:00 - 13:15 East

SQUID Applications and Systems (1)

Andrea Giachero, University of Milano-Bicocca, Milano, Italy
Sherman Peek, Google, United States

1-EP-AS1.2	**Effect of Josephson junction parameter spreads on 1D SQUID array performance using Monte Carlo simulations** Emma Mitchell, CSIRO, Lindfield, Australia	12:00 - 12:00
1-EP-AS1.3	**Development of a Zappe-interferometer style superconducting switch for time-division multiplexed readout of transition edge sensor array** Bo GAO, Shanghai Jiaotong University, Shanghai, China	12:00 - 12:00
1-EP-AS1.4	**Improving YBCO-based Quantum Interference Antennas Performance via Annealing of Ion-Irradiated Josephson Junctions.** Meghan Lecerf, Laboratoire Albert Fert, CNRS, Thales, Université Paris Saclay, Palaiseau, France	12:00 - 12:00
1-EP-AS1.5	**Fabrication and Optimization of SWAPS-Based Superconducting Quantum Interference Devices (SQUIDs) Using Advanced Multilayer Processing Techniques** Kuruppulage Achini Chanika Rathnathilaka, VTT Technical Research Centre, Espoo, Finland	12:00 - 12:00
1-EP-AS1.6	**High-Sensitivity Multi-Loop SQUID Magnetometer with Nb/Al-AlOx/Nb Sub-Micron Junctions** Yu Shumin, Shanghai Institute of Microsystem and Information Technology (SIMIT), Chinese Academy of Scie (CAS), Shanghai 200050, China, Shanghai, China	12:00 - 12:00

Poster
12:00 - 13:15 East

Nanowire Detectors (1)

Andrea Giachero, University of Milano-Bicocca, Milano, Italy
Sherman Peek, Google, United States

1-EP-ND1.1I	**Superconducting Feedforward Electronics for Photon-Number Discrimination in Quantum Photonic Platforms**	12:00 - 12:00

Matteo Castellani, Massachusetts Institute of Technology, Cambridge, MA, United States

1-EP-ND1.2I	**Energy-resolved response of high-Tc superconducting nanowires** Mariia Sidorova, Humboldt-Universität zu Berlin, Germany	12:00 - 12:00
1-EP-ND1.3	**Fast numerical methods for the Usadel equation** Reed A Foster, Massachusetts Institute of Technology, Cambridge, United States	12:00 - 12:00
1-EP-ND1.4	**Quantum Projection Imaging using an 8-Pixel Superconducting Nanowire Single-Photon Detector Array** Xiaoqing Zheng, Shanghai Institute of Microsystem and Information Technology, Shanghai, China	12:00 - 12:00
1-EP-ND1.5	**Quantum-Correlated Absorption Spectroscopy using Mid-Infrared Superconducting Nanowire Single-Photon Detectors** Hui Zhou, Shanghai Institute of Microsystem and Information Technology, Chinese Academy of Sciences, Chi	12:00 - 12:00
1-EP-ND1.6	**Microwave-circuit-inspired design of optical cavities for superconducting single-photon detectors** Hiroki Kutsuma, Tohoku University, Sendai, Japan	12:00 - 12:00
1-EP-ND1.7	**Three-state BB84 enhancement via Superconducting Single Photon Detectors**	12:00 - 12:00

Poster
12:00 - 13:15 East

High Field Magnets (1)

Ulf Peter Trociewitz, ASC/NHMFL, United States
Stoyan Stoynev, Fermi National Accelerator Laboratory, United States

1-LP-HF1.1I	**Design of all-superconducting user magnets for EMFL** Xavier Chaud, Laboratoire National des Champs Magnétiques Intenses - European Magnetic Field Laboratory UPR3228 Centre National de la Recherche Scientifique, Univ. Grenoble -Alpes, Institut National des Sciences Appliquées de Toulouse, Univ. Paul Sabatier, Grenoble, France	12:00 - 12:00
1-LP-HF1.2	**Insert HTS Coil Design and Development for High-Field Application above 45 T** Xinxing Qian, High Magnetic Field Laboratory, Hefei Institutes of Physical Science, Chinese Academy of Scien China	12:00 - 12:00
1-LP-HF1.3	**Mechanical conception and calculation of HTS insert for the 40 T+ all superconducting magnet of the FASUM project.** Thibault de Chabannes la Palice, CEA - IRFU, Gif sur Yvette, 91190, France	12:00 - 12:00
1-LP-HF1.4	**Design, fabrication, and testing of large-diameter split superconducting magnets upgraded to 10T** Hongbo Sun, Institute of Electrical Engineering, Chinese Academy of Sciences, Beijing, China	12:00 - 12:00
1-LP-HF1.5	**Numerical investigation of impact of winding tension on screen current induced strain in no-insulation REBCO coils** Yingzheng Pan, Hokkaido University, Sapporo, Japan	12:00 - 12:00
1-LP-HF1.7	**Development of NMR Magnets Based on REBCO High-Temperature Superconducting Tapes: Design, Construction, and Testing** Shuai Hu, Institute of Plasma Physics, Hefei Institutes of Physical Science, Chinese Academy of Sciences, Chi	12:00 - 12:00

1-LP-HF1.8	**Mechanical stress analysis of REBCO pancake coils with reinforced rings for ultra-high-field magnets** Jintao Hu, Massachusetts Institute of Technology, United States	12:00 - 12:00
1-LP-HF1.9	**Analysis of DC magnet cool down process of Super-X based on three-dimensional fluid-solid coupling model** libiao hu, Institute of Plasma Physics, CAS, China	12:00 - 12:00
1-LP-HF1.10	**Mechanical design of a ReBCO non/metal-insulated 40 T solenoid for the Muon Collider** Carlotta Accettura, CERN, Switzerland	12:00 - 12:00
1-LP-HF1.11	**World's first closed loop multi-pancake REBCO magnet with persistent current mode** Fazhu Ding, Institute of Electrical Engineering, Chinese Academy of Sciences,, Beijing, China	12:00 - 12:00

Poster
12:00 - 13:15 East

Quench and Protection

Marco Breschi, University of Bologna, Bologna, Italy
Sergei Pokrovskii, National Research Nuclear University MEPhI (NRNU MEPHI), Moscow, Russian Federation

1-LP-QP.1I	**Microwave RF/microwave time domain-based diagnostic technique for HTS magnets quench detection** Jarek Wosik, University of Houston, Houston, United States	12:00 - 12:00
1-LP-QP.2	**Quench behavior of no-insulation REBCO coils in 1/2-scale coil system of Skeleton Cyclotron** Atsushi Ishiyama, Waseda University, Tokyo, Japan	12:00 - 12:00
1-LP-QP.3	**Development of $(Pr_{0.8}Sm_{0.2})_{0.6}Ca_{0.4}CoO_3$ Metal-Insulator Transition Slurry for Smart Insulation Coils** Kyosuke Sakurai, Tohoku University, Japan	12:00 - 12:00
1-LP-QP.4	**Feasibility of Quench Detection Using Hall Sensors at CORC Cable Terminations for a Full-Scale CCT Magnet** Ao Feng, CAS Ion (Hangzhou) Medical Technology Co., Ltd., China	12:00 - 12:00
1-LP-QP.5	**Experimental investigation of CNN-based voltage predictor for REBCO pancake coil protection** Riki Sakakibara, Hokkaido University, Sapporo, Japan	12:00 - 12:00
1-LP-QP.6	**Quench Protection Characteristics of Conduction Cooled HTS Coil Using Ionic-Liquid Impregnation.** Masahiro Hosono, Sophia University, Chiyoda-ku, Japan	12:00 - 12:00
1-LP-QP.7	**Study on thermal conductive properties of Resistance-Controlled (RC) interfaces with metal mesh for No-Insulation (NI)-scheme coils** Syouon Imanishi, Sophia University, Tokyo, Japan	12:00 - 12:00
1-LP-QP.8	**Quench properties of intra-layer no-insulation (LNI) REBCO coils implemented with resistance-controlled (RC) interfaces using stainless-steel mesh** Mizuho Kawahata, Sophia University, Tokyo, Japan	12:00 - 12:00

1-LP-QP.9	**Analysis method for quench protection of spiral-coated-conductor cables under AC current conditions** Taisei Nishikawa, Kyoto University, Kyoto, Japan	12:00 - 12:00
1-LP-QP.12	**Experimental and Numerical Evaluations of the Encapsulated LTS Quench Detector** Juan wang, the Institute of High Energy Physics, Chinese Academy of Sciences (IHEP, CAS), China	12:00 - 12:00

Poster
12:00 - 13:15 East

Biomedical Applications of Superconductors

Matteo Tropeano, ASG Superconductors Spa, Genova, Italy
Mariusz Wozniak, CERN, Geneva, Switzerland

1-LP-BA.1I	**Electromagnetic Optimization of a Completely Open MRI Magnets with a combination of coils shaped with one side folder back** Yuya Asakura, Kyushu University, Japan	12:00 - 12:00
1-LP-BA.2	**Quench protection of HTS closed-loop coil magnet by a dump-energy coil** Chengxiang Liu, Huazhong University of Science and Technology, China	12:00 - 12:00
1-LP-BA.3	**Investigation of MRI 0.5 T DC-Coils Using 2G HTS Tapes** Guilherme Sotelo, Fluminense Federal University, Niterói, Brazil	12:00 - 12:00
1-LP-BA.4	**Numerical analysis of a bulk superconductor-based magnetic particle guidance system** Zhenyang Xu, King's College London, London, United Kingdom	12:00 - 12:00
1-LP-BA.5	**Quench protection design and cryogenic test of Nb_3Sn coils for a 14 T animal MRI magnet** Weican Huang, Tsinghua University, Beijing, China	12:00 - 12:00
1-LP-BA.6	**Combined Area-Field Optimization for 9.4T Ultra-High Field Superconducting MRI Magnet Design** Zijie Lin, Hefei Institutes of Physical Science, Chinese Academy of Sciences, China	12:00 - 12:00
1-LP-BA.7	**SUPERCONDUCTING PERSISTENT MODE SWITCH FOR CONTROLLING THE HELIUM FREE MAGNETIC SYSTEM OF 1.5 T MRI** Vitaly Vysotsky, Russian Scientific R&D Cable Institute, Moscow, Russian Federation	12:00 - 12:00
1-LP-BA.8	**Switching Performance Analysis of the Persistent Current Switch** Ajit Nandawadekar, European XFEL GmbH, Holzkoppel 4, 22869, Schenefeld, Germany	12:00 - 12:00

Social & Networking
13:15 - 14:30 West

Exhibition & Lunch

Special
14:30 - 16:00 R1

Modelling High-Temperature Superconductors for Large-Scale Applications: Mechanical, Thermal, and Electromagnetic Behavior

1-LS-HT.1	**Numerical modeling of high-temperature superconducting applications: current status, open challenges, and future directions** Francesco Grilli, Karlsruhe Institute of Technology, Germany	14:30 - 15:00
1-LS-HT.2	**Homogenization Strategies for Modeling Stacks of Insulated HTS Coils with the H-Phi Formulation** Benoît Vanderheyden, University of Liège, Liège, Belgium	15:00 - 15:15
1-LS-HT.3	**Numerical Analysis of Mechanical Stress in High-Temperature Superconducting Coils with Coupled Electromechanical Model** Huadong Yong, Department of mechanics and Engineering Sciences, College of Civil Engineering and Mecha Lanzhou University, China	15:15 - 15:30
1-LS-HT.4	**Multiphysics modelling of full-scale HTS stellarator coils with Quanscient Allsolve** Ross Taylor, Proxima Fusion, Germany	15:30 - 15:35
1-LS-HT.5	**Modelling porosity distributions in bulk superconductors to better assess their electrothermomechanical impact during magnetization** Santiago Guijosa Guadarrama, Université de Lorraine, Nancy, France	15:35 - 15:40
1-LS-HT.6	**BELFEM Development Update: h-φ FEM for Multiphysics Thin Shell HTS Modeling** Christian Messe, Lawrence Berkeley National Laboratory, Berkeley, United States	15:40 - 15:45
1-LS-HT.7	**Open Q&A / Discussion** Kévin Berger, Université de Lorraine, GREEN, Nancy, France Frederic Trillaud, Universidad Nacional Autónoma de México, Ciudad de México, Mexico	15:45 - 16:00

Oral
14:30 - 16:00 R2

HTS Conductors and Magnets for Fusion

Pierluigi Bruzzone, EPFL, Villigen PSI, Switzerland
Xiaodong Li, Technical University of Munich, Garching B. Munich, Germany

1-LO-MF.1	**Plans and progresses on HTS CICC for fusion in China** Chao Zhou, Hefei Institute of Physical Science, CAS, Hefei, China	14:30 - 14:45
1-LO-MF.2	**Critical current, inter-tape resistance and mechanical stiffness under cyclic transverse loading of REBCO round cables for fusion** Arend Nijhuis, University of Twente, Enschede, Netherlands	14:45 - 15:00
1-LO-MF.3	**Development status of high-current / high-field HTS conductors for fusion at ENEA** Gabriele Colombo, University of Bologna, Italy	15:00 - 15:15
1-LO-MF.4	**Development of compact, fast ramping, high field HTS coils for fusion and other applications.** Greg Brittles, Tokamak Energy Ltd, Oxford, United Kingdom	15:15 - 15:30

1-LO-MF.5	**The Design and Fabrication of an Insulated Multi-tape Parallel-Wound REBCO Superconducting Coil** Di Wang, Shanghai Dianji University, China	15:30 - 15:45
1-LO-MF.6	**The performance of CICC type Bi-2212 insert coil under 20 T** Zhenchuang Zhang, Institute of Plasma Physics, Hefei Institutes of Physical Science, Hefei City, China	15:45 - 16:00

Oral
14:30 - 16:00 R3

Flux Pumps

Giacomo Russo, Alma Mater Studiorum - University of Bologna, Bologna, Italy
Adil Shah, University of Edinburgh, Edinburgh, United Kingdom

1-LO-FP.1	**Progress toward a 10-kA Superconducting Power Supply for Levitated Dipole Reactors** Bradley Leuw, OpenStar Technologies, New Zealand	14:30 - 14:45
1-LO-FP.2	**Cryogenic Superconducting Voltage Inverters Enabled Through Jc(B)-Switches** Samuel Schimanski, OpenStar Technologies Ltd, Wellington, New Zealand	14:45 - 15:00
1-LO-FP.3	**A high-precision flux pump for charging HTS magnets** Yi Lin, Huazhong University of Science and Technology, China	15:00 - 15:15
1-LO-FP.4	**A Full-Wave HTS Transformer-Rectifier Flux Pump Based on AC Field-Controlled Switches** Chao Li, Tianjin University, China	15:15 - 15:30
1-LO-FP.5	**Comparison of Switch Technologies for Transformer-Rectifier Flux Pumps Supplying High-Current, High-Inductance DC Magnets** Hamza Benrabah, University of Bologna, Bologna, Italy	15:30 - 15:45
1-LO-FP.6	**Dynamo modeling comparison using the J-A-Φ and H-A formulations considering two distinct operating scenarios** Gabriel dos Santos, Federal University of Rio de Janeiro, Rio de Janeiro, Brazil	15:45 - 16:00

Oral
14:30 - 16:00 R4

Integrated Systems

Alexander Shchukin, Strathclyde University, Glasgow, United Kingdom
Antonio Morandi, University of Bologna, BOLOGNA, Italy

1-LO-IS.1	**A superconducting DC traction substation kW-scale prototype** Lauro Ferreira, Université Paris-Saclay, CentraleSupélec, 91192, Gif-sur-Yvette, France	14:30 - 14:45
1-LO-IS.2	**Transportability and Robustness of the first Cold Powering System for the HL-LHC** Christian Barth, CERN, Geneva, Switzerland	14:45 - 15:00
1-LO-IS.3	**Investigation of Thermal Distribution in Cryogenically Cooled Inverter for Superconducting Motor** Yuchen Wang, University of Bath, United Kingdom	15:00 - 15:15

1-LO-IS.4	**Opportunities and challenges of superconducting and cryogenic powertrain for liquid hydrogen aircraft propulsion: CRYOPROP use case** Reda ABDOUH, Airbus UpNext, France	15:15 - 15:30
1-LO-IS.5	**Operating the power electronics of a superconducting system at low temperatures: mitigation of interface trap effects in a p-type MOS capacitor** Francisco Eleuterio de Loredo, University of Liège, Liège, Belgium	15:30 - 15:45
1-LO-IS.6	**Large and Small Turbo-Brayton Based Cryogenic Plants for HTS** pierre crespi, Air Liquide advanced Technologies, Sassenage, France	15:45 - 16:00

Special
14:30 - 16:00 R5

Neuromorphic Computing

1-ES-NC.1I	**SuperLoop: Architecture Modeling for Superconducting AI Accelerators** L. Camron Blackburn, Massachusetts Institute of Technology, Cambridge, United States	14:30 - 15:00
1-ES-NC.2	**Spiking-Hopfield Neural Networks with SFQ Logic** Arda Caliskan, University of Southern California, Los Angeles, United States	15:00 - 15:15
1-ES-NC.3	**Spiking Super-Tsetlin: Superconducting Tsetlin Machines with Spiking Neural Networks** Dilip Vasudevan, Lawrence Berkeley National Laboratory, Berkeley, United States	15:15 - 15:30
1-ES-NC.4	**Flexible brain-inspired hybrid analog-spiking neuronal network computation in energy-efficient superconducting neuromorphic hardware** Christoph Kirst, University of California San Francisco, San Francisco, United States	15:30 - 15:45
1-ES-NC.5	**Design of an SFQ confluence buffer-based adder tree for stochastic computing** Yuki Matsumoto, Kyushu University, Japan	15:45 - 16:00

Oral
14:30 - 16:00 R6

REBCO Coated Conductors | Critical Current Anisotropy and Performance Enhancement for Application

Giuseppe Celentano, ENEA, Frascati, Italy
Maxime Leroux, LNCMI, CNRS, Toulouse, France

1-MO-CA.1	**Characterization and scaling of the angular dependence of the critical current in commercial REBCO tapes for high-field applications** Romain Babouche, University of Geneva, Geneva, Switzerland	14:30 - 14:45
1-MO-CA.2	**I_c angle dependence database of commercial REBCO tape at both in-plane, out-of-plane, and under-stress** Zili Zhang, Institute of Electrical Engineering, Chinese Academy of Sciences,, Beijing, China	14:45 - 15:00
1-MO-CA.3	**Reduction of J_c Anisotropy in *RE*BCO Coated Conductors via Bilayer**	15:00 - 15:15

Structure of Columnar and Random Pinning Centers
Tatsunori Okada, Kyushu Institute of Technology, Kitakyushu, Japan

1-MO-CA.4	**Understanding of vortex pinning in the ultrafast Transient Liquid Assisted Growth (TLAG) process of coated conductors** Teresa Puig, ICMAB-CSIC, Bellaterra, Spain	15:15 - 15:30
1-MO-CA.5	**Advancements in REBCO Conductor Fabrication to Meet Applications Requirements** Venkat Selvamanickam, University of Houston, Houston, United States	15:30 - 15:45
1-MO-CA.6	**Current progress at KC^4 pilot production line: transport properties of 1 µm thick YBCO+3%BZO films** Ruslan Popov, Karlsruhe Institute of Technology, Eggenstein-Leopoldshafen, Germany	15:45 - 16:00

Oral
14:30 - 16:00 R7

MgB2 Wires & Tapes

Tetiana Prikhna, V. Bakul Institute for Superhard Materials of the National Academy of Sciences of Ukraine, Kyiv, Ukraine
Canan Aksoy, Karadeniz Technical University, Trabzon, Turkey

1-MO-MG.1I	**First large-scale production of MgB_2 round wire: the Superconducting Links for the HL-LHC Project at CERN** Amalia Ballarino, CERN, Geneva, Switzerland	14:30 - 15:00
1-MO-MG.2	**Deep learning of filament microstructure in MgB_2 multifilamentary wires** Akiyasu Yamamoto, Tokyo University of Agriculture and Technology, Japan	15:00 - 15:15
1-MO-MG.3	**MgB_2 wires and tapes at ASG Superconductors: state of the art and future perspectives** Matteo Tropeano, ASG Superconductors Spa, Genova, Italy	15:15 - 15:30
1-MO-MG.4	**Revisiting the powder-in-tube method to reduce the cost of MgB2 wires for energy applications** Guillaume Matthews, University of Oxford, Oxford, United Kingdom	15:30 - 15:45
1-MO-MG.5	**Improving superconducting properties of 100 m class MgB_2 wire with 37 filaments produced via internal Mg diffusion process** Fang Yang, Northwestern Polytechnical University, China	15:45 - 16:00

Oral
14:30 - 16:00 R8

Device Fabrication and Metrology

Emma Mitchell, CSIRO, Lindfield, Australia
Alex Wynn, Massachusetts Institute of Technology, Lexington & Cambridge, MA, United States

1-EO-FM.1I	**Building a Superconducting Electronics Process** Aaron Lee, Northrop Grumman Corporation, United States	14:30 - 15:00
1-EO-FM.2	**Microstructural analysis of corrosion inhibition in sub-100nm-scale Josephson circuits**	15:00 - 15:15

Michael Faley, Forschungszentrum Jülich, Jülich, Germany

1-EO-FM.3	**Stacked Josephson Junction Arrays for the Josephson Arbitrary Waveform Synthesizer with Integrated Broadband Power Dividers** Omar M. Aladdin, Physikalisch-Technische Bundesanstalt (PTB), 38116 Braunschweig, Germany	15:15 - 15:30
1-EO-FM.4	**2D-superconductivity in surface-reduced transparent ITO films** Ali Aliev, University of Texas at Dallas, Richardson, United States	15:30 - 15:45
1-EO-FM.5	**Crafting vortex topologies into copper-oxide superconductors by focused helium-ion-beam irradiation and their temporal evolution** Wolfgang Lang, University of Vienna, Vienna, Austria	15:45 - 16:00

Social & Networking
16:00 - 16:45 West

Exhibition & Refreshments

Oral
16:45 - 18:15 R1

Superconducting Quantum Bits (1)

Peter Hopkins, National Institute of Standards and Technology, Boulder, United States
Akshay Murthy, Fermilab, Batavia, IL, United States

1-EO-QB1.1I	**Chip-based digital readout of a superconducting qubit** Luigi Di Palma, SEEQC EU, Napoli, Italy	16:45 - 17:15
1-EO-QB1.2	**Demonstration of self-shunted flux qubits with high anharmonicity** Tokunoshin Uchida, Tohoku University, Sendai, Japan	17:15 - 17:30
1-EO-QB1.3	**All-nitride quantum devices by means of molecular beam and thermal laser epitaxy** Thomas James Smart, Forschungszentrum Jülich & Jülich Aachen Research Alliance, Jülich, Germany	17:30 - 17:45
1-EO-QB1.4	**Strategies for quantum computation with superconducting quantum processors: performances benchmarking and solutions towards open-source gate-based quantum computing** Halima Giovanna Ahmad, University of Napoli "Federico II", Napoli, Italy	17:45 - 18:00
1-EO-QB1.5	**Scalable Fabrication of High-Performance Superconducting Qubits Using Native-Oxide Passivated Trilayer Junctions** Pankaj Sethi, VTT Technical Research Centre of Finland, Finland	18:00 - 18:15

Oral
16:45 - 18:30 R2

Fusion Programmes based on Magnets

Kamil Sedlak, EPFL, Villigen PSI, Switzerland
Jinggang Qin, ASIPP, China

1-LO-FM.1	**Progress of HTS magnet technology development for the next generation fusion device at ASIPP**	16:45 - 17:00
1-LO-FM.2	**Qualification Testing of SPARC's Poloidal Field Magnets**	17:00 - 17:15

Jeremy Adams, Commonwealth Fusion Systems, Cambridge, MA, United States

1-LO-FM.3	**The STEP Magnets Technology Development Programme 2025 – 2029** Stuart Wimbush, UK Industrial Fusion Solutions Ltd, Abingdon, United Kingdom	17:15 - 17:30
1-LO-FM.4	**Demo4 - Presentation of the assembly, commissioning and testing of a representational set of high filed HTS magnets in a reactor relevant configuration** Graham Dunbar, Tokamak Energy Limited, Oxford, United Kingdom	17:30 - 17:45
1-LO-FM.5	**Advancements in Non-Planar HTS Magnet Technology for QI Stellarator-Based Fusion Power Plants** Robert Slade, Proxima Fusion, Germany	17:45 - 18:00
1-LO-FM.6	**Superconductors for Stellarators: Design and Integration in a Fusion Power Plant** Neil Mitchell, Gauss Fusion GmbH, Munich, Germany	18:00 - 18:15
1-LO-FM.7	**The SupraFusion French Research Program: Development of HTS technologies for Fusion and wide societal applications** Walid ABDEL MAKSOUD, CEA, France	18:15 - 18:30

Oral
16:45 - 18:15 R3

Power Transmission Lines and Cables (AC and DC)

Antonio Morandi, University of Bologna, BOLOGNA, Italy
Kévin Berger, Université de Lorraine, GREEN, Nancy, France

1-LO-PT.1	**SupraMarine - AC connection of distant offshore wind farms using HTS cables** Loïc Quéval, University Paris-Saclay, Gif-sur-Yvette, France	16:45 - 17:00
1-LO-PT.2	**Final design and first performance tests on short-length prototypes of the Green Superconducting Line for the Italian facility IRIS** Carlo Santini, INFN Milan, Milan, Italy	17:00 - 17:15
1-LO-PT.3	**DEMO200 – Design, Development and Test of a 200 kA DC busbar demonstrator** Steffen Elschner, University of Applied Science Mannheim, Mannheim, Germany	17:15 - 17:30
1-LO-PT.4	**Implementation of a 2400-meter long HTS cable line project in the power system of St. Petersburg.** Viktor Sytnikov, CryoPowerSystems, Moscow, Russian Federation	17:30 - 17:45
1-LO-PT.5	**Cooling and operation analysis of the 150m SuperLink HTS cable system** Martin Pitzer, NKT GmbH & Co KG, Cologne, Germany	17:45 - 18:00
1-LO-PT.6	**Analysis of the evolution of accidental transients in the cooling of a MgB_2-LH_2 hybrid power cable** Laura Savoldi, Politecnico di Torino, Torino, Italy	18:00 - 18:15

Oral
16:45 - 18:15 R4

Accelerator Magnets

Douglas Araujo, Paul Scherrer Institut, Switzerland
Audren Blondelle, Université Grenoble Alpes, Grenoble, France

1-LO-AM.1	**Lessons from testing the first three US HL-LHC cryo-assemblies at FNAL** Stoyan Stoynev, Fermi National Accelerator Laboratory, United States	16:45 - 17:00
1-LO-AM.2	**Status of the Hi-Lumi LHC MBRD series production and test** Alessandra Pampaloni, INFN, Genova, Italy	17:00 - 17:15
1-LO-AM.3	**Fabrication of Rutherford cables using roped strands made from ultra-fine wires** Ian Pong, Lawrence Berkeley National Laboratory, Berkeley, United States	17:15 - 17:30
1-LO-AM.4	**Advancements in the mechanical structure design of FalconD: the INFN-CERN collaboration for the Nb_3Sn 12 T Cos-Theta Dipole within the High-Field Magnets R&D Program** Alessandra Pampaloni, INFN, Genova, Italy	17:30 - 17:45
1-LO-AM.5	**Development of Dual-aperture Final Focus Interaction Region Superconducting Magnet for Super Tau-Charm Facility** Wenbin Ma, High Magnetic Field Laboratory, Hefei Institutes of Physical Science, Chinese Academy of Scienc China	17:45 - 18:00
1-LO-AM.6	**Development of a Fast-ramping Dipole Prototype with Multi-layer Nested Cos θ Configuration** Tongjun Yang, Institute of Modern Physics of Chinese Academy of Sciences, Lanzhou, China	18:00 - 18:15

Oral
16:45 - 18:15 R5

AC-Losses and Magnetisation

Zhenan Jiang, Victoria University of Wellington, LOWER HUTT, New Zealand
Jiabin Yang, UK Atomic Energy Authority, United Kingdom

1-MO-AC.1	**Low-AC loss, defect-tolerant 2G filament for fast-cycling fusion magnets** Vyacheslav Solovyov, Brookhaven Technology Group, Stony Brook, United States	16:45 - 17:00
1-MO-AC.2	**Magnetization loss in filamentized REBCO tapes and cables: analytical model and experiments** Fedor Gömöry, Institute of Electrical Engineering, Slovak Academy of Sciences, Bratislava, Slovakia	17:00 - 17:15
1-MO-AC.3	**Numerical Modelling of HTS Coated Conductors in Three-Dimensional Arrangements** Guilherme Telles, Institute of Materials Science of Barcelona (ICMAB - CSIC), Spain	17:15 - 17:30
1-MO-AC.6	**Numerical and Experimental Study of AC Losses in Multifilamentary MgB_2 Wires** Luca Soldati, ASG Superconductors, Genova, Italy	17:30 - 17:45
1-MO-AC.5	**Laser scribing processing to reduce the hysteresis and coupling**	17:45 - 18:00

	loss Takato Machi, AIST, Tsukuba, Japan	
1-MO-AC.6	**AC Loss of Nb_3Sn Strands for High-Field Accelerator Magnets** Mariusz Wozniak, CERN, Geneva, Switzerland	18:00 - 18:15

