

Scientific Society for Mechanical Engineering  
Department of Rolling Stock

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***13TH INTERNATIONAL  
CONFERENCE ON***

**RAILWAY BOGIES AND  
RUNNING GEARS**



**CONFERENCE PROGRAM**

<https://events.gteportal.eu/bogie26/>

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**9 - 12 FEBRUARY, 2026  
BUDAPEST, HUNGARY**

**13th International Conference on  
Railway Bogies and Running Gears**  
*hosted by the*  
**Department of Rolling Stock, SSME**  
**Budapest, Hungary,**  
**9 - 12 February, 2026**

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# CONFERENCE PROGRAM

## FIRST DAY

9 February, 2026 Monday

Registration opens at the Conference Venue at the  
Budapest University of Technology and Economics  
Building 'A' Conference Hall at 12:00

Special Workshop on

**Vehicle System Dynamics, Identification and Anomalies  
Issues of Digital Automatic Coupling operation in the EU**

14:00

*Session Chairman: Prof. András Szabó*

*Session Secretary: Mr. Péter Ferencz*

**SZABÓ, A.** (Hungary)

Presidential opening speech

**BÁRDOS, K.** (Hungary)

On current activities of the Hungarian Scientific Society for Mechanical Engineering, festive greetings by the Managing Director

**KNORR-BREMSE** (Germany)

Keynote presentation on the development of the DAC Digital Automatic Coupling

Coffee Break: 15:00

**PANEL DISCUSSION 15:30**

*Session Chairman: Prof. Péter Zwierzyk*

*Session Secretary: Mr. Péter Ferencz*

Panel Members are from Entities as of:

Akiem SAS

Budapest University of Technology and Economics

Europe's Rail DACFIT Project

Knorr-Bremse GmbH.

Rail Cargo Hungary Co.

**Visiting of the University BME Laboratory with DAC units prepared**

16:45

# First Day Evening Program 19:00

## ***CONFERENCE GRAND OPENING RECEPTION***

at the

***DANUBE HALL of the***

***Budapest University of Technology and Economics***

***Building "K", 1<sup>st</sup> floor***

***with festive addresses of the Conference Hosts and Patrons***

## ***SECOND DAY***

***10 February, 2026 Tuesday***

### ***SESSION LECTURES 9:00***

***Session Chairman: Prof. Zoltán Zábori***

***Session Secretary: Mr. Máté M. Szűcs***

***DING, X. P. – Teng, W. – Li, J. – Wang, W. – Zhang, L. (China)***

Monitoring Method for Hunting Problem of High-Speed Train Based on Fusion of Rail Image and Vehicle Acceleration

***M. SZŰCS, M. (Hungary)***

Investigation into the effect of worn wheel and rail profiles on the energy dissipation realized in the wheel-rail connection of a railway vehicle traveling in a curve

***BÉZI, G. – FERENCS, P. (Hungary)***

Validation of smartphone-based acceleration measurements for running quality assessment of an electric locomotive

***MICHÁLEK, T. – VOLTR, P. – LIBEROVÁ, S. – KOHOUT, M. – JENIS, F. (Czech Republic)***

Examples of practical use of an Electric Multiple Unit Multi-Body model developed in the simulation tool at the University of Pardubice

***Coffee Break: 10:20***

## SESSION LECTURES 10:50

*Session Chairman: Prof. Lajos Borbás  
Session Secretary: Mr. Péter Ferencz*

**YUAN, Z.** (China)

Structural Design of Articulated Bogies with Built-in Axle Boxes for Light Rail Vehicles

**DIZO, J. – LOVSKA, A. – BLATNICKY, M. – BUCKO, M. – ISHCHUK, V.**

(Slovak Republic)

Research into influence of flexibility of a freight wagon bogie frame on the output parameters

**HAN, J. – YAO, S. – ZHAN, L.** (China)

Lightweight design of bogie frame for 400 km/h based on structural optimization technology

**Lunch Break: 12:00**

## SESSION LECTURES 14:00

*Session Chairman: Prof. László Lovas  
Session Secretary: Mr. Balázs Orbán*

**GAO, H.** (China)

Structural Optimization of the Upper Traction Device Based on the Finite Element Method

**Wang, C.** (China)

Causes Analysis of Abnormal Temperature Fault in Metro Vehicle Axle Box Assembly Based on FTA Theory

**BERG, S. – GIL, P. – SCHINDLER, Ch. – PFAF, R.** (Germany)

Parametric Study Comparing Rolling Contact Fatigue Prediction

**Coffee Break: 15:00**

## SESSION LECTURES 15:30

*Session Chairman: Prof. Nalinaksh S. Vyas*

*Session Secretary: Mr. István Németh*

**ORBÁN, B. – FICZERE, P.** (Hungary)

On the effects of changes in characteristics of rubber springs exposed to environmental impacts

