

Tuesday 15 September 2026

8:00 AM - 8:30 AM	Registration and Refreshments
8:30 AM - 9:00 AM	Welcome – ETS Assembly Room: Pentland
9:00 AM - 9:45 AM	Plenary Talk: Matthias Wuttig , RWTH Aachen University, Germany Tailoring Thermoelectrics through metavalent Bonding Session Chair: Paz Vaqueiro Room: Pentland
9:45 AM - 10:15 AM	Invited Talk: Andrej Pustogow , Vienna University of Technology, Austria Advent of the Metal Age of Thermoelectricity Session Chair: Paz Vaqueiro Room: Pentland
10:15 AM - 10:30 AM	IOP Membership Benefits: Matt Lovell , IOP, UK Room: Pentland
10:30 AM - 11:00 AM	Morning Break
11:00 AM - 12:15 PM	Chalcogenides-1 Session Chair: Krzysztof Wojciechowski Room: Pentland 11:00 AM - 11:15 AM Paz Vaqueiro Structure-Property Relationships in Thermoelectric Copper-Iron Sulfides 11:15 AM - 11:30 AM Arthur Wieder Enhancing the Thermoelectric Performance of Cu_2SnSe_3 through Structural Ordering Control 11:30 AM - 11:45 AM Yuting Qiu Enhanced Lattice Symmetry via Mn Doping Boosts Electrical Transport Performance in Rhombohedral GeSe Thermoelectric Materials 11:45 AM - 12:00 PM Indrajit Halder Conduction Band Convergence and Modular Nanostructures: Driving High Thermoelectric Performance in n-Type PbSe 12:00 PM - 12:15 PM Hanna Donyk Toward Efficient and Earth-Abundant Thermoelectrics: Anion-Tuned $\text{Cu}_2\text{FeSnS}_{4-x}\text{Se}_x$

11:00 AM - 12:15 PM	Organics and Hybrids Session Chair: Iris Nandhakumar Room: East Terrace 11:00 AM - 11:15 AM Muhammet Toprak Synergistic Enhancement of Bi₂Te₃/Sb₂Te₃-PMMA Thermoelectric Generators via Dithiol-Assisted Conductivity and FEM-Based Geometry Optimization 11:15 AM - 11:30 AM Federico Giulio Electrical Characterization of Encapsulated Vertically Aligned Silicon Nanopillars Obtained via Metal-Assisted Chemical Etching 11:30 AM - 11:45 AM Mina Saeidnia Processing and Doping Effects in P3HT for High-Performance Organic Thermoelectric Modules 11:45 AM - 12:00 PM Surajit Das High-Performance Fully Flexible Self-Supported Thermoelectric Generator from Bi₂Se₃ and Cu₃BiS₃ Based Composites 12:00 PM - 12:15 PM Seyedmohammad Mortazavinatanzi Flexible Cellulose-Based Insulated Metal Substrates for Thermoelectric Modules
11:00 AM - 12:15 PM	Applications-1 Session Chair: Patricia Aranguren Room: Prestonfield 11:00 AM - 11:15 AM Raúl Aragonés Ortiz Evolution of a Thermoelectric IIoT Platform for Continuous Furnace Monitoring 11:15 AM - 11:30 AM Alireza Rezaniakolaei Energy storage system integrated with low temperature gradient thermoelectric generator for self-powering industrial sensor platforms 11:30 AM - 11:45 AM David Astrain Ulibarrena Field Demonstration of Passive Geothermal Thermoelectric Generators: Long-Term Field Operation and Opportunities for Performance Improvement 11:45 AM - 12:00 PM Jovana Kovacevic SPIRIT - Sustainable Power Integration and Recovery of Industrial Thermal Waste 12:00 PM - 12:15 PM Miguel Araiz Autonomous Power Supply for Coastal Volcanic Monitoring through Geothermal Thermoelectric Generators in Intertidal Settings
12:15 PM - 1:30 PM	Lunch

1:30 PM - 3:00 PM	Heusler-1 Session Chair: Michihiro Ohta Room: Pentland 1:30 PM - 2:00 PM Chenguang Fu (Invited Speaker) Defects and thermoelectric transport in Half-Heusler compounds 2:00 PM - 2:15 PM Ran He Point-Defect Modulation as a Design Strategy for Optimizing Thermoelectric Transport in Half-Heusler Compounds 2:15 PM - 2:30 PM YE Sheng Electron and Phonon Transport Properties of The Single-crystalline TiCoSb - based Half-Heuslers 2:30 PM - 2:45 PM Eric Alleno Improved thermoelectric properties in Ga-substituted p-type Fe₂Val 2:45 PM - 3:00 PM XUE NAN Defect Complexity-Induced Local Bonding Reconstruction Enables Synchronized Thermoelectric Performance in V_{0.9}Fe_{0.5}Co_{0.5}Sb-based Half-Heusler Thermoelectrics
1:30 PM - 3:00 PM	Machine Learning Session Chair: Philippe Jund Room: East Terrace 1:30 PM - 2:00 PM Elif Ertekin (Invited Speaker) Direct Physical Modeling vs. Learned Patterns: Computation-Guided Thermoelectric Materials Discovery in the Age of Machine Learning 2:00 PM - 2:15 PM Guojing Huang Machine Learning Interatomic Potentials for Microstructural Defects in SnSe and SnTe 2:15 PM - 2:30 PM Nirmal Kumar Ramalingam Simple physics-based correction of CRTA predictions towards ab-initio accuracy thermoelectric transport 2:30 PM - 2:45 PM Jose J. Plata Accelerating the Discovery of Thermoelectric Skutterudites through Efficient Chemical Space Exploration 2:45 PM - 3:00 PM Haoji Yang Machine learning-enabled design and optimisation of thermoelectric devices: from generators to coolers

