

ORIENTAČNÁ MAPA MHD ŽILINY
INFORMATION URBAN TRANSPORT MAP OF ŽILINA



VEDECKO-TECHNICKÁ SPOLOČNOSŤ PRI
 ŽILINSKEJ UNIVERZITE V ŽILINE
 SCIENTIFIC AND TECHNICAL SOCIETY AT
 THE UNIVERSITY OF ŽILINA



XXII. MEDZINÁRODNÁ KONFERENCIA
SÚČASNÉ PROBLÉMY V
KOĽAJOVÝCH VOZIDLÁCH

22th INTERNATIONAL CONFERENCE
CURRENT PROBLEMS
IN RAIL VEHICLES



POZVÁNKA

INVITATION

ŽILINA, 16. - 18. 9. 2015, SLOVENSKO
 ŽILINA, SEPTEMBER 16 - 18, 2015, SLOVAKIA

PARTNERI KONFERENCIE PRORAIL 2015
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Železničná spoločnosť Slovensko, a.s.
 Rožňavská 1, 832 72 BRATISLAVA
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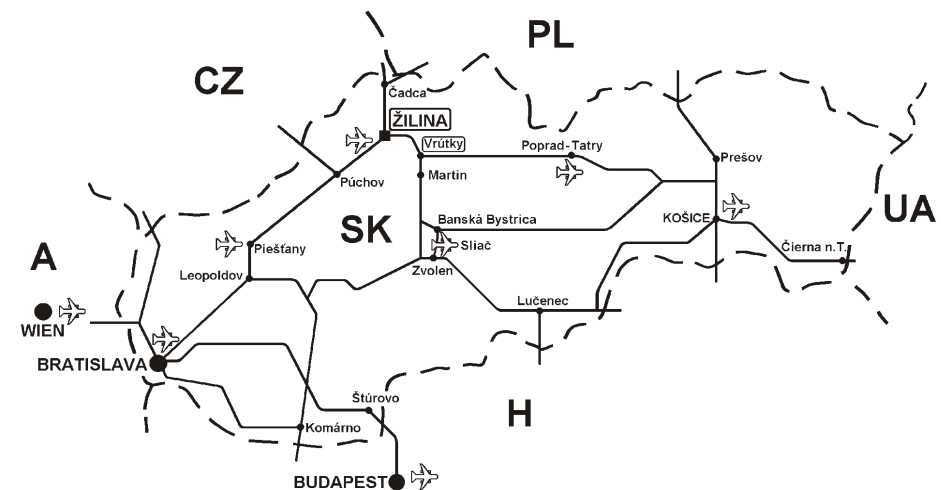
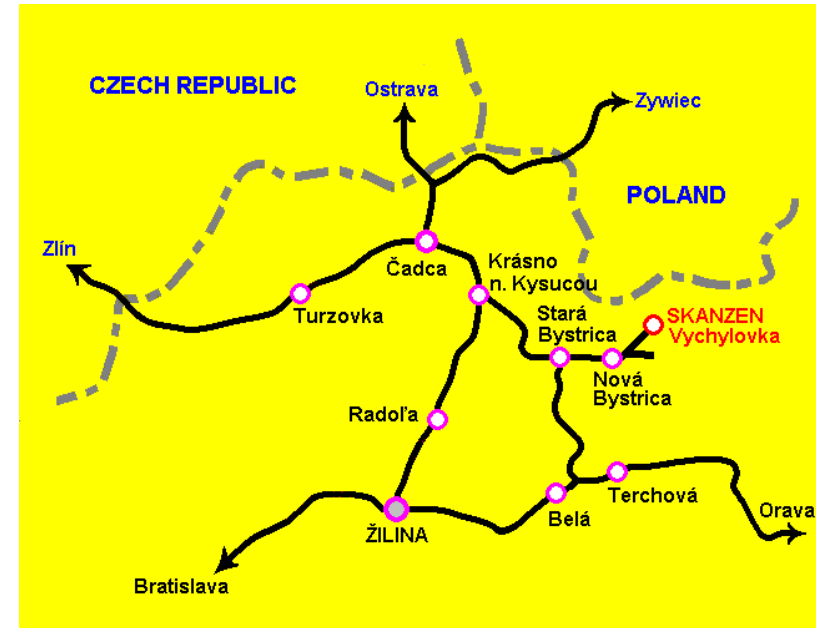
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Súčasťou 22. medzinárodnej konferencie "Súčasný problémy v koľajových vozidlách - PRORAIL 2015" je aj návšteva **Historickej lesnej úvratovej železnice** a skanzenu v Novej Bystrici - Vychylovke.

