

11TH INTERNATIONAL CONFERENCE ON
RAILWAY BOGIES AND
RUNNING GEARS

September 9 – 12, 2019
BUDAPEST, HUNGARY

PROGRAMME



SCIENTIFIC SOCIETY OF MECHANICAL ENGINEERS
DEPARTMENT OF ROLLING STOCK
BUDAPEST
2019

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Registration Time

at the Conference Hall of Hotel FLAMENCO

Budapest, distr. XI. Tas-vezér str. 3 – 7.

8 September 2019: **16⁰⁰ - 20⁰⁰, Welcome Buffet**

9 September 2019: **7³⁰ - 15⁰⁰**

10 September 2019: **8⁰⁰ - 15⁰⁰**

11 September 2019: **8⁰⁰ - 13⁰⁰**

12 September 2019: **8⁰⁰ - 16⁰⁰**

You are welcome as a participant of our Conference. We hope that you will be enriched with a great deal of new information both in your special field and in human relations.

If any question would arise in connection with the Conference, please contact our professional organiser

Mr. Gábor TÓTH

at the registration desk.

The Organising Committee

PROGRAMME OF THE CONFERENCE

Official Language:
English

FIRST DAY

9 September, 2019 - 9⁰⁰

Opening Ceremony, Festive Addresses

9²⁵ **Lectures** Chairman: **I. ZOBORY** (Hungary)

9³⁰ - 9⁵⁵ **KRETTEK, O.** (Germany)
Environmental Influences Force Orientation Towards Rail Transport

10⁰⁰ - 10²⁵ **SZANTO, F.** (Australia)
Operation of A Single Air Spring Bogie

10³⁰ - 11⁰⁰ **COFFEE BREAK**

11⁰⁰ **Lectures** Chairman : **O. KRETTEK** (Germany)

11⁰⁰ – 11²⁵ **RICHTER,** (Germany)
Design by Accident – Accident by Design

11³⁰ – 11⁵⁵ **SCHÖNHUBER, P. – ROLFF, E. – SCHINDLER, CH.** (Germany)
Numerical Study on the Dynamics of a Novel, High-Speed
Passenger Bogie Design without Primary Suspension Spring

12⁰⁰ – 12²⁵ **BRACCIALI, A. – MAGNA, G.** (Italy)
A Really Innovative Freight Bogie

12³⁰ – 12⁴⁰ **CONFERENCE PHOTO** (in front of Hotel FLAMENCO)

12⁴⁰ – 14⁰⁰ **LUNCH BREAK**

14⁰⁰ **Lectures** Chairman: **O. POLACH** (Switzerland)

14⁰⁰ – 14²⁵ **BENICKY, M. – HAUPT, L – KOPAL, J.** (Czech Republic)
Locomotive Bogies from CZ Loko Production

14³⁰ – 14⁵⁵ **ROMERO-NAVARRATE, J. – OTREMBA, F.** (Germany)
Conceptual Design of an Active Centre Plate

15⁰⁰ – 15²⁵ **BAUER, P. – ČAPEK, J. – FRIDRICHOVSKÝ, T. –
KRULICH, P. – MALKOVSKÝ, Z. – MUSIL, J. – ZÍSKAL, T.**
(Czech Republic)
Bogie for Freight Wagon

15³⁰ - 16⁰⁰ COFFEE BREAK

16⁰⁰ Lectures Chairman: **L. OROSZVÁRY** (Hungary)

16⁰⁰ – 16²⁵ PLOMER, J. (Czech Republic)

D-DART Concept – A Way to Higher Capacity

16³⁰ – 16⁵⁵ NEGISHI, H. – YAMADA, H. – IWANAMI, K. –

SHIMAMUNE, R. – SHINAGAWA, D. – MIMURA, M. (Japan)
Development of Steering Mechanism and Control Method for
Active Bogie Steering

17⁰⁰ – 17²⁵ DONGFANG, S. (Germany)

Exploration into the Applicability of Running Dynamics
of Conventional-Form Non-Powered Bogies with Very
Small Wheels



18⁰⁰ - 22⁰⁰

CONFERENCE RECEPTION

in the **HALL OF HOTEL FLAMENCO**,
Budapest, distr.XI. Tas-vezér str. 3 – 7.

