

Foreword Issue 63

We are pleased to present the Issue No. 63 of the Superconductivity News Forum which includes, first of all, 3 Plenary and 7 Invited presentations made at the **38th International Symposium on Superconductivity (ISS 2025)** which was held in Nagasaki (Japan) from 4th to 6th December 2025. These talks cover areas from Large Scale, Materials, and Electronics categories.

Two Plenary presentation were made in the Large-Scale Category: the first one was made by Dr. Luigi Muzzi about “High-Current HTS Cables for Fusion: Development Status and Prospects” and the second one by Dr Bernardo Bordini about “REBCO Requirements for Next-Generation HEP High-Field Magnets — Insights from Recent Muon Collider Design Studies.” The third Plenary presentation was in the Materials category, and it was delivered by Dr. Eli Zeldov about “Scanning SQUID-on-Tip Magnetic and Thermal Imaging: Nanoscale Probe of Superconductivity and Strongly Correlated Electronic Systems.”

The delivered Invited talks in the large-scale category were the following: 1/ “Superconducting Accelerators for Proton Therapy: Overview and the Compact AVF Cyclotron SC230,” presented by Dr. Yuta Ebara; 2/ “Conceptual Design Study for Japanese Fusion DEMO Reactor,” presented by Dr. Hiroyasu Utoh; and 3/ “DC Superconducting Cables for Present and Future Power Needs” presented by Dr. Antonio Morandi.

The Invited talks we include in the Electronics category are the following: 1/ “Stochastic Computing Using Superconductive Random Number Generators” presented by Dr. Yuki Yamanashi; 2/ “Recent Progress in Design Automation of Superconductor Circuits,” presented by Dr. Lieze Schindler; 3/ “From Weak Links to Quantum Coherence: A Focused Ion Beam Perspective on Superconducting Tunneling Phenomena,” presented by Dr. Jay LeFebvre; and 4/ “Physics of Superconductors for Haloscopes: The Cases of NbTi, Nb₃Sn and Fe(Se,Te),” presented by Dr. Andrea Alimenti.

The Issue also includes the link to a recently published Review in *Superconductor Science and Technology* titled “Perspective: A Strategic Roadmap for Implementing Superconductivity Towards Zero-Emission Transport.” The article is authored by 18 researchers from 16 institutions from 6 different countries.

We hope that you will find the content of the SNF Issue No. 63 informative and interesting. Remember to periodically check back to the site for continuous updates and announcements.

Xavier Obradors and the SNF Editorial Team