Oral
16:45 - 18:15 R6

Critical Currents and Flux Pinning Irradiation Effects

Michael Eisterer, TU Wien, Austria
Anastasiya Duchenko, Roma Tre University, Italy

1-MO-IE.1I	**Radiation Tolerance of REBCO Coated Conductors - Influence of Pristine Properties and Operating Conditions** Raphael Unterrainer, TU Wien, Vienna, Austria	16:45 - 17:15
1-MO-IE.2	**The performance of REBCO coated conductor during in situ cryogenic fusion-spectrum neutron irradiation** Kirk Adams, University of Oxford, Oxford, United Kingdom	17:15 - 17:30
1-MO-IE.3	**Microwave Vortex Motion in Fe(Se,Te) and FeSe Thin Films: Investigating Vortex Core Dissipation, Pinning, Anisotropy, and the Effects of Heavy-Ion Irradiation** Enrico Silva, University Roma Tre, Rome, Italy	17:30 - 17:45
1-MO-IE.4	**Highly effective Au ion irradiation on Fe(Se, Te) thin films grown on buffered templates** Francesco Rizzo, ENEA, Frascati, Italy	17:45 - 18:00
1-MO-IE.5	**In-situ measurements of the normal state resistivity during annealing of neutron irradiated REBCO** Alexander Bodenseher, TU Wien, Vienna, Austria	18:00 - 18:15

Oral
16:45 - 18:15 R7

Cuprates and Related Compounds

Cornelia Pop, Institut de Ciències de Materials de Barcelona, ICMAB-CSIC, Campus UAB, Bellaterra, Barcelona, Spain
Achille Angrisani Armenio, ENEA, Italian National Agency for New Technologies, Energy and Sustainable Economic Development, Frascati, Rome, Italy

1-MO-CC.1	**Tuning the pinning landscape of chemically deposited YBCO film with Gd excess** Valentina Pinto, ENEA, Frascati (Rome), Italy	16:45 - 17:00
1-MO-CC.2	**MECHANISM INSIGHTS OF TRANSIENT LIQUID ASSISTED GROWTH FOR HIGH PERFORMANCE REBCO LAYERS USING DIFFERENT RARE EARTH** Carla Torres, Institut de Ciència de Materials de Barcelona (ICMAB), Spain	17:00 - 17:15
1-MO-CC.3	**Development of High-entropy-type REBCO thin films with high irradiation resistance for nuclear fusion reactor application** Aichi Yamashita, Tokyo Metropolitan University, Tokyo, Japan	17:15 - 17:30

1-MO-CC.4	**Atomistic modelling of radiation damage in HTS for fusion applications** Davide Gambino, Linköping University, Linköping, Sweden	17:30 - 17:45
1-MO-CC.5	**Thallium-1223 Films: A High-Temperature Superconductor for High-Field Applications** Alessandro Leveratto, CNR-SPIN, Genova, Italy	17:45 - 18:00
1-MO-CC.6	**Unpinned Josephson vortices in $Tl_2Ba_2CuO_{6+x}$ microstructures up to 70K** Ayanesh Maiti, Max Planck Institute for Chemical Physics of Solids, Dresden, Germany	18:00 - 18:15

Oral
16:45 - 18:15 R8

Josephson Junctions (1)

Alberto Ronzani, VTT Technical Research Centre of Finland, Finland
Kyle Jackman, Stellenbosch University, Banhoek Road, Stellenbosch 7600, South Africa

1-EO-JJ1.1I	**Towards a Voltage Standard using $YBa_2Cu_3O_{7-x}$ Josephson Junction Arrays Fabricated by Focused He Ion Beam Irradiation** Max Pröpper, TU Braunschweig, Braunschweig, Germany	16:45 - 17:15
1-EO-JJ1.2	**Investigation of YBCO Thin-Film Surface Impedance on LSAT and MgO for THz Microscopy Using Josephson Junctions** Paul Julius Ritter, TU Braunschweig, Germany	17:15 - 17:30
1-EO-JJ1.3	**Self-heating in Superconductor-Insulator-Superconductor Mixers: Experimental Evidence and Theoretical Modeling** Wenlei Shan, National Astronomical Observatory, Japan	17:30 - 17:45
1-EO-JJ1.4	**Increasing integration scale of superconductor electronics: Development of self-shunted high-J_c Josephson junctions and compact transmission lines with high-κ dielectric** Sergey K. Tolpygo, Lincoln Laboratory, Massachusetts Institute of Technology, Lexigton, MA, United States	17:45 - 18:00
1-EO-JJ1.5	**Detection and manipulation of Josephson vortices in planar junctions** Razmik A. Hovhannisyan, Stockholm University, Stockholm, Sweden	18:00 - 18:15

Social & Networking
18:15 - 20:15 West

Exhibitor Reception

Tuesday, September 23, 2025

Plenary
08:30 - 09:30 R1

Superconducting Digital Electronics: Current Advances and the Beginning of a New Era
Nobuyuki Yoshikawa, Yokohama National University (YNU), Japan

Awards
09:30 - 09:50 R1

CONECTUS Awards

Focus
10:05 - 11:20 R1

Superconducting Electronics: Present toward Future

2-EF-SE.1 **Bipolar thermoelectricity in Josephson nanocircuits: Towards the realization of quantum thermoelectric machines** 10:05 - 10:30
Francesco Giazotto, NEST Istituto Nanoscienze-CNR and Scuola Normale Superiore, Pisa, Italy

2-EF-SE.2 **Superconducting Cryotron-Like Electronic Devices and Circuits** 10:30 - 10:55
Karl K. Berggren, Massachusetts Institute of Technology, Cambridge, United States

Oral
10:05 - 11:20 R2

Superconductivity in Transportation (MAGLEV, electrical aircraft, propulsion)
Frederick Berg, Airbus Defence and Space GmbH, Taufkirchen, Germany
Guilherme Sotelo, Fluminense Federal University, Niterói, Brazil

2-LO-TR.1 **Design, assembly and electrical tests of a 250 kW partially superconducting machine for aicrafts applications** 10:05 - 10:20
Jean Lévêque, Université de Lorraine, Nancy, France

2-LO-TR.2 **Research and Technology needs and challenges for Multi-MW superconducting powertrain for aviation** 10:20 - 10:35
Emelie Nilsson, Airbus UpNext, Toulouse, France

2-LO-TR.3 **Fabrication and Testing of Prototype Saddle-Shaped Field and Distributed Armature Coils for a 2 MW REBCO Fully Superconducting Synchronous Generator** 10:35 - 10:50
Hiroshi Miyazaki, Kyushu University, Japan

2-LO-TR.4 **Development of high-temperature superconducting CORC® power cables for electrified aviation and naval applications** 10:50 - 11:05
Sven Doenges, Advanced Conductor Technologies, United States

2-LO-TR.5 **Progress on the development of a 100 kW fully HTS aviation motor** 11:05 - 11:20
Min Zhang, University of Strathclyde, United Kingdom

Oral
10:05 - 11:20 R3

High Field Magnets

Xavier Chaud, Laboratoire National des Champs Magnétiques Intenses - European Magnetic Field Laboratory, UPR3228 Centre National de la Recherche Scientifique, Univ. Grenoble -Alpes, Institut National des Sciences Appliquées de Toulouse, Univ. Paul Sabatier, Grenoble, France
Daniel Davis, National High Magnetic Field Laboratory @ FSU, Tallahassee, United States

2-LO-HF.1I **Development of a 35 T all-superconducting User Magnet** 10:05 - 10:20
Qiuliang Wang, Institute of Electrical Engineering, Chinese Academy of Sciences, Beijing, China

2-LO-HF.2 **Technical Exploration of 40 T Class NI HTS Magnets: Opportunities and Challenges** 10:20 - 10:35
Jianhua Liu, Institute of Electrical Engineering, Chinese Academy of Sciences, Beijing, China

2-LO-HF.3 **Towards a 40 T solenoid magnet for high-energy physics experiments: small-scale prototype testing and screening-current reduction for the Extreme-NI coils** 10:35 - 10:50
Liangjun Shao, Massachusetts Institute of Technology, Cambridge, United States

2-LO-HF.4 **A numerical study on the impact of edge impregnation: Screening current-induced strain/stress in REBCO insert for 33T-CSM** 10:50 - 11:05
Shohei Nojima, Tohoku University, Sendai, Japan

2-LO-HF.5 **The progress of the REBCO magnets with pancake coils for high field applications exceeding 20T** 11:05 - 11:20
xintao Zhang, Hefei Institutes of Physical Science, Chinese Academy of Sciences, China

Oral
10:05 - 11:20 R4

Power Supply of Superconductor Apparatuses |Quench and Protection

Mariusz Wozniak, CERN, Geneva, Switzerland
Xiaoze Pei, University of Bath, United Kingdom

2-LO-PS.1 **Inductive excitation tests of REBCO assembled conductor coil in liquid hydrogen by applying alternating current to primary coil** 10:05 - 10:20
Masayoshi Ohya, Kwansei Gakuin University, Sanda, Japan

2-LO-PS.2 **Impact of Transformer Inductive Parameters on Charging Performance in Fusion Magnet Systems** 10:20 - 10:35
Antonio Morandi, University of Bologna, BOLOGNA, Italy

2-LO-PS.3 **Development of a 100kW cryogenic inverter for superconducting motors in aviation applications** 10:35 - 10:50
Weijia Yuan, University of Strathclyde, United Kingdom

2-LO-PS.4 **Predicting Superconducting Magnet Quench: A 1D-CNN Model for Real-Time Implementations** 10:50 - 11:05
Pedro Henrique Trindade, National Center for Research in Energy and Materials (CNPEM), Campinas, Brazil

2-LO-PS.5 **Analysis of Silicon Carbide Varistors for Fast Discharge Units of DEMO Toroidal Field Superconducting Magnets in Case of a Quench.** 11:05 - 11:20
Pietro Zito, Italian National Agency for New Technologies, Energy and Sustainable Economic Development (E

Frascati, Italy., Frascati, Italy

Oral
10:05 - 11:20 R5

Fundamental Properties relevant for Applications

Assistant Prof. Serena Eley, University of Washington, Shoreline, WA, United States
Raphael Unterrainer, TU Wien, Vienna, Austria

2-MO-FP.1 **Fundamental limit of the self-field critical current: Density of Cooper pairs or density and strength of pinning centers?** 10:05 - 10:20
Evgeny F. Talantsev, M. N. Mikheev Institute of Physics of Metals, Ekaterinburg, Russian Federation

2-MO-FP.2 **Persistent photoresponse of oxide superconductors** 10:20 - 10:35
Javier E. Villegas, Laboratoire Albert Fert, CNRS, Thales, Université Paris-Saclay, Palaiseau, France

2-MO-FP.3 **Analyzing the H-T-θ phase diagram of two exemplary superconductors: Fe(Se,Te) and YBCO** 10:35 - 10:50
Gaia Grimaldi, CNR - National Research Council, SALERNO, Italy

2-MO-FP.4 **Quench by Vortex Lattice Instability in YBCO** 10:50 - 11:05
Antonio Leo, CNR-SPIN, Fisciano, Italy

2-MO-FP.5 **High-Throughput Screening of REBCO Superconductors via Combinatorial Inkjet Printing and Advanced Scanning Techniques** 11:05 - 11:20
Emma Ghiara, ICMAB-CSIC, Bellaterra, Catalunya, Spain

Oral
10:05 - 11:20 R6

REBCO Coated Conductors Manufacturing and Supply (1)

Stuart Wimbush, UK Industrial Fusion Solutions Ltd, Abingdon, United Kingdom
Carmine Senatore, University of Geneva, Geneva, Switzerland

2-MO-MS1.1 **R&D and Industrialization Progress of SuperMag Technology** 10:05 - 10:20
Guang Yu Jiang, Supermag Technology Co.,Ltd, Shanghai, China

2-MO-MS1.2 **Mass Production and Performance of SST REBCO Tape** 10:20 - 10:35
Jiamin Zhu, Shanghai Superconductor Technology Co., Ltd., China

2-MO-MS1.3 **Manufacturing and development of REBCO HTS wires at SuperPower** 10:35 - 10:50
Yifei Zhang, SuperPower Inc., United States

2-MO-MS1.4 **Progress in 2G-HTS Tape Manufacturing at HIgh Temperature Superconductors, Inc,** 10:50 - 11:05
Raymond Karam, High Temperature Superconductors, Inc., Santa Barbara, United States

2-MO-MS1.5 **Enhancing the self-field and in-field performance of MOD-Derived REBCO Superconducting Coated Conductors** 11:05 - 11:20
Chuanbing Cai, Shanghai University, Shanghai 200444, China

Oral
10:05 - 11:20 R7

Mechanical Properties

Gen Nishijima, National Institute for Materials Science, Japan
Jack Greenwood, École Polytechnique Fédérale de Lausanne (EPFL), Villigen PSI, Switzerland

2-MO-MP.1	**Critical current under axial, transverse and winding stress of various REBCO tapes** Arend Nijhuis, University of Twente, Enschede, Netherlands	10:05 - 10:20
2-MO-MP.2	**Integrated FEM Simulations and Experimental Testing for Electromechanical Characterization of Coated and Delaminated REBCO Tapes** Luca Benedetti, ICMAB, Barcelona, Spain	10:20 - 10:35
2-MO-MP.3	**Electrical properties of REBCO superconductors under static and cyclic mechanical loading** Tomas Kujovic, Institute of Electrical Engineering, Slovak Academy of Sciences, Bratislava, Slovakia	10:35 - 10:50
2-MO-MP.4	**Delamination mechanisms and current-carrying degradation characteristics in a high-temperature superconducting coil during a quench** Donghui Liu, Lanzhou University, Lanzhou, China	10:50 - 11:05
2-MO-MP.5	**Effects of edge geometry and interface characteristics on delamination strength of REBCO tapes under transverse tension using anvil method** Hyung-Seop Shin, Andong National University, Andong, Korea, Republic of	11:05 - 11:20

Social & Networking
11:20 - 12:00 West

Exhibition & Refreshments

Poster
12:00 - 13:15 East

Analysis and Test of Model Coils

João F. P. Fernandes, IDMEC, Instituto Superior Técnico, Universidade de Lisboa, Lisbon, Portugal

2-LP-MC.1	**The electromagnetic calculation and mechanical evaluation of CFETR CSMC under transient extreme operation** Aihua Xu, Changzhou Vocational Institute of mechatronic Technology, Changzhou, China	12:00 - 12:00
2-LP-MC.2	**Insulation testing of CFETR CS model coil under paschen condition** Ziming Wang, Hefei Institutes of Physical Science, Chinese Academy of Sciences, Hefei, Anhui, China	12:00 - 12:00
2-LP-MC.3	**Test Result of a 12T Meter-Scale Fusion ReBCO HTS Model Coil on 20K Cryogenic platform** Chenglian Liu, Hebei Key Laboratory of Compact Fusion, China	12:00 - 12:00

Poster
12:00 - 13:15 East

Josephson Junctions (1)

Khalil Harrabi, King Fahd University of Petroleum and Minerals, Saudi Arabia
Haizheng Dang, Shanghai Institute of Technical Physics, Chinese Academy of Sciences, Shanghai, China

2-EP-JJ1.1I **Signature of Non-reciprocal response in Josephson nano-Junctions with Pt-Ni-Pt barriers** 12:00 - 12:00
Debashree Nayak, National Institute of Science Education and Research, KHURDA, India

2-EP-JJ1.2I **Tuning Josephson junction characteristics using pulsed laser annealing for improved quantum circuit performance** 12:00 - 12:00
Shimeng Xi, University of Glasgow, GLASGOW, United Kingdom

2-EP-JJ1.3 **Characteristics of Nb-based Josephson junctions with TaN_x barrier** 12:00 - 12:00
Ivan P. Nevirkovets, Northwestern University, Evanston, United States

2-EP-JJ1.4 **Hilbert Spectroscopy Analysis for Frequency-Resolved THz Imaging Using HTS Josephson Junctions** 12:00 - 12:00
Julius F. Mumme, Technische Universität Braunschweig, Braunschweig, Germany

2-EP-JJ1.5 **A new high-Tc Josephson junction based on redox reactions** 12:00 - 12:00
Sarah Menouni, Laboratoire Albert Fert - CNRS - Thales - Université Paris Saclay, Palaiseau, France

2-EP-JJ1.6 **Fast random-number generation using chaos in intrinsic Josephson junction under irradiation with high frequency.** 12:00 - 12:00
Dai Oikawa, National Institute of Technology, Toyota, Japan

Poster
12:00 - 13:15 East

Cuprate Thin Films and Multilayers

Jonathan Lee, Florida State University, Tallahassee, United States
Francesca Incalza, Massachusetts Institute of Technology, CAMBRIDGE, United States

2-MP-FM.2 **Implementation of YBCO thin films on sapphire and silicon substrates** 12:00 - 12:00
Mengjie Li, Leibniz Institute for Solid State and Materials Research, Helmholtzstrasse 20, 01069 Dresden, Ge

2-MP-FM.3 **Enhancing in-field current-carrying capability through Ca-doping in BZO-doped YBCO multilayers** 12:00 - 12:00
Hannu Huhtinen, University of Turku, Finland

2-MP-FM.4 **Influence of Rare Earth variations and multilayer configurations on the superconducting properties of REBCO Films** 12:00 - 12:00
Moe Moe Aye, University of Turku, Turku, Finland

2-MP-FM.5 **Effect of Annealing on the Superconducting and Structural Properties of Aerosol-Deposited Bi-2223 Films** 12:00 - 12:00
Marina Mercedes Mendoza, Doshisha University, Japan

2-MP-FM.6 **Characterising Structural Heterogeneity in Superconducting Epitaxial Single Crystal $YBa_2C_3O_{7-\delta}$ Thin Films** 12:00 - 12:00
Kirk Adams, University of Oxford, Oxford, United Kingdom

2-MP-FM.7	**Double-sided $REBa_2Cu_3O_y$ thin film using TFA-MOD applied to microwave devices** Keita Sakuma, University of Yamanashi, Japan	12:00 - 12:00
2-MP-FM.8	**Decoupling of substrate and epitaxial growth of thin film $YBa_2Cu_3O_{7-x}$ by $Ca_2Nb_3O_{10}$ nanosheet templates** Jelle Robert Helena Ruiters, University of Twente, Enschede, Netherlands	12:00 - 12:00
2-MP-FM.9	**Enhancement of clustered atom-replaced pins (CARP) through surface structure suppression** Takeshi Araki, Toshiba Corporation, Kawasaki, Japan	12:00 - 12:00
2-MP-FM.10	**Optimizing Buffer Layer Architecture for High-Throughput Manufacturing of 2G-HTS Tapes** Marcel Mesko, Faraday Factory Japan LLC, Tokyo, Japan	12:00 - 12:00

Poster
12:00 - 13:15 East

Power Transmission Lines and Cables (1)

Andrea Musso, Ricerca sul Sistema Energetico, RSE S.p.A., Italy
Mattia Simonazzi, University of Bologna, Bologna, Italy

2-LP-PT1.1I	**Qualification testing of the 110 kV SuperLink to IEC 63075** Olfert Holte, NKT Technology R&D, Copenhagen, Denmark	12:00 - 12:00
2-LP-PT1.2I	**Performance of superconducting power transmission in long-term commercial railway operation over one year** Masaru Tomita, Railway Technical Research Institute, Japan	12:00 - 12:00
2-LP-PT1.3I	**A Status Update on HTS AC Cables for Low Voltage Data Center Applications** Erick Garcia, VEIR Inc., United States	12:00 - 12:00
2-LP-PT1.5	**Progress and Results of Type Test of 23 kV 60 MVA class Concentric HTS Cable** Jin Bae Na, LS Cable&System, Korea, Republic of	12:00 - 12:00
2-LP-PT1.6	**Improvement of the vacuum thermal insulation properties for Ultra-Lightweight Stacked Superconducting Cables** Kei Shiohara, SWCC, Japan	12:00 - 12:00
2-LP-PT1.7	**Lightning Impulse Breakdown Strength of Pure Liquid Nitrogen Insulated Superconducting Three-Phase AC High-Voltage Cable Systems** Daniel Zerbes, TH Köln - University of Applied Sciences, Cologne, Germany	12:00 - 12:00
2-LP-PT1.9	**Superconductivity used in data centers** Brian Marchionini, Energetics Incorporated, Washington DC, United States	12:00 - 12:00
2-LP-PT1.10	**SURE - SUperconducting Reliability & Efficiency project** Marco Statera, INFN Milano LASA, Milano, Italy	12:00 - 12:00
2-LP-PT1.11	**Sizing and economic assessment for auxiliary components of a MgB2-LH2 hybrid power cable**	12:00 - 12:00

Giovanni Mangiulli, Politecnico di Torino, Torino, Italy

2-LP-PT1.12	**Analysis of electric fault in a MV DC MgB2 transmission line cooled by liquid hydrogen** Marco Breschi, University of Bologna, Bologna, Italy	12:00 - 12:00
2-LP-PT1.13	**Optimization procedure to design a low-losses MgB_2 wire** Marco Breschi, University of Bologna, Bologna, Italy	12:00 - 12:00

Poster
12:00 - 13:15 East

Nanowire Detectors (2)

Khalil Harrabi, King Fahd University of Petroleum and Minerals, Saudi Arabia
Haizheng Dang, Shanghai Institute of Technical Physics, Chinese Academy of Sciences, Shanghai, China

2-EP-ND2.1I	**Superconducting Microstrip Single-Photon Detectors Using Epitaxial NbN(111) Thin Film on Sapphire Substrate** Hiroki Kutsuma, Tohoku University, Sendai, Japan	12:00 - 12:00
2-EP-ND2.2	**Transfer Printing of Superconducting Nanowire Single-Photon Detectors Supported on SiN_x Membranes** Max Patterson, University of Glasgow, Glasgow, United Kingdom	12:00 - 12:00
2-EP-ND2.3	**High speed and high fidelity 8-pixel SNSPD** Hao Li, Shanghai Institute of Microsystem and Information Technology, Chinese Academy of Sciences, China	12:00 - 12:00
2-EP-ND2.4	**Quantum Resolution-Optimized Cryogenic Observatory for Dark matter Incident at Low Energy (QROCODILE)** Noah Brugger, University of Zurich, Zürich, Switzerland	12:00 - 12:00
2-EP-ND2.5	**Sub-ns recovery times in short NbTiN SNSPDs** Marco Caputo, Single Quantum, Delft, Netherlands	12:00 - 12:00
2-EP-ND2.6	**Enhancing Detection Efficiency of SNSPDs by Suppressing the Proximity Effect in DBR Substrates** Hongxin Xu, Shanghai Institute of Microsystem and Information Technology, Chinese Academy of Sciences, C	12:00 - 12:00
2-EP-ND2.7	**Addressing Pyroelectric Damage on SNSPDs to Enhance Detector Yield on Lithium Niobate** Johanna Biendl, Paderborn University, Paderborn, Germany	12:00 - 12:00
2-EP-ND2.8	**Investigation on TiN Suspended Meander-based Optical MKIDs** Maria Appavou, Observatoire de Paris, Université PSL, Sorbonne Université, CNRS, 75014 Paris, France	12:00 - 12:00

Poster
12:00 - 13:15 East

Superconductivity in Transportation (2)

Ercan Ertekin, The University of Strathclyde, Glasgow, United Kingdom
Reda ABDOUH, Airbus UpNext, France

2-LP-TP2.1I	**Superconducting vs Hyperconducting Machines: Evaluating the Optimal Cryogenic Technology for Electric Aircraft Propulsion** Hongye Zhang, The University of Edinburgh, Edinburgh, United Kingdom	12:00 - 12:00

2-LP-TP2.2I	**Comparison of Stator Windings in an Air-Core Superconducting Motor** Wenkai Yan, University of Bath, BATH, United Kingdom	12:00 - 12:00
2-LP-TP2.3I	**Fabrication and Testing of a HTS Field Coil for a Homopolar Alternator** Laurenz Ziegler, Technical University Darmstadt / Institute of Electrical Energy Conversion, Germany	12:00 - 12:00
2-LP-TP2.4I	**Design of a MW-class superconducting motor for CRYOPROP demonstrator** Rémi Dorget, Airbus UpNext, Toulouse, France	12:00 - 12:00
2-LP-TP2.5	**Challenges in modelling and simulation for the Cryoprop superconducting aircraft propulsion demonstrator** Frederick Berg, Airbus Defence and Space GmbH, Taufkirchen, Germany	12:00 - 12:00
2-LP-TP2.6	**Design and optimization of a superconducting synchronous reluctance motor** Anass Lemansour, University of Lorraine, Nancy, France	12:00 - 12:00
2-LP-TP2.7	**Additive manufacturing of stator winding for cryogenically cooled axial flux motor** Xiaoze Pei, University of Bath, United Kingdom	12:00 - 12:00
2-LP-TP2.9	**Design and Assessment of a Flexible High-Temperature Superconducting Coil for UAV-Based Airborne Electromagnetic Emission** Qingyuan Gou, Shanghai Jiao Tong University, Shanghai, China	12:00 - 12:00
2-LP-TP2.10	**J-A-phi formulation applied to simulations of magnetic bearings with superconducting 2G tapes** Bárbara Santos, Rio de Janeiro State University, Rio de Janeiro, Brazil	12:00 - 12:00
2-LP-TP2.11	**Experimental investigation of round former High Temperature Superconducting cables in aircraft vibrational environment** Pedro Barusco, Airbus UpNext SAS, Toulouse, France	12:00 - 12:00
2-LP-TP2.12	**Cryogenic dc/dc converter for superconducting propulsion applications** Weijia Yuan, University of Strathclyde, United Kingdom	12:00 - 12:00
2-LP-TP2.13	**High temperature superconducting applications in Electric propulsion** Yifan Du, Institute of Plasma Physics, Hefei Institutes of Physical Science, Chinese Academy of Sciences, Chir	12:00 - 12:00

Poster
12:00 - 13:15 East

SQUIDs, SQIFs and nanoSQUIDs

Khalil Harrabi, King Fahd University of Petroleum and Minerals, Saudi Arabia
Haizheng Dang, Shanghai Institute of Technical Physics, Chinese Academy of Sciences, Shanghai, China

2-EP-SQ.1I	**Flux Trapping and Ground Plane Performance** Alexander Jarjour, Northrop Grumman Systems Corporation, United States	12:00 - 12:00

2-EP-SQ.2	**High Tc DC SQUID and Its Applications in NDE** Xiangyan Kong, Ningbo University, Ningbo, China	12:00 - 12:00
2-EP-SQ.3	**Superconducting Echo State Network for High-Speed SQUID Magnetometer Readout** Beyza Zeynep Ucpinar, University of Southern California, Los Angeles, United States	12:00 - 12:00
2-EP-SQ.4	**Development of a SQUID-Based Gravimeter for High-Sensitivity Gravity Measurements** Gracia KIM, Korea Research Institute of Standard and Science, Korea, Republic of	12:00 - 12:00
2-EP-SQ.5	**Design and Modelling of Superconducting Quantum Microwave Amplifiers for Fundamental Physics Experiments** Tian Bai, University College London, London, United Kingdom	12:00 - 12:00
2-EP-SQ.6	**Application Examples of Transient Electromagnetic Receiving System Based on SQUID** Yifeng Pei, Shanghai Institute of Microsystem and Information Technology, Chinese Academy of Sciencesnsti Microsystem and Information Technology, Chinese Academy of Sciences, China	12:00 - 12:00
2-EP-SQ.7	**Developing SQUID Based Optomechanical Devices for Quantum Local Area Networks (QLAN)** Ling Hao, National Physical Laboratory, Teddington, United Kingdom	12:00 - 12:00
2-EP-SQ.8	**Sub-μΦ₀/√Hz SQUID Circuit Design with Flux Feedback Linearization: Enabling High-Resolution Magnetic Anomaly Detection for Mineral Exploration** Jiawei Luo, Shanghai Institute of Microsystem and Information Technology (SIMIT)□Chinese Academy of Scier (CAS), China	12:00 - 12:00

Poster
12:00 - 13:15 East

Joints, Contacts, Insulation (1)

Greg Brittles, Tokamak Energy Ltd, Oxford, United Kingdom
Yuji Tsuchiya, Tohoku University, Sendai, Japan