1:30 PM - 3:00 PM	Microharvesting Session Chair: Carlo Fanciulli Room: Prestonfield 1:30 PM - 2:00 PM Kafil M. Razeeb (Invited Speaker) Development of micro-thermoelectric devices for ambient applications 2:00 PM - 2:15 PM Heiko Reith Toward High-Efficiency Micro-Thermoelectric Cooling: The Role of Leg Height Optimization 2:15 PM - 2:30 PM Yao Lu Chalcogenide-based Flexible Thermoelectric Films and Devices for Multifunctional Applications 2:30 PM - 2:45 PM Nan Luo Optimizing performance of printed flexible origami thermoelectric generator via non-stoichiometry and sulfur inclusion 2:45 PM - 3:00 PM Olga Caballero-calero Electrochemically Deposited Nanostructured Bi₂Te₃ for Flexible Thermoelectric Energy Harvesting
3:00 PM - 3:30 PM	Afternoon Break
3:30 PM - 5:00 PM	Zintl-1 Session Chair: Ran He Room: Pentland 3:30 PM - 3:45 PM Johannes de Boor Grain boundary engineering for high temperature stable Mg₂Si-based thermoelectric materials 3:45 PM - 4:00 PM SARAN Mayilsamy Fermi-level Engineering and Band gap Renormalization for High Performance Bi-doped Mg₂Si_{0.6}Sn_{0.4} Solid Solution for Thermoelectric Application 4:00 PM - 4:15 PM Jing Tang High-performance Mg₂SiSn-based thermoelectrics with superior compression strength and elastic resilience 4:15 PM - 4:30 PM Navita Jakhar Discovery of Resonant-Like Doping in Mg₃Sb₂ for High-Efficiency Thermoelectrics 4:30 PM - 4:45 PM António Pereira Gonçalves Gamma-Irradiation-Induced $\gamma \rightarrow \alpha$ MgAgSb solid-state phase transformation: Mechanisms and Implications 4:45 PM - 5:00 PM Jun Li Atomic Layer Deposited Cu Incorporation Enables Enhanced Thermoelectric Performance in n-Type Mg₃(Sb, Bi)₂

3:30 PM - 5:00 PM	Emerging Session Chair: Takao Mori Room: East Terrace 3:30 PM - 3:45 PM Alireza Rezaniakolaei Evaluation of TE-Catalyst Driven CO₂ Hydrogenation under Non-Pressurized Reaction Conditions 3:45 PM - 4:00 PM Davide Spirito Multiphysics simulation of germanium-tin thermophotovoltaics 4:15 PM - 4:30 PM Vicente Pacheco Recycling of Bi₂Te₃ based thermoelectric modules: progress for the recovery of bismuth and tellurium 4:30 PM - 4:45 PM Ali Bashiri Rezaie Fabrication of thermoelectric cementitious composites using continuous functionalized CNT-coated polymer fibers 4:45 PM - 5:00 PM Xin Feng Optimizing textured structure of polycrystalline SnSe thermoelectric material by solvent-regulated cold sintering
3:30 PM - 5:00 PM	Harvesting and Sensing Session Chair: Kafil Razeed Mahmood Room: Prestonfield 3:30 PM - 3:45 PM Xiaodong Wang 3D elastic inorganic thermoelectric network for body heat energy harvesting 3:45 PM - 4:00 PM Carlo Fanciulli Wearable Thermal Management System Based on Thermoelectric Device and Textile Heat Exchanger 4:00 PM - 4:15 PM Shanghao Chen Near-Equilibrium Interfacial Engineering for Robust and High-Performance Bi₂Te₃-based Thermoelectric Generators 4:15 PM - 4:30 PM Feng Cao Improved thermoelectric thin-film device performance via integrating optical thin films 4:30 PM - 4:45 PM Adhiraj Sundar From Height-Optimized to Upscaled Micro-Thermoelectric Generators for Autonomous IoT Applications 4:45 PM - 5:00 PM Richard Tuley Beyond Flexible Devices: the System Challenge
6:00 PM - 7:30 PM	Evening Excursion (pre-booking only): Walking Tour of Edinburgh or Whisky Tasting