The part of the 22th International Conference "Current problems in rail vehicles - PRORAIL 2015" is a visit of the **Historical Logging Switchback Railway and Open air museum** in Nová Bystrica - Vychylovka.



Fees include only printing of advertisements delivered in the suitable form. Black&white or two color advertisements should be delivered in electronical form (WordPerfect, MSWord, AmiPro) including pictures (*.pcx, *.cdr, *.bmp, *.pjl, *.wpg) and/or in printed form. Full color advertisement should be delivered in an electronical form. All additional expenses connected with necessary treatment of advertisement will be charged in addition to base fees stated before.

It is possible to exhibit some smaller products in mini-exhibition, which will be in the area adjacent to the Conference rooms. For this purpose tables and chairs will be provided. Panels for leaflet displaying, texts, pictures, photos etc. will be available too.

Fees for this ways of presentation are as follows:

Table or panel	80 EUR,
Exhibition of your own panel	55 EUR,
Free exhibition area	55 EUR/1 m ² .

If you are interested in advertising your company in the Conference PRORAIL 2015, please fill in enclosed order and send it (including text and pictures of advertisement) **no later than on August 21, 2015** to address:

Prof. Ing. Daniel KALINČÁK, PhD.

VTS pri Žilinskej univerzite

Univerzitná 1

010 26 ŽILINA

SLOVAKIA

Phone: +421 (0)41 513 2650, Fax: +421 (0)41 5254 440, mobil: +421 (0)907 586 005, e-mail: daniel.kalincak@fstroj.uniza.sk.

If you order advertisement, we will send you one free copy of Proceedings of the Conference PRORAIL 2015 till the end of October 2015.

Scientific and Technical Society at the University of Žilina
Faculty of Mechanical Engineering of the University of Žilina
The Jan Perner Transport Faculty of the University of Pardubice

INVITATION

for 22th International Conference CURRENT PROBLEMS IN RAIL VEHICLES PRORAIL 2015



under the auspices of

Minister of Transport, Construction and Regional Development of the
Slovak Republic

Ing. Ján POČIATEK,

Rector of the University of Žilina

Dr.h.c. Prof. Ing. Tatiana ČOREJOVÁ, Ph.D.,

Chairman of the Board of Directors and Director General of Railway
Company Slovensko, j.s.c.

Ing. Pavol GÁBOR,

Chairman of the Board of Directors and Director General of Railway
Company Cargo Slovakia, j.s.c.

Ing. Vladimír ĽUPTÁK

September 16 - 18, 2015, ŽILINA, SLOVAKIA

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Prof. Dr.Sc. István ZOBORY, Faculty of Transportation Engineering, BUTE Budapest, HU

Prof. Ing. Peter ZVOLENSKÝ, Ph.D., Faculty of Mechanical Engineering, University of Žilina, SK

Organizing Committee

Chairman:

Ing. Dalibor BARTA, Ph.D., Faculty of Mechanical Engineering, University of Žilina, Univerzitna 1, 010 26 ŽILINA, Phone.: +421 41 513-2654, M.: +421 918 663 371, e-mail: dalibor.barta@fstroj.uniza.sk

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Ing. Andrej Suchánek, Ph.D., Faculty of Mechanical Engineering, University of Žilina, SK

Ing. Pavol Šťastniak, Ph.D., Faculty of Mechanical Engineering, University of Žilina, SK

Conference languages:

Slovak, Czech, English.

Hotel GRAND**** Žilina

- is situated right in the historic town centre. In hotel there is newly opened Grand wellnessclub.

Price (accommodation including breakfast, Wellnessclub, WIFI)

single room LUX 70,00 €

double room LUX 101,00 €

Hotel SLOVAKIA*** Žilina

- is situated in the city centre. The hotel has a night bar, swimming pool, sauna, solarium.

Price (accommodation including breakfast)

single room 31,00 €

double room 52,00 €

In case of cancellation the order, CK DUOTOUR charges these storno-taxes:

till 5 days before arrival - without tax

4 - 2 days before arrival - 80% of calculated price

less than 2 days and no cancelled orders - 100% of calculated price.