2-MP-JC1.1I	**Filled PVB coating for tailored contact resistance in partial insulation of HTS coils** Matteo Crescenti, PSI, Villigen PSI, Switzerland	12:00 - 12:00
2-MP-JC1.2I	**Thermal and soldering effects on REBCO HTS tapes: optimizing joint reliability for high-field magnets** Himanshu Himanshu, LNCMI, Grenoble, France	12:00 - 12:00
2-MP-JC1.3	**Combined Cold and Hot Uniaxial Pressing – An innovative and reproducible technique for manufacturing superconducting REACTED MgB2 joints for persistent mode operation**	12:00 - 12:00
2-MP-JC1.5	**Direct Joining Method of Y-based High-Temperature Superconducting Tapes for Application to High-Current Conductors** Noriko Chikumoto, The University of Osaka, Japan	12:00 - 12:00
2-MP-JC1.6	**Development of mechanically robust joints between REBCO coated conductors** Nooshin Goodarzi, King's College London, London, United Kingdom	12:00 - 12:00

2-MP-JC1.7	**CABLEGNOSIS project: ageing studies on insulation materials and superconducting wires for cable applications** Riccardo Tebano, ASG Superconductors, Genova, Italy	12:00 - 12:00
2-MP-JC1.8	**Mechanical reinforcement of REBCO soldered joints for improvement of joint strength** Roshan Parajuli, university of Strathclyde, Glasgow, United Kingdom	12:00 - 12:00
2-MP-JC1.9	**The excellent improvement on REBCO tape joints for superconducting applications** Canan Aksoy, Karadeniz Technical University, Trabzon, Turkey	12:00 - 12:00
2-MP-JC1.10	**Evaluation of Resistance and Critical Current of REBCO Superconducting Joints Fabricated by Slurry Process** Yasuaki Takeda, National Institute for Materials Science, Tsukuba, Japan	12:00 - 12:00

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MgB2 Wires and Tapes

Akiyasu Yamamoto, Tokyo University of Agriculture and Technology, Japan
Tetiana Prikhna, V. Bakul Institute for Superhard Materials of the National Academy of Sciences of Ukraine, Kyiv, Ukraine

2-MP-MG.1I	**The ultrafine MgB_2 superconducting wires** Akihiro Kikuchi, National Institute for Materials Science, Tsukuba, Japan	12:00 - 12:00
2-MP-MG.2I	**Large Scale Production of Elemental Nano Boron Powder** Selcuk Acar, Pavezyum Chemicals, Istanbul, Turkey	12:00 - 12:00
2-MP-MG.3	**A New Type of High-performance and Low-cost MgB_2 Superconductor** Dan Xi, Northwest Institute for Nonferrous Metal Research, Xi'an, China	12:00 - 12:00
2-MP-MG.4	**Highly promising new attempt for obtaining composited coaxial iron-based and MgB_2 wires with high Jc & Bc by cold hydro-extrusion with followed final high gas pressure HIP** Andrzej Jacek Morawski, Institute of High Pressure Physics Polish Academy of Sciences, Warsaw/ Warszawa,	12:00 - 12:00
2-MP-MG.6	**Magneto-Optical Imaging of local magnetic field in multifilamentary wires of MgB_2** Matteo Cialone, University of Genova, Genova, Italy	12:00 - 12:00
2-MP-MG.7	**Synthesis of MgB_2 films on Hastelloy-C276 tape with $Al_2O_3/Y_2O_3/MgO/LaMnO_3$ or single Al_2O_3 buffer layers followed by Nb protective layer** Ruslan Batulin, Kazan, Russian Federation	12:00 - 12:00
2-MP-MG.8	**Research progress of kilometer level MgB_2 supercongducting wires in NIN** Pingxiang Zhang, Northwest Institute for Non-ferrous Metal Research, China	12:00 - 12:00
2-MP-MG.9	**Development of 2 km-class carbon-doped MgB_2 wire with uniform critical current property** Dong Gun Lee, Sam Dong Co., Ltd., Daejeon, Korea, Republic of	12:00 - 12:00

2-MP-MG.10	**The preparation of ten kilometers level MgB2 wires with high current performance in WST** Mingjiang Wang, Western Superconducting Technologies (WST) Co. Ltd., China	12:00 - 12:00
2-MP-MG.11	**Superconducting Properties of Annealed MgB_2 Superconductor** Kyu Jeong Song, Jeonbuk National University, Jeonju, Korea, Republic of	12:00 - 12:00

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Fe-based Materials (1)

Yanwei Ma, Institute of Electrical Engineering, Chinese Academy of Sciences, Beijing, China
Chiara Tarantini, Applied Superconductivity Center - National High Magnetic Field Laboratory, Tallahassee, United States

2-MP-FE1.1I	**Crystal growth kinetics and microstructural evolution of iron-based superconductors in outer space conditions** Minghui Tang, Institute of Electrical Engineering, Chinese Academy of Sciences, China	12:00 - 12:00
2-MP-FE1.4	**Analysis of TAFF and Vortex phase transition in Fe (Te, Se) superconducting thin films deposited on YSZ** Ghanshyam Varma, Indian Institute of Technology Roorkee, Roorkee, India	12:00 - 12:00
2-MP-FE1.5	**Investigating Irradiation Induced Defects in Iron Based Superconductors using HRTEM and EXAFS** Akhil Gupta, Oxford University, Oxford, United Kingdom	12:00 - 12:00
2-MP-FE1.6	**Growth of polycrystalline $SmFe_{1-x}Co_xAsO$ films by metal-organic chemical vapor deposition and ex-situ diffusion process.** Karen Aguilar-Mendoza, CINVESTAV, CDMX, Mexico	12:00 - 12:00
2-MP-FE1.7	**Epitaxial Fe(Se,Te) film deposited on CaF_2 single crystal substrate: defect generation and film stability** Alessandro Rufoloni, ENEA, Frascati, Italy	12:00 - 12:00
2-MP-FE1.8	**Electrodeposition of Iron Selenide Thick Films for RF Cavities for Axion Search** Laura Piperno, ENEA, Italian National Agency for New Technologies, Energy and Sustainable Economic Devel Frascati, Rome, Italy	12:00 - 12:00
2-MP-FE1.10	**Enhanced critical temperatures in iron-based superconductors observed by point contacts** Oksana Kvitnitskaya, Institute for Solid State Research, IFW Dresden, Dresden, Germany	12:00 - 12:00
2-MP-FE1.11	**Towards freestanding iron based superconducting films for advanced studies** Zhuoyue Jia, Leibniz Institute for Solid State and Materials Research, Dresden, Germany	12:00 - 12:00
2-MP-FE1.12	**Critical current properties of FST on simple Coated Conductor architecture.** Achille Angrisani Armenio, ENEA, Italian National Agency for New Technologies, Energy and Sustainable Ecor Development, Frascati, Rome, Italy	12:00 - 12:00
2-MP-FE1.13	**Superconducting properties of Co-doped Ba122 grown on NiW RABiTS tapes**	12:00 - 12:00

Thomas Vetter, Karlsruhe Institute of Technology, Eggenstein-Leopoldshafen, Germany

2-MP-FE1.14	**Critical Role of Interface Engineering in Mitigating Thickness Dependence of Superconducting Properties in $FeSe_{0.5}Te_{0.5}$ Coated Conductors** Zhongtang Xu, Institute of Electrical Engineering, Chinese Academy of Sciences, China	12:00 - 12:00
2-MP-FE1.15	**The Rhombic-to-Square Transition in the Bragg Vortex Glass Phase analysed on an overdoped $BaFe_2(As_{1-x}P_x)_2$ crystal by multi-harmonic AC magnetic susceptibility** Massimiliano Polichetti, University of Salerno, Fisciano (SALERNO), Italy	12:00 - 12:00

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Critical Current Characterization

Nitin Srivastava, Indian Institute of Technology Delhi, New Delhi, India
Nicolas Rotheudt, University of Liège, Liège, Belgium

2-MP-CC.1I	**Superconducting critical current measurements in pulsed magnetic field up to 60 T** Maxime Leroux, LNCMI, CNRS, Toulouse, France	12:00 - 12:00
2-MP-CC.2	**Solution deposition planarization for surface engineering of flexible YSZ substrates in HTS Coated Conductors** Mircea Nasui, Technical University of Cluj-Napoca, Cluj-Napoca, Romania	12:00 - 12:00
2-MP-CC.3	**Preparation and Performance Study of Large Area $REBa_2Cu_3O_{7-\delta}$ Superconducting coated conductors Using MOD Method** Chi Zhang, Shanghai University, Shanghai, China	12:00 - 12:00
2-MP-CC.4	**Superconducting Properties of Annealed HTS GdBCO Coated Conductors** Kyu Jeong Song, Jeonbuk National University, Jeonju, Korea, Republic of	12:00 - 12:00
2-MP-CC.5	**Correlating Microstructure and Properties of High Current Density REBCO Superconducting Films and Coated Conductors Grown by Ultra-fast Transient Liquid Assisted Growth (TLAG)** Mahel Voulhoux, Institute of Materials Science of Barcelona (ICMAB-CSIC), Bellaterra, Spain	12:00 - 12:00
2-MP-CC.6	**Enhanced the Critical Current in nanocrystal-added REBCO-coated conductors via He-Ion Irradiation** Ning Zhang, Shanghai University, Shanghai 200444, China	12:00 - 12:00
2-MP-CC.7	**In-field Critical Current of REBCO Tapes with Micro-bridges over a Wide Temperature Range** qi yuan, Huazhong University of Science and Technology, wuhan, China	12:00 - 12:00
2-MP-CC.8	**Application of a Cylindrical Halbach Array for High-Temperature Superconductor Tape Characterization** Krzysztof Habelok, Silesian University of Technology, Gliwice, Poland	12:00 - 12:00
2-MP-CC.9	**Behavior of HTS tape during short-circuit current; waveforms of HTS tape current and voltage, resistance and critical current estimation**	12:00 - 12:00

Sataro Yamaguchi, Chubu University, Kasugai, Aichi, Japan

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Levitation (1)

James Storey, Victoria University of Wellington, Wellington, New Zealand
Tim Hofmann, Technical University of Munich, Munich, Germany

2-LP-LE1.1I	**Dynamic analysis and optimization of a superconducting magnetic bearing for high-speed ring spinning processes** Mostafa Baloochi, Leibniz IFW Dresden, Dresden, Germany	12:00 - 12:00
2-LP-LE1.2I	**Design and evaluation of a prototype of cryocooler-free High-Tc superconducting Magnet for Hypertube** Chang-young Lee, Korea Railroad Research Institute, Korea, Republic of	12:00 - 12:00
2-LP-LE1.3	**Research on Control Strategies for Superconducting EDS Train Aimed at Vibration Suppression of Superconducting Magnets** Piji Feng, Southwest Jiaotong University, Chengdu, China	12:00 - 12:00
2-LP-LE1.4	**Fatigue Durability Assessment of Onboard Superconducting Magnets of EDS train under Traveling-Wave Magnetic Fields** Qing Shao, CRRC Changchun Railway Vehicles Co., Ltd., Changchun, China	12:00 - 12:00
2-LP-LE1.6	**The Studies of Vibration Performance for Superconducting Electrodynamic Suspension Train with Magneto-Electric-Force Coupled Model** zhaoying Yan, Guangdong Ocean University,, Zhanjiang, China	12:00 - 12:00
2-LP-LE1.7	**Finite element analysis of electromagnetic field of superconductive-assisted machining (SUAM) using superconducting wires and Halbach array permanent magnets** Edmund Soji Otabe, Kyushu Institute of Technology, Iizuka, Fukuoka 820-8502, Japan	12:00 - 12:00
2-LP-LE1.8	**Comparison of the vibration reduction effect of primary electromagnetic damping on EDS vehicles under different control laws and parameters** Huan Huang, Tongji Univeisity, Shanghai, China	12:00 - 12:00
2-LP-LE1.9	**Study of wind-and-flip-coils for fully superconducting magnetic bearings** Tilo Espenhahn, Leibniz Institute for Solid State and Materials Research Dresden, Germany	12:00 - 12:00
2-LP-LE1.10	**Improvement of Vibration Suppression and Capturing Performance Using Electromagnetic Shunt Damper in Superconducting Magnetic Docking System** Shinji Eto, Keio University, Yokohama, Japan	12:00 - 12:00
2-LP-LE1.11	**Validation of a Data-Driven Approach for Predicting Auto-parametric Resonance in a Superconducting Magnetic Levitation System** Taiga Miyahara, Keio University, Yokohama, Japan	12:00 - 12:00
2-LP-LE1.12	**Study on Levitation Force Characteristics of Superconducting**	12:00 - 12:00

Magnetic Levitation Bearings: Experimental and Simulation Analysis
Guomin Zhang, The Institute of Electrical Engineering, Chinese Academy of Sciences, China

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Superconducting RF

Sergio Calatroni, CERN, Switzerland
Pablo Vidal García, Roma Tre University, Rome, Italy

2-LP-RF.1	**Co-sputtering of Nb_3Sn thin films for SRF cavity application** Amir Farhood, TU Darmstadt, Institute of Materials Science, Darmstadt, Germany	12:00 - 12:00
2-LP-RF.2	**Improvement of RF Magnetic Field Strength Generated RF Coil Using HTS for NMR** Takanori Fujita, University of Yamanashi, Japan	12:00 - 12:00
2-LP-RF.4	**Soldering and peeling commercial REBCO tapes for microwave resonant cavity** Angelo Vannozzi, ENEA, Frascati, Italy	12:00 - 12:00

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Electronic Devices and Circuits

Khalil Harrabi, King Fahd University of Petroleum and Minerals, Saudi Arabia
Haizheng Dang, Shanghai Institute of Technical Physics, Chinese Academy of Sciences, Shanghai, China

2-EP-DC.1I	**Numerical Modelling and Analysis of Parasitic Inductance in Shunted Josephson Junctions** Kyle Jackman, Stellenbosch University, Banhoek Road, Stellenbosch 7600, South Africa	12:00 - 12:00
2-EP-DC.2I	**A Scalable Novel Finite State Machine for Tsetlin Machine Using Single Flux Quantum Circuits** Zeyu Han, Yokohama National University, Yokohama, Japan	12:00 - 12:00
2-EP-DC.3I	**Characterization of lens-coupled kinetic inductance bolometers** Juho Luomahaara, VTT Technical Research Centre of Finland Ltd, Finland	12:00 - 12:00
2-EP-DC.4I	**MgB_2 Thermal Kinetic Inductance Detectors** Tahereh Jabbari, NASA Jet Propulsion Laboratory (JPL), United States	12:00 - 12:00
2-EP-DC.5	**System-Level Comparison of Superconductor-Semiconductor Interface Circuits** Keith Krause, Auburn University, Auburn, United States	12:00 - 12:00
2-EP-DC.6	**Improvement of Operating Margins of Half-Flux-Quantum Logic Circuits Considering the Kinetic Inductance of π-Junctions.** Soma Deguchi, Nagoya University, Japan	12:00 - 12:00
2-EP-DC.7	**Design Automation of Large-Scale RQL Superconducting Circuits** Michael Vesely Jr, Northrop Grumman Corporation, United States	12:00 - 12:00
2-EP-DC.8	**AC-Powered Fast Phase Logic**	12:00 - 12:00

Changxu Song, UNIVERSITY OF SOUTHERN CALIFORNIA, Los Angeles, United States

2-EP-DC.9	**Lightweight Error-Correction Code Encoder for SFQ-to-CMOS Interface Circuits** Selçuk Köse, University of Rochester, Rochester, NY, United States	12:00 - 12:00
2-EP-DC.10	**The time-dependent Ginzburg-Landau simulation of pulse-current responses of a superconducting nanowire cryotron** Naoki Yasukawa, Tokyo University of Science, Shinjuku, Japan	12:00 - 12:00
2-EP-DC.11	**Silicon bump flip-chip interconnections: A novel approach for superconducting multi-chip module** Gaowei Xu, Shanghai Institute of Microsystem and Information Technology, Chinese Academy of Sciences, Cl	12:00 - 12:00
2-EP-DC.12I	**Superconductive Electronics for Quantum-based Signal Synthesis** Sam Benz, NIST, Boulder, United States	12:00 - 12:00

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Accelerator Magnets (2)

Jan van Steenlandt, University of Twente, Enschede, Netherlands
Enric Pardo, Institute of Electrical Engineering SAS, Bratislava, Slovakia

2-LP-AM2.1I	**Evaluation of the temperature margin of a conduction-cooled superconducting magnet package for the ILC Main Linac** Óscar Durán Lucas, CIEMAT, Spain	12:00 - 12:00
2-LP-AM2.2I	**Modeling and experiment result of a helical, RE-Ba-Cu-O tape undulator** Zhuangwei Chen, Shanghai Institute of Applied Physics, Chinese Academy of Sciences, Shanghai, China	12:00 - 12:00
2-LP-AM2.3	**Transient Analyses for the ASTERICS 28 GHz ECR Ion Source Superconducting Magnet** Tanguy Cadoux, CEA-Saclay, IRFU, Université Paris-Saclay,, Gif-sur-Yvette, France	12:00 - 12:00
2-LP-AM2.4	**Performance testing of the mirror structure for the high-current NbTi sextupole coil of a superconducting FECR ion source** Li Zhu, Institute of Modern Physics of Chinese Academy of Science, China	12:00 - 12:00
2-LP-AM2.5	**Superconducting Undulator Coils Mockup: Design and Quench Protection System** Ajit Nandawadekar, European XFEL GmbH, Holzkoppel 4, 22869, Schenefeld, Germany	12:00 - 12:00
2-LP-AM2.6	**Development of Fast-ramping Superconducting Solenoid prototypes for CiADS** Ping Yuan, Institute of Modern Physics of Chinese Academy of Sciences, Lanzhou, China	12:00 - 12:00
2-LP-AM2.7	**Testing and Performance Evaluation of Fast-Ramping Superconducting Dipole Magnets with Cosθ Configration**	12:00 - 12:00

Jing Yang, Institute of Modern Physics, China

2-LP-AM2.8	**Design and Test of a Fast-Ramping Superconducting Magnet for Heavy-Ion Synchrotron** Canjie Xin, Institute of Modern Physics , Chinese Academy of Sciences, Lanzhou, China	12:00 - 12:00
2-LP-AM2.9	**Mechanical design of the fast-cycling superconducting dipole magnet** Tongjun Yang, Institute of Modern Physics of Chinese Academy of Sciences, Lanzhou, China	12:00 - 12:00
2-LP-AM2.11	**Numerical Study of a High-Temperature Superconducting Undulator Utilizing an Improved REBCO Bulk Geometry** Yimin Tong, Shanghai Institute of Applied Physics, CAS, Shanghai, China	12:00 - 12:00
2-LP-AM2.12	**Numerical simulation of supercritical helium flow-cooled fast-pulse superconducting magnets** Ming daotong, Institute of Modern Physics, Chinese Academy of Sciences, China	12:00 - 12:00
2-LP-AM2.13	**Development status of magnetic field measurement systems for a REBCO Bulk Superconducting Undulator at SXFEL** Yimin Tong, Shanghai Institute of Applied Physics, CAS, Shanghai, China	12:00 - 12:00
2-LP-AM2.14	**Operation of Superconducting Quadrupoles in a Radioactive Environment** Kensuke Kusaka, RIKEN Nishina Center for Accelerator-Based Science, Wako, Japan	12:00 - 12:00

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Quench in Fusion Magnets

Andrea Zappatore, Politecnico di Torino, Italy
Guillaume Dilasser, CEA, Université Paris-Saclay, Gif-sur-Yvette, France

2-LP-QF.1I	**Thermal – hydraulic and quench analysis of conductors for the EU-DEMO LAR coils** Monika Lewandowska, The Henryk Niewodniczanski Institute of Nuclear Physics Polish Academy of Sciences, Poland	12:00 - 12:00
2-LP-QF.2I	**Quench Simulation of STEP TF Coil Cage System** Jiabin Yang, UK Atomic Energy Authority, United Kingdom	12:00 - 12:00
2-LP-QF.3	**Improvement of the quench detection system for the PF coils of JT-60SA** Shogo Sonoda, National Institutes for Quantum Science and Technology, Ibaraki, Japan	12:00 - 12:00
2-LP-QF.4	**Quench Protection in HTS Insulated Conductors: Design Optimization and Fast Detection Strategies** Hajar Zgour, CEA-Paris Saclay, Gif-sur-Yvette, France	12:00 - 12:00
2-LP-QF.5	**Ultra-fast hybrid circuit breaker to protect 40kA high-energy HTS magnet for fusion** Pierre GERARD, CEA/IRFU, France	12:00 - 12:00
2-LP-QF.6	**Measurements of Quench Propagation Velocity in HTS Cables for Fusion Applications using Optical Fiber Sensors**	12:00 - 12:00

Mattia De Stasio, Politecnico di Torino, Torino, Italy

2-LP-QF.7	**Research on key technologies of quench detection for CFETR TF prototype coil** Teng Wang, Institute of Plasma Physics, Chinese Academy of Sciences, Hefei, China	12:00 - 12:00
2-LP-QF.8	**Proposal of Low-Voltage Fusion Magnet with a Semi-active Quench Protection Technique** Shin Hasegawa, Gauss Fusion GmbH, Germany	12:00 - 12:00
2-LP-QF.9	**Numerical investigation of electromagnetic forces on tokamak fusion reactor system including PF magnetic field during quench event** Riki Sakakibara, Hokkaido University, Sapporo, Japan	12:00 - 12:00
2-LP-QF.10	**Stability evaluation for the EAST Superconducting Magnet System based on different operation modes** Yudong Lu, Institute of Plasma Physics, Hefei Institutes of Physical Science, Chinese Academy of Sciences, Ch	12:00 - 12:00
2-LP-QF.11	**Electromagnetic and Structural Analysis of the Central Solenoid for the Divertor Tokamak Test Facility** Francesco Giorgetti, ENEA, Frascati, Italy	12:00 - 12:00

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AC Loss in HTS

Enric Pardo, Institute of Electrical Engineering SAS, Bratislava, Slovakia
Min Zhang, University of Strathclyde, United Kingdom

2-LP-AC.2	**Test and Study of AC Loss of a High-Temperature Superconducting Shunt Reactor** Shuhao Peng, Shanghai Jiaotong University, China	12:00 - 12:00
2-LP-AC.3	**Numerical electromagnetic field analyses of dynamic losses and dynamic resistances in multilayered Spiral Copper-plated Striated Coated-conductor cables** Yusuke Sogabe, Kyoto University, Kyoto, Japan	12:00 - 12:00
2-LP-AC.4	**Theoretical modeling of AC loss in REBCO coated conductor during ramping operation** Takanobu Mato, Hokkaido University, Japan	12:00 - 12:00
2-LP-AC.5	**Improved thermal stability of YBCO pancake coils due to contact with highly thermally conductive sheets** Yuki Shikata, Sophia University, Japan	12:00 - 12:00
2-LP-AC.6	**AC Loss Study in REBCO Double Pancake Coils with and without Auxiliary Coils Carrying AC Current with DC Offset** Yue Wu, Karlsruhe Institute of Technology, Karlsruhe, Germany	12:00 - 12:00
2-LP-AC.7	**Development of the simultaneous multi-scale homogeneous model for ac loss calculation of large-scale REBCO magnets** Lei Wang, Anhui University of Science and Technology, Hefei, China	12:00 - 12:00

2-LP-AC.8	**AC Loss Property of Two-dimensional Array of REBCO Superconducting Tapes** Hiromasa Sasa, Kyushu University, Japan	12:00 - 12:00
2-LP-AC.9	**Numerical simulation on threshold field and total loss in vertical stacks of REBCO tapes carrying DC transport currents under AC magnetic fields** Shun Miura, Kyushu University, Fukuoka, Japan	12:00 - 12:00
2-LP-AC.10	**AC Losses Study in a 2G HTS Coil with Ferrite Core** Guilherme Sotelo, Fluminense Federal University, Niterói, Brazil	12:00 - 12:00
2-LP-AC.11	**AC loss measurement in HTS conductors and coils based on thermal method** Yang Xinsheng, Southwest Jiaotong University, Chengdu, China	12:00 - 12:00
2-LP-AC.12	**Numerical Analysis and Measurement of Hysteresis Losses in a HTS rotating coil** Hang Xu, Institute of High Energy Physics, Beijing, China	12:00 - 12:00
2-LP-AC.13	**Effect of central core and winding angle of tapes on the transport AC loss of CORC cable** Yuxuan Chen, Shanghai Jiao Tong University, China	12:00 - 12:00
2-LP-AC.14	**Investigation on the impact of single and double pancake HTS coil topologies on AC losses for superconducting machine application** Arthur Jamois, University of Lorraine, F-54000 Nancy, France	12:00 - 12:00
2-LP-AC.15	**PEEC modelling of ripple-induced AC-losses in HTS DC power cables for aviation** roel Metsch, University of Twente, ENSCHEDE, Netherlands	12:00 - 12:00
2-LP-AC.16	**Experimental study on AC loss reduction in a REBCO coil assembly by applying superconducting shielding coils** Yueming Sun, Victoria University of Wellington, Wellington, New Zealand	12:00 - 12:00

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Cuprates and Related Compounds

Alessandro Leveratto, CNR-SPIN, Genova, Italy
Aichi Yamashita, Tokyo Metropolitan University, Tokyo, Japan

2-MP-CR.1I	**Ink design for high performance CSD-TLAG REBCO superconductors using different rare earths** Cornelia Pop, Institut de Ciències de Materials de Barcelona, ICMAB-CSIC, Campus UAB, Bellaterra, Barcelona	12:00 - 12:00
2-MP-CR.4	**Gamma radiation hardness of chemically deposited YBCO film and commercial HTS at fusion relevant irradiation conditions** Valentina Pinto, ENEA, Frascati (Rome), Italy	12:00 - 12:00
2-MP-CR.5	**Supersaturation and superconductivity of rare-earth based cuprate superconducting films grown by chemical solution deposition** Jiangtao Shi, Xi'an technological university, Shaanxi, China	12:00 - 12:00

2-MP-CR.6	**Search for improved synthesis and enhanced properties of the Mo-substituted YBaCuO** BOGDAN DABROWSKI, Institute of Physics, Polish Academy of Sciences, Warsaw, Poland	12:00 - 12:00
2-MP-CR.7	**Microstructural analysis of transmission electron microscope images of YBCO superconducting thin films using machine learning image analysis** Ataru Ichinose, Central Research Institute of Electric Power Industry, Yokosuka, Japan	12:00 - 12:00
2-MP-CR.9	**Kohn-Luttinger based-mechanism for superconductivity applied to cuprates** Patrick Navez, Université de Montpellier, Montpellier, France	12:00 - 12:00

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Superconducting Quantum Bits (1)

Khalil Harrabi, King Fahd University of Petroleum and Minerals, Saudi Arabia
Haizheng Dang, Shanghai Institute of Technical Physics, Chinese Academy of Sciences, Shanghai, China

2-EP-QB1.2I	**Voltage Tuning of a Superconducting Resonator via the Aharonov-Casher Effect** Asem Elarabi, National Physical Laboratory, United Kingdom	12:00 - 12:00
2-EP-QB1.3	**Loss evaluation of niobium nitride coplanar waveguide resonator on silicon substrate for qubit readout** Kohki Watanabe, Tohoku University, Sendai, Japan	12:00 - 12:00
2-EP-QB1.4	***Mechanically robust, dielectric free, superconducting Through-Silicon Vias for QPU applications*** Harshad Mishra, VTT Technical Research Center of Finland, Espoo, Finland	12:00 - 12:00
2-EP-QB1.5	**Developing superconducting qubit systems from 10 GHz to 50 GHz** Adam Sirois, NIST, United States	12:00 - 12:00
2-EP-QB1.6	**Cryogenic Tunable Bandpass Filter for Multiplexed Superconducting Qubit Control** Siqi Li, Shanghai Institute of Microsystem and Information Technology, Chinese Academy of Sciences (CAS), S China	12:00 - 12:00
2-EP-QB1.7	**Dynamics of an entangled state in TLSs coupled via a transmission line** Fabio Borrelli, Università degli Studi di Napoli Federico II, Naples, Italy	12:00 - 12:00

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Microwave Devices and Novel Electronics (2)

Khalil Harrabi, King Fahd University of Petroleum and Minerals, Saudi Arabia
Haizheng Dang, Shanghai Institute of Technical Physics, Chinese Academy of Sciences, Shanghai, China

2-EP-NE2.2	**Numerical Optimization and Implementation of Josephson Plasma Emitters for Enhanced Terahertz Radiation** Ryota Kobayashi, Graduate School of Engineering, Kyoto University, Kyoto, Japan	12:00 - 12:00

2-EP-NE2.3	**Characterisation of high-Q superconducting tantalum microwave coplanar waveguide resonators for quantum circuit technology realisation.** Shima Poorgholam Khanjari, University of Glasgow, Glasgow, United Kingdom	12:00 - 12:00
2-EP-NE2.4	**Quasiparticle Energy Distributions on NbN Superconducting Coplanar Waveguide Resonators** Paniz Foshat, University of Glasgow, Glasgow, United Kingdom	12:00 - 12:00
2-EP-NE2.5	**Normal Metal Coulomb Blockade Thermometers: Wafer-scale Fabrication and Cryogenic Wafer Probing** Lassi Lehtisyrjä, VTT Technical Research Centre of Finland Ltd, Espoo, Finland	12:00 - 12:00
2-EP-NE2.6	**A self-training superconducting neuromorphic architecture** Michael Schneider, National Institute of Standards and Technology, Boulder, United States	12:00 - 12:00
2-EP-NE2.7	**Icy-Hot: Decoupled Compute Paradigm towards a General-Purpose Superconducting CPU Design** Tara Renduchintala, University of Southern California, Los Angeles, United States	12:00 - 12:00

