News Release

Railway Technical Research Institute

The 10th SNCF-RTRI Collaborative Research Seminar Takes Place

The Railway Technical Research Institute (RTRI) and SNCF held their 10th collaborative research seminar on November 30, 2022.

RTRI and SNCF concluded an agreement on collaborative research in 1995. Since then, the two organizations have been collaborating in railway technical research and sharing information. The collaborative research seminar has been organized every two years to present research results, discuss how to manage railway technical research and plan the collaboration in the ensuing phase.
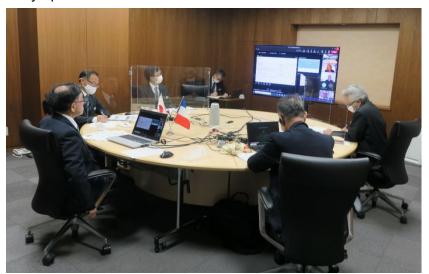
In this 10th seminar, about 50 people participated. Carole Desnost, Chief Innovation Officer, and David De Almeida, Head of Science and Research, of the Technology, Innovation and Group Projects Division, of SNCF, Atsushi Furukawa, Executive Director, and Yasushi Ujita, General Director of Research and Development Promotion Division, of RTRI and researchers from both organizations took part in this seminar.

The seminar was organized as a web meeting like the previous one in 2020, although travel restrictions due to Covid-19 have already been lifted.

(1) Management Meeting

At the Management Meeting, executives of SNCF and RTRI discussed how to plan and implement future research collaboration. After SNCF made a presentation on energy saving in railway operation and RTRI introduced their research to apply digital technologies to railways, they discussed the backgrounds and future goals.

In addition to the existing collaborative research and information exchange, they decided to set up a new framework, "Focus Group Discussions," in order to have discussions regularly on the technical issues which are yet to be included in the formal topics for collaborative research and on other challenges in railway operation.

Management meeting

(2) Presentation Meeting

Researchers of SNCF and RTRI made presentations on the results of two collaborative research and eight information exchange projects of the 10th Phase which were implemented from 2020 to 2022. The researchers held active discussions on the presentations regarding projects including the following three:

Information exchange to analyze cases of scouring disasters

As one of the measures to mitigate natural disaster damage, scouring cases were analyzed and risk points were identified using machine learning technologies.

Further utilization of energy storage systems and high-voltage converters, for higher environmental and cost performance

Research to use fuel-cell vehicles and ground energy storage systems efficiently and to predict degradation of vehicle-mounted batteries, to work toward decarbonization of railways.

Information exchange on utilization of AI in railways and its concept

Research to apply image analysis techniques and artificial intelligence to passenger flow analysis and obstacles detection.

The research plans for three collaborative research and seven information exchange projects for the 11th Phase collaboration from 2022 to 2024 were reported.

Collaborative research meeting

The next collaborative research seminar is scheduled to be held in the fall of 2024 in Tokyo.