ADVERTISING

We are preparing the 22th International Conference „Current Problems in Rail Vehicles - PRORAIL 2015", which will take place at the University of Žilina in September 16 - 18, 2015. Usually about 200 specialists from the Slovak Republic, the Czech Republic and other countries participate at the Conference.

We offer to Your company possibility to advertise your products and services in the Proceedings of the Conference. The Proceedings will be printed in format B5 (176 x 250 mm). Fees for one page advertisement in the Proceedings are:

black&white page 95,- €

two color page 150,- €

full color page 230,- €.

Payment instructions. All payments should be made NET of bank charges

Please pay in our favour:

Beneficiary: VTS pri Zilinskej univerzite v Ziline, Univerzitna 1, 010 26 Zilina, Slovakia

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22th INTERNATIONAL CONFERENCE
**CURRENT PROBLEMS IN RAIL
VEHICLES - PRORAIL 2015**
September 16 - 18, 2015, Žilina, Slovakia

ENCLOSURES

DUOTOUR, travel agency

013 22 Rosina 405, okr. ŽILINA

Phone: +421 904 692 592, E-mail: ckduotour@gmail.com

offers and secures accommodation for participants of the Conference in hotels:

Hotel DUBNÁ SKALA** Žilina**

Hotel Dubna Skala is the first four-star boutique hotel, located in the historic city centre of Zilina

Price (accommodation including breakfast, parking, internet)

single room 106,00 €

double room 117,00 €

PALACE hotel POLOM**+ Žilina**

Exclusive hotel, which has a century tradition. Hotel is situated in the town city centre.

Price (accommodation including breakfast, parking, internet, sauna)

single room 70,00 €

double room 101,00 €

Hotel BOSS** Žilina**

New hotel is situated in the historical city centre near hotel SLOVAKIA.

Price (accommodation including breakfast, parking)

single room 65,00 €

double room 90,00 €

Conference objectives

The conference is organized for railway workers, urban transport and factory transport workers, manufacturers and users of rail vehicles and their components, research, development workers, designers, university staff and all people interested in research, development, design, technology, materials, operation and maintenance of rail vehicles.

The aim of the conference is to bring information to participants about state and perspectives of development in field of rail vehicles in broad sense from theoretical achievements, through design, testing, production technologies, material engineering, maintenance to practical operational experience.

Lectures of the conference will be held in three rooms in the building AC of the University of Žilina (with exception of opening ceremony and plenary session which will be in the building NG). Lectures are divided into parallel sessions according to their specialization:

Session A - lectures dedicated to theoretical problems and experimental methods,

Session B - lectures dedicated to design of rail vehicles and their subsystems,

Session C - lectures dedicated to ecology, operation and maintenance, braking systems, bearings, technology and materials.

Organizers are pleased to thank

the Partners:

the Railway Company Slovensko a.s.,

the Railway Company Cargo Slovakia a.s.

the sponsors of the Conference:

AŽD Praha s.r.o., Žirovnicka 2/3146, 106 71 Praha 10, CZ,

BONATRANS GROUP a.s., Revoluční 1234, 735 94 Bohumín, CZ

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TC Inter-Informatics spol. s r.o., Žilinská 790/17, 017 01 Považská Bystrica, SK,

and other companies which supported the Conference in different way.

PROGRAMME

September 15, 2015 - Tuesday

- **16.00 - 20.00 Registration of participants** at building of the Regional Directorate of ŽSR, 1. Maja str., No 34

September 16, 2015 - Wednesday

- **from 7.30 Registration of participants** in block NG, University Campus - Veľký diel
- **9.30 - 10.30 Opening ceremony (lecture hall NG 01)**

Opening Speeches

Opening speeches of representatives of the Ministry of Transport, Construction and Regional Development of Slovak Republic, the Railway Company Slovensko, a.s., the Railway Company Cargo Slovakia, a.s., the University of Žilina and the Jan Perner Transport Faculty, University of Pardubice.

- **10.30 - 10.50 Break**
- **10.50 - 11.30 Plenary session**

POHL Jiří, Ing., Siemens, s.r.o., Praha, CZ

Expanding transport performance of railway in the way of new technical solutions

DOMANICKÝ František, Ing., Tatravagónka a.s., Poprad, SK

Noise in freight railway transport, a real problem?