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Bulk Superconductors (1)

Jan Plechacek, CAN Superconductors, Czech Republic
John Durrell, University of Cambridge, United Kingdom

2-MP-BS1.1I	**Enhancing the thermal stability of MgB_2 cryomagnets to overcome magnetic flux jumps** Yiteng Xing, Normandie Univ, ENSICAEN, UNICAEN, CNRS, CRISMAT, Caen, France	12:00 - 12:00
2-MP-BS1.3	**Current loop contributions to trapped fields in practical bulk superconducting magnets** Mark Ainslie, King's College London, London, United Kingdom	12:00 - 12:00
2-MP-BS1.4	**Effects of a buffer pellet on the fabrication of Ag-added YBCO superconductor bulks by single direction melt growth method** Hiroto Hakoishi, IWATE UNIVERSITY, Morioka, Japan	12:00 - 12:00
2-MP-BS1.5	**3D Finite Element Modeling of Electromagnetic, Thermal, and Mechanical Behavior of HTS Bulks With Artificial Holes During PFM** Santiago Guijosa Guadarrama, Université de Lorraine, Nancy, France	12:00 - 12:00
2-MP-BS1.6	**Perform Density as a Key to Low-Porosity GdBCO/Ag Bulks Prepared by the Single-Direction Melt Growth** Michal Lojka, CAN SUPERCONDUCTORS, s.r.o., Kamenice, Czech Republic	12:00 - 12:00
2-MP-BS1.7	**Misfit angles and superconducting properties of REBCO melt-textured bulks grown on multiple seed plates by the SDMG method** Jun Endo, Aoyama Gakuin University, Sagamihara, Japan	12:00 - 12:00
2-MP-BS1.8	**Focus on pinning properties of RE-Ba-Cu-O bulk superconductors for trapped field magnets** Difan Zhou, Shanghai University, Shanghai, China	12:00 - 12:00

2-MP-BS1.9	**φ-H-ϕ and φ-J-A-ϕ mixed formulations for the fast 3D finite element simulation of porosity in REBCO bulks** V. R. Jara-González, Universidad Nacional Autónoma de México, Mexico City, Mexico	12:00 - 12:00
2-MP-BS1.10	**Microstructure and properties of single-crystal Ag_2O-doped EuBCO superconductors prepared with different Eu211 phase ratios** Veronika Kuchárová, Slovak Academy of Sciences, Košice, Slovakia	12:00 - 12:00
2-MP-BS1.11	**Investigation of Hydrogen-doping Methods for SmFeAsO Polycrystalline Bulks** Fumiya Shimoyama, Tokyo University of Agriculture and Technology, Tokyo, Japan	12:00 - 12:00

Poster
12:00 - 13:15 East

Test Facilities (2)

Loïc Quéval, University Paris-Saclay, Gif-sur-Yvette, France
Luca Soldati, ASG Superconductors, Genova, Italy

2-LP-TF.1I	**Experiment and Data Processing of Contactless Measurement of HTS Cables** Lingfeng Lai, Beijing Eastforce Superconducting Technology Co., Ltd., China	12:00 - 12:00
2-LP-TF.3I	**TF20HV: A High-Voltage Test Facility for Cable Samples in a Gaseous Helium Environment at 20 K and 10 bar** Georg Gamper, ASG Superconductors, Genova, Italy	12:00 - 12:00
2-LP-TF.4	**A helium gas-cooled test bench for hyper- and superconducting aviation cables.** Margreet ter Schure, University of Twente, Netherlands	12:00 - 12:00

Poster
12:00 - 13:15 East

Motors, Generators and Other Rotating Machines (2)

Roberto Oliveira, Karlsruhe Institute of Technology, Eggenstein-Leopoldshafen, Germany

2-LP-RM2.1	**Flywheel type uninterruptible power supply using high temperature superconducting induction machine** Osami Tsukamoto, Yokohama National University, Yokohama, Japan	12:00 - 12:00
2-LP-RM2.2	**Design of high-temperature superconducting non-planar coils for use in rotating electrical machines** Jianghong Wan, Karlsruhe Institute of Technology, Institute for Technical Physics, Karlsruhe, Germany	12:00 - 12:00
2-LP-RM2.3	**Control method for compensating flux in non-insulated HTS field coils in response to variations in d-axis armature current** Hoon Jung, Jeju National University, Jeju, Korea, Republic of	12:00 - 12:00
2-LP-RM2.4	**Superconducting Stator Winding for Axial Flux Electrical Machine Applications** Giuseppe Messina, ENEA, Frascati (Rome), Italy	12:00 - 12:00
2-LP-RM2.5	**Study of current transport properties in the rotating frame of an HTS induction/synchronous motor**	12:00 - 12:00

Caio Nascimento D'Azevedo, Kyoto University, Kyoto, Japan

2-LP-RM2.6	**Simulation of Wind Turbine Generator Superconducting Coils** Luciano Coelho, Fluminense Federal University, Niterói, Brazil	12:00 - 12:00
2-LP-RM2.7	**Multi-objective Electromagnetic Topology Optimization of a Partial-Superconducting Direct-Drive Generator for Wind Turbines** Yuanfeng Lan, Huazhong University of Science and Technology, Wuhan, China	12:00 - 12:00
2-LP-RM2.8	**Electromagnetic Design of kW-Class HTS Rotating Machines for Carbon-Neutral Ports** Keita TSUZUKI, National Institute of Technology, Toyota College, Toyota, Aichi, Japan	12:00 - 12:00
2-LP-RM2.9	**Electromagnetic Design of the 250 kW Fully Superconducting "SupraGenSys" Demonstrator** Sebastian Lengsfeld, Fraunhofer IEE, Kassel, Germany	12:00 - 12:00
2-LP-RM2.10	**Proposal of Simple Expressions to Estimate AC Losses in HTS Pancake Coils Located inside Iron Core Slots** Kazuhiro Kajikawa, Sanyo-Onoda City University, Sanyo-Onoda, Japan	12:00 - 12:00
2-LP-RM2.11	**Performance Characteristics of an HTS Ladder-type Short Circuit for an HTS Linear Induction Motor in a Moving Magnetic Field** Takumi Mizutani, Kyoto University, Kyoto, Japan	12:00 - 12:00
2-LP-RM2.12	**Novel modelling and simulation of Superconducting Electric Machines based on *J-Φ* Coupled Models** Hanlin Zhu, University of Bristol, United Kingdom	12:00 - 12:00
2-LP-RM2.13	**Design and Structural Optimization of an HTS Air-Cored Coil Array Module for High-Power Superconducting Generators** Zhenkai Cai, The University of Edinburgh, United Kingdom	12:00 - 12:00
2-LP-RM2.14	**Applied Superconductivity to Propulsor in Marine Technology** Mitsuru IZUMI, Tokyo University of Marine Science and Technology, Minato-ku, 108-8477 Tokyo, Japan	12:00 - 12:00
2-LP-RM2.15	**A Novel Equivalent Circuit Method for Rapid Loss Analysis in Superconducting Motors** Wenkai Yan, University of Bath, BATH, United Kingdom	12:00 - 12:00

Poster
12:00 - 13:15 East

HTS Magnets (1)

Ibrahim Kesgin, Argonne National Laboratory, United States
Audren Blondelle, Université Grenoble Alpes, Grenoble, France

2-LP-HT.1I	**Investigation of Diffusion Bonding and Thermal Conductivity in HTS Coils under Varying Winding Tensions** Junil Kim, Korea Electrotechnology Research Institute, Changwon-si, Korea, Republic of	12:00 - 12:00
2-LP-HT.2I	**Development of Flexible HTS Cables for Non-Planar Stellarators Coils** Wei Guo, Proxima Fusion GmbH, Germany	12:00 - 12:00

2-LP-HT.3	**Defect Detection of High - temperature Superconducting Coils** Chen Gu, Tsinghua University, China	12:00 - 12:00
2-LP-HT.4	**Design and Test of a 5-T / 34-mm REBCO Dipole Magnet Insert for a 15-T Full-Service-Field Testing Facility** Ziyang Xu, Tsinghua University, Beijing, China	12:00 - 12:00
2-LP-HT.5	**HTS Central Coils for Magnetic Mirror** Alexey Radovinsky, Commonwealth Fusion Systems, United States	12:00 - 12:00
2-LP-HT.6	**Development of non-planar, HTS, tabletop-sized-stellarator coils** S. Nißl, Max Planck Institute for Plasma Physics, Germany	12:00 - 12:00
2-LP-HT.7	**The effect of cool down and external magnetic field induced mechanical properties in epoxy-impregnated REBCO magnet** Zhaoran Wang, Harbin Engineering University, China	12:00 - 12:00
2-LP-HT.8	**Experimental study on the critical current of REBCO solenoid insert coil under various curing process** Guanyu Xiao, Institute of Plasma Physics, Chinese Academy of Sciences, Hefei, China	12:00 - 12:00
2-LP-HT.9	**Progress of REBCO high-field fusion magnet research at Southwestern Institute of Physics** Xinbo Hu, Southwestern Institute of Physics, China	12:00 - 12:00
2-LP-HT.10	**Integrated Engineering of Stacked REBCO Cable-in-Conduit Conductors: Design, Manufacture and Performance Evaluation** Shu Tao, Institute of Plasma Physics, Hefei Institutes of Physical Science, Chinese Academy of Sciences, Hefe	12:00 - 12:00
2-LP-HT.11	**Hydraulic characterization of spiral cooling channels with small diameters for superconducting cables** Aleksandra Dembkowska, West Pomeranian University of Technology, Szczecin, Poland	12:00 - 12:00
2-LP-HT.12	**A Novel 13.4 kA Non-Twisted Stacked REBCO Cable-in-Conduit Conductor with Superior Bending Performance** Qianjun Zhang, Shanghai Dianji University, China	12:00 - 12:00
2-LP-HT.13	**Axial compression behavior of multi-layer flexible HTS spiral cable** Xuan Zhou, SHANGHAI JIAO TONG UNIVERSITY, SHANGHAI, China	12:00 - 12:00
2-LP-HT.14	**Measurements of the self-magnetic field of REBCO Rutherford-type cable** Tetsuhiro Obana, National Institute for Fusion Science, Japan	12:00 - 12:00
2-LP-HT.15	**PSALM for Compact Fusion Magnets** Luning Hao, University of Cambridge, United Kingdom	12:00 - 12:00

Poster
12:00 - 13:15 East

Conductors on a Round Core

Kévin Berger, Université de Lorraine, GREEN, Nancy, France
Emelie Nilsson, Airbus UpNext, Toulouse, France

2-LP-RC.1I	**Electromagnetic Modeling of Multi-Turn CORC Magnets for Compact High-Field Applications** Wenqi Bai, University of Cambridge, United Kingdom	12:00 - 12:00
2-LP-RC.2	**Bending characteristics and electromagnetic properties of a copper tube reinforced CORC cable for fusion magnets** shijie Shi, Southwest Jiaotong University, Hefei, China	12:00 - 12:00
2-LP-RC.3	**Research on the performance of CORC cable under transverse-axial comprehensive load** Yangyang Shi, Beijing Jiaotong University, Beijing, China	12:00 - 12:00
2-LP-RC.4	**Experimental research on critical transverse compression performance of large current carrying CORC cable** Lei Hu, Beijing Jiaotong University, China	12:00 - 12:00
2-LP-RC.5	**Performance and Quench Detection of a Prototype Canted-Cosine-Theta HTS Dipole Magnet Wound with CORC Cable: Design, Testing, and Evaluation** Ao Feng, CAS Ion (Hangzhou) Medical Technology Co., Ltd., China	12:00 - 12:00
2-LP-RC.6	**Peculiarities of thermal processes in CORC-cable windings under non-stationary current loads** Sergei Pokrovskii, National Research Nuclear University MEPhI (NRNU MEPHI), Moscow, Russian Federation	12:00 - 12:00
2-LP-RC.7	**The voltage loop for the transport AC loss measurement of CORC cables** Zhixing Yang, Shanghai Jiao Tong University, China	12:00 - 12:00
2-LP-RC.8	**Study of hydraulic characterization of the CORC cable and conductor** Xiaohui Guan, Institute of Plasma Physics, Chinese Academy of Sciences, China	12:00 - 12:00
2-LP-RC.9	**Mechanical-electric behaviors of CORC type cables with different core structure** Yuanwen Gao, Lanzhou University, China	12:00 - 12:00

Poster
12:00 - 13:15 East

AI, Machine Learning and AC Loss

Asef Ghabeli, Karlsruhe Institute of Technology, Karlsruhe, Germany

2-LP-AI.1	**Machine Learning Regression of Dynamic Quench Behaviour in Superconducting Coils: Insights from Experimental Data** Yahao Wu, University of Glasgow, Glasgow, United Kingdom	12:00 - 12:00
2-LP-AI.2	**Measurement of AC loss on sub-scaled superconducting coils for electrical aircraft motor application** Alexandre COLLE, Airbus UpNext, TOULOUSE, France	12:00 - 12:00
2-LP-AI.3	**Development of a monitoring system for forced-flow-cooled superconducting coils with principal component analysis** Tetsuhiro Obana, National Institute for Fusion Science, Japan	12:00 - 12:00

2-LP-AI.4	**Proposal of AI-based magnetic field estimation methods** Haruna Takaki, Osaka Institute of Technology, Japan	12:00 - 12:00
2-LP-AI.5	**Current Density Distribution Estimation of REBCO Coated Conductors Using Machine Learning** Junichiro Takei, Hokkaido University, Sapporo, Japan	12:00 - 12:00
2-LP-AI.6	**Multiobjective Design Optimization of Air-Core HTS Pancake Coils Using a Machine Learning-Based Surrogate Model and Particle Swarm Optimization** Masoud Ardestani, NOVA School of Science and Technology, UNINOVA-CTS and LASI, NOVA University Lisbon Portugal	12:00 - 12:00
2-LP-AI.7	**Machine learning based process modeling of YBCO film and Jc prediction from process parameter** Tomoya Horide, Nagoya University, Nagoya, Japan	12:00 - 12:00
2-LP-AI.8	**Field optimization of a 10 cm long high temperature superconducting bulk staggered array undulator** Alexandre Arsenault, Paul Scherrer Institute, Switzerland	12:00 - 12:00
2-LP-AI.9	**Magnetic Field Conforming Foil Conductor Models for Homogenization of HTS Coils** Elias Paakkunainen, TU Darmstadt, Germany	12:00 - 12:00
2-LP-AI.10	**AC loss analysis of HTS REBCO windings in superconducting synchronous electrical machine for electric aircraft** Jun Ma, University of Bristol, Bristol, United Kingdom	12:00 - 12:00
2-LP-AI.11	**Transport current loss analysis of parallel stacked HTS coils for electrified aircraft motor armature design** Oriol Fernández-Serracanta, University of Strathclyde, Glasgow, United Kingdom	12:00 - 12:00
2-LP-AI.13	**A Hybrid Method for Evaluating AC Losses in DC HTS Coils under AC Magnetic Field in Linear Machines Considering Conductive Layer Effects** Emma Gottardi, Eindhoven University of Technology, Eindhoven, Netherlands	12:00 - 12:00
2-LP-AI.14	**AC loss scaling of REBCO field winding for superconducting synchronous motors** Difan Zhou, Shanghai University, Shanghai, China	12:00 - 12:00
2-LP-AI.15	**AC loss characteristics of the twisted multi-filamented YBCO tape under alternating magnetic fields** Zhixuan Zhang, university of bristol, bristol, United Kingdom	12:00 - 12:00
2-LP-AI.16	**AC loss characteristics of multistranded ultrafine superconducting wires** SEOKBEOM KIM, Okayama University, Okayama, Japan	12:00 - 12:00

Social & Networking
13:15 - 14:30 West

Exhibition & Lunch

Ancillary Meeting
13:15 - 14:30 Ribeira II

Joint IEEE/IEC Superconducting Standards Committee (by invitation only)

Special
14:30 - 16:20 R1

Novel and Room-temperature Superconductors (in memory of Mikhail Emerets)

2-MS-NR.1	**In Memory of Mikhail Emerets** Gianni Profeta, SPIN-CNR University of L'Aquila, Italy	14:30 - 14:35
2-MS-NR.2I	**In Memory of Dr. Mikhail Eremets: Towards Room-Temperature Superconductivity** Alexander Drozdov, Max Planck Institute for Chemistry, Germany	14:35 - 15:05
2-MS-NR.3	**Near-room-temperature superconductivity in thin film and bulk metal hydrides at megabar pressures** Jonathan Buhot, University of Bristol, Bristol, United Kingdom	15:05 - 15:20
2-MS-NR.4	**The Maximum T_c of Conventional Superconductors at Ambient Pressure** Hai-Chen Wang, Ruhr University Bochum, Bochum, Germany	15:20 - 15:35
2-MS-NR.5	**Discovery of new superconductor $In_{3-x}S_4$ under high pressure** Yoshihiko TAKANO, National Institute for Materials Science (NIMS), Tsukuba, Japan	15:35 - 15:50
2-MS-NR.6I	**The New Record High T_c of 149 K in HBCCO at Ambient Without Pressure via PQP** Paul C. W. Chu, University of Houston, Houston TX, United States	15:50 - 16:20

Oral
14:30 - 16:00 R2

HTS Multiphysics Modelling (1)

Arno Godeke, Compact PT, Hengelo, Netherlands
Monika Lewandowska, The Henryk Niewodniczanski Institute of Nuclear Physics Polish Academy of Sciences, Krakow, Poland

2-LO-MM1.1	**Analytical Solution for Current Distribution in Non-Insulated and Metal-Insulated High-Temperature Superconducting Coils** Marco Breschi, University of Bologna, Bologna, Italy	14:30 - 14:45
2-LO-MM1.2	**Delamination model for impregnated REBCO superconducting coils considering random distribution of interfacial strengths** Peifeng Gao, Lanzhou University, China	14:45 - 15:00
2-LO-MM1.3	**T-A formulation for the electrodynamic behavior of high-temperature superconductors: application to rotating coils** Francesco Grilli, Karlsruhe Institute of Technology, Germany	15:00 - 15:15
2-LO-MM1.4	**Quench and discharge modelling of large superconducting coils using a modified AV formulation with line elements for cables** Rien Wesselink, Demcon Multiphysics, Enschede, Netherlands	15:15 - 15:30

2-LO-MM1.5	**Electrodynamic Interactions in Hybrid CORC-TSTC HTS Cables: Impact on Current Distribution and AC Losses** Hasan Al-ssalih, University of Leicester, Leicester, United Kingdom	15:30 - 15:45
2-LO-MM1.6	**PSALM - towards reducing AC losses in HTS fusion magnets** Tim Coombs, cambridge university, Cambridge, United Kingdom	15:45 - 16:00

Oral
14:30 - 16:00 R3

Stability and AC loss / AI/ML as a Tool for Large Scale

Mohammad Yazdani-Asrami, University of Glasgow, Glasgow, United Kingdom
Giacomo Russo, Alma Mater Studiorum - University of Bologna, Bologna, Italy

2-LO-AI.1	**Experimental investigation of the resonance characteristics of fully superconducting resonator** Jun Ogawa, Niigata University, Japan	14:30 - 14:45
2-LO-AI.2	**Mapping quench disturbances using pick-up coils during training in the Rutherford cable Nb_3Sn Bonding Experiment (BOX)** Jan van Steenlandt, University of Twente, Enschede, Netherlands	14:45 - 15:00
2-LO-AI.3	**Thermo-magnetic instabilities and local Joule heating in REBCO superconducting films: consequences for high-current transport in 2G HTS tapes** Francesco Laviano, Politecnico di Torino, Torino, Italy	15:00 - 15:15
2-LO-AI.4	**Holistic Numerical Simulation of Thermomagnetic Instabilities on a Real-size Multifilamentary Superconducting Coil** Cun Xue, Northwestern Polytechnical University, China	15:15 - 15:30
2-LO-AI.5	**Acceleration of Multi-Scale LTS Magnet Simulations with Neural Network Surrogate Models** Louis Denis, University of Liège, Liège, Belgium	15:30 - 15:45
2-LO-AI.6	**AC loss and electrothermal modelling of high-temperature superconducting motors for electric aircraft propulsion** Enric Pardo, Institute of Electrical Engineering SAS, Bratislava, Slovakia	15:45 - 16:00

Oral
14:30 - 16:00 R4

Transformers, Fault Current Limiters, SMEs and Fly-wheels

Antonio Morandi, University of Bologna, BOLOGNA, Italy
Pascal Tixador, Univ. Grenoble Alpes, CNRS, Grenoble-INP, Grenoble, France

2-LO-TF.1	**Enhancing Grid Performance with Superconducting Cables and Fault Current Limiters: A Path to Efficiency and Reliability** Wescley Tiago Batista de Sousa, Karlsruhe Institute of Technology, Eggenstein-Leopoldshafen, Germany	14:30 - 14:45
2-LO-TF.2	**DC short-circuit tests of a 50 kV Resistive Superconducting Fault Current Limiter** Diego Brasiliano, SuperGrid Institute, Lyon, France	14:45 - 15:00
2-LO-TF.3	**Dynamic Breakdown Characteristics of Liquid Nitrogen for**	15:00 - 15:15

	Superconducting Fault Current Limiters in Multi-terminal HVDC Systems Naoki Hayakawa, Nagoya University, Japan	
2-LO-TF.4	**In-field Test of an 1MVA/10kV Air-core High-Temperature Superconducting Shunt Reactor** Jie Sheng, Shanghai Jiaotong University, China	15:15 - 15:30
2-LO-TF.5	**Load Recovery Performance of Variable Impedance Superconducting Fault Current Limiting Transformers** Qi Zhang, Xi'an Jiaotong University, Xi'an, China	15:30 - 15:45
2-LO-TF.6	**A Novel Fast Recovery Helical Bifilar SFCL for the Protection of Electrified Aircraft System: Design, Simulation and Experimental Validation** Wenjuan Song, University of Glasgow, Glasgow, United Kingdom	15:45 - 16:00

Oral
14:30 - 16:00 R5

Bulk Superconductors: From Materials to Applications

Tomas Hlasek, CAN Superconductors, Czech Republic
Jacques Noudem, University of Caen, France

2-MO-MA.1I	**Field-trapping properties and electromagnetic analysis of SDMG-processed REBCO melt-textured bulks at middle temperature region** Takanori Motoki, Aoyama Gakuin University, Sagamihara, Japan	14:30 - 15:00
2-MO-MA.2	**C-Axis Welding of REBCO Bulks via Modified Single-Direction Melt Growth** Filip Antoncik, University of Chemistry and Technology Prague, Prague, Czech Republic	15:00 - 15:15
2-MO-MA.3	**High superconducting properties of dense low temperature – high pressure spark plasma sintered MgB_2 ceramics** Clotilde Lechevalier-Boissel, French-German Research Institute of Saint-Louis (ISL), Saint-Louis, France	15:15 - 15:30
2-MO-MA.4	**Rotation of a bulk superconductor as a way to boost the magnetic field gradient** Philippe Vanderbemden, University of Liège, Liège, Belgium	15:30 - 15:45
2-MO-MA.5	**A new method for fabrication of high quality single domain GdBCO ring superconductor by RE+011 TSIG method** Wanmin Yang, Shaanxi Normal University, Xi'an, China	15:45 - 16:00

Oral
14:30 - 16:00 R6

REBCO Coated Conductors Manufacturing and Supply (2)

Stuart Wimbush, UK Industrial Fusion Solutions Ltd, Abingdon, United Kingdom
Carmine Senatore, University of Geneva, Geneva, Switzerland

2-MO-MS2.1	**Large-Scale Manufacturing and Enhancing Performance of 2G-HTS Tapes for Fusion and Advanced Applications** Valery Petrykin, Faraday Factory Japan LLC, Hachioji, Japan	14:30 - 14:45

2-MO-MS2.2	**Recent status of RE-based high temperature superconductor tapes at Fujikura** Shinji Fujita, Fujikura Ltd., Japan	14:45 - 15:00
2-MO-MS2.3	**Advancements in production scale-up with RCE and PLD at SuNAM** Hunju Lee, SuNAM Co., Ltd., Korea, Republic of	15:00 - 15:15
2-MO-MS2.4	**The research and industrialization progress of 2G-HTS based on MOCVD technology in China** Yulei Chen, Eastern Superconducting Technology (Suzhou) Co., Ltd., China	15:15 - 15:30
2-MO-MS2.5	**Fabrication of Fluorine-Free MOD REBCO tape with $BaMO_3$ (M = Zr, Hf) nanoparticles as artificial pinning centers** Genki Honda, Sumitomo Electric Industries, Ltd., Osaka, Japan	15:30 - 15:45

Oral
14:30 - 16:00 R7

SQUID Applications and Systems

Michael Hamilton, Auburn University, United States
Xiangyan Kong, Ningbo University, Ningbo, China

2-EO-SQ.1I	**MRI at 10 mT Using SQUID Detection in an Open Environment** Dimitri Labat, Chipiron, Paris, France	14:30 - 15:00
2-EO-SQ.2	**Active Management of Trapped Flux. Part I. Modelling** Kyle Jackman, Stellenbosch University, Banhoek Road, Stellenbosch 7600, South Africa	15:00 - 15:15
2-EO-SQ.3	**Active Management of Trapped Flux Part II: Scanning SQUID imaging** Brenna Petrelli, University of Connecticut, United States	15:15 - 15:30
2-EO-SQ.4	**Characterization and design of a low-noise second-order gradient SQUID with asymmetric shunt resistors** Yuxiao Guo, National Institute of Metrology, China, China	15:30 - 15:45
2-EO-SQ.5	**Geomagnetic Observation in both On-ground and Under-ground Environments with SQUID** Longqing QIU, Shanghai Institute of Microsystem and Information Technology, Chinese Academy of Sciences Shanghai, China	15:45 - 16:00

Special
14:30 - 16:00 R8

Microwave Quantum Detection by Superconducting Systems

2-ES-MQ.1	**Superconducting qubits as detectors** Pol Forn-Díaz, Institut de Física d'Altes Energies (IFAE), Bellaterra (Cerdanyola del Vallès), Spain	14:30 - 15:00
2-ES-MQ.2	**From single photon detection to entangled photon pair - generation in a superconducting qubit array embedded in a microwave cavity.** Patrick Navez, Université de Montpellier, Montpellier, France	15:00 - 15:15
2-ES-MQ.3	**Enhancing Dark Matter-induced qubit excitations through noise**	15:15 - 15:30

resilient ancillary systems
Roberto Moretti, University of Milano Bicocca, Milan, Italy

2-ES-MQ.4 **Towards Near-Field Quantum-Enhanced Microwave Illumination with Superconducting Devices** 15:30 - 15:45
Bernardo Galvano, University of Palermo, Department of Engineering, Viale delle Scienze, Ed. 8, 90128, Pale

2-ES-MQ.5 **Toward magnetic field resistant microwave detector based on $NbSe_2$ quantum device** 15:45 - 16:00
Alessandro D'Elia, INFN, Frascati, Italy

Social & Networking
16:00 - 16:45 West
Exhibition & Refreshments

Special
16:45 - 18:15 R1
Industry-Led Projects on Superconducting Power Cables: Driving Innovation and Adoption
Wescley Tiago Batista de Sousa, Karlsruhe Institute of Technology, Eggenstein-Leopoldshafen, Germany

2-LS-PC.1 **SuperLink 150 m Demo and large-scale perspective** 16:45 - 17:00
Dag Willén, NKT Technology R&D, Copenhagen, Denmark

2-LS-PC.2 **Installation and commissioning of SuperRail superconducting cable system in Paris Montparnasse traction substation** 17:00 - 17:15
Arnaud ALLAIS, NEXANS, Paris, France

2-LS-PC.3 **SST's Experience Sharing on High-Temperature Superconducting Cables and Insights into the Future Development of Superconducting Cable Technology** 17:15 - 17:30
Jiamin Zhu, Shanghai Superconductor Technology Co., Ltd., China

2-LS-PC.4 **MVDC 1 GW-scale MgB2 power cables for the Green Superconducting line of the Italian IRIS facility and for the SCARLET EU project.** 17:30 - 17:45
Matteo Tropeano, ASG Superconductors Spa, Genova, Italy

2-LS-PC.5 **VEIR HTS Cables for the Data Center Market** 17:45 - 18:00
Franco Moriconi, VEIR Inc., Woburn, MA, United States

2-LS-PC.6 **High-power medium-voltage superconducting cables for Europe's energy transition** 18:00 - 18:15
Christophe Creusot, SuperGrid Institute, France