The Reception is sponsored by the

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SECOND DAY

10 September, 2019 - 9⁰⁰

9⁰⁰ **Lectures** Chairman: **A. MATSUMOTO** (Japan)

9⁰⁰ - 9²⁵ **TANIMINE, T. – TOIDE, T. – IWATO, K. – SHIMOKOWA, S.**
(Japan)

Development of Linkage Type Steering Bogie for the Linear Metro

9³⁰ - 9⁵⁵ **NÉMETH, I.** (Hungary)

Vibration of Friction Brake Systems – Modelling and Attenuation

10⁰⁰ - 10²⁵ **HANDOKO, Y. A. – MAHYUDDIN, A. I. – SUGIHARTO, A. –
WIKARANA, P. – NUGRAHA, P. A.** (Indonesia)

Dynamics Simulation of a Light Rail Vehicle Based on EN-14363 Standard

10³⁰ - 11⁰⁰ **COFFEE BREAK**

11⁰⁰ **Lectures** Chairman: **N.S. VYAS** (India)

11⁰⁰ - 11²⁵ **DUSZA, M.** (Poland)

Rail Vehicle Model Possibility of Safety Motion Analysis in the Overcritical Velocity Range

11³⁰ – 11⁵⁵ **ARAI, I. – TANIMOTO, M. – WATANABE, S. – MATSUDA, T.
– MATSUMOTO, A. – MITCHITSUJI, Y.** (Japan)

Estimating Method of Wheel-Rail Friction Condition by Using Pq Monitoring Bogie

12⁰⁰ – 12²⁵ **BRACCIALI, A. – MAGNA, G.** (Italy)

The Liberty Wheel

12³⁰ – 14⁰⁰ **LUNCH BREAK**

14⁰⁰ **Lectures** Chairman: **J. CSIBA** (Hungary)

14⁰⁰ – 14²⁵ **MATSUMOTO, A. – MICHITSUJI, Y. – ICHIYANAGI, Y. –
TANIMOTO, M. – NAKI, T. – SATO, Y.** (Japan)

Flange Climb Derailments in Curving

14³⁰ - 14⁵⁵ **VYAS, N. S. – NAYANI, M. – SINGH, R. K.** (India)

Estimation of Wheel/Rail Forces from Vehicle Acceleration Data Using Artificial Neural Networks

15⁰⁰ - 15²⁵ **SAKAI, H.** (Japan)

Design Method for Suppressing Hunting Oscillations Focusing on Its Damping Ratio

15³⁰ - 15⁵⁵ **MICHALEK, T. – ZELENKA, J.** (Czech Republic)
Contribution of Active Elements in Locomotive Running
Gear to Reduction of Guiding Forces

16⁰⁰ - 16³⁰ **COFFEE BREAK**



LATE AFTERNOON – EVENING PROGRAM

NARROW GAUGE RAILWAY PARTY

sponsored by the

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Buses leave the **Conference Centre** at 16³⁰

After the Party

buses return by cca. 22⁰⁰

THIRD DAY

11 September, 2011 - 9⁰⁰

9⁰⁰ **Lectures** Chairman: **A. SZABÓ** (Hungary)

9⁰⁰ - 9²⁵ **KULKARNI, R. – BERG, M. – STICHEL, S.** (Sweden)
Fault Detection and Isolation method for Vehicle Running Instability from Vehicle Dynamics Response Using Machine Learning

9³⁰ - 9⁵⁵ **PÁLINKÓ, M. – BRUNI, S. – DI GIALLEONARDO, E. – LIU, B. – KRISHNA, V. – MUÑOZ, J.** (Germany + Italy + Sweden + Spain)
Evaluation of Passive And Mechatronic Steering Systems for 3-Axle Locomotive Bogies by Means of Multi-Body Simulation

10⁰⁰ – 10²⁵ **CSÉPKE, R.** (Hungary)
New Regulations of the Rail/Wheel Contact Mechanism for Hungarian Tramway Tracks

10³⁰ - 11⁰⁰ **COFFEE BREAK**

11⁰⁰ **Lectures** Chairman: **Z. ZÁBORI** (Hungary)

11⁰⁰ - 11²⁵ **JOST, F. – GRATZFELD, P.** (Germany)
Mechatronic Guidance for Tramways Using a Novel Hall-sensor Array

11³⁰ – 11⁵⁵ **FOSSATI, M. – CAPELLÁN, A. – ZAPIRAIN, A.** (Spain)
Dynamic Simulation to Structural Damage