- **11.30 - 12.40 Presentation of companies**

ŠKODA TRANSPORTATION a.s., Pilsen, CZ

ŠKODA VAGONKA a.s., Ostrava, CZ

AŽD Praha s.r.o., CZ

TC INTER-INFORMATICS, spol. s r.o., Považská Bystrica, SK

BONATRANS GROUP a.s., Bohumín, CZ

PARS Komponenty s.r.o., Studénka, CZ

DEWETRON-PRAHA, s.r.o., CZ

- **12.40 - 14.00 Lunch**

● **Afternoon work in sessions (Block AC)**

✖ **Session A, September 16, 2015**

- **14.00 - 16.00 Lectures**

CULEK Bohumil, prof., Ing., CSc., CULEK Bohumil, Ing., assoc. prof., PhD., SCHMIDOVÁ Eva, prof., Ing., Ph.D., Jan Perner Transport Faculty, University of Pardubice, CZ

Test equipment for dynamic tensile tests of materials of railway vehicles

ČERNÝ Ivo, Ing., Ph.D., SÍS Jiří, Ing., SVÚM a.s., Čelákovice, CZ

Measurement of Crack Growth Using DCPD Method in Full Scale Railway Axle Loaded by Rotating Bending

ORGANIZATIONAL INSTRUCTIONS

Conference venue: The Conference will be held at the auditoria **NG** and **AC** of the University of Žilina, Veľký diel from September 16 to September 18, 2015.

Registration of participants: September 15, 2015 16.00 - 20.00 at the building of the Regional directorate Žilina of ŽSR, 1. Maja str., No 34.

September 16, 2015 from 7.30 in block „NG“ at University Campus at Veľký diel

Transport: - to **registration in the RD ŽSR**, which is about 200 m from the railway station on left hand side, you can walk (see the map);

- to **registration and conference sessions in blocks NG and AC** you can take trolleybus No 4, stop at the railway station - direction to the housing estate „Hliny“ and „Vičince“, and get off at bus stop „Žilinská univerzita“. For more detailed information about mass transport in Žilina see <http://www.dpmz.sk/>.

Registration information: Please fill in the enclosed **Obligatory Application** form and mail it by **August 21, 2015** to the address:

Prof. Ing. Daniel Kalinčák, PhD.

VTS pri ŽU

Univerzitna 1, 010 26 ŽILINA, SLOVAKIA

Phone.: +421 41 513 2650, Fax: +421 41 5254 440, mobile: +421 907 586 005 or send by

e-mail: daniel.kalincak@fstroj.uniza.sk.

Accommodation: Reservations in the hotels are booked by travel agency DUOTOUR (see enclosed application form for the accommodation), or individually (<http://www.hotel.sk/>, <http://www.limba.sk/>).

Food: Lunches on September 16 and 18 are in the canteen of the University Campus, lunch on September 17 is in Vychlovka. Price per lunch is 5,30 €.

Social evening: Evening reception will be on September 16, 2015 at 19.00 in the hall under the Church at Vičince. Payment for evening reception is 8,- €.

Conference fee: Conference fee is **130,- €** (if payment is made by bank transfer) or **(140,- €)** if conference fee is paid in cash at registration. **One of authors of each paper pay** reduced conference fee **100,- €** (payment by bank transfer) or **140,- €** if it is paid in cash. Conference fee covers the registration, Proceedings, visit of Historical Logging Switchback Railway and refreshment. The Conference fee does not cover accommodation and food.

The current information about the Conference PRORAIL 2015 you can find on:

<http://www.vtszu.sk>

PRELIMINARY SCHEDULE

September 15, 2015 - Tuesday

16.00 - 20.00 Registration of participants at the building of the Regional Directorate Zilina of ZSR, 1. Maja str. No 34

September 16, 2015 - Wednesday

from 7.30 Registration of participants at the block „NG“ of the University of Žilina, Veľký diel

9.30 - 10.30 Opening ceremony and opening speeches (lecture hall „NG 01“)

10.50 - 12.50 Plenary session and presentation of companies (NG 01)

12.50 - 14.15 Lunch (canteen of the University campus, Veľký diel)

14.15 - 18.15 Parallel Sessions (block AC at Veľký diel)

from 19.00 Social Evening at the hall under Church Vičince in front of the Post Office No 8 at the housing estate “Vičince”.