Oral
16:45 - 18:15 R2
Superconducting RF
Enrico Silva, University Roma Tre, Rome, Italy
Jarek Wosik, University of Houston, Houston, United States

2-LO-RF.1I **HTS for high-power RF applications** 16:45 - 17:00

Sergio Calatroni, CERN, Switzerland

2-LO-RF.2	**Progress on $MgB2_2$ coating for Cu superconducting RF cavities** Ke Chen, Temple University, Philadelphia, United States	17:00 - 17:15
2-LO-RF.3	**Microwave Vortex-Motion Characterization of Nb_3Sn Coatings for Applications in High Magnetic Field** Pablo Vidal García, Roma Tre University, Rome, Italy	17:15 - 17:30
2-LO-RF.4	**Vortex dynamics and pinning in NbTi, Nb_3Sn and YBCO films: a microwave analysis and ion irradiation study** Gianluca Ghigo, Politecnico di Torino, Torino, Italy	17:30 - 17:45
2-LO-RF.5	**$REBa_2Cu_3O_{7-x}$ coatings for low-surface impedance applications at high-fields** Joffre Gutierrez Royo, Institut de Ciencia de Materials de Barcelona, Barcelona, Spain	17:45 - 18:00
2-LO-RF.6	**Elemental study on magnetic refrigerator using high temperature superconductor as magnetic shield** Naoki Hirano, National Institute for Fusion Science, Toki, Japan	18:00 - 18:15

Oral
16:45 - 18:15 R3

Muon Collider and Other Accelerator Magnets

Michael A. Green, Lawrence Berkeley National Laboratory, Berkely CA 94020, United States

2-LO-MC.1	**Preliminary Electromagnetic and Mechanical Analysis of the Block-Coil Dipole Configuration for the Muon Collider Arc Ring** Luca Alfonso, INFN - Genova, Italy	16:45 - 17:00
2-LO-MC.2	**Exploring combined function magnets for a Muon Collider** Daniel Novelli, Sapienza University of Rome, Rome, Italy	17:00 - 17:15
2-LO-MC.3	**Fabrication and assembly of the stress-managed cosine-theta insert based on Bi-2212 Rutherford cable.** Alessio D'Agliano, Lawrence Berkeley National Laboratory, Berkeley, United States	17:15 - 17:30
2-LO-MC.4	**A dedicated mirror-magnet experiment to study quench characteristics and dependencies in Nb_3Sn coils and explore improvements of diagnostics capabilities** Stoyan Stoynev, Fermi National Accelerator Laboratory, United States	17:30 - 17:45
2-LO-MC.5	**Update on the electromagnetic and mechanical design of a cosθ dipole for the Muon Collider** Francesco Mariani, Istituto Nazionale di Fisica Nucleare (INFN), Milan, Italy	17:45 - 18:00
2-LO-MC.6	**Application of HTS Straight Soldered Stack Cable in Subscale Magnet Geometry: A Direct Comparison with LTS Cable** Dmitry Sotnikov, Paul Scherrer Institut PSI, Switzerland	18:00 - 18:15

Oral
16:45 - 18:15 R4

Quench and Fusion Magnets

Arend Nijhuis, University of Twente, Enschede, Netherlands
Andrea Zappatore, Politecnico di Torino, Italy

2-LO-QF.1	**Analysis of the Quench Experiment on the Aluminum slotted-core HTS conductors** Giuseppe Celentano, ENEA, Frascati, Italy	16:45 - 17:00
2-LO-QF.2	**Experimental study of stability, quench propagation and detection methods on 16 kA subscale HTS fusion conductors in ASIPP** Qing Yan, Institute of Plasma Physics Chinese Academy Of Scieneces, Hefei, China	17:00 - 17:15
2-LO-QF.3	**Test Results of the magnet quench detection and magnet interlock system in the CFETR central solenoid model coil(CSMC) project** Yanlan Hu, the institute of Plasma Physics, Hefei, China	17:15 - 17:30
2-LO-QF.4	**Quench analysis of the coupled CS magnet in China nest-generation fusion device** Yongsheng Wu, Institute of Plasma Physics, Hefei Institutes of Physical Science, Chinese Academy of Science China	17:30 - 17:45
2-LO-QF.5	**Multi-physical behaviours on non-insulated HTS Toroidal Field Coils under quench or ramping up scenarios for fusion applications.** Oriol Fernández-Serracanta, University of Strathclyde, Glasgow, United Kingdom	17:45 - 18:00
2-LO-QF.6	**Electro-Thermo-Hydraulic Quench Simulation of the MACQU Solenoid Including Transverse Current Diffusion Across the CICC Copper Jacket** Guillaume Dilasser, CEA, Université Paris-Saclay, Gif-sur-Yvette, France	18:00 - 18:15

Oral
16:45 - 18:15 R5

Fe-based Superconductors (1)

Kazumasa Iida, Nihon University, Japan
Anastasiya Duchenko, Roma Tre University, Italy

2-MO-FE1.1	**Multi-scale segmentation of current paths in polycrystalline K-Ba122** Fumitake Kametani, Florida State University, Tallahassee, United States	16:45 - 17:00
2-MO-FE1.6	**Grain Orientation Evolution in BaK122 Superconducting Wires: Influence of Grain Size, Wire Processing, and Sheath Material** Emilio Bellingeri, National Research Council (Cnr), Genova, Italy	17:00 - 17:15
2-MO-FE1.3	**Understanding the Nanoscale Chemistry of Iron-based Superconductors Through Atom Probe Tomography** Laura Lain Rodriguez, University of Oxford, Oxford, United Kingdom	17:15 - 17:30
2-MO-FE1.4	**Tailoring Superconductivity: Mn Doping-Driven Enhancements in Fe(Se,Te) Thin Films** Xinyue Xia, Institute of Electrical Engineering, Chinese Academy of Sciences, Beijing, China	17:30 - 17:45

2-MO-FE1.5	**Effect of Pb irradiation on the superconduting properties of Fe(Se,Te) thin films** Valeria Braccini, CNR-SPIN, Genova, Italy	17:45 - 18:00
2-MO-FE1.6	**Superconducting and structural properties of mechanically exfoliated Fe(Se,Te) films** Jens Hänisch, Karlsruhe Institute of Technology, Eggenstein-Leopoldshafen, Germany	18:00 - 18:15

Oral
16:45 - 18:15 R6

Progress in Superconductor Joints

Kévin Berger, Université de Lorraine, GREEN, Nancy, France
Jan Jaroszynski, National High Magnetic Field Laboratory, Tallahassee, United States

2-MO-SJ.1	**Formation of joints between Bulk Superconductors below their peritectic temperature** John Durrell, University of Cambridge, United Kingdom	16:45 - 17:00
2-MO-SJ.2	**Temperature, Magnetic Field, and Field Angular Dependence of Critical Current of REBCO intermediate Grown Superconducting (iGS) Joint** Yasuaki Takeda, National Institute for Materials Science, Tsukuba, Japan	17:00 - 17:15
2-MO-SJ.3	**Recent Advancements in MgB2 Superconducting Joints Technology for Next-Gen Liquid Helium free MRI System in Persistent Mode** Hao Liang, The University of Queensland, Brisbane, Australia	17:15 - 17:30
2-MO-SJ.4	**Effect of chemical etching and electrochemical etching on the performance and microstructure of REBCO-coated conductors** Ziming Wang, Hefei Institutes of Physical Science, Chinese Academy of Sciences, Hefei, Anhui, China	17:30 - 17:45
2-MO-SJ.5	**Ultra-low resistant joint process for multifilamentary Nb-Ti wires using low temperature synthesis of MgB_2.** Joshua Winger, University of Oxford, Oxford, United Kingdom	17:45 - 18:00
2-MO-SJ.6	**Persistent Bi-2212 joints for 50 bar overpressure heat treatment** Petr Zagura, University of Oxford, Oxford, United Kingdom	18:00 - 18:15

Oral
16:45 - 18:15 R7

Digital Circuits: Superconducting Circuits and Memories

Kyle Jackman, Stellenbosch University, Banhoek Road, Stellenbosch 7600, South Africa
Evan Golden, Massachusetts Institute of Technology, United States

2-EO-CM.1I	**100 GHz bandwidth measurements of single flux quantum pulses using a Josephson sampler** Peter Hopkins, National Institute of Standards and Technology, Boulder, United States	16:45 - 17:00
2-EO-CM.2	**High-speed readout circuit for 20GHz impulse-driven matrix memory** AKIRA FUJIMAKI, Nagoya University, Nagoya, Japan	17:00 - 17:15
2-EO-CM.3	**Single Flux Quantum Circuit Operation at MilliKelvin Temperatures**	17:15 - 17:30

Igor Vernik, SEEQC, Inc., Elmsford, United States

2-EO-CM.4	**Sustainable ballistic data processing with underdamped Josephson junctions** Joao Barbosa, SEEQC, 150 Clearbrook Road, Elmsford, NY, 10523 USA, United States	17:30 - 17:45
2-EO-CM.5	**Fabrication of high density NbTiN-based interconnects, vias, Josephson junctions and capacitors for Superconducting Digital Logic** Benjamin Huet, imec, Leuven, Belgium	17:45 - 18:00
2-EO-CM.6	**The Josephson balanced comparator as a testbed for digital circuits and as a sensor to monitor the fabrication process.** Timur Filippov, Hypres, Inc, Elmsford, United States	18:00 - 18:15

Oral
16:45 - 18:15 R8

Transition-Edge Sensors (Characterisation and Applications)

Xiaolong Xu, National Institute of Metrology (NIM), Beijing, China
M. Amin Choghadi, The University of Tokyo, Tokyo, Japan

2-EO-TE.1I	**Detection of low-energy electrons with TESs for neutrino physics** Federico Malnati, Politecnico di Torino, Torino, Italy	16:45 - 17:00
2-EO-TE.2I	**High Precision Laboratory Astrophysics with an Electron Beam Ion Trap and a TES Microcalorimeter-Array** Marc Botz, Max-Planck-Institut für Kernphysik, Heidelberg, Germany	17:00 - 17:15
2-EO-TE.3	**Transition Edge Sensor X-ray Spectrometer for Laboratory Science Applications** Martin de Wit, Netherlands Institute for Space Research, Leiden, Netherlands	17:15 - 17:30
2-EO-TE.4	**Energy resolution dependence on the operating point of Mo/Au Transition Edge Sensors** Carlos Pobes, Instituto de Nanociencia y Materiales de Aragón, CSIC-Univ. Zaragoza, Zaragoza, Spain	17:30 - 17:45
2-EO-TE.5	**Extremely Non-Invasive Bio-imaging with Transition Edge Sensors** Koki Shirota, National Institute of Advanced Industrial Science and Technology (AIST), Tsukuba city, Japan	17:45 - 18:00
2-EO-TE.6	**Impact of materials in Lateral Inverse and Longitudinal Proximity Effects in TESs** Hobey Garrone, Politecnico di Torino, Torino, Italy	18:00 - 18:15

Social & Networking
18:15 - 20:30 West

Early Career Researchers (ECR) Social Networking

Wednesday, September 24, 2025

Plenary
08:30 - 09:30 R1

The Acceleration to Fusion Energy Demonstration Through the Chinese Program: Progress on the Construction of CRAFT Facility and BEST Tokamak magnet

Jinggang Qin, ASIPP, China

Plenary
09:30 - 09:50 R1

Conference Publication - IEEE TAS

Mark Ainslie, King's College London, London, United Kingdom

Focus
10:05 - 11:25 R1

Future of Coated Conductors (joint industry/academia session)

Stuart Wimbush, UK Industrial Fusion Solutions Ltd, Abingdon, United Kingdom

3-MF-CC.1 **The Future of Coated Conductor Manufacturing at SST** 10:05 - 10:20
Bai Song, Shanghai Superconductor Technology Co., Ltd., China

3-MF-CC.2 **(Cu,C)Ba2Ca2Cu3O9 and (Cu,C)Ba2Ca3Cu4O11 superconducting systems: new promising platforms for high field applications in LN2 temperature region** 10:20 - 10:35
Hai-Hu Wen, Nanjing University, Nanjing, China

3-MF-CC.3 **Combination of thermodynamic and pinning optimization routes for enhancing J_c** 10:35 - 10:50
Masashi Miura, Seikei University, Japan

3-MF-CC.4 **Influence of Spatial Non-uniformity on Critical Currents in REBCO Coated Conductors** 10:50 - 11:05
Takanobu Kiss, Kyushu University, Fukuoka 819-0395, Japan

3-MF-CC.5 **The value of deconvoluting angular pinning data into maximum entropy components** 11:05 - 11:20
Nicholas Long, Robinson Research Institute, Victoria University of Wellington, Lower Hutt, New Zealand

Oral
10:05 - 11:20 R2

AC Loss in REBCO Coils and Cables

Emelie Nilsson, Airbus UpNext, Toulouse, France
Bruno Douine, Université de Lorraine, Vandoeuvre-les-Nancy, France

3-LO-CC.1 **Thermal creep and -runaway in layer-wound *Re*BCO coils** 10:05 - 10:20
W.M. Verbruggen, University of Twente, Enschede, Netherlands

3-LO-CC.2 **Project HighAmp: experimental AC characterization of a single-phase HTS cable wound on a round copper tube former.** 10:20 - 10:35
Carsten Raech, Vision Electric Super Conductors GmbH, Kaiserslautern, Germany

3-LO-CC.3	**Quick estimation of AC loss reduction in round cables made by filamentized ReBCO tapes** Mykola Soloviov, Institute of Electrical Engineering, Slovak Academy of Sciences, Bratislava, Slovakia	10:35 - 10:50
3-LO-CC.4	**Deep-learning surrogate model for dynamic AC loss prediction of superconducting propulsion motor in system-level modelling of electric aircraft** Mohammad Yazdani-Asrami, University of Glasgow, Glasgow, United Kingdom	10:50 - 11:05
3-LO-CC.5	**A Hierarchical Machine Learning Model for Prediction of AC Transport Losses in HTS Pancake Coils** Masoud Ardestani, NOVA School of Science and Technology, UNINOVA-CTS and LASI, NOVA University Lisbon Portugal	11:05 - 11:20

Oral
10:05 - 11:20 R3

Superconducting Coils | Test Facilities

Naoki Hirano, National Institute for Fusion Science, Toki, Japan
Asef Ghabeli, Karlsruhe Institute of Technology, Karlsruhe, Germany

3-LO-SC.1I	**Investigations on thermo-magnetic instabilities in MgB_2 bulk shields and magnets via an experimental-numerical approach** Laura Gozzelino, Politecnico di Torino, Torino, Italy	10:05 - 10:35
3-LO-SC.2	**Magnetic screening behaviour of hybrid high-temperature superconducting screens subjected to successive ramping excitation cycles: experiments and numerical study** Nicolas Rotheudt, University of Liège, Liège, Belgium	10:35 - 10:50
3-LO-SC.3	**Experiment and 3D modelling investigation of DC magnetic shielding by Bi-2223 and hybrid vessels** Michela Fracasso, Politecnico di Torino, Torino, Italy	10:50 - 11:05
3-LO-SC.4	**The Superconducting Magnets for the Future K-DEMO Superconductor Test Facility: Design Status** Byung Su Lim, KENTECH, Korea, Republic of	11:05 - 11:20

Oral
10:05 - 11:20 R4

SMES and Fly-wheels | Flux pumps, Wireless Power Transfer

Wenjuan Song, University of Glasgow, Glasgow, United Kingdom
Giacomo Russo, Alma Mater Studiorum - University of Bologna, Bologna, Italy

3-LO-SM.1I	**Testing of forced-flow cooling HTS SMES with 6 kA-level current capacity** Ming Li, Institute of Plasma Physics, Chinese Academy of Sciences, China	10:05 - 10:20
3-LO-SM.2	**Design, fabrication, and test of a 50kJ HTS energy storage magnet constructed by silicon-based coated insulation REBCO tapes** Lei Wang, Institute of Electrical Engineering, Chinese Academy of Sciences, Beijing, China	10:20 - 10:35
3-LO-SM.3	**Simulation and Experimental Validation of Inductive Excitation in HTS Flywheel Energy Storage System**	10:35 - 10:50

Ma Rui, the Institute of High Energy and Physics(IHEP), China

3-LO-SM.4	**Full-Scale Design of a Superconducting Wireless Power Transfer System for Maglev-Cobra** João Murta-Pina, NOVA School of Science and Technology, Caparica, Portugal	10:50 - 11:05
3-LO-SM.5	**High-Current Superconducting Wireless Power Transfer: Electromagnetic Performance and Loss Analysis** Mattia Simonazzi, University of Bologna, Bologna, Italy	11:05 - 11:20

Oral
10:05 - 11:20 R5

Joint Technology

Mariusz Wozniak, CERN, Geneva, Switzerland

3-LO-JT.1	**Advancing Fusion Energy with Demountable Superconducting Coils to Improved Accessibility and Cost Reduction** Tommaso Bagni, Gauss Fusion GmbH, GARCHING B. MUNCHEN, Germany	10:05 - 10:20
3-LO-JT.3	**Joint Concepts for a Coaxial HTS DC Cable for Combined Energy Transmission with LH_2** Mira Wehr, Karlsruhe Institute of Technology (KIT), Germany	10:20 - 10:35
3-LO-JT.4	**Design of HTS based hybrid current leads for a cryocooled 1 T NbTi detector magnet** Eino Tiirinen, CERN, Geneva, Switzerland	10:35 - 10:50
3-LO-JT.5	**Test of 3kA hybrid current leads thermalized with a cryocooler-driven remote cooling loop** Weronika Głuchowska, CERN, Meyrin, Switzerland	10:50 - 11:05

Oral
10:05 - 11:20 R6

Superconducting Qubit Readout & Control

Pascal Febvre, University Savoie Mont Blanc, Le Bourget du Lac, France

3-EO-QR.1	**Towards superconducting quantum-based arbitrary waveform generators for microwave frequencies** Michael Haas, Physikalisch-Technische Bundesanstalt, Braunschweig, Germany	10:05 - 10:20
3-EO-QR.2	**Characterizing amplifiers in quantum regime using a Transmon Qubit as a Calibrated Power Sensor and Single-Photon Source** Danilo Labranca, University of Milano-Bicocca, Milano, Italy	10:20 - 10:35
3-EO-QR.3	**Systematic optimization of TWPA in multi-qubit readout using optimization algorithms** Jeakyung Choi, Korea Research Institute of Standards and Science, Daejeon, Korea, Republic of	10:35 - 10:50
3-EO-QR.4	**Two-mode squeezing generation in a flux tunable Josephson Traveling Wave Parametric Amplifier** Pegah Darvehi, SPIN-CNR, Naples, Italy	10:50 - 11:05
3-EO-QR.5	**Superconducting qubit based on twisted cuprate van der Waals**	11:05 - 11:20

heterostructures
Giuseppe Serpico, University of Naples Federico II, Naples, Italy

Oral
10:05 - 11:20 R7

Nanowire Detectors + MKID (3)

Sergio Pagano, University of Salerno, Salerno, Italy
Ilya Charaev, University of Zurich, Zurich, Switzerland

3-EO-ND3.1I	**Superconducting nanostrip photon-number-resolving detector for photon distribution reconstruction** Pasquale Ercolano, University of Naples Federico II, Italy	10:05 - 10:20
3-EO-ND3.2I	**Single-photon image sensor based on superconducting nanowires** Lingdong Kong, Shanghai Institute of Microsystem and Information Technology, Chinese Academy of Science Shanghai, China	10:20 - 10:35
3-EO-ND3.3	**Readout circuit for a superconducting nanostrip single-photon detector array using a SQUID-based delay line** Fumihiro China, National Institute of Information and Communications Technology, Kobe, Japan	10:35 - 10:50
3-EO-ND3.4	**Micrometric single photon detectors based on superconducting NbRe films** Carla Cirillo, CNR SPIN (SuPerconducting and other INnovative materials and devices institute), Italy	10:50 - 11:05
3-EO-ND3.5	**Kinetic Inductance in ultra-thin MgB_2 nanowires: large current tuning close to the Cooper pairs breaking limit** Sergey Cherednichenko, Chalmers University of Technology, Gothenburg, Sweden	11:05 - 11:20

Oral
10:05 - 11:20 R8

HTS Conductors Development

Marco Statera, INFN Milano LASA, Milano, Italy
Kamil Sedlak, EPFL, Villigen PSI, Switzerland

3-LO-CD.1	**Development of Bi-2212 Strand for Rutherford Cables and Cable-Wound Solenoids** Daniel Davis, National High Magnetic Field Laboratory @ FSU, Tallahassee, United States	10:05 - 10:20
3-LO-CD.2	**Development of high-field dipole and solenoid magnets using the latest generation of CORC® cables and wires** Sven Doenges, Advanced Conductor Technologies, United States	10:20 - 10:35
3-LO-CD.3	**A newly developed 50kA-level HTS conductor: innovative tenon-mortise-based modularized conductor (TMMC)** Jinxing Zheng, Institute of Plasma Physics, Chinese Academy of Sciences, China	10:35 - 10:50
3-LO-CD.4	**A new SCSC-IFB cable consisting of multifilament coated conductors with superconducting bridges between filaments** Naoyuki Amemiya, Kyoto University, Kyoto, Japan	10:50 - 11:05
3-LO-CD.5	**Measurements of voltage waveforms during thermal runaway of spiral-coated-conductor cables under ac operation condition**	11:05 - 11:20

Yusuke Sogabe, Kyoto University, Kyoto, Japan

Social & Networking
11:20 - 12:00 West

Exhibition & Refreshments

Poster
12:00 - 13:15 East

AC Losses in HTS Cables and Coils

Antonio Macchiagodena, ALMA mater studiorim Università di Bologna, Bologna, Italy
Yue Wu, Karlsruhe Institute of Technology, Karlsruhe, Germany

3-LP-CC.1I	**AC losses in a multi-tape REBCO pancake with thin film insulation** Jérémie Cicéron, Univ. Grenoble Alpes, CNRS, Grenoble INP, Grenoble, France	12:00 - 12:00
3-LP-CC.3	**AC Loss of Central Solenoid Magnets in High Background Magnetic Fields: A Numerical Study Using Volume Integral Equation and Fast Multipole Method** Xiang Dai, Shanghai Jiao Tong University, China	12:00 - 12:00
3-LP-CC.4	**Analysis of Uneven Coupling Loss of CICC Conductors** Yi Sun, University of Science and Technology of China, Hefei, China	12:00 - 12:00
3-LP-CC.5	**AC Loss Measurement and Validation of an HTS Soldered Stack Cable for Accelerator Magnets** Dmitry Sotnikov, Paul Scherrer Institut PSI, Switzerland	12:00 - 12:00
3-LP-CC.6	**Study on Coupling AC Loss of Stacked Cable Using the FEM and Equivalent Circuit** Gao Shuyang, Southwest Jiaotong University, Chengdu, China	12:00 - 12:00
3-LP-CC.7	**AC loss measurements of coils wound with single-layer spiral-coated-conductor cables consisting of multiple coated conductors** Hiiragi Uegaki, Kyoto University, Kyoto, Japan	12:00 - 12:00
3-LP-CC.8	**Investigation of AC loss performance in tenon-mortise modularized conductor (TMMC) under the influence of transport triangular wave current** Yuhan Yang, Institute of Plasma Physics, Hefei Institutes of Physical Science, Chinese Academy of Sciences, C	12:00 - 12:00
3-LP-CC.9	**Estimation of the Critical Current in Stacked REBCO Tapes Considering Magnetization Loss and DC Current Transport** Bonghyun Cho, Pusan National University, Busan, Korea, Republic of	12:00 - 12:00

Poster
12:00 - 13:15 East

Motors, Generators and Other Rotating Machines (3)

Jean Lévêque, Université de Lorraine, Nancy, France
Shun Miura, Kyushu University, Fukuoka, Japan

3-LP-RM3.1I	**Rotating Characteristics of a Motor Rotor System Using Superconducting Magnetic Bearings Toward Future Liquid**	12:00 - 12:00

	Hydrogen Pump Systems Yutaka Terao, The University of Tokyo, Japan	
3-LP-RM3.2I	**Calculation of AC loss and current distribution of a DC-excited no-insulation superconducting racetrack coil under AC magnetic field** Yingzhen Liu, Harbin Institute of Technology, Harbin, China	12:00 - 12:00
3-LP-RM3.3I	**Parametric Analytical Modeling of High-Temperature Superconducting Magnets for Motor Applications** Zhenyang Zhang, Southeast University, China	12:00 - 12:00
3-LP-RM3.4I	**Extrapolation of HTS Induction Machine Performance from No-load and Locked-Rotor Ambient Tests using Analytical Models** João F. P. Fernandes, IDMEC, Instituto Superior Técnico, Universidade de Lisboa, Lisbon, Portugal	12:00 - 12:00
3-LP-RM3.5I	**Development of a Lightweight, Modular, and High-Power Superconducting Generator: Design, Simulation, and Experimental Validation** Qian Dong, University of Edinburgh, Edinburgh, United Kingdom	12:00 - 12:00
3-LP-RM3.6I	**Fully HTS Machine for Electric Propulsion: Design and Testing of the Brushless HTS Rotor** Hengpei Liao, Univerisity of Strathclyde, United Kingdom	12:00 - 12:00
3-LP-RM3.7	**Electromagnetic Design of Superconducting Motors Using Permanent Magnets and MgB_2 Wires for Hydrogen Fuel Vehicle Pump Systems** Yutaka Terao, The University of Tokyo, Japan	12:00 - 12:00
3-LP-RM3.8	**Conceptual Design of an Axial Field Machine with Stacked Superconductor** Haigening Wei, University of Cambridge, Cambridge, United Kingdom	12:00 - 12:00
3-LP-RM3.9	**Pulsed Magnetization on Jointless Crossed-loop Field Coils Using Multi-Toroidal Auxiliary Winding** Flávio Martins, Universidade Federal Fluminense, Niterói, Brazil	12:00 - 12:00
3-LP-RM3.10	**Numerical Simulation of a Bulk Superconductor-Based HTS Dynamo-Type Flux Pump** Rui Du, King's College London, United Kingdom	12:00 - 12:00
3-LP-RM3.11	**Design, Optimization, and Analysis of Fully Superconducting Electrical Machine based on HTS REBCO windings** Jun Ma, University of Bristol, Bristol, United Kingdom	12:00 - 12:00
3-LP-RM3.12	**Electromagnetic Performance Comparison of Superconducting Direct-Drive Motor with Different Pole-Slot Configuration for Locomotive Application** Jun Luo, Southwest Jiaotong University, Chengdu, China	12:00 - 12:00
3-LP-RM3.14	**Comparative analysis of the dynamic characteristics of high-temperature superconducting motor through equivalent circuit simulation and experimental testing** Hoon Jung, Jeju National University, Jeju, Korea, Republic of	12:00 - 12:00

3-LP-RM3.15	**Dynamic Performance and Critical Current Characteristics of No-Insulation HTS Magnets in Large-Scale Superconducting Motors** Kuinan Wang, Huazhong University of Science and Technology, China	12:00 - 12:00

Poster
12:00 - 13:15 East

Quench Detection and Protection: LTS

Giuseppe Celentano, ENEA, Frascati, Italy
Daniel Korsun, MIT Plasma Science and Fusion Center, Cambridge, United States

3-LP-LT.1I	**Successful Demonstration of E-CLIQ Inductive Quench Heaters on a Nb_3Sn Short Model Coil**	12:00 - 12:00
3-LP-LT.2	**An Ansys APDL quench suite.** Alessio Dellacasagrande, Istituto Nazionale di Fisica Nucleare, Genoa, Italy	12:00 - 12:00
3-LP-LT.3	**Quench Protection of the Main Quadrupole Magnet for the FCC-hh** Mariusz Wozniak, CERN, Geneva, Switzerland	12:00 - 12:00
3-LP-LT.4	**Development of a CLIQ-Varistor Quench Protection Scheme for the LPF3-U Superconducting Dipole Magnet** Junqing Wang, University of Chinese Academy of Sciences, Beijing, China	12:00 - 12:00
3-LP-LT.5	**General study of inductor discharge through dissipative elements** Alessandro Lampasi, ENEA & DTT, Frascati, Italy	12:00 - 12:00
3-LP-LT.6	**The Online Quench Detection System Based on ZYNQ for Superconducting Magnets of CiADS and HIAF** Beimin Wu, Institute of Modern Physics, Chinese Academy of Sciences., China	12:00 - 12:00

Poster
12:00 - 13:15 East

SQUID Applications and Systems (2)

Dimitri Labat, Chipiron, Paris, France
Keith Krause, Auburn University, Auburn, United States
Marc Gali Labarias, Advanced Industrial Science and Technology (AIST), Tsukuba, Japan