12⁰⁰ – 12²⁵ **CSIBA, J. – BÉRES, I.** (Hungary).
Data To The History of the Hungarian Bogie Type: *Kaláka*

12³⁰ - 14⁰⁰ **LUNCH BREAK**

14⁰⁰ **Lecture** Chairman: **I. ZOBORY** (Magyarország)

14⁰⁰ – 14²⁰ **KOVÁCS, A.** (Hungary)
Railway Vehicle System Designing and Manufacturing of Products at the Budapest Works of the Knorr-Bremse Co.
Introductory lecture to prepare the afternoon technical visit



AFTERNOON - EVENING PROGRAM:

1. Visiting the

**BUDAPEST WORKS OF THE
KNORR-BREMSE
RAILWAY VEHICLE SYSTEMS HUNGARY Ltd.**

2. Right after the visit:

***COUNTRY CONFERENCE
BANQUET***

sponsored by the

KNORR-BREMSE
RAILWAY VEHICLE SYSTEMS HUNGARIA Ltd. (H)

Buses leave the Conference Centre at **14⁴⁵**

After the Banquet

buses return to Budapest hotels by cca. **22⁰⁰**

FOURTH DAY

12 September, 2019 - 9⁰⁰

9⁰⁰ **Lectures** Chairman: **I. ZOBORY** (Hungary)

9⁰⁰ – 9²⁵ **WEBER, H. J. – RIEGER, M.** (Austria)
Enhanced Safety Concept for Wheel-Set Axles: The Path From Scientific Research to Innovation in Product Development

9³⁰ – 9⁵⁵ **YAMAMOTO, D.** (Japan)
The Monitoring System of Wheel/Rail Contact by Means of Thermal Imaging

10⁰⁰ – 10²⁵ **YONEMORI, H. – OYAMA, H. – ICHIKAWA, S. – NAGAMOTO, M. – MATSUOKA, A. – KAWADA, N.** (Japan)
Discussion on The Concept and Performance of Derailment Detector

10³⁰ - 11⁰⁰ **COFFEE BREAK**

11⁰⁰ **Lectures** Chairman: **A. MATSUMOTO** (Japan)

11⁰⁰ – 11²⁵ **ALFI, S. – LIU, B. – BRUNI, S.** (Italy)
Condition Monitoring of Suspension Components Based on On-Board Acceleration Measurements

11³⁰ – 11⁵⁵ **FERENCZ, P.** (Hungary)
Investigations Into Impacts of Bogie Secondary Suspension System Anomalies on Wheel Wear Propagation

12⁰⁰ – 12²⁵ **KANAMORI, S. – OTSUKA, T. – ADACHI, M. – SAKANOUÉ, K.** (Japan)
Technologies for Achieving both Reliability Improvement and Weight Reduction of N700s Shinkansen Bogie

12³⁰ - 14⁰⁰ **LUNCH BREAK**

14⁰⁰ **Lecture** Chairman: **O. KRETTEK** (Germany)

14⁰⁰ – 14²⁵ **SZABÓ, A. – ZOBORY, I.** (Hungary)
Selection of Parameters for Bogie Simulation on the Basis of Experimental Research



14³⁰ **Closing** Chairman: **I. ZOBORY** (Hungary)

CLOSING ADDRESS

Farewell Drink

PROGRAM OF THE POSTER SESSION

Posters will be exhibited near the Lecture Room
between 9 and 12 September 2019

Discussions can be realised in coffee breaks and every day
before the Afternoon Sessions between 13³⁰ and 14⁰⁰

CSÉPKE, R. (Hungary)

New Regulations of the Rail/Wheel Contact Mechanism for Hungarian Tramway Tracks

MIAMLIN, S. S. (Ukraine)

Improving Bogies' Design for Narrow Gauge Railways

ZOBORY, I. – NAGY, D. (Hungary)

Creep Control in Brake Operation to Avoid Wheel Sliding and Flattening

FERENCZ, P. (Hungary)

The Question of Lifetime: Extension Possibilities of Bogie Force Transmission Elements on The Basis of Condition Test Results

CHVOJAN, J. (Czech Republic)

Tools and Professional Activities of Research and Testing Institute In Pilsen in the Field of Development and Quality Increasing of Railway Stocks and Their Components



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MAP OF THE SITUATION OF HOTEL FLAMENCO

