

# JAPAN Railway & Transport REVIEW

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Editorial **Railway-university cooperation**

## Special Feature **Railways and Universities**

### **How Should Universities and Railways Cooperate in a New Era?**

Makoto Arisawa

Professor of Environmental Engineering at Keio University and Ex-secretary of Research and Educational Funding Projects at JR East

A course of lectures on railways is being conducted at a campus of Keio University on the outskirts of Tokyo, covering such topics as how railways will be positioned in an information-oriented society, solving the problems currently faced by railways, and what the future vision for railways should be. This article looks at the contents of the course and introduces actual investigations and research projects carried out by a student group.

### **The Advanced Railway Research Centre**

Roderick A. Smith

British Rail Research Professor at Sheffield University and Chairman of Advanced Railway Research Centre

The Advanced Railway Research Centre (ARRC) was established by British Rail (BR) with the aim of opening up a new era of cooperation between universities and the railway industry in the United Kingdom. The author reports on technical research being conducted using original facilities and equipment at the University of Sheffield, and the promotion of other research programmes as well as education for engineers.

### **Relations between Railways and Universities in Switzerland**

Heinrich Brändli

Professor of Traffic Engineering at Swiss Federal Institute of Technology in Zurich and Ex-president of Swissrail Export Association

This article points out that the Swiss Federal Railways (SBB) does not have a formally established system of cooperation with universities in the field of railway technology research. However, universities in Switzerland have the necessary foundation to enable them to be entrusted with contract research work. The article also notes that the lack of an official cooperation system does not prevent exchanges of specialists, and that individual research activities on the theme of public transport systems as a whole are possible.

### **Major Projects of Joint European Railway Research**

Imrich Korpanec

Current Director of ERRI/UIC and Ex-director of International Department of Czech Federal Ministry of Transportation

The political and economic changes in Europe are increasing the need for research facilities with a stronger business orientation. The author explains how the European Rail Research Institute (ERRI), formerly the Office for Research Experiments (ORE), is shouldering a central role in the context of this new trend. How will the European railway industry cope with the many problems facing it both now and in the future?

### **Railway Colleges of China**

Chen Guanmao

President of Shanghai Tiedao University and Professor of Mechanical Engineering

Around a century ago, when railways were at the forefront of science and technology in China, railway colleges were established under state control. This is a description of the evolution and present situation of China's railway colleges, which have been promoting structural improvements appropriate to the times.

### **Industry/Academic Cooperation in Transportation: The Partnership of JR East and MIT**

Joseph M. Sussman

JR East Professor, Professor of Civil & Environmental Engineering, and Director of Association of American Railways Affiliated Research Laboratory at MIT

A programme of joint research and education by two organizations which have different missions but common targets has entered its fourth year. This article describes the integral programme established by the East Japan Railway Co. (JR East) and the Massachusetts Institute of Technology (MIT) with the future of railways in mind. The programme has been created by a fusion of the worlds of academia and industry in response to various current and future problems facing the transport industry.

### **Another Perspective**

#### **A Journey by 'Anti-War Extremists'**

Hyun Dae Song

Okinawa, Hiroshima, Nagasaki and Japan as a whole 50 years after World War II are seen from the perspective of war in the midst of peace by the author, a native of Pusan, South Korea, who came to Japan as a Ministry of Education scholarship student. The author also makes proposals on the role that Japan should play in the international community.

### **People "Welcome to the Izu Peninsula!" – Four Young Women Take on the Challenge of Becoming Train Drivers**

This article tells the story leading up to the induction of Japan's first woman train driver on a railway running through the Izu Peninsula, an area known for its scenic beauty. Her current activities are also described.

### **Japanese Railway History 7 Special Pictorial**

- Landmark Locomotives in Japanese Railway
- History, and Japanese Rail Transport Growth until 1945

### **Topics October 1995 to January 1996 Yurikamome Unmanned Guided Transport System-**

### **Photostories no-title**

JR West Series 500 Shinkansen EMU, and JR Central Series 300X Test Train