



PROGRAMME

SUPERCONDUCTIVITY for Railway Application

11-12 December 2024
PARIS, UIC HQ



Introduction

Superconductor technology, once confined to research laboratories, is now making its way into the industrial sector.

Building on the success of these advancements, the rail industry is turning to this innovation to modernize its infrastructure. Europe is exploring new possibilities with cables and fault limiters, while Asia invests in futuristic rail vehicle projects. SNCF Réseau, at the forefront of this technological revolution, is financing key projects that are shaping the future of rail transport. The project SuperRail was funded by the government as part of France 2030.

Don't miss our inaugural workshop, where you'll discover three world-first railway projects where superconductivity plays a central role.

Join us to witness groundbreaking innovations that will redefine rail transport!

Agenda

DAY 1

- ▶ Welcome remarks
- ▶ Paving the way of high efficient railways networks with Superconducting cables
- ▶ Key note interview
- ▶ Networking Reception Drinks

DAY 2

- ▶ Welcome remarks
- ▶ Enhancing rail network reliability and safety with Superconducting Fault Current Limiters (sFCL)
- ▶ Japanese Maglev train: World's Fastest Bullet train
- ▶ HTS Advanced Conductors and wires: accelerators of the next generation of superconducting electric transmission lines

It's a free event, and registration can be done here:

[HOME - Superconductivity for Railway Application Workshop \(evenium.events\)](https://evenium.events)



For further information please contact:
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International Union of Railways (UIC)
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Programme

Day 1 11 December 2024

9:00 **Registration and coffee reception**

9:30 **Plenary session**

Welcome speech

UIC, F. Davenne

Why innovation is a core element of SNCF Réseau strategic road map

SNCF Réseau, T. Joindot

Industrial outlook for all sectors

Nexans, J. Fournier

10:10 **Networking break**

10:30 **Session 1: Paving the way of high efficient railways networks with Superconducting cables**

Overview of superconductor technology

Grenoble-INP, P. Tixador

State-of-the-art cooling techniques

Absolut System, J. Lacapère

World's first: SuperRail, paving the way towards higher power availability at train stations

SNCF Réseau, T. Joindot

Presentation of the SuperRail project

SNCF Réseau, H. Caron

12:30 **Lunch break and discovery of the Innovation Hall**

13:45 **Session 2: Superconducting power Cables – Unlocking electricity potential**

What tools and resources are needed to develop and study superconducting cables?

Université de Lorraine, K. Berger

Superconducting cables activities in Japan

RTRI, T. Masaru

Accelerating the Energy Transition via High Temperature Superconducting Systems and projects

Nexans, Y. Duclot

15:25 **Session 3: Superconducting Fault Current limiter (SFCL) – Higher network reliability and safety**

AC fault Current Limiter

Nexans, A. Allais

Safe, DC Fault Current Limiter

L2EP, K. Almaksour

16:25 **Networking break**

16:45 **Key Note: Day's wrap-up discussion**

Sustainable development prospects for superconductivity

Is climate change a factor in the acceleration of supra/cryo technology market adoption?

How superconducting technology play a role in the energy transition?

With SNCF & Airbus

17:30 **Networking Cocktail reception**



Programme

Day 2 12 December 2024

8:00 **Welcome coffee**

8:30 **Session 4: High Temperature Superconducting wire**

REBCO tape

Theva, A. Smara

MgB₂ + Scarlett

ASG, C-E. Bruzek

HTS Advanced Conductors and wires: accelerators of the next generation of superconducting electric transmission lines

MeTox, J. Vitha & M. Hayden

10:00 **Networking break**

10:20 **Session 5: Superconducting systems – Broadening railway applications**

Superconducting traction substation

Centrale Supélec, L. Quéval

MagLev in Japan

University of Tokyo, H. Ohsaki

11:30 **Round table: Keynotes of the event**

Superconductivity's impact on other industrial sectors

With Safran, J. Labbé & Airbus, L. Ybanez & CEA, W. Abdelmaksoud (TBC) & Renaissance Fusion

12:25 **Closing remarks**

12:30 **Networking Lunch break**

