Scientific Program scheme

Time avalaible by talk is : 15' presentation + 5' questions (20 mins max)	Oral Contribution Presenter	start	40+6 end
Monday 15 June 2026 (St Trinnean's room, St Leonard's Hall, 18 Holyrood Park Rd, Edinburgh EH16 5AY)			
Welcome Apero and Workshop Registration		**18:00**	**22:00**
Tuesday 16 June 2026 (South Hall, 18 Holyrood Park Rd, Edinburgh EH16 5AU)			
Workshop Registration		**08:00**	**08:45**
Workshop Introduction & Welcome	**Hongye Zhang**	**08:45**	**09:00**
Session 1: Innovative HTS modelling methods and tools			
Screening current simulation comparison between T-A FEM with thin film approximation and A-V FEM	So Noguchi	09:00	09:20
Assessing the Applicability of the T-A Formulation for Parallel-Field Magnetisation of an Insulated Double-Pancake Coil	Zhenkai Cai	09:20	09:40
Finite element simulation of high temperature superconductors using H-formulation with NGSolve	Zakaria Houta	09:40	10:00
Coffee Break 30'		**10:00**	**10:30**
Electromagnetic Integral Equation Modeling of Large-Scale 3D no-insulation coils	Xiang Dai	10:30	10:50
Modeling of transient electromagnetic behavior in short REBCO samples during transport characterization using a 3D volume integral method based on the J-formulation	Hugo Sourice	10:50	11:10
A hard-constrained physics-guided recurrent neural network (hPGRNN) for modeling the quench dynamics of 2G HTS coated conductors	Sirois Frédéric	11:10	11:30
The energy variational method for the electromagnetic modeling of high-temperature superconductors	Sijian Wang	11:30	11:50
Lunch Break 60'		**11:50**	**12:50**
Novel multiphysics modelling method for metal-insulated REBCO high-field magnets	Anang Dadhich	12:50	13:10
Hybrid Electromagnetic Modelling and Physics-Guided Machine Learning for Critical Current Prediction in HTS Coils	Jiyuan Gao	13:10	13:30
A Cloud-Native PDE-Constrained Optimization Framework for Advanced Modelling of Superconductors and Functional Magnetic Materials	Yusen Guo	13:30	13:50
Progress of the BELFEM code: new features, benchmarks and applications	Gregory Giard	13:50	14:10
Coffee Break 20'		**14:10**	**14:30**
Analytical solution for the magnetic field and inductance of helically wound HTS tapes using a magnetic scalar-potential formulation	Kevin Berger	14:30	14:50
2D frequency-domain model for the homogeneous J-A formulation of the Maxwell equations	Frederic Trillaud	14:50	15:10
T-E formulation and a mixed finite element method for thin-film magnetization problems	Leonid Prigozhin	15:10	15:30
Comparison of Numerical 3D Models for Thin-Wall HTS Bulk Pulsed-field Magnetization	Santiago Guijosa	15:30	15:50
Coffee Break 10'		**15:50**	**16:00**
A Fast 3D J-model for Electromagnetic Analysis of HTS Strictures Under Combined Operating Conditions	Xiang Kang	16:00	16:20
A benchmark for the electromagnetic analysis of non-insulated or metal-insulated REBCO-based coils Operating Conditions	Marco Breschi	16:20	16:40
Presentations from sponsors			
EastSuper：The research and industrialization progress of 2G-HTS based on MOCVD technology in China	Shengchen Xue	16:40	16:55
Renaissance Fusion ： Modified Power Law using the A based Formulation for Quench Modelling in Axisymmetric Non-Insulated HTS Pancake Coils	Mohammed Sayed MIAH	16:55	17:10
HynHe		17:10	17:25
End of the first day		**17:25**	
Wednesday 17 June 2026 (Alder Theatre, Nucleus Building, King's Buildings, Thomas Bayes Rd, Edinburgh EH9 3FG)			
Session 1: Innovative HTS modelling method and tools			
Fast electromagnetic modeling of complex structure and large-scale 3D no-insulation REBCO coils using T-A formulation Operating Conditions	Jianhua Liu	09:00	09:20