September 17, 2015 - Thursday

8.00 - 11.20 Parallel Sessions (block AC)

from ca 12.00 Visit of the Historical Logging Switchback Railway and Open Air Museum in Nova Bystrica - Vychylovka including the lunch and the transport by buses from Žilina to Vychylovka and back.

September 18, 2015 - Friday

8.00 - 12.20 Parallel Sessions (block NR)

12.20 - 12.40 Closing Plenary Session (block AC)

from 12.40 Lunch

VÁCLAVÍK Jaroslav, Ing., WEINBERG Otakar, Ing., VZÚ Plzeň, CZ

Measurement of residual stresses on railway axles

DIŽO Ján, Ing., PhD., Faculty of Mechanical Engineering, University of Žilina, SK, **STEIŠŪNAS Stasys, MSc.,** Vilnius Gediminas technical University, Faculty of Transport Engineering, Vilnius, LT, **BLATNICKÝ Miroslav, Ing., PhD.,** Faculty of Mechanical Engineering, University of Žilina, SK

Dynamic analysis of motion smoothness of railway vehicle with wheel-flat

PAWEŁCZYK Marek, Dr hab. inż., prof. PŚK, Kielce University of Technology, **LESIAK Piotr, dr hab. inż., prof. UTH, PODSIADŁO Rafał, dr inż.,** Kazimierz Pulaski University of Technologies and Humanities in Radom, PL

Simulation study of the 4-axle wagon damaging impact on the track caused by some deformations of the wheel set surface

ÖZDEMİR Yalçın, MSc., VOLTR Petr, Ing., Ph.D., Jan Perner Transport Faculty, University of Pardubice, CZ

Finite Element Simulation of Rolling Contact of Wheel and Rail

● **16.00 - 16.20** **Coffee break**

● **16.20 - 18.20** **Lectures**

FRIDRICHOVSKÝ Tomáš, Ing., Faculty of Mechanical Engineering, CVUT Prague, CZ
Analysis of occurrence of torsional oscillations in wheelset drives used in modern railway vehicles

KOLÁŘ Josef, assoc. prof., CSc., Faculty of Mechanical Engineering, CVUT Prague, CZ

The problems of modeling the influence of vertical inequalities of track in to dynamics of drive wheelset

MARKOVIC Petar, MSc., KOSTIC Dragutin, prof., Ph.D. BOJOVIC Nebojsa, prof., University of Belgrade, Faculty of traffic and transport engineering, Serbia

One Method for Detection of Torsion Oscillations of Driving Axles of Electrical Locomotives

VINKÓ Ákos, Ing., Budapest University of Technology and Economics, Budapest, HU
Kinematic Analysis of the Wheelset on straight Track with pre-defined Alignment Faults

ONAT Altan, MSc., VOLTR, Petr, Ing., Ph.D., LATA Michael, doc., Ing., Ph.D., Jan Perner Transport Faculty, University of Pardubice, CZ

Analysis of Lateral Dynamical Response of a Wheelset during Traction

KALIVODA Jan, Ing., Ph.D., BAUER Petr, Ing., Ph.D., Faculty of Mechanical Engineering, CVUT Prague, CZ

Active Controlled Wheelset Guidance – Simulations and Roller Rig Tests

✘ Session B, September 16, 2015

● **14.00 - 16.00** **Lectures**

SLÁVIK Miloš, Ing., pensioner, Bratislava, **KURUC Štefan, Ing.,** Railway Company Slovakia a.s., Bratislava, SK, **BŘEČKA Radek, Ing., MACHÁČEK Libor, Ing.,** ŠKODA VAGONKA a.s., Ostrava, CZ

The double deck sets of Railway Company Slovakia

BRODSKÝ Jaroslav, Ing., ŠKODA Transportation a.s., Plzeň, CZ

The locomotive BR102 of the trainset NIM Express

KUNDRATA Miroslav, Ing., ŠKODA VAGONKA a.s., Ostrava, CZ

Coaches of the NIM Express trainset

SEGEŤA Jiří, Ing., **SÝKORA Radim, Ing.**, ŠKODA VAGONKA a.s., Ostrava CZ

"Panthers" family from ŠKODA VAGONKA a.s.