3-EP-AS2.1	**Low Temperature Superconducting Planar Gradiometers with Sub-µm Sized Josephson Junctions and Short Baseline** Jun Wu, Shanghai Institute of Microsystem and Information Technology Chinese Academy of Sciences, China	12:00 - 12:00
3-EP-AS2.2	**A high-voltage SFQ-to-DC driver for wide-range digital SQUID magnetometer based on flux quanta counting scheme** Lingyun Li, Shanghai Institute of Microsystem and Information Technology (SIMIT), Chinese Academy of Scien (CAS), Shanghai, China	12:00 - 12:00
3-EP-AS2.3	**3D SQUIDs comprising amorphous superconductors** Yiying Xu, Technion Israel Institute of Technology, Haifa, Israel	12:00 - 12:00
3-EP-AS2.4	**Moving to scalability and industrialization: Requirements and Methods for Fabrication of High Temperature Superconductor Josephson Circuits** Anna Leese, Quantum Vector Inc., Encinitas, United States	12:00 - 12:00

3-EP-AS2.5	**Parameter extraction of SQUIDs based on nano-junctions** Pascal Febvre, University Savoie Mont Blanc, Le Bourget du Lac, France	12:00 - 12:00
3-EP-AS2.6	**Modular Cryogenic Piezoelectric Scanner for Scanning SQUID Microscopy** Brenna Petrelli, University of Connecticut, United States	12:00 - 12:00

Poster
12:00 - 13:15 East

Nanowire Detectors (3)

Dimitri Labat, Chipiron, Paris, France
Keith Krause, Auburn University, Auburn, United States
Marc Gali Labarias, Advanced Industrial Science and Technology (AIST), Tsukuba, Japan

3-EP-ND3.1I	**Commercially Available Superconducting Nanowire Single-Photon Detector for Ultra-Low Background Axion Experiments** Elmeri Rivasto, University of Southern Denmark, Odense, Denmark	12:00 - 12:00
3-EP-ND3.2	**Improved counting rate of superconducting wide strip photon detector using rectangular wave biasing** Shigehito Miki, National Institute of Information and Communications Technology, Kobe, Japan	12:00 - 12:00
3-EP-ND3.3	**high-temporal-precision detection of single X-ray photons by superconducting nanowires** Shuya Guo, Purple Mountain Laboratories, China	12:00 - 12:00
3-EP-ND3.4	**Signal Processing of Single-Photon Detectors with Superconducting Electronics for Photonic Applications** Maximilian Protte, Paderborn Univeristy, Paderborn, Germany	12:00 - 12:00
3-EP-ND3.5	**Modifying thermal properties of superconducting nanowire single-photon detectors with helium ion irradiation** Pu-Sheng Yuan, Shanghai Institute of Microsystem and Information Technology, Chinese Academy of Science CAS), Shanghai, China	12:00 - 12:00
3-EP-ND3.6	**Saturation single telecom-photon nanowire detector at liquid helium temperature** tao xu, Nanjing University, China	12:00 - 12:00
3-EP-ND3.7	**Ultra low dark count measurements in NbN-based SNSPD for 1064 nm** Devendra Kumar Namburi, University of Glasgow, Glasgow, United Kingdom	12:00 - 12:00

Poster
12:00 - 13:15 East

Microwave Devices and Novel Electronics (3)

Dimitri Labat, Chipiron, Paris, France
Keith Krause, Auburn University, Auburn, United States
Marc Gali Labarias, Advanced Industrial Science and Technology (AIST), Tsukuba, Japan

3-EP-ND3.1I	**Design consideration and validation of SIS mixer-based amplifier circuits** Yoshinori Uzawa, National Astronomical Observatory of Japan, Tokyo, Japan	12:00 - 12:00

3-EP-ND3.2	**Investigating the Influence of Geometry on SJS Performance** Behnoosh Babaghorbani, Delft University of Technology, Delft, Netherlands	12:00 - 12:00
3-EP-ND3.3	**Superconducting Josephson Plasma Emitter for Short-Range Terahertz Communication: Design and Experimental Demonstration** Manabu Tsujimoto, National Institute of Advanced Industrial Science and Technology (AIST), Japan	12:00 - 12:00
3-EP-ND3.4	**Towards developing of a superconducting vortex-based random-access memory** Taras Golod, Stockholm University, Stockholm, Sweden	12:00 - 12:00
3-EP-ND3.5	**Nitrogen Vacancy Diamond Microscope as an Emerging Tool for Magnetic Imaging of Trapped Flux in Superconductors** Sergey K. Tolpygo, Lincoln Laboratory, Massachusetts Institute of Technology, Lexigton, MA, United States	12:00 - 12:00

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Bi-oxides (Wires and Tapes)

Jianyi Jiang, Florida State University, Tallahassee, United States
Petr Zagura, University of Oxford, Oxford, United Kingdom

3-MP-BI.1I	**Studies of the Influence of Filament Non-uniformity on the Critical Current Density of Bi-2212 Composite Wires** Ahmed Hasnine Abuzar, Applied Superconductivity Center, National High Magnetic Field Laboratory, Tallahas United States	12:00 - 12:00
3-MP-BI.2I	**Effects of Cabling Process on Critical Current Distribution in Bi-2212 Wires** Shaon Barua, National High Magnetic Field Laboratory, Tallahassee, FL, United States	12:00 - 12:00
3-MP-BI.3	**Control of melting growth and critical current density of Bi-2212 wires** Xianghong Liu, Northwest Institute for Non-ferrous Metal Research, China	12:00 - 12:00
3-MP-BI.6	**Formation and growth of Bi-2223 phase in Bi-2223/Ag and Bi-2223/AgAu tapes** Xiaobo Ma, Northwest Institute for Nonferrous Metal Research, Xi'an, China	12:00 - 12:00
3-MP-BI.7	**The R & D progress of Bi-2212 superconducting wire in WST** Guodi Wang, Western Superconducting Technologies Co., Ltd, China	12:00 - 12:00
3-MP-BI.8	**Effect of Bending Before Over Pressure Heat Treatment on Current Carrying Capacity of Bi2212 Round Wires** Zhiyou Chen, High Magnetic Field Laboratory, Hefei Institutes of Physical Science, Chinese Academy of Scien China	12:00 - 12:00

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Development of Nb-based Wires

Simon C. Hopkins, CERN, Geneva, Switzerland
Nobuya Banno, National Institute for Materials Science, Tsukuba, Japan

3-MP-NB.1I	**Superconducting properties of diffusion processed Nb_3Al ultra-fine**	12:00 - 12:00

	stranded cables Yoshimitsu Hishinuma, National Institute for Fusion Science, Japan	
3-MP-NB.2	**Effects of high neutron radiation fluences on critical currents in superconducting Nb_3Sn wires** Morteza Asiyaban, TU Wien, Vienna, Austria	12:00 - 12:00
3-MP-NB.3	**A Study on various wire designs for reducing the sub-element diameter of High-J_C Nb_3Sn wires** Youngkyoung Kim, Kiswire Advanced Technology Co., Ltd., Daejeon, Korea, Republic of	12:00 - 12:00
3-MP-NB.4	**Optimization of filament Structure in NbTi Superconducting Wires in WST** Kailin Zhang, Harbin Institute of Technology, Harbin, Heilongjiang, China	12:00 - 12:00
3-MP-NB.5	**Research on 80442-Filament Ultra-Low Loss NbTi Superconducting Wire for Fast-Pulse Accelerator Magnets** Shuai Wang, Western Superconducting Technologies Co. Ltd., China	12:00 - 12:00
3-MP-NB.6	**Study on the fracture mode of Nb_3Sn wire** Zheng Li, Western Superconducting Technologies Co., Ltd, China	12:00 - 12:00
3-MP-NB.7	**Effect of Strain for Newly Designed High Current Density Nb_3Sn Wires with Distributed Barrier Strands (DBS)** Sanghyeun Je, KAT, Daejeon, Korea, Republic of	12:00 - 12:00
3-MP-NB.8	**Effect of the preparation process on the low-temperature mechanical properties of internal-tin Nb_3Sn superconducting strand** Yigong Shi, Northwestern Polytechnical University, China	12:00 - 12:00
3-MP-NB.9	**Study on the influence of Ta and Zr addition on the diffusion reaction of Nb_3Sn** Chunguang Wang, Western Superconducting Technologies Co., Ltd, China	12:00 - 12:00

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Cryogenic Design and Analysis

Carolin Zoller, Paul Scherrer Institut (PSI), Villigen PSI, Switzerland
Yuchen Wang, University of Bath, United Kingdom

3-LP-CD.1I	**Conceptual design and thermal analysis of modular cryostat for a single module of an air-cored partially HTS wind turbine generator** Adil Shah, University of Edinburgh, Edinburgh, United Kingdom	12:00 - 12:00
3-LP-CD.2I	**Advancing Cryogenic Magnetic Regenerator Characterization: Magnetic Transient Methods for Enhanced Sensitivity in Packed Bed Testing** Carlos Hernando, CYCLOMED TECHNOLOGIES, Spain	12:00 - 12:00
3-LP-CD.3I	**Design of heat exchangers for the intermediate stage of a test station for conduction-cooled HTS magnets** Enrico Beneduce, Università degli studi di Milano, Milano, Italy	12:00 - 12:00

3-LP-CD.4	**Impact of Modular Non-Metallic Cryostats in the Performance of Superconducting AC Windings** Luís F.D. Bucho, IDMEC, Instituto Superior Técnico, Universidade de Lisboa, Lisbon, Portugal	12:00 - 12:00
3-LP-CD.5	**Design of the Neon-based Cooling System for the 250 kW Fully Superconducting "SupraGenSys"-Demonstrator** Jannis Sindram, Fraunhofer Institute for Energy Economics and Energy System Technology, Kassel, Germany	12:00 - 12:00
3-LP-CD.6	**Experimental evaluation of the interaction between superconducting magnets and magnetic materials in an active magnetic regenerative refrigerator** Tsuyoshi Shirai, University of Tsukuba, Tsukuba, Japan	12:00 - 12:00
3-LP-CD.7	**Investigation of JT unit in a cryogen-free dilution refrigerator coupling with superconducting quantum computing chips** Dong Ma, State Key Laboratory of Infrared Physics, Shanghai Institute of Technical Physics, Chinese Academy Sciences, Shanghai, China	12:00 - 12:00
3-LP-CD.8	**Thermal insulation performance of multilayer insulation under different wrapping conditions** Hirofumi Watanabe, Chubu University, Japan	12:00 - 12:00
3-LP-CD.9	**Investigation on the heat exchange system of the millikelvin dilution refrigerator with high cooling capacity for cooling superconducting quantum computers** Yujia Zhai, Shanghai Institute of Technical Physics, Chinese Academy of Sciences, China	12:00 - 12:00
3-LP-CD.10	**Pressure variation mechanisms in high-cooling capacity dilution refrigerators for superconducting quantum chip cooling** Shiguang Wu, University of Chinese Academy of Sciences, Shanghai, China	12:00 - 12:00
3-LP-CD.11	**Investigation and Optimization of Heat Loss Suppression in Cryogen-Free Dilution Refrigerators for Cooling Superconducting Quantum Processors** Shuting Lu, State Key Laboratory of Infrared Physics, Shanghai Institute of Technical Physics, Chinese Acade Sciences, Shanghai, China	12:00 - 12:00

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Transition Edge Sensors

Dimitri Labat, Chipiron, Paris, France
Keith Krause, Auburn University, Auburn, United States
Marc Gali Labarias, Advanced Industrial Science and Technology (AIST), Tsukuba, Japan

3-EP-ES.1I	**Fabrication of a Fast Transition Edge Sensor Using Focused Ion Beam** M. Amin Choghadi, The University of Tokyo, Tokyo, Japan	12:00 - 12:00
3-EP-ES.2I	**Development of High Quantum Efficiency Titanium Transition-Edge Sensors for 1550 nm Single-Photon Detection** Xiaolong Xu, National Institute of Metrology (NIM), Beijing, China	12:00 - 12:00
3-EP-ES.3	**Towards a low energy calibration of transition-edge sensor X-ray spectrometer**	12:00 - 12:00

Emanuele Taralli, Netherlands Institute for Space Research, Netherlands

3-EP-ES.4	**Mo/Au Transition-Edge Sensors for X-ray detection: basic parameters and excess noise** Carlos Pobes, Instituto de Nanociencia y Materiales de Aragón, CSIC-Univ. Zaragoza, Zaragoza, Spain	12:00 - 12:00
3-EP-ES.5	**Temperature and magnetic field dependence of resistivity and magnetoresistance in electrodeposited Bismuth samples for X-ray Transition-Edge Sensor** Alessandro Mauro, Università degli Studi di Salerno, Salerno, Italy	12:00 - 12:00
3-EP-ES.6	**Thermal treatment of Ti/Au TES for photon counting** Eugenio Monticone, I.N.Ri.M - Istituto Nazionale di Ricerca Metrologica, Strada delle Cacce 91, 10135 Turin, It	12:00 - 12:00
3-EP-ES.7	**Characterization of electrical crosstalk in FDM readout for CMB experiment** Eugenia Di Giorgi, University of Trento, Trento, Italy	12:00 - 12:00

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AC Losses and Magnetization

Emma Ghiara, ICMAB-CSIC, Bellaterra, Catalunya, Spain
Raphael Unterrainer, TU Wien, Vienna, Austria

3-MP-AC.1I	**AC loss of parallel-wound HTS coils** Min Zhang, University of Strathclyde, United Kingdom	12:00 - 12:00
3-MP-AC.2	**Magnetisation of Assemblies of Thin Superconducting Strips and Potential Routes for AC Loss Reduction in REBCO Cables** Yifeng Yang, University of Southampton, United Kingdom	12:00 - 12:00
3-MP-AC.3	**3D Numerical Modelling of AC Loss of Multifilamentary MgB_2 Wires at 20 K** Zhenan Jiang, Victoria University of Wellington, LOWER HUTT, New Zealand	12:00 - 12:00
3-MP-AC.4	**Geometry extraction and magnetisation modelling of Nb_3Sn wires: Validation of simulations with magnetometry data** Josef Baumann, CERN, Meyrin, Switzerland	12:00 - 12:00
3-MP-AC.5	**Photolithographic fabrication of multifilamentary superconducting tapes with reduced AC losses for cable fabrication** Simona Hornáčková, Slovak University of Technology in Bratislava, Faculty of Materials Science and Technol Trnava, Trnava, Slovakia	12:00 - 12:00
3-MP-AC.6	**AC Loss of the HTS Armature in a 100 kW Fully HTS Aviation Motor** Rui Li, University of Strathclyde, Glasgow, United Kingdom	12:00 - 12:00
3-MP-AC.7	**AC Loss of Double Pancake Coils Wound with Striated Copper-Coated REBCO Tape Using the Laser-Scribed Method** Yuuki Himeno, kyushu university, Japan	12:00 - 12:00
3-MP-AC.9	**Improvement of pulsed-field magnetization characteristics by combining a holed REBCO bulk with a cross-shaped soft-iron yoke** Kazuya Yokoyama, Ashikaga University, Ashikaga, Japan	12:00 - 12:00

3-MP-AC.10	**DC and AC properties of 49 strands circular cables made of differently sheathed ultrafine MgB_2 superconducting wires** Ján Kováč, Institute of Electrical Engineering of SAS, Bratislava, Slovakia	12:00 - 12:00
3-MP-AC.11	**Ferromagnetism-diamagnetism competence in Ni(x%)/YBCO/$LaAlO_3$ heterostructures from magnetic measurements** Henry Sanchez-Cornejo, National University of San Marcos, Lima, Peru	12:00 - 12:00

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Joints, Contacts, Insulation (2)

Yasuaki Takeda, National Institute for Materials Science, Tsukuba, Japan
Zhenchuang Zhang, Institute of Plasma Physics, Hefei Institutes of Physical Science, Hefei City, China

3-MP-JC2.1I	**Advanced Microscopy Investigation and Analysis of the MgB_2 Superconducting Reacted Joint Interface** Hao Liang, The University of Queensland, Brisbane, Australia	12:00 - 12:00
3-MP-JC2.2	**Development of low-resistance soldered joints between REBCO coated conductors** Nooshin Goodarzi, King's College London, London, United Kingdom	12:00 - 12:00
3-MP-JC2.3	**Superconducting Joint of Monofilamentary MgB_2 Wires using FAST** Yeasin Tarek, The University of Queensland, Brisbane, Australia	12:00 - 12:00
3-MP-JC2.4	**Full-time-scale analytical model for flux dissipation in coils with persistent joints** Petr Zagura, University of Oxford, Oxford, United Kingdom	12:00 - 12:00
3-MP-JC2.5	**Effects of the nonlinear superconducting resistance on the joint resistance of superconducting tapes through normal metals** Yasunori Mawatari, National Institute of Advanced Industrial Science and Technology (AIST), Tsukuba, Japan	12:00 - 12:00
3-MP-JC2.6	**Using eutectic reactions to make joints for reacted multifilamentary MgB_2 wires** Joshua Winger, University of Oxford, Oxford, United Kingdom	12:00 - 12:00
3-MP-JC2.7	**Grasp and Prediction of Joint Resistivity in Sonic-Welding Process of REBCO Coated Conductors Based on Limited Numbers of Experimental Data** Shinya Sera, Kyushu Univ., Fukuoka, Japan	12:00 - 12:00
3-MP-JC2.8	**Dielectric Breakdown Characteristics Considering Surface Roughness in Accelerator Insulation Design** minkyung jeong, KOREA NATIONAL UNIVERSITY OF TRANSPORTATION, Korea, Republic of	12:00 - 12:00
3-MP-JC2.9	**Quantifying strain energy released as heat in CTD-101K magnet impregnant** Jan van Steenlandt, University of Twente, Enschede, Netherlands	12:00 - 12:00
3-MP-JC2.10	**Advanced Insulation Design for HTS Coils : Dielectric Strength in High-Vacuum Conditions** minkyung jeong, KOREA NATIONAL UNIVERSITY OF TRANSPORTATION, Korea, Republic of	12:00 - 12:00

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Critical Current and Flux Pinning

Jan Jaroszynski, National High Magnetic Field Laboratory, Tallahassee, United States
Romain Babouche, University of Geneva, Geneva, Switzerland

3-MP-FP.1I	**Surface Impedance Measurements on Tl-1223 Films in DC Magnetic Fields: Insights for High-Temperature Superconducting Beam Screens** Alessandro Magalotti, Roma Tre University, Rome, Italy	12:00 - 12:00
3-MP-FP.2I	**Highly effective secondary phase doping in pulsed laser deposited YBCO thin films** Violetta Poletto Dotsenko, University of Roma Tre, Rome, Italy	12:00 - 12:00
3-MP-FP.3	**Vortex matching in MgB_2 thin films by imprinting periodic pinning arrays with a focused helium-ion beam** Ying Han, Peking University, Beijing, China	12:00 - 12:00
3-MP-FP.4	**Critical Current and Electromagnetic Force of a Novel HTS Strand Weaved by Transposed REBCO Tapes at low Temperature** Wei Pi, North China Electric Power University, China	12:00 - 12:00
3-MP-FP.5	**Unlocking the performance evolution of REBCO tapes irradiated by deuterium plasma** Hongwei Gu, Institute of Electrical Engineering, Chinese Academy of Sciences, Beijing, China	12:00 - 12:00
3-MP-FP.6	**2G HTS Tape to Tape Comparison of Ic Degradation From Heat Processes** Maise Shepard, Commonwealth Fusion Systems, United States	12:00 - 12:00
3-MP-FP.7	**Surface Impedance Study of REBCO Coated Conductors under High Magnetic Fields for High-Energy Applications** irfan ahmed, ICMAB CSIC, Barcelona, Spain	12:00 - 12:00
3-MP-FP.8	**The influence of IHT on in-field J_c properties of TFA-MOD $(Y_{0.77}Gd_{0.23})Ba_2Cu_3O_y$+$BaHfO_3$ CCs** Yuki Ogimoto, Seikei University, Tokyo, Japan	12:00 - 12:00
3-MP-FP.9	**The effect of a high volume of $BaHfO_3$ NPs on the in-field J_c properties of TFA-MOD $(Y_{0.77}Gd_{0.23})$ $Ba_2Cu_3O_y$+$BaHfO_3$ CCs** Yohei Nakada, Seikei University, Tokyo, Japan	12:00 - 12:00
3-MP-FP.10	**Synergistic Effect of BMO_3 Additions and Film Intrinsic Defects of MOD-YBCO Superconducting Coated Conductors on Flux Pinning** Rongtie Huang, Shanghai Creative Superconductor Technologies Co. Ltd., shanghai, China	12:00 - 12:00

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Bulk Superconductors (2)

Jan Plechacek, CAN Superconductors, Czech Republic
John Durrell, University of Cambridge, United Kingdom

3-MP-BS2.1I	**Waveform Controlled Pulsed Field Magnetization with Negative**	12:00 - 12:00

	Feedback of GdBCO Bulk at 30 K Tetsuya Ida, Tokyo University of Marine Science and Technology, Tokyo, Japan	
3-MP-BS2.2	**Critical current and trapped magnetic field properties of $CaKFe_4As_4$ superconducting bulk** Kenji Kawashima, IMRA JAPAN Co., Ltd., Kariya, Aichi, Japan	12:00 - 12:00
3-MP-BS2.3	**Tunable superconductivity in molybdenum carbide through surface modification** Jianfeng Li, Northwest Institute for Non-ferrous Metal Research, China	12:00 - 12:00
3-MP-BS2.4	**Manufacturing and Characterization of Al-doped MgB_2 superconducting bulks** Yingqing Wang, King's College London, London, United Kingdom	12:00 - 12:00
3-MP-BS2.5	**Enhancing EuBCO Superconductivity: A Microstructural Investigation of Additive Effects** Veronika Kuchárová, Slovak Academy of Sciences, Košice, Slovakia	12:00 - 12:00
3-MP-BS2.7	**Force-thermal property study of additive manufacturing YBCO superconductor** Baoqiang Zhang, Lanzhou University, Lanzhou, China	12:00 - 12:00
3-MP-BS2.8	**Improved flux pinning properties of the ferrocene added YBCO superconductor** Subhransu Kumar Panda, Indian Institute of Technology Roorkee, Roorkee, India	12:00 - 12:00
3-MP-BS2.9	**The influence of compaction method on the properties of ex-situ MgB_2 bulks** Lucas Barboza Sarno da Silva, University of São Paulo, Lorena, SP, Brazil	12:00 - 12:00
3-MP-BS2.10	**Numerical Simulation of High-Field Bulk Superconducting Magnet Reinforcement Using Beryllium Copper** Dongkai Chen, King's College London, London, United Kingdom	12:00 - 12:00
3-MP-BS2.11	**Numerical simulation of the performance of a bulk superconductor-based microfluidic magnetic separation chip** Zhenyang Xu, King's College London, London, United Kingdom	12:00 - 12:00

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Fe-based Materials (2)

Laura Piperno, ENEA, Italian National Agency for New Technologies, Energy and Sustainable Economic Development, Frascati, Rome, Italy
Fumitake Kametani, Florida State University, Tallahassee, United States

3-MP-FE2.1I	**Polycrystalline phase formation of Co-doped $BaFe_2As_2$ studied by in-situ 4D-STEM** Yiming MA, Kyushu University, Fukuoka, Japan	12:00 - 12:00
3-MP-FE2.2I	**Properties of high-*Jc* Fe(Se,Te) coated conductors with a conductive buffer layer architecture** Achille Angrisani Armenio, ENEA, Italian National Agency for New Technologies, Energy and Sustainable Ecor Development, Frascati, Rome, Italy	12:00 - 12:00

3-MP-FE2.3I	**Flux Pinning Properties of High-performance Stainless Steel/Ag-sheathed $Ba_{1-x}K_xFe_2As_2$ Tapes** Junyi Luo, Tohoku University, Sendai, Japan	12:00 - 12:00
3-MP-FE2.4	**Progress of high-T_c iron-based superconductors by high-pressure growth technique** Shiv Singh, Institute of High-Pressure Physics (IHPP), Polish Academy of Sciences, Warsaw, Poland	12:00 - 12:00
3-MP-FE2.5	**Boosting the superconducting properties of Fe(Se, Te) bulks via an easy chemical doping method** Jixing Liu, Northwest Institute for Non-ferrous Metal Research, China	12:00 - 12:00
3-MP-FE2.6	**Critical current density of natural grain boundaries in polycrystalline $Ba(Fe,Co)_2As_2$** Takafumi Hatano, Nagoya University, Nagoya, Japan	12:00 - 12:00
3-MP-FE2.7	**An Extension of Gurevich-Cooley's Model to Uniaxially Anisotropic Superconductors -A Possible Interpretation of $J_c(H)$ Hysteresis in $Ba_{1-x}K_xFe_2As_2$ Tapes-** Tatsunori Okada, Kyushu Institute of Technology, Kitakyushu, Japan	12:00 - 12:00
3-MP-FE2.8	**Tuning the Superconducting Properties of K-Ba122 Bulks via Composition Adjustment and Heat Treatment** Md Rafsun Jani, FAMU-FSU College of Engineering, Tallahassee, United States	12:00 - 12:00
3-MP-FE2.9	**Impact of granularity on AC losses in Ba-122 superconducting tapes** Nick Strickland, Victoria University of Wellington, Lower Hutt, New Zealand	12:00 - 12:00
3-MP-FE2.10	**Experimental observation of various phase transitions in granular 1111 iron-based superconducting films.** Karen Aguilar-Mendoza, CINVESTAV, CDMX, Mexico	12:00 - 12:00
3-MP-FE2.11	**Experimental study on the chemical compatibility of Ta-based sheaths with 1144 Iron Based Superconductors for PIT wires** Anastasiya Duchenko, Roma Tre University, Italy	12:00 - 12:00
3-MP-FE2.12	**Understanding the route to purify grain boundaries in Ba122 through Y doping** Akiyasu Yamamoto, Tokyo University of Agriculture and Technology, Japan	12:00 - 12:00

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Posters

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Levitation (2)

Rubens de Andrade Jr, Federal University of Rio de Janeiro, Rio de Janeiro, Brazil
Guilherme Sotelo, Fluminense Federal University, Niterói, Brazil

3-LP-LE2.1	**Simulation-based optimization of magnet configurations for superconducting magnetic bearings**	12:00 - 12:00

Johannes Saske, Leibniz Institute for Solid State and Materials Research, Dresden, Germany

3-LP-LE2.3	**Magnetic force characteristics of radial bearings based on closed and non-closed HTS winding tapes** Sergei Pokrovskii, National Research Nuclear University MEPhI (NRNU MEPHI), Moscow, Russian Federation	12:00 - 12:00
3-LP-LE2.4	**Studies of the Effect of the Stack Configuration on Dynamic Characteristics of a Stack-Type HTS Maglev System** Wenjiao Yang, Guangdong Ocean University, Zhanjiang, China	12:00 - 12:00
3-LP-LE2.5	**Stroboscopic imaging system for studying the dynamics of superconducting levitation bearings** James Storey, Victoria University of Wellington, Wellington, New Zealand	12:00 - 12:00
3-LP-LE2.6	**A study on the linear propulsion system based on superconducting magnets for the Korean hyperloop** Jungmin Jho, Korea Railroad Research Institute, Uiwang, Korea, Republic of	12:00 - 12:00
3-LP-LE2.8	**Proposal of Levitation System Using HTS Bulks Achieving Both Levitation and Guidance Properties.** Taiga Kagoshima, Sophia University, Japan	12:00 - 12:00
3-LP-LE2.10	**Design and Dynamic Simulation of a V-Shaped HTS Maglev System for Urban Rail Transit** Gino D'Ovidio, University of L'Aquila, L'Aquila, Italy	12:00 - 12:00
3-LP-LE2.11	**Study of coated conductor stacks for application in planar superconducting magnetic bearings** Ruben Hühne, Leibniz Institute for Solid State and Materials Research, Dresden, Germany	12:00 - 12:00

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Measuring Techniques

Lingfeng Lai, Beijing Eastforce Superconducting Technology Co., Ltd., China

3-LP-MT.1I	**Localization of Quench Initiation During Magnet Training in Nb_3Sn Rutherford Cables By Combining Novel Pick-up Coils and Advanced Modelling** Ruben Keijzer, University of Twente, Netherlands	12:00 - 12:00
3-LP-MT.2	**Local investigations of magnetic flux density distributions in superconducting samples by scanning Hall probe magnetometry** Michela Fracasso, Politecnico di Torino, Torino, Italy	12:00 - 12:00
3-LP-MT.3	**The magnetic field measurement for the superconducting magnet of combined multipoles in HIAF** Jing Yang, Institute of Modern Physics, China	12:00 - 12:00
3-LP-MT.5	**The distributed strain measurement of bipolar superconducting magnet coil based on OFDR distributed fiber optic sensor** Canjie Xin, Institute of Modern Physics , Chinese Academy of Sciences, Lanzhou, China	12:00 - 12:00
3-LP-MT.6	**A Study on the PRPD Technique for Defect Diagnosis of Epoxy**	12:00 - 12:00

Resin-Impregnated Superconducting Coils
Jaesang Kim, korea national university of transportation, Chungju, Korea, Republic of