3D Modelling of HTS Coils Using the H-Conforming Foil Conductor Model	Elias Paakkunainen	09:20	09:40
Session 2: Multiphysics and AC loss/Quench Modelling			
Multiphysics Modeling and Performance Analysis of a 35.6 T All-Superconducting User Magnet System	Qiuliang Wang	09:40	10:00
Three Dimensional Simulation and Experimental Validation of Quench Behaviour in Non-Planar Direct Wound NI-HTS Magnets	Aiden Robert Hightower	10:00	10:20
Coffee Break 20'		**10:20**	**10:40**
Electrical Network Model Coupled with 2D Axisymmetric Magnetothermal FEM to Investigate Quench Dynamics in NI Coils	Noël Strasser	10:40	11:00
3D Quench Analysis of Full-Spectrum REBCO Coils by the H-Phi Formulation with Surface Dissipation Method	Shuowei Gao	11:00	11:20
Reduced Order Finite Element Modelling of AC Loss in HTS Twisted Stacked Tape Cables	Julien Dular	11:20	11:40
AC losses in a round cable made from filamentized CC tapes	Mykola Solovyov	11:40	12:00
Lunch Break & POSTER SESSION 1 150'		**12:00**	**14:30**
Electromagnetic–Thermal Modeling of Drilled MgB_2 Bulks for Enhanced Trapped-Field Performance	Michela Fracasso	14:30	14:50
Transient 3D magneto-thermal finite element analysis of metal-insulation racetrack coils	Erik Schnaubelt	14:50	15:10
Anisotropic Homogenization for 3D FE Quench Simulation of Large-Scale NI and MI HTS Magnets	Louis Denis	15:10	15:30
Excessive screening current stress, plastic damage, and the electric field center shift	Jeseok Bang	15:30	15:50
Coffee Break 10'		**15:50**	**16:00**
Session 3: Fusion and Other Applications			
Modelling, designing and improving scalable HTS magnetic screens for rotating machines	Nicolas Rotheudt	16:00	16:20
Design Optimisation of a 12 T Levitated-Dipole Magnet that Meets Plasma and Zero-Field requirements	Emily-Kei Brewerton	16:20	16:40
Presentations from sponsors			
COMSOL		16:40	16:55
CryoPride		16:55	17:10
Proxima Fusion ： HTS Magnet Design and Technology Development at Proxima Fusion	Nicolò Riva	17:10	17:25
Lab Tour - Applied Superconductivity Lab at Edinburgh 95'		**17:25**	**19:00**
Social Dinner at the Playfair Library, South Bridge, Edinburgh EH8 9YL (with bus transfer) 180'		**19:00**	**22:00**
Thursday 18 June 2026 (Alder Theatre, Nucleus Building, King's Buildings, Thomas Bayes Rd, Edinburgh EH9 3FG)			
Session 3: Fusion and Other Applications			
Electromagnetic Design and AC Loss Reduction Strategies for a 10 MW Air-Core Axial-Flux Fully HTS Wind Turbine Generator	Shuangrong You	09:00	09:20
Electromagnetic simulations of a CASPER undulator using the H-ϕ formulation	Alexandre Arsenault	09:20	09:40
Numerical Modelling of an HTS Saturated-Core Reactor as a Power Flow Control Device	Leonardo Miúdo	09:40	10:00
Modelling quench propagation in indirectly cooled HTS winding packs for fusion applications	Andrea Zappatore	10:00	10:20
Coffee Break & Group Photo 30'		**10:20**	**10:50**
3D Mechanical Analysis of HTS Cables Under Screening Current Loads for use in Fusion Applications	Moray Arbuckle	10:50	11:10
Multiscale Quench Modeling of the SPARC Toroidal Field Model Coil	Daniel Korsun	11:10	11:30
CORT Cable Carrying AC Current: a Proposed Benchmark for Full 3D Modeling of HTS	Francesco Grilli	11:30	11:50
Electromagnetic Modeling of HTS Cable-in-Conduit Conductors for Fusion Applications Under High-Current Ramps	Gabriel dos Santos	11:50	12:10
Lunch Break & POSTER SESSION 2 150'		**12:10**	**14:40**
Fast Recovery SFCL for Future Electrified and Hydrogen-powered Aircraft under Gaseous Helium Cooling	Dedao Yan	14:40	15:00
Summary, awards, conclusion - End of the workshop 120'		**15:00**	**17:00**