ŠTĚPÁNEK Jiří, Ing., CZ LOKO, a.s., Česká Třebová, CZ

CZ LOKO Export Locomotives

KÁLMAN Peter, Ing., PhD., **CÚT Marián, Ing.**, Železničné opravovne a strojárne Zvolen, a.s., SK

Optimization of the cooperation of the combustion engine and hydromechanical transmission for rail diesel-car unit

● **16.00 - 16.20** **Coffee break**

● **16.20 - 18.20** **Lectures**

ZELINGR Miloš, Ing., a kol. TC INTER-INFORMATICS a. s., Praha, CZ

New Trams Skoda 29T/30T for Bratislava City

SÁLA Pavel, Ing., Ph.D., ŠKODA Transportation a.s., Plzeň, CZ

Trainset of metro NeVa for gauge 1520 mm

OPAVAL Jaroslav, doc., Ing., CSc., Transport Faculty, CVUT Prague, CZ

Possibilities and Conditions for Accumulator Railcars Operation

POKORNÝ Petr, Ing., VÚKV a.s., Praha, CZ

The cabs of tramcars and railway vehicles developed in VÚKV

ČERVENKA Zdeněk, Ing., **SÁLA Pavel, Ing., Ph.D.**, ŠKODA Transportation a.s., Plzeň, CZ

Development and testing of new traction bogie for electric metro cars

MAŇUROVÁ Mária, Ing., **SUCHÁNEK Andrej, Ing., PhD.**, Faculty of Mechanical Engineering, University of Žilina, SK

Determination of secondary suspensions stiffness of a bogie for a rail vehicle with a tilting car body

✖ **Session C, September 16, 2015**

● **14.00 - 16.00** **Lectures**

PRELL Roman, Ing., Siemens, s.r.o., Divize Mobility, Praha, CZ

Study of the entrance of the handicapped person in accordance to specification TSI PRM

RÜGER Bernhard, DI Dr., TU Viena, AU

Passenger requirements for modern railway coaches

ČERVENKA Peter, Ing., REMING CONSULT a.s., Bratislava, **PECHANCOVÁ Lenka, Ing.**, **ŠIMO Ján, Ing., CSc.**, Klub ZPS vo vibroakustike, s.r.o., Žilina, SK

Noise and vibration emitted by the tram traffic in the context of the protection and promotion of public health

ZVOLENSKÝ Peter, prof., Ing., CSc., **BAVLNA Lukáš, Ing.**, Faculty of Mechanical Engineering, University of Žilina, SK

Reduction of the internal noise of railway passenger coaches using new acoustic materials

HEJZLAR Lukáš, Ing., VUZ, a.s., Praha, CZ

European D-RAIL project – Development of the Rail Freight System to Reduce the Occurrences of Derailment

FEILHAUER Petr, Ing., UniControls-Tramex s.r.o., Blansko, CZ

Acoustic public address system for rail vehicles

TRÍSKA Ladislav, Ing., **KOŘÍNEK Jiří, Ing.**, **TRPÁK Lukáš, Ing.**, **HELLER, Petr, doc. Ing., CSc.**, Faculty of Mechanical Engineering, West Bohemian University in Pilsen, Regional Technological Institute, CZ

The possibilities of railway vehicle weight reduction by optimizing the ventilation system

FAMFULÍK Jan, doc., Ing., Ph.D., **MÍKOVÁ Jana, Ing., Ph.D.**, **RICHTÁŘ Michal, Ing., Ph.D.**, **ŠIROKÝ Jaromír, Ing., Ph.D.**, VŠB-TU Ostrava, Fakulta strojní, CZ

Active safety system for railway vehicles

● **10.00- 10.20** **Coffee break**

● **10.20 - 12.20** **Lectures**

MARTINEK David, BcA., PARS Komponenty s.r.o., Studénka, CZ

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PERMYAKOV Mikhail, Kranunion GmbH, Leipzig, Germany

Modern method of switch renewal

ŠUK Vratislav, Ing., Výzkumný ústav železniční, a.s., Praha, CZ

A rebirth of the locomotive T499.0002 "Kyklop"

GALLIKOVÁ Jana, Ing., Ph.D., **POPROCKÝ Roman, Ing.**, Žilinská univerzita v Žiline, Strojnícka fakulta, SK

