News Release

Railway Technical Research Institute

Digital Maintenance Technical Seminar Held in Osaka

On October 22, at Hotel Mielparque Osaka, RTRI held Digital Maintenance Technical Seminar focusing on labor-saving and remote operation in railway facilities maintenance.

RTRI has been addressing research into "labor saving by digital maintenance" in order to attain more labor-efficient railway facilities maintenance by fully using digital technologies. Currently, we are in the midst of the Covid-19 pandemic and, in terms of minimizing the infections, remote operation of facilities maintenance is increasingly important.

This seminar was held with sufficient measures taken to prevent the coronavirus infections. 94 participants from 25 companies, mostly railway operators, joined the seminar. Its keynote lectures were live-streamed and 64 viewers from 36 companies watched them.

During the seminar, three keynote speeches in the fields of structures, track and earthquake engineering and eight presentations of our research results were made. Two of the presentations were delivered in "hybrid" style combining live streaming from the test fields at RTRI and presentations at the seminar venue, and six were remotely done by researchers who explained from RTRI about the panels, monitor screens, exhibited materials and models at the seminar venue.

[Keynote speeches]

- Masayuki Koda
  Director, Head of Structures Technology Division
  "Railway structures maintenance using digital technologies: labor saving in construction work"

- Hiroo Kataoka
  Director, Head of Track Technology Division
  "Labor saving and safety improvement in track maintenance using digital technologies"

- Shunroku Yamamoto
  Director, Head of Center for Railway Earthquake Engineering Research
  "Early reopening of train operation after an earthquake using real-time data"

[Research presentations]

Hybrid style
- Visual inspection support system using 3-dimensional images
- Track maintenance database system LABOCS and its future prospect

Remote style

- Tunnel inspection support system using image data
- Station renovation support system using passenger flow simulation
- Track^{2}er: low-cost track inspection device
- Degradation assessment system for wood sleepers using deep learning
- Train inspection support system using image analysis engine
- DISER and supporting early reopening of train operation after an earthquake using displacement sensor
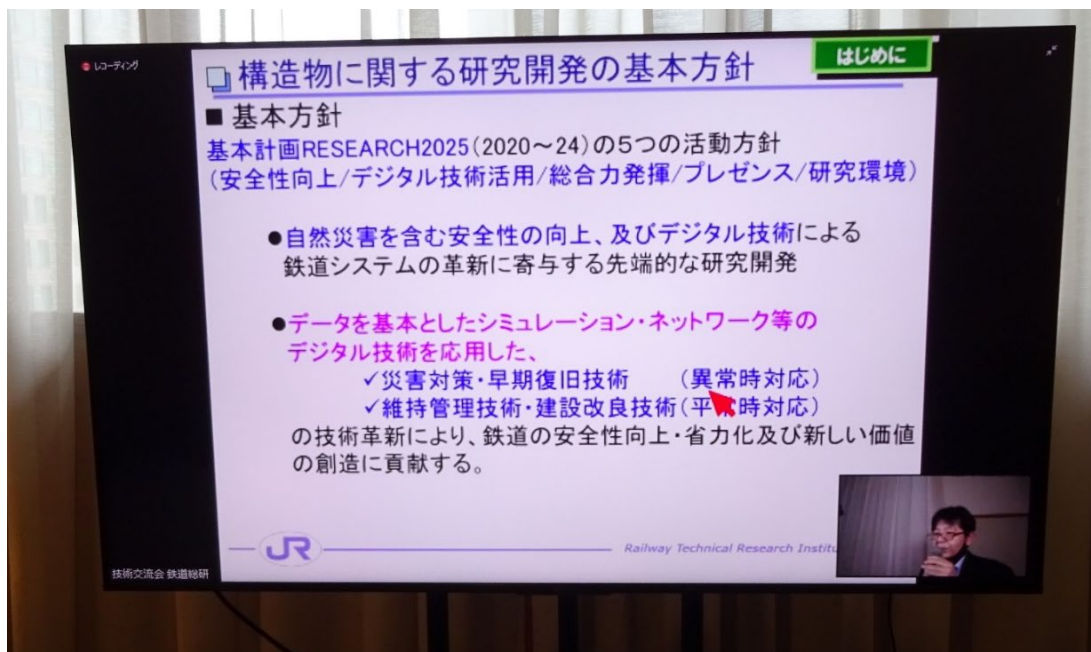
For further details please contact:

https://www.rtri.or.jp/sales/inquiry.html

Keynote speech

Seminar venue

Live streaming of a keynote speech
Bottom-right is the speaker
Railway structures maintenance using digital technologies: labor saving in construction work

Hybrid presentation

Presentation at the seminar venue
Visual inspection support system using 3-dimensional images

Live streaming from the test field reproducing railway structures at RTRI
Visual inspection support system using 3-dimensional images

Remote presentation

Participants asking questions at the seminar venue
Train inspection support system using image analysis engine

A researcher making remote presentation and answering questions from RTRI
Train inspection support system using image analysis engine