3-LP-MT.7 **Physics-Informed ConvLSTM U-Net for Real-Time Temperature Monitoring and Distribution Prediction in Superconducting Magnet Cooling** 12:00 - 12:00
MingLiang LIU, Institute Of Plasma Physics Chinese Academy Of Sciences, China

3-LP-MT.8 **Advanced Reel-to-Reel Devices for Lengthwise Critical Current Characterization of REBCO CC at Low Temperatures and Moderate Magnetic Fields** 12:00 - 12:00
Rastislav Ries, National High Magnetic Field Laboratory, Florida State University, Tallahassee, FL 32310, Unit

3-LP-MT.9 **Development of joint test equipment for mass production evaluation** 12:00 - 12:00
Shoichi YOKOYAMA, Japan Superconductor Technology, Inc, Kobe, Japan

3-LP-MT.10 **Superconducting-compensated DCCT large current measurement technique for high-temperature superconducting cables** 12:00 - 12:00
Shengnan Zou, Shanghai Yixi Technology Development Co., Ltd., Shanghai, China

3-LP-MT.11 **Development of the multichannel time domain reflectometer for HL-LHC superconducting magnets' instrumentation testing** 12:00 - 12:00
Jaromir Ludwin, Institute of Nuclear Physics Polish Academy of Sciences, Krakow, Poland

3-LP-MT.12 **Upgrade of the automatic DC high voltage multichannel insulation tester for superconducting circuits of the LHC** 12:00 - 12:00
Karol Marciniak, Institute of Nuclear Physics Polish Academy of Sciences, Krakow, Poland

3-LP-MT.13 **Impedance-frequency characterization of a HL-LHC Nb3Sn MQXFS model magnet during full power operation at nominal current** 12:00 - 12:00
Magnus Christensen, CERN, Geneva, Switzerland

3-LP-MT.14 **A Magnetic Field Scanner System (MFSS) for the magnet prototype MAGDEM of the ISOLDE Superconducting Recoil Separator (ISRS).** 12:00 - 12:00
Rafael Berjillos, University of Huelva, Huelva, Spain

3-LP-MT.15 **Quantitative Mapping of Current Redistribution in NI-HTS planner Coils Using Multi-Channel Gradiometric Antennas** 12:00 - 12:00
Gonçalo Tomás, University of Twente, Netherlands

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Magnetic Separation

Sonja Schlachter, Karlsruhe Institute of Technoloky, Karlsruhe, Germany

3-LP-MS.1 **Use of high-temperature superconducting tapes to improve the multiplication coefficient of vector inversion generators: analytical modelling results and perspectives** 12:00 - 12:00
Thor Wens, University of Liège, Liège, Belgium

3-LP-MS.2 **Enhancing vector inversion generators with high-temperature superconducting tapes: first experimental validation using tapes with non-magnetic and magnetic substrates** 12:00 - 12:00

Jean-Francois Fagnard, University of Liège, Liège, Belgium

3-LP-MS.3	**A High-Temperature Superconducting Aviation Exploration Transmitting Coil with a Large Magnetic Moment** Shuhao Peng, Shanghai Jiaotong University, China	12:00 - 12:00

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Detector Magnets and Current Leads

Sonja Schlachter, Karlsruhe Institute of Technoloky, Karlsruhe, Germany

3-LP-DM.1	**The Scale Model-Driven Study on CEE Superconducting Dipole Magnet Coil Technology: Engineering Validation of Discrete Distributed Coil Technology** Yujin Tong, Institute of Modern Physics, Chinese Academy of Sciences, Lanzhou, China	12:00 - 12:00
3-LP-DM.3	**Quench protection of a NbTi detector magnet: a case study** François-Paul Juster, Université Paris-Saclay, CEA, 91191 Gif-sur-Yvette, France	12:00 - 12:00
3-LP-DM.4	**Preliminary design for the future muon collider detector magnet MUSIC** Andrea Bersani, Istituto Nazionale di Fisica Nucleare, Genova, Italy	12:00 - 12:00
3-LP-DM.5	**Experimental Demonstration of Low Heat Load 3 kA Hybrid Current Leads** Jasper van der Werf, CERN, Geneva, Switzerland	12:00 - 12:00
3-LP-DM.6	**Design and Experimental Investigation of 13.4 kA REBCO HTS Current Lead for Fusion Application** Qing Li, Shanghai Dianji University, China	12:00 - 12:00

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Design and Analysis of TF Fusion Magnets

Marco Breschi, University of Bologna, Bologna, Italy
Aldo Di Zenobio, ENEA, Frascati (RM), Italy

3-LP-TM.1I	**Status of Nb_3Sn cable-in-conduit conductors development for future fusion reactors at ASIPP** Chao Dai, Institute of Plasma Physics, Chinese Academy of Sciences, China	12:00 - 12:00
3-LP-TM.3	**Progress of High J_c Tororidal Field Superconducting Magnet for Next Generation Fusion Reactor in China** Jinxing Zheng, Institute of Plasma Physics, Chinese Academy of Sciences, China	12:00 - 12:00
3-LP-TM.4	**Estimation of mutual inductance caused by misalignment of JT-60SA TF coil** Miyu Kazuno, Sophia University, Japan	12:00 - 12:00
3-LP-TM.5	**Thermal Processing Deformation Simulation and Experimental Analysis of CRAFT TF High-Field Coil** Yifei Wu, The Hefei Institutes of Physical Science, Chinese Academy of Sciences, Hefei 230031, China, China	12:00 - 12:00

3-LP-TM.6	**Numerical investigation of electromagnetic and thermal behavior of multi-bundled D-shape coils** Takanobu Mato, Hokkaido University, Japan	12:00 - 12:00
3-LP-TM.7	**Design and Analysis of High-Temperature Superconducting Tokamak Magnet with Liquid Hydrogen Cooling System** Pai Peng, Shanghai Jiao Tong University, China	12:00 - 12:00
3-LP-TM.8	**Mechanical Designs of Toroidal Field Coils for a Lower Aspect Ratio EU-DEMO Fusion Power Plant** Jack Greenwood, École Polytechnique Fédérale de Lausanne (EPFL), Villigen PSI, Switzerland	12:00 - 12:00
3-LP-TM.9	**Conductor and Winding Pack Design for DEMO TF Coil based on React&Wind Nb_3Sn Flat Cable** Kamil Sedlak, EPFL, Villigen PSI, Switzerland	12:00 - 12:00
3-LP-TM.10	**Manufacture and SULTAN testing of a TF cable design for the STEP tokamak** Jacob Rochester, Tokamak Energy Ltd, Abingdon, United Kingdom	12:00 - 12:00
3-LP-TM.11	**Design and Manufacturing of the Terminal Box for the CFETR TF coil** Xiaogang LIU, Institute of Plasma Physics, Hefei Institutes of Physical Science, Chinese Academy of Sciences,	12:00 - 12:00

Poster
12:00 - 13:15 East

High Field Magnets (2)

Loïc Quéval, University Paris-Saclay, Gif-sur-Yvette, France
Qiuliang Wang, Institute of Electrical Engineering, Chinese Academy of Sciences, Beijing, China

3-LP-HF2.1I	**Electrical and mechanical characteristics of HTS mock-up magnets wound with various REBCO tapes under high magnetic field at 4.2 K** Jungbin Song, Laboratoire National des Champs Magnétiques Intenses - European Magnetic Field Laboratory, UPR3228 Centre National de la Recherche Scientifique, Univ. Grenoble -Alpes, Institut National des Sciences Appliquées de Toulouse, Univ. Paul Sabatier, Grenoble, France	12:00 - 12:00
3-LP-HF2.2	**Reduced the screening-current-induced stress of NI-REBCO coil by artificially degrading the critical current of REBCO tape through heat treatment** Zhaofei Jiang, High Magnetic Field Laboratory, Hefei Institutes of Physical Science, Chinese Academy of Scien China Zhen Fang, High Magnetic Field Laboratory, Hefei Institutes of Physical Science, Chinese Academy of Science	12:00 - 12:00
3-LP-HF2.3	**Effect of winding densities on screening current behaviors in REBCO coils** Junichiro Takei, Hokkaido University, Sapporo, Japan	12:00 - 12:00
3-LP-HF2.4	**Experimental evidence of the self-magnetization origin of transient voltages over HTS coil** Alexandre ZAMPA, The University of Tokyo, Kashiwa, Japan	12:00 - 12:00
3-LP-HF2.5	**Numerical investigation of turn-to-turn contact behaviors of NI REBCO coils reinforced with overbanding**	12:00 - 12:00

Yingzheng Pan, Hokkaido University, Sapporo, Japan

3-LP-HF2.6	**Experimental and Numerical Study of I_c and n-value of Non-insulation HTS Coils with Local Defects** Yong Chen, Institute of Electrical Engineering, Chinese Academy of Sciences, Beijing, China	12:00 - 12:00
3-LP-HF2.7	**FE model of screening currents combined with PEEC model of high-field HTS magnets** Nikola Jerance, CEA, Paris Saclay, France	12:00 - 12:00
3-LP-HF2.8	**Experimental Study on Innovative Methods to Improve Electromechanical Performance in Insert HTS Coil** Xinxing Qian, High Magnetic Field Laboratory, Hefei Institutes of Physical Science, Chinese Academy of Scien China	12:00 - 12:00
3-LP-HF2.10	**Modelling of screening currents and electro-thermal quench in the REBCO nested stack of pancakes in an all superconducting 40 T magnet** Enric Pardo, Institute of Electrical Engineering SAS, Bratislava, Slovakia	12:00 - 12:00
3-LP-HF2.11	***Dynamic Evolution of Multi-Physics-Dependent Non-Uniform Inter-Turn Contact Resistivity in No-Insulation REBCO Magnets: Modeling and Experimental Validation*** Shuowei Gao, Institute of plasma physics, Chinese Academy of Sciences, China	12:00 - 12:00

Poster
12:00 - 13:15 East

HTS Magnets (2)

Arno Godeke, Compact PT, Hengelo, Netherlands

3-LP-HT.1I	**Study on Inter-Turn Contact Mechanical Behavior and Elastoplastic Evolution Mechanism in High-Field REBCO Magnets** WENZHE HONG, Hefei Institute of Physical Sciences, China	12:00 - 12:00
3-LP-HT.2	**Analysis on Current and Magnetic Field Distribution of Gourd-shaped HTS Plates with Narrow Multi-notch** Ziqing Meng, North China Electric Power University, China	12:00 - 12:00
3-LP-HT.3	**Horizontal winding methods for undulator using high-temperature superconductor tapes** Satoshi Sano, Osaka Institute of Technology, Japan	12:00 - 12:00
3-LP-HT.4	**Stability Study of Compact High-Temperature Superconducting Magnets for Extreme Operating Conditions** haiyang Liu, Institute of Plasma Physics, Chinese Academy of Sciences, China	12:00 - 12:00
3-LP-HT.6	**Design of a REBCO large bore 10 T split-coil magnet and small scale prototype validation** Arnaud Badel, Univ. Grenoble Alpes, CNRS, Grenoble INP, Grenoble, France	12:00 - 12:00
3-LP-HT.7	**HTS Prototype Coil Design and Modelling for Radiation Hardness Experiments** Martina Casciello, Politecnico di Torino, Torino, Italy	12:00 - 12:00

3-LP-HT.8	**Thermal runaway of REBCO coils immersed in liquid nitrogen/hydrogen** Shinsaku IMAGAWA, National Institute for Fusion Science, Toki, Japan	12:00 - 12:00
3-LP-HT.9	**Electromagnetic Characterization of a Combined Arc-Shaped Racetrack High-Temperature Superconducting Dipole Magnet** Gang He, the University of Chinese Academy of Sciences/Institute of Modern Physics (IMP), Chinese Academy Sciences(CAS), Lanzhou, China	12:00 - 12:00
3-LP-HT.10	**Performance limits of sextupole magnets for a Muon Collider** Daniel Novelli, Sapienza University of Rome, Rome, Italy	12:00 - 12:00

Poster
12:00 - 13:15 East

Accelerator Cables

Amalia Ballarino, CERN, Geneva, Switzerland

3-LP-AC.1I	**Multi-scale modelling of Nb_3Sn cable for accelerator magnets** Joep Léon Van den Eijnden, ETH Zürich, Zürich, Switzerland	12:00 - 12:00
3-LP-AC.2	**The Ability to Control Facet Size Balance in a Keystoned Rutherford Cable** Ian Pong, Lawrence Berkeley National Laboratory, Berkeley, United States	12:00 - 12:00
3-LP-AC.4	**The first kA class transposed cable with Iron-Based Superconducting tapes** Juan wang, the Institute of High Energy Physics, Chinese Academy of Sciences (IHEP, CAS), China	12:00 - 12:00
3-LP-AC.5	**Study on the influence of toroidal Rutherford cable twist on the accuracy and uniformity of magnetic field** Aihua Xu, Changzhou Vocational Institute of mechatronic Technology, Changzhou, China	12:00 - 12:00

Poster
12:00 - 13:15 East

Power Transmission Lines and Cables

Wescley Tiago Batista de Sousa, Karlsruhe Institute of Technology, Eggenstein-Leopoldshafen, Germany

3-LP-PT2.1I	**Power flow calculation in Superconducting Multiterminal DC grids** Emiliano Guerra, University of Bologna, Bologna, Italy	12:00 - 12:00
3-LP-PT2.2I	**Thermal Parameter Estimation for HVDC Superconducting Cables: a FEM-Based Analysis** Mattia Simonazzi, University of Bologna, Bologna, Italy	12:00 - 12:00
3-LP-PT2.3I	**Unwanted Harmonics and Transport Losses in CORC Cables: Effects of their Magneto Angular Anisotropy** Hasan Al-ssalih, University of Leicester, Leicester, United Kingdom	12:00 - 12:00
3-LP-PT2.4	**IRIS 1 GW supercondicting line: quench analysis and protection system** stefano maffezzoli felis, INFN -Milano LASA, Italy	12:00 - 12:00
3-LP-PT2.5	**Lumped-parameter transient model to simulate superconducting**	12:00 - 12:00

	power cables in power systems Juan M. Delgado Q., Universidad Nacional Autónoma de México, México city, Mexico	
3-LP-PT2.7	**Transient fault response and recovery capability of HTS switching station in multi-system cooperative operation mode** Hanyu Liang, Shanghai Jiao Tong University, China	12:00 - 12:00
3-LP-PT2.8	***AC Losses Analysis in HTS DC Cable in the Presence of High Frequency Harmonics*** Timofey Ryabin, JSC "CRYOPOWERSYSTEMS", Moscow, Russian Federation	12:00 - 12:00
3-LP-PT2.9	**Modelling and Analysis of HVDC HTS Cables for Power Transmission** Weijia Yuan, University of Strathclyde, United Kingdom	12:00 - 12:00
3-LP-PT2.10	***Impact of installation and cooldown stresses on the performance of triaxial HTS cable*** Bryan Sperry, VEIR, Boston, United States	12:00 - 12:00
3-LP-PT2.11	**Electro-Thermal Modelling of HTS Cable for DC Power Transmission** Eugen Seiler, Institute of Electrical Engineering of Slovak Academy of Sciences, Bratislava, Slovakia	12:00 - 12:00
3-LP-PT2.12	**Case studies on the fluid-dynamic behavior of superconducting cables during fault conditions** Andrea Musso, Ricerca sul Sistema Energetico, RSE S.p.A., Italy	12:00 - 12:00
3-LP-PT2.14	**Consideration of Superconducting DC Cables for Aircraft** Hina Nitano, Chubu University, Kasugai, Aichi, Japan	12:00 - 12:00

Poster
12:00 - 13:15 East

Superconducting Quantum Bits (3)

Dimitri Labat, Chipiron, Paris, France
Keith Krause, Auburn University, Auburn, United States
Marc Gali Labarias, Advanced Industrial Science and Technology (AIST), Tsukuba, Japan

3-EP-QB3.2	**Organic self-assembled monolayers as barrier material in Josephson junctions** Moritz Singer, Technical University of Munich, Munich, Germany	12:00 - 12:00
3-EP-QB3.3	**Junction-less Superconducting Qubit** Sean Crowe, Naval Information Warfare Center, San Diego, United States	12:00 - 12:00
3-EP-QB3.4	**Quantum Phase Slip Effects in NbN Superconducting Nanowires: Toward QPS-Based Quantum Devices** Wang Xiaoni, Shanghai Institute of Microsystem and Information Technology, Shanghai, China	12:00 - 12:00
3-EP-QB3.5	**Superconducting Qubits with Niobium-based Josephson Junctions** Li Qingjian, Chinese Academy of Sciences (CAS), Shanghai, China	12:00 - 12:00
3-EP-QB3.6	**Improvements of the Single Angle Overlap Josephson Junction Technology for Qubit Application** Muhammad Shoaib, University of Campania "Luigi Vanvitelli", Caserta, Italy	12:00 - 12:00

3-EP-QB3.7	**Galvanic-interconnection for the readout multiplexing in the superconducting quantum circuit utilizing the flip-chip bonding** Daisuke Saida, Fujitsu Limited., Kawasaki, Japan	12:00 - 12:00
3-EP-QB3.8	**Hidden Threats in Quantum Computers: Data Transmission Trojans in Superconducting Qubit Readout Circuits** Selçuk Köse, University of Rochester, Rochester, NY, United States	12:00 - 12:00

Poster
12:00 - 13:15 East

Transformers and Fault Current Limiters

Wescley Tiago Batista de Sousa, Karlsruhe Institute of Technology, Eggenstein-Leopoldshafen, Germany
Bin Xiang, Xi'an Jiaotong University, Xi'an, China

3-LP-CL.1I	**Characterization and tests of the HTS tape and the preliminary pancake for the RSFCL of the SCARLET project** Diego Brasiliano, SuperGrid Institute, Lyon, France	12:00 - 12:00
3-LP-CL.2I	**AC breakdown strength of layered tape insulation systems in liquid nitrogen using different spacer materials** Christof Humpert, TH Köln - University of Applied Sciences, Cologne, Germany	12:00 - 12:00
3-LP-CL.3I	**A Fast and Adaptive LSTM-based Surrogate Model for Predicting Limitation Performance of SFCLs in Hybrid-Electric Aircraft Systems** Wenjuan Song, University of Glasgow, Glasgow, United Kingdom	12:00 - 12:00
3-LP-CL.4I	**Numerical Modeling Approach for Superconducting Saturated Core Reactors** Leonardo Miúdo, NOVA School of Science and Technology, UNINOVA-CTS and LASI, NOVA University Lisbon, 2 Caparica, Portugal	12:00 - 12:00
3-LP-CL.5	**Considerations on the transition mechanism by magnetic field of the resistive stage in the IR-SFCL** Alfredo Álvarez, University of Extremadura, Spain	12:00 - 12:00
3-LP-CL.6	**Investigation of SFCL Losses in Electric Aircraft Cryogenic Propulsion System.** Mingxuan Sui, University of Bath, Bath, United Kingdom	12:00 - 12:00
3-LP-CL.7	**Optimization of HTS Bifilar Coil Turn-to-Turn Spacing for Enhanced Stability of SFCLs in Extreme Environments** Young-Gon KIM, LS ELECTRIC, Korea, Republic of	12:00 - 12:00
3-LP-CL.8	**A parametric analysis of SFCL behaviour in HVDC systems with MMCs** Andrea Musso, Ricerca sul Sistema Energetico, RSE S.p.A., Italy	12:00 - 12:00
3-LP-CL.9	**Superconducting Fault Current Limiters for Lightning Protection in Distribution Networks** Qihuan Dong, Beijing Jiaotong University, BEIJING, China	12:00 - 12:00
3-LP-CL.10	**Protection Coordination of OCRs considering SFCL Operation for Single Line Ground Fault in a Loop Power Distribution System**	12:00 - 12:00

Sung-Hun Lim, Soongsil University, Seoul, Korea, Republic of

3-LP-CL.11	**Superconducting Fault Current Limiter for electrical Aircraft** Pascal Tixador, Univ. Grenoble Alpes, CNRS, Grenoble-INP, Grenoble, France	12:00 - 12:00
3-LP-CL.12	**Analysis on Series Arc Reduction according to SFCL's Starting Current Limiting Operation of Induction Motor - in Power Distribution System** Min-Ho Yoon, Soongsil University, Seoul, Korea, Republic of	12:00 - 12:00
3-LP-CL.13	**Analysis on Operational Characteristics of DC Hybrid SFCLCB with Self-Pickup Function** Seung-su Choi, Soongsil University, Seoul, Korea, Republic of	12:00 - 12:00
3-LP-CL.14	**Enhancing Transformer Safety by Extending the Allowable Fault Time with SFCLs** Fanya Sang, Xi'an Jiaotong University, China	12:00 - 12:00
3-LP-CL.15	**Mitigation of Arc-induced Overpressure Within Power Transformers Using SFCLs** Yiyao Lyu, Xi'an Jiaotong University, China	12:00 - 12:00
3-LP-CL.16	**Techno-Economic Assessment of a Superconducting Fault Current Limiter for Wind Farm Grid Integration: A Case Study in Portugal** Nuno Amaro, NOVA School of Science and Technology, Caparica, Portugal João Murta-Pina, NOVA School of Science and Technology, Caparica, Portugal	12:00 - 12:00
3-LP-CL.17	**Study on Protection Coordination between Protective Relays due to SFCL Application in a DC Power Distribution System** Chan-Muk Park, Soongsil University, Seoul, Korea, Republic of	12:00 - 12:00
3-LP-CL.18	**Protection Coordination of OCR with Flux-Coupled Type SFCL for Driving Current Reduction of Induction Motor** Young-Ho Park, Soongsil University, Seoul, Korea, Republic of	12:00 - 12:00
3-LP-CL.19	**A Novel Suppression Strategy for Transient Sending-End Overvoltage in LCC-HVDC Systems Using an ISFCL** Ying Liu, Xi'an Jiaotong University, China	12:00 - 12:00

Poster
12:00 - 13:15 East

Josephson Junctions (2)

Dimitri Labat, Chipiron, Paris, France
Keith Krause, Auburn University, Auburn, United States
Marc Gali Labarias, Advanced Industrial Science and Technology (AIST), Tsukuba, Japan

3-EP-JJ2.2	**Fabrication of Single-Layer LOR Manhattan-Style Josephson Junction Towards Large Scale Production** Drew Addison, Auburn University, Auburn, United States	12:00 - 12:00
3-EP-JJ2.3	**Wafer-Scale Variability and Post-Deposition Effects in Josephson Junctions for Superconducting Quantum Technologies** Luca Fasolo, Istituto Nazionale di Ricerca Metrologica (INRiM), Torino, Italy	12:00 - 12:00

3-EP-JJ2.4	**Influence of Spacing of Josephson Junctions in Helium Focused Ion Beam $YBa_2Cu_3O_{7-\delta}$ Arrays at THz Frequencies** Marc-André Tucholke, TU Braunschweig, Braunschweig, Germany	12:00 - 12:00
3-EP-JJ2.5	**Single-Flux-Quantum Circuits Utilizing Self-Shunted NbN/TaN/NbN Josephson Junctions Grown on Silicon Substrates** lu zhang, Shanghai Institute of Microsystem and Information Technology, Chinese Academy of Sciences, shar China	12:00 - 12:00

Ancillary Meeting
12:30 - 13:30 Ribeira II

IOP Publishing Board Meeting (by invitation only)

Lucy Simpson, IOP Publishing, United Kingdom

Social & Networking
13:15 - 14:30 West

Exhibition & Lunch

Ancillary Meeting
13:15 - 14:30

IEEE-TAS Technical Editors' Lunch (by invitation only)

Mark Ainslie, King's College London, London, United Kingdom

Special
14:30 - 16:00 R1

Mechanical Properties of Superconductors (in memory Colin Walters)

3-MS-MP.5	**In Memory of Colin Walters** Damian Hampshire, Durham University, United Kingdom	14:30 - 14:35
3-MS-MP.6	**How Colin Walters Contributed to the Expansion of the Electromechanical Studies of Superconductors** Najib Cheggour, Florida State University, Tallahassee, FL 32310, United States	14:35 - 14:55
3-MS-MP.1	**Influence of Wire Design on I_c Degradation of Accelerator-Grade Nb_3Sn Wires Under Transverse Compressive Stress** Carmine Senatore, University of Geneva, Geneva, Switzerland	14:55 - 15:10
3-MS-MP.2	**The Critical Current Density Dependence of Narrow-width Tracks of REBCO Tape as a function of Magnetic Field up to 0.7 T, Temperature, Angle and Strain.** Emma Gillard, Durham University, Durham, United Kingdom	15:10 - 15:25
3-MS-MP.3	**Large-current Electro-Mechanical Characteristic of REBCO Tapes over a Wide Temperature Range Using Pulsed Current** Shunsuke Kume, Tohoku University, Institute for Materials Research, Japan	15:25 - 15:40
3-MS-MP.4	**Electromechanical Performance Evaluation of Practical REBCO Tapes for Superconducting Magnets** Hyung-Seop Shin, Andong National University, Andong, Korea, Republic of	15:40 - 15:55

Oral
14:30 - 16:00 R2

HTS Multiphysics Modelling (2)

Francesco Grilli, Karlsruhe Institute of Technology, Germany
Neil Mitchell, Gauss Fusion GmbH, Munich, Germany

3-LO-MM2.1	**3D thermo-mechanical modelling during quench propagation in HTS conductors for fusion applications** Andrea Zappatore, Politecnico di Torino, Italy	14:30 - 14:45
3-LO-MM2.2	**Reduced Order Finite Element Analysis of Twisted Stacked-Tape HTS Cables** Mariusz Wozniak, CERN, Geneva, Switzerland	14:45 - 15:00
3-LO-MM2.3	**Test and analysis of AC losses under high-field in REBCO CORC cable** Qiangwang Hao, Hefei Institutes of Physical Science□Chinese Academy of Sciences, Hefei, China	15:00 - 15:15
3-LO-MM2.4	**AC losses of scaled HTS TF magnets under various magnetic fields** Yuyang Wu, University of Cambridge, United Kingdom	15:15 - 15:30
3-LO-MM2.5	**Circuit Model for Hysteresis Losses in Twisted Stacked HTS Cables** Antonio Macchiagodena, ALMA mater studiorim Università di Bologna, Bologna, Italy	15:30 - 15:45
3-LO-MM2.6	**Experimental and numerical study on magnetization loss of REBCO stacked-tape in magnetic material tube** Yunpeng Zhu, Southwestern Institute of Physics (SWIP), China	15:45 - 16:00

Oral
14:30 - 16:00 R3

Motors, Generators and other Rotating Machines

Wenjuan Song, University of Glasgow, Glasgow, United Kingdom
Kévin Berger, Université de Lorraine, GREEN, Nancy, France

3-LO-MG.1	**Evaluation of AC loss characteristics of MgB_2 coil under rotating magnetic field generated by PM rotor** Satsuki Okumura, University of Tokyo, Kashiwa, Japan	14:30 - 14:45
3-LO-MG.2	**Characterization and Testing of a Multiphase Superconducting Axial Machine for Electric Aircraft** Fábio Encarnação-Gregório, NOVA School of Science and Technology, Caparica, Portugal	14:45 - 15:00
3-LO-MG.3	**Optimization design and engineering scheme of 15 MVA high temperature superconducting synchronous condenser rotor** Lei Wang, Institute of Electrical Engineering, Chinese Academy of Sciences, Beijing, China	15:00 - 15:15
3-LO-MG.4	**Challenging the Ultimate Starting Characteristics of High Temperature Superconducting Induction/Synchronous Motor for Transportation Applications** Caio Nascimento D'Azevedo, Kyoto University, Kyoto, Japan	15:15 - 15:30
3-LO-MG.5	**Critical design problems and possible solutions to a superconducting squirrel-cage induction machine: an electrical machines' expert point-of-view**	15:30 - 15:45

João F. P. Fernandes, IDMEC, Instituto Superior Técnico, Universidade de Lisboa, Lisbon, Portugal

3-LO-MG.6	**Shielding for trapped field stacks against cross field demagnetisation at 77 K** Qi Wang, University of Cambridge, Cambridge, United Kingdom	15:45 - 16:00

Oral
14:30 - 16:00 R4

MRI and Medical Applications

Wescley Tiago Batista de Sousa, Karlsruhe Institute of Technology, Eggenstein-Leopoldshafen, Germany
Aurobindo Siddarth Swaminathan, UK Industrial Fusion Solutions Ltd, United Kingdom

3-LO-MR.1	**Manufacturing of the EuroSIG Dipole Demonstrator Magnet for Hadrontherapy** Marco Prioli, INFN, Milano, Italy	14:30 - 14:45
3-LO-MR.2	**Compact and affordable particle therapy with high temperature superconductors** Arno Godeke, Compact PT, Hengelo, Netherlands	14:45 - 15:00
3-LO-MR.5	**3D Mechanical Analysis of a High-Curvature Superconducting Dipole** Emma Bianchi, National Institute for Nuclear Physics, Italy	15:00 - 15:15
3-LO-MR.6	**Optimization of SQUID-based Ultra-Low Field MRI via Hardware and Algorithms** Quan Tao, Shanghai Institute of Microsystem and Information Technology, Chinese Academy of Sciences, Sh China	15:15 - 15:30