Risks assessment in rail vehicles

GREŇČÍK Juraj, doc., Ing., PhD., **RUMAN František, Ing.**, Žilinská univerzita v Žiline, Strojnícka fakulta, SK

Analysis of life cycle costs and profits of railway vehicle in Slovakia

SKRÚCANÝ Tomáš, Ing., **PONICKÝ Ján, Ing.**, **KENDRA Martin, doc., Ing., PhD.**, Žilinská univerzita v Žiline, F PEDAS, **GREŇČÍK Juraj, doc., Ing., PhD.**, Žilinská univerzita v Žiline, Strojnícka fakulta, SK

Energy consumption and GHG production on chosen railway track in regional passenger transport

● **12.40 - 12.40** **Closing Plenary Session**

● **12.40** **Lunch**



KOHOUT Martin, Ing., Ph.D., ZELENKA Jaromír, doc., Ing., CSc., MICHÁLEK Tomáš, Ing., VÁGNER Jakub, Ing., Ph.D., Jan Perner Transport Faculty, University of Pardubice, CZ

Yaw dampers in construction of rail vehicles

LACK Tomáš, doc., Ing., Ph.D., GERLICI Juraj, prof., Dr. Ing., Faculty of Mechanical Engineering, University of Žilina, SK

Freight car bogie properties analysis by means of simulation computations

LACKO Michal, Ing., Tatragagónka a.s., Poprad, SK

Simulation of compressive longitudinal forces acting on a freight wagon propelled along an S-shaped curve

MICHÁLEK Tomáš, Ing., ZELENKA, Jaromír, doc., Ing., Csc., Jan Perner Transport Faculty, University of Pardubice, CZ

Proposal of characteristics of bogie steering active elements for purposes of reduction of guiding forces in small-radius curves

VÁGNER Jakub, Ing., Ph.D., Jan Perner Transport Faculty, University of Pardubice, Pardubice, **ŠTORKÁN Marek, Ing.,** VÚKV a.s., Praha, CZ

Lateral stiffness of flexi-coil springs – experiment and calculation

● **10.00 - 10.20** Coffee break

● **10.20 - 12.20** Lectures

ZELENKA, Jaromír, doc., Ing., CSc., HÁBA Aleš, Ing., Ph.D., KOHOUT Martin, Ing., Ph.D., Jan Perner Transport Faculty, University of Pardubice, CZ

Evaluation of Dynamical Loading of Frog Turnout Part Based on Vertical Acceleration Measurement of Unsprung Parts of Passing Vehicle

CHVOJAN Jan, Ing., VZÚ Plzeň, CZ

Contribution of VZÚ Plzeň to solving the railway vehicles problems

STAMENKOVIĆ Dušan, prof., Dr. Ing., MILOŠEVIĆ Miloš, doc., Ing., Ph.D., BANIC Milan, dipl. inž., University of Niš, Faculty of Mechanical Engineering, Serbia

Testing of rubber-metal springs

PÁCHA Matěj, Ing., Ph.D., CZ LOKO, a.s., Česká Třebová, CZ

Indirect Tractive Force Measurement of Special Vehicle for METRO at Ultra-Low Speeds

PÁCHA Matěj, Ing., Ph.D., CZ LOKO, a.s., Česká Třebová, CZ

Traction Characteristics Verification of Locomotive Class 2M62U Using Simulation

STOKŁOSA Józef, dr inż., University of Economics and Innovation in Lublin, Faculty of Transport and Computers Science, PL

Modeling long haul train using Universal Mechanics.

✘ Session B, September 18, 2015

● **8.00 - 10.00** Lectures

BUREŠ Vít, Ing., EXACTIS CZ s.r.o., Pardubice CZ

The system of measurement of pantograph according to EN 50206-1

ŘEZNIČEK Rudolf, Ing., Ph.D., KALINČÁK Daniel, prof., Ing., Ph.D., Žilinská univerzita v Žiline, Strojnícka fakulta, SK

Brake bench testing of railway brake discs

HÁBA Aleš, Ing., Ph.D., VÁGNER Jakub, Ing., Ph.D., MUSIL Michal, Ing., Ph.D., Jan Perner Transport Faculty, University of Pardubice, **PHAMOŤÁ Lucie, Ing., RICHTER Milan, ŠVĚD Stanislav, Ing.,** VÚKV a.s., Praha, **KŘEPELA Jan