**XU, G. – PENG, X. – JIANG, D. – ZHANG, B. – LIU, G. – CAI, Y.** (China)

Multi-objective optimization of suspension parameters for locomotive bogie under worn wheel condition

**HAO, Q. – CHU, Y.** (China)

Optimization and experimental study on key parameters of secondary suspension for high-speed metro vehicles

## Coffee Break: 16:20

## SESSION LECTURES 17:00

*Session Chairman: Prof. Péter Béda*

*Session Secretary: Mr. Máté M. Szűcs*

**YU, M. – LI, T. – ZHENG, C. – HAO, Q. – LIN, F.** (China)

Optimization of Suspension Parameters and Vibration Characteristics of Urban Rail Vehicles Based on Mechanism-Data Fusion

**GERLICI, J. – LOVSKA, A. – DIZO, J. – RYBIN, A.** (Slovak Republic)

Study of dynamic characteristics of an open wagon on bogies 18-100 with different variants of elastic spring suspension elements

**MYAMLIN, V. S. – LOZOVIY, Y. – MYAMLIN, S. S. – LOZOVA, A.** (Ukraine)

Improvement of the spring suspension design of railway rolling stock bogies

## Introduction presentation of exhibitor Companies

## Evening Program 18:30

***Dinner at the University Cantine***

## **THIRD DAY**

**11 February, 2026 Wednesday**

### **SESSION LECTURES 9:00**

***Session Chairman: Prof. Péter Zwiercyk***

***Session Secretary: Mr. Balázs Orbán***

**ZÁBORI, Z. (Hungary)**

Energetic analysis of the derailment process of a railway wheelset as a function of the elastic support of the track

**LIU, Y. (China)**

Research on Steering Control Strategy of the Running Gears of Virtual Rail Train

**VYAS, N. S. – DESAPPAN, S. R. (India)**

Signal Processing and CNN-Based Classification Framework for Rolling Stock Condition Assessment using WILD Data

**DÖBRENTEI, S. (Hungary)**

Prediction of crack plane orientation in railway wheels for different braking conditions

**Coffee Break: 10:20**

### **SESSION LECTURES 10:50**

***Session Chairman: Prof. László Lovas***

***Session Secretary: Mr. Máté M. Szűcs***

**CHVOJAN, J. – VACLAVIK, J. – WEBER, F. J. (Czech Republic)**

Locomotive composite drive shaft strength investigation

**KISS, Cs. (Hungary)**

Experiences and lessons on the bogie crisis of the V43 series electric locomotives of the Hungarian State

**ZUDOR, L. B – ZWIERCYK, P. (Hungary)**

Crack detection opportunities on railway surfaces

**Lunch Break: 12:00**

## **SESSION LECTURES 14:00**

**Session Chairman: Prof. András Szabó**

**Session Secretary: Mr. Péter Ferencz**

**BKV Zrt.** (Hungary)

Introduction to the operation and vehicles of the first electric powered subway line of the World, Metro line M1 Budapest, Hungary

*Afternoon and Evening Program:*

*Visiting the*

*BKV Zrt.*

**MAINTENANCE WORKSHOP AND DEPOT of the**

**METRO LINE M1, BUDAPEST**

*inclusive heritage rides on bus and metro vehicles*

*After the visit ca. at 18:00*

**CONFERENCE BANQUET DINNER**

**at the RESTAURANT BÚSULÓ JUHÁSZ**

<https://www.busulojuhasz.hu/>

**Heritage bus ride leaves the conference venue at 14:30**

## **FOURTH DAY**

**12 February, 2026 Thursday**

### **SESSION LECTURES 9:00**

***Session Chairman: Prof. Gergely Tulipánt***

***Session Secretary: Mr. István Németh***

**FICZERE, P. – BORBÁS, L. (Hungary)**

A comprehensive study on the sources and effects of railway noise

**MOOCK, E. – RAKOWITSCH, M. – PFAFF, R. (Germany)**

Influence of structural vibrations on polygonization on tramways

**LI, Z. (China)**

Research on Improving the Operational Reliability of Axle Box Assemblies at Grounding Ends Under Abnormal Vibration Conditions

**Coffee Break: 10:00**

### **SESSION LECTURES 10:40**

***Session Chairman: Prof. Lajos Borbás***

***Session Secretary: Mr. Péter Ferencz***

**CHU, Y. – HAO, Q. (China)**

Research on Train Brake Disc Wear Life Prediction System Based on BP Neural Network

**ZWIERCYK, P. (Hungary) – *Invited lecturer***

Possible failure modes in the wheel-rail connection caused by modern rail anti-spin devices – a review

**NÉMETH, I. (Hungary)**

Crack detection opportunities on railway surfaces

## **The BOGIE'26 CAKE CEREMONY**

**and**

## **CLOSING ADDRESS**

**by Conference President Prof. András Szabó**

***Farewell Drink***

**12:00**