Oral
14:30 - 16:00 R5

Undulators, ECR & Accelerator Magnets Analysis

Marco Statera, INFN Milano LASA, Milano, Italy
Ruben Keijzer, University of Twente, Netherlands

3-LO-UE.1	**Modeling HTS Racetrack Coils with Metal-as-Insulation: Addressing Screening Currents and Experimental Validation** Audren Blondelle, Université Grenoble Alpes, Grenoble, France	14:30 - 14:45
3-LO-UE.2	**Recent Advances in Superconducting Undulator Magnets** Ibrahim Kesgin, Argonne National Laboratory, United States	14:45 - 15:00
3-LO-UE.3	**Progress on a meter-long high temperature superconducting bulk staggered array undulator** Alexandre Arsenault, Paul Scherrer Institute, Switzerland	15:00 - 15:15
3-LO-UE.4	**Active shimming magnet for dipole accelerator magnet to compensate sextupole harmonic field** Mianjun Xiao, Tsinghua University, Beijing, China	15:15 - 15:30
3-LO-UE.5	**Mechanical Analysis, Preload and Testing of the High Field Hybrid Superconducting Magnet for the Fourth-generation Electron Cyclotron Resonance (FECR) Ion Source**	15:30 - 15:45

Beimin Wu, Institute of Modern Physics, Chinese Academy of Sciences., China

3-LO-UE.6	**Combined System for Cryogenics and Protection of High-Field Superconducting Magnets** Douglas Araujo, Paul Scherrer Institut, Switzerland	15:45 - 16:00

Oral
14:30 - 16:00 R6

REBCO Films Basic Properties

Chuanbing Cai, Shanghai University, Shanghai 200444, China
Teresa Puig, ICMAB-CSIC, Bellaterra, Spain

3-MO-FP.1	**Overdoping of superconducting TLAG - YBa2Cu3O7-δ films** Xavier Obradors, Institut de Ciència de Materials de Barcelona, CSIC, Bellaterra, Spain	14:30 - 14:45
3-MO-FP.2	**Modeling the chemical growth of epitaxial YBCO films through structural and *ab initio* investigations** Michele De Angelis, University of Rome Tor Vergata, Rome, Italy	14:45 - 15:00
3-MO-FP.3	**In-situ Synchrotron studies to unravel the reaction mechanisms of Ultrafast growth of REBCO Films by the Transient Liquid-Assisted Growth Method** Elzbieta Pach, The Institute of Materials Science of Barcelona (ICMAB-CSIC), Spain	15:00 - 15:15
3-MO-FP.4	**Quantifying extended RE124 stacking faults in RE123 thin films using X-ray diffraction** Kai Walter, Karlsruhe Institute for Technolgy, Karlsruhe, Germany	15:15 - 15:30
3-MO-FP.5	**Observing oxygen in REBCO coated conductor tapes: The power of electron ptychography and high-resolution EELS for studying irradiation damage effects in REBCO** Matthew Coulson, University of Oxford, Oxford, United Kingdom	15:30 - 15:45
3-MO-FP.6	**Investigation of Current Redistribution in Multifilamentary REBCO Tapes with Bridges** Martin Kucharovic, Institute of Electrical Engineering SAS, Bratislava, Slovakia	15:45 - 16:00

Oral
14:30 - 16:00 R7

Superconducting Quantum Bits (2)

Taro Yamashita, Tohoku University, Sendai, Japan
Asem Elarabi, National Physical Laboratory, United Kingdom

3-EO-QB2.1I	**Understanding Sources of Performance Variations in Superconducting Qubits** Akshay Murthy, Fermilab, Batavia, IL, United States	14:30 - 15:00
3-EO-QB2.2	**On-demand shaped-photon emission based on a parametrically modulated qubit** Dongning Zheng, Chinese Academy of Sciences, Beijing, China	15:00 - 15:15
3-EO-QB2.3	**Collective Quantum States in Superconducting Qubit Networks: the role of topology**	15:15 - 15:30

Berardo Ruggiero, Institute of Applied Science and Intelligent Systems - ISASI, Pozzuoli Naples I-80078, Italy

3-EO-QB2.4	**Kinetic Inductance Traveling Wave Parametric amplifier for practical readout applications** Andrea Giachero, University of Milano-Bicocca, Milano, Italy	15:30 - 15:45
3-EO-QB2.5	**A high-saturation-power Josephson traveling-wave parametric amplifier** Christoph Kissling, Physikalisch-Technische Bundesanstalt, Germany	15:45 - 16:00

Special
14:30 - 16:00 R8

Novel Phenomena in Superconducting Circuits and Devices (caloritronics, spintronics, fractional fluxonics, new electronics)

3-ES-CD.1I	**Epitaxial Al/InAs Josephson Junction Array for Realizing Topological Superconductivity** Javad Shabani, New York University, United States	14:30 - 15:00
3-ES-CD.2	**New Superconducting Technologies for Higher Energy Efficiency and Integration Density Logic and Memory** Oleg Mukhanov, SEEQC, Elmsford, United States	15:00 - 15:30
3-ES-CD.3	**Cryogenic quantum electronic hardware with voltage-addressable superconducting-semiconducting hybrid logics** Kaveh Delfanazari, University of Glasgow, United Kingdom	15:30 - 15:45
3-ES-CD.4	**Programmable Hybrid Superconducting-Semiconducting Electronics** Alessandro Paghi, NEST, NanoScience Inst.-CNR and Scuola Normale Superiore, Pisa, Italy	15:45 - 16:00

Social & Networking
16:00 - 16:45 West

Exhibition & Refreshments

Special
16:45 - 18:15 R1

Early Career Researchers - ESAS Award Winners Presentations

3-SS-EC.1	**Research on large-scale superconducting magnet for magnetic confinement fusion devices** Jinxing Zheng, Institute of Plasma Physics, Chinese Academy of Sciences, China	16:45 - 17:15
3-SS-EC.3	**Trends and perspectives in radiation damage of HTS** Daniele Torsello, Politecnico di Torino, Torino, Italy	17:15 - 17:45

Oral
16:45 - 18:15 R2

Fusion Materials R&D

Fedor Gömöry, Institute of Electrical Engineering, Slovak Academy of Sciences, Bratislava, Slovakia
Xiaodong Li, Technical University of Munich, Garching B. Munich, Germany

3-LO-RD.1	**Advanced evaluation of radiation damage in HTS for fusion applications** Daniele Torsello, Politecnico di Torino, Torino, Italy	16:45 - 17:00
3-LO-RD.2	**High-Current (<2 kA), Field-Angle (<0.7 T), and Variable Temperature (60 - 77 K) Critical Current Measurements of stacked REBCO tapes for Superconducting Terminations** Rollo Hutson, Durham University, Durham, United Kingdom	17:00 - 17:15
3-LO-RD.3	**Stress-strain State of HTSC Tapes in SPARC Toroidal Field and Central Solenoid Coils** Sergey Kuznetsov, Commonwealth Fusion Systems, United States	17:15 - 17:30
3-LO-RD.4	**Steady-state performance, in-field degradation, and anneal recovery of REBCO tapes under proton irradiation in a well-controlled cryogenic environment.** Alexis Devitre, Massachusetts Institute of Technology, Cambridge, United States	17:30 - 17:45
3-LO-RD.5	**Assessment of a High Mn–High N Austenitic Stainless Steel as a Structural Material for Cryogenic Applications in Fusion and High Energy Physics Devices** Berta Ruiz-Palenzuela, University Carlos III of Madrid, Spain	17:45 - 18:00
3-LO-RD.6	**High-strength and ultra-low temperature structural materials for superconducting magnets in China Fusion demonstration Reactor** Weijun Wang, Hefei Institutes of Physical Science, China	18:00 - 18:15

Oral
16:45 - 18:15 R3

Levitation

Canan Aksoy, Karadeniz Technical University, Trabzon, Turkey
João F. P. Fernandes, IDMEC, Instituto Superior Técnico, Universidade de Lisboa, Lisbon, Portugal

3-LO-LE.1I	**Modeling and Measurement of the Levitation Force in Superconducting Magnetic Bearings with Thinned HTS Tape Stacks** Asef Ghabeli, Karlsruhe Institute of Technology, Karlsruhe, Germany	16:45 - 17:15
3-LO-LE.2	**A Simulation Platform for High-Speed EDS Maglev Systems with Real-Time Validation at 600 km/h** Qing Shao, CRRC Changchun Railway Vehicles Co., Ltd., Changchun, China	17:15 - 17:30
3-LO-LE.3	**Study on the levitation height performance under the current variation starting method in pinning maglev** Wei Hong, Anhui university of Science and Technology, Hefei, China	17:30 - 17:45
3-LO-LE.4	**Experimental investigation of large-scale non-insulated ReBCO coils for a linear motor excitation system** Tim Hofmann, Technical University of Munich, Munich, Germany	17:45 - 18:00

3-LO-LE.5	**Measurement and simulation of no-insulation coils for use in superconducting levitation bearings** James Storey, Victoria University of Wellington, Wellington, New Zealand	18:00 - 18:15

Oral
16:45 - 18:15 R4

HTS Magnet Development (1)

Bernardo BORDINI, CERN, Geneva, Switzerland
Naoyuki Amemiya, Kyoto University, Kyoto, Japan

3-LO-MD1.1	**Design and manufacturing of a 10 T HTS energy saving dipole magnet for the Italian facility IRIS** Carlo Santini, INFN Milan, Milan, Italy	16:45 - 17:00
3-LO-MD1.2	**10 T 170 mm warm bore HTS MAGNET FOR GYROTRONE** Daria Kolomentseva, SuperOx, Russian Federation	17:00 - 17:15
3-LO-MD1.3	**Robotic winding of non-planar HTS coils with hard-way bending** Magnus Dam, Karlsruhe Institute of Technology (KIT), Karlsruhe, Germany	17:15 - 17:30
3-LO-MD1.4	**HTS superferric combined function magnet for the FCC-ee project** Simone Busatto, Università La Sapienza, Italy	17:30 - 17:45
3-LO-MD1.5	**Design Optimization of the S5 Cooling Cell Demonstrator Solenoids for the Muon Collider** Giuseppe Scarantino, INFN Milan LASA laboratory, Milan, Italy	17:45 - 18:00
O62.6	**Development of a high-temperature superconducting REBCO coated conductor magnet for Stellarators** Zehua Liu, Technical University of Munich, Garching B. Munich, Germany	18:00 - 18:15

Oral
16:45 - 18:15 R5

Fe-based Superconductors (2)

Emilio Bellingeri, National Research Council (Cnr), Genova, Italy
Laura Lain Rodriguez, University of Oxford, Oxford, United Kingdom

3-MO-FE2.1	**Progress towards iron-based coated conductors on simplified templates** Laura Piperno, ENEA, Italian National Agency for New Technologies, Energy and Sustainable Economic Devel Frascati, Rome, Italy	16:45 - 17:00
3-MO-FE2.2	**Recent advances in iron-based superconducting wires for high-field applications** Yanwei Ma, Institute of Electrical Engineering, Chinese Academy of Sciences, Beijing, China	17:00 - 17:15
3-MO-FE2.3	**Ultrahigh supercurrent at 33 T in iron-based superconductors with tailored dislocation pinning landscapes** Chiheng Dong, Institute of Electrical Engineering, Chinese Academy of Sciences, Beijing, China	17:15 - 17:30
3-MO-FE2.4	**Grain boundary structure and transport properties of Fe(Se,Te) grown on [010]-tilt bicrystal substrates**	17:30 - 17:45

Kazumasa Iida, Nihon University, Japan

3-MO-FE2.5	**Field and temperature-dependence of grain boundary currents density in K-doped $BaFe_2As_2$ bi-crystalline films** Florian Semper, TU Wien, Vienna, Austria	17:45 - 18:00
3-MO-FE2.6	**Effects of Disorder and Defects on the Critical Current Density of CaKFe4As4** Anastasiya Duchenko, Roma Tre University, Italy	18:00 - 18:15

Oral
16:45 - 18:15 R6

Critical Current Characterisation

Tatsunori Okada, Kyushu Institute of Technology, Kitakyushu, Japan
Boris Maiorov, Los Alamos National Laboratory, Los Alamos, United States

3-MO-CC.1I	**The European ITER TF and PF Strand Verification Test Results: What Does the Analysis Tell Us About the Measurements and the Samples?** Mark Raine, Durham University, Durham, United Kingdom	16:45 - 17:15
3-MO-CC.2	**Round Robin testing for low temperature (~20K), high field (5-30T) transport Ic of 2G HTS** JL Cheng, Commonwealth Fusion Systems, United States	17:15 - 17:30
3-MO-CC.3	**Investigation of the critical current evolution of HTS tapes in the 30 T to 40 T magnetic field range at 4.2 K** Alexandre ZAMPA, The University of Tokyo, Kashiwa, Japan	17:30 - 17:45
3-MO-CC.4	**Assessing the local electric field of coated conductors during overcurrent pulses** David Hofmann, TU Wien, Vienna, Austria	17:45 - 18:00
3-MO-CC.5	**E(J) characterization of REBCO tapes using pulsed current method** Hugo Sourice, Univ. Grenoble Alpes, CNRS, Grenoble INP, G2Elab-Institut Néel, 38000 Grenoble, France	18:00 - 18:15

Oral
16:45 - 18:15 R7

Microwave Devices and Novel Electronics

Anna Leese, Quantum Vector Inc., Encinitas, United States
Feng Li, Nagoya University, Japan

3-EO-MD.1I	**Frequency-modulated terahertz radiation from Bi2212 intrinsic Josephson junction stacks** Itsuhiro Kakeya, Kyoto University, Kyoto, Japan	16:45 - 17:15
3-EO-MD.2	**Linear microwave frequency shifter** Felix Ahrens, Fondazione Bruno Kessler, Trento, Italy	17:15 - 17:30
3-EO-MD.3	**Microwave Characteristics of Superconducting Tantalum/Tungsten Resonators on Silicon Substrates** Min-Jui Lin, Graduate Institute of Electronics Engineering, National Taiwan University, Taipei, Taiwan, China	17:30 - 17:45

3-EO-MD.4	**Coulomb spectroscopy on a proximitized topological insulator charge island** Benedikt Frohn, Forschungszentrum Jülich & JARA Jülich-Aachen Research Alliance / Peter Grünberg Institut 9 Jülich, Germany	17:45 - 18:00
3-EO-MD.5	**Coupling of spin dynamics and superconducting state across d-wave superconductor/ferromagnet interfaces** Javier E. Villegas, Laboratoire Albert Fert, CNRS, Thales, Université Paris-Saclay, Palaiseau, France	18:00 - 18:15

Oral
16:45 - 18:15 R8

SQUIDs, SQIFs and NanoSQUIDs

Ling Hao, National Physical Laboratory, Teddington, United Kingdom
Emma Mitchell, CSIRO, Lindfield, Australia

3-EO-SQ.1I	**SQUID on cantilever probes based on corner lithography** Thijs Roskamp, University of Twente, Enschede, Netherlands	16:45 - 17:15
3-EO-SQ.2	**Single layer niobium nanobridge based non-linear microwave circuit** Parth Bhandari, National Physical Laboratory, Teddington, London, United Kingdom	17:15 - 17:30
3-EO-SQ.3	**On-chip nanoSQUIDs for scanning SQUID microscope** Lei Chen, Shanghai Institute of Microsystem and Information Technology (SIMIT), Chinese Academy of Scienc), China	17:30 - 17:45
3-EO-SQ.4	**Fabrication of Nb SQUIDs using Au sacrificial layer with FIB and RIE techniques** Jorge Perez-Bailon, Nanoscience and Materials Institute of Aragon (INMA), Zaragoza, Spain	17:45 - 18:00
3-EO-SQ.5	**Towards reliable YBCO-based SQUID magnetometers with fabrication optimization and *ex-situ* techniques** Alessia Garibaldi, Chalmers University of Technology, Gothenburg, Sweden	18:00 - 18:15

Outreach
18:15 - 19:30 R1

Superconductivity for a Sustainable Future: The Promise of HTS

João Martins, NOVA University, Portugal

	Superconductivity and the Grand Challenges of Sustainability Ziad Melhem, Lancaster University, United Kingdom	18:15 - 18:27
	HTS Technologies for the Grid: Lessons from the Field Mathias Noe, Karlsruhe Institute of Technology (KIT), Germany Tabea Arndt, Karlsruhe Institute of Technology, Germany	18:27 - 18:39
	Bringing HTS to Market: Barriers and Business Opportunities Wolfgang Walter, Bilfinger Nuclear & Energy Transition GmbH, Würzburg, Germany	18:39 - 18:51
	Panel discussion / Q&A	18:51 - 19:26

Social & Networking
19:30 - 23:00 Furnas

Gala Dinner

Thursday, September 25, 2025

Special
08:45 - 10:15 R1

CONECTUS: Industrial Impact of European Superconducting Technologies

4-SS-CO.1 **CONECTUS - Introduction and Members Activities** 08:45 - 09:00
Jan Plechacek, CAN Superconductors, Czech Republic

4-SS-CO.2 **Building an ecosystem for fusion magnet science and delivery** 09:00 - 09:15
Aurobindo Siddarth Swaminathan, UK Industrial Fusion Solutions Ltd, United Kingdom

4-SS-CO.3 **RoWaMag: Design and test of the HTS magnet and the cryogenic system of the robust and low maintenance magnetic billet heater** 09:15 - 09:30
Sonja Schlachter, Karlsruhe Institute of Technoloky, Karlsruhe, Germany

4-SS-CO.4 **Status of a demonstration mission operating an ion thruster magnet on the International Space Station** 09:30 - 09:45
Nicholas Long, Robinson Research Institute, Victoria University of Wellington, Lower Hutt, New Zealand

4-SS-CO.5 **Multifilamented REBCO tapes produced by large-scale low-cost methods** 09:45 - 10:00
Christian R. H. Bahl, SUBRA A/S, Farum, Denmark

4-SS-CO.6 **Manufacturing of Superconducting Coils for Fusion – from Big Science Projects to Future Fusion Power Plants** 10:00 - 10:15
Wolfgang Walter, Bilfinger Nuclear & Energy Transition GmbH, Würzburg, Germany

Oral
08:45 - 10:15 R2

Quench and Protection

Marco Prioli, INFN, Milano, Italy
Naoyuki Amemiya, Kyoto University, Kyoto, Japan

4-LO-QP.2 **Transient behavior of the Fusillo Demonstrator Curved CCT Magnet** 08:45 - 09:00
Mariusz Wozniak, CERN, Geneva, Switzerland

4-LO-QP.3 **Self-protection Mechanism of Parallel-wound No-insulation, Metal-insulation, and Insulated Coils** 09:00 - 09:15
Yawei Wang, Shanghai Jiao Tong University, China

4-LO-QP.4 **Simplified Multiphysics Models for Quench in Non-Insulated Coils and Implications for Coil Design and Operation** 09:15 - 09:30
Daniel Korsun, MIT Plasma Science and Fusion Center, Cambridge, United States

4-LO-QP.5 **Quench protection method based on the adjustable quench-back induced by the co-wound copper coils** 09:30 - 09:45
Yujin Tong, Institute of Modern Physics, Chinese Academy of Sciences, Lanzhou, China

4-LO-QP.6 **Advanced intelligent approach for kink detection in high temperature superconducting pancake coils** 09:45 - 10:00
Mohammad Yazdani-Asrami, University of Glasgow, Glasgow, United Kingdom

Oral
08:45 - 10:15 R3

Thin Films and Multilayers

Cornelia Pop, Institut de Ciències de Materials de Barcelona, ICMAB-CSIC, Campus UAB, Bellaterra, Barcelona, Spain
Thomas James Smart, Forschungszentrum Jülich & Jülich Aachen Research Alliance, Jülich, Germany

4-MO-TF.2	**Bipolar resistance switching in YBCO-Based Spin Valves with Half-Metallic Ferromagnets** Salvatore Mesoraca, Laboratoire Albert Fert, CNRS, Thales, Université Paris-Saclay, Palaiseau, France	08:45 - 09:00
4-MO-TF.3	**Superconducting Thin-Films for Quantum Devices with Off-Line Quality Assessment** Clara Barker, Oxford University, Oxford, United Kingdom	09:00 - 09:15
4-MO-TF.4	**Properties of NbTiN thin films deposited on 300 mm silicon wafers for upscaling superconducting digital circuits** Daniel Perez, IMEC, Belgium	09:15 - 09:30
4-MO-TF.5	**Tailoring the superconducting properties of YBa2Cu3O7−δ thin films by laser driven local oxygen doping** Irene Biancardi, Politecnico di Milano, Milan, Italy	09:30 - 09:45
4-MO-TF.6	**Ion Irradiation for Advanced Control of Superconductivity in Thin Films** Carlo Pepe, Institute of Microelectronics of Barcelona, IMB-CNM-CSIC, Barcelona, Spain	09:45 - 10:00

Oral
08:45 - 10:15 R4

Magnet Design and Analysis | Cryogenics Design and Analysis

Laura Savoldi, Politecnico di Torino, Torino, Italy
Dong Ma, State Key Laboratory of Infrared Physics, Shanghai Institute of Technical Physics, Chinese Academy of Sciences, Shanghai, China

4-LO-MD.1	**Design and Implementation of Solder-Impregnated High-Temperature Superconducting (HTS) Coils with Predictable Operating Characteristics** Raymond Hu, OpenStar Technologies Ltd, Wellington, New Zealand	08:45 - 09:00
4-LO-MD.2	**Analysing Parameter Changes and Performance Degradation of a Non-Insulated 1T-HTS Magnet after one Year of Operation in a Test Facility** Sebastian Hellmann, Victoria University Wellington, New Zealand	09:00 - 09:15
4-LO-MD.3	**Analysis of the mechanical behavior of a 20 T hybrid cosθ dipole during energization and quench transients** Marika D'Addazio, Politecnico di Torino, Torino, Italy	09:15 - 09:30
4-LO-MD.4	**Application of Neon Pulsating Heat Pipes to Cryocooler-based HTS Coils** Carolin Zoller, Paul Scherrer Institut (PSI), Villigen PSI, Switzerland	09:30 - 09:45
4-LO-MD.5	**Thermosyphon-Based Rotational Cooling for a 100 kW Fully HTS Aviation Motor** Ercan Ertekin, The University of Strathclyde, Glasgow, United Kingdom	09:45 - 10:00

4-LO-MD.6	**High-Field Solenoid Magnet Design Using Multiphysics Topology Optimization** Jason LE COZ, Université Paris-Saclay, CEA, Service d'Etudes Mécanique et Thermiques, Gif-sur-Yvette, Franc	10:00 - 10:15

Oral
08:45 - 10:15 R5

Critical Current and Flux Pinning (2)

Francesco Rizzo, ENEA, Frascati, Italy
Teresa Puig, ICMAB-CSIC, Bellaterra, Spain

4-MO-CF2.1	**Tuning the theoretical limits for the critical current density and vortex creep rate in superconductors** Assistant Prof. Serena Eley, University of Washington, Shoreline, WA, United States	08:45 - 09:00
4-MO-CF2.2	**Machine Learning-based Detection and Analysis of Current Blocking Local Obstacles in REBCO Coated Conductors Obtained from Different Manufacturing Processes** Zeyu Wu, Kyushu University, Japan	09:00 - 09:15
4-MO-CF2.3	**High field opportunities to understand and improve performance of superconductors** Boris Maiorov, Los Alamos National Laboratory, Los Alamos, United States	09:15 - 09:30
4-MO-CF2.4	**Achieving high and isotropic pinning in multilayer $BaZrO_3/YBa_2Cu_3O_{7-x}$ nanocomposite films** Judy Wu, University of Kansas, United States	09:30 - 09:45
4-MO-CF2.5	**Investigation of Grain Boundaries in High-Tc Superconducting Powder-In-Tube Wires from the macro- to the nano-scale** ANDREA MALAGOLI, CNR-SPIN, Italy	09:45 - 10:00
4-MO-CF2.6	**Intrinsic pinning in hexagonal MoN superconducting films.** Agustín Conde-Gallardo, CINVESTAV-IPN, CDMX, Mexico	10:00 - 10:15

Oral
08:45 - 10:15 R6

HTS Magnet Development (2)

Fedor Gömöry, Institute of Electrical Engineering, Slovak Academy of Sciences, Bratislava, Slovakia
Zehua Liu, Technical University of Munich, Garching B. Munich, Germany

4-LO-MD2.1I	**Lessons Learned from NI-REBCO Coil Tests in Fields Above 40 T** Jonathan Lee, Florida State University, Tallahassee, United States	08:45 - 09:15
4-LO-MD2.2	**Bi2Sr2CaCu2O8-x (Bi-2212) High Field Magnet Technology** Ulf Peter Trociewitz, ASC/NHMFL, United States	09:15 - 09:30
4-LO-MD2.3	**Advancing the Development of a Compact 40 T ReBCO Solenoid for the Muon Collider** Bernardo BORDINI, CERN, Geneva, Switzerland	09:30 - 09:45
4-LO-MD2.4	**Complete system overview and powering test results of HTS NI Adiabatic Matching Device for PSI Positron Production Experiment** Michal Duda, Paul Scherrer Institute, Switzerland	09:45 - 10:00

Oral
08:45 - 10:15 R7

Nanowire Detectors + MKID (2)

Matteo Castellani, Massachusetts Institute of Technology, Cambridge, MA, United States
Khalil Harrabi, King Fahd University of Petroleum and Minerals, Saudi Arabia

4-EO-ND2.1I	**Breaking new ground in quantum detection with SNSPDs: the search for light-mass dark matter and high-critical-temperature superconductors** Ilya Charaev, University of Zurich, Zurich, Switzerland	08:45 - 09:15
4-EO-ND2.2	**Ab initio modeling of single-photon detection in superconducting nanowires** Alejandro Simon, Massachusetts Institute of Technology, Cambridge, United States	09:15 - 09:30
4-EO-ND2.3	**Superconducting Nanowire Single-Photon Detectors Fabricated on Epitaxial NbN Thin Films Grown by Sputtering** Francesca Incalza, Massachusetts Institute of Technology, CAMBRIDGE, United States	09:30 - 09:45
4-EO-ND2.4	**Planar Superconducting Nanowire Single Photon Detector array with integrated micro-lenses** Dmitry Morozov, University of Glasgow, United Kingdom	09:45 - 10:00
4-EO-ND2.5	**Single-photon detection using the wide superconducting strips with widths ranging from 30 to 100 µm** Masahiro Yabuno, Advanced ICT Research Institute, National Institute of Information and Communications Te (NICT), Japan	10:00 - 10:15

Oral
08:45 - 10:15 R8

Hybrid Devices: Novel Applications

Pascal Febvre, University Savoie Mont Blanc, Le Bourget du Lac, France
Beyza Zeynep Ucpinar, University of Southern California, Los Angeles, United States

4-EO-NA.1I	**Electronic refrigeration from 2.4 K to below 1.6 K using Nb-based superconducting tunnel junctions** Joel Hätinen, VTT Technical Research Centre of Finland, Finland	08:45 - 09:15
4-EO-NA.2	**A hybrid ferromagnetic transmon qubit: the ferro-trasmon** Roberta Satariano, Università di Napoli Federico II, Napoli, Italy	09:15 - 09:30
4-EO-NA.3	**On-Chip Time Division Multiplexing of Non-Dissipative Currents Enables Dramatic Wiring Reduction in a Quantum Computer** Alessandro Paghi, NEST, NanoScience Inst.-CNR and Scuola Normale Superiore, Pisa, Italy	09:30 - 09:45
4-EO-NA.4	**Wafer-scale fabrication of hybrid Josephson components and devices** Alberto Ronzani, VTT Technical Research Centre of Finland, Finland	09:45 - 10:00
4-EO-NA.5	**Giant inductance device based on ferromagnetic π Josephson junctions for energy-efficient SFQ circuits** Feng Li, Nagoya University, Japan	10:00 - 10:15

Social & Networking
10:15 - 11:00 West
Exhibition & Refreshments

Plenary
11:00 - 12:00 R1
Microstructure: A Key to Superconductor Performance
Susannah Speller, University of Oxford, United Kingdom

Plenary
12:00 - 12:15 R1
ESAS General Assembly

Awards
12:15 - 12:30 R1
ESAS Award Presentations

Plenary
12:30 - 13:20 R1
ESAS Award for Excellence Winner

Plenary
13:20 - 13:35 R1
Closing Remarks & EUCAS 2027

Ancillary Meeting
13:30 - 17:30 Ribeira I
Information Session: Participation in the International Energy Agency Technology Collaboration Programme on High-Temperature Superconductivity

Social & Networking
13:35 - 14:50 West
Exhibition & Lunch

Ancillary Meeting
13:35 - 15:35 Ribeira II
IEEE-TAS Editors Meeting (by invitation only)
Min Zhang, University of Strathclyde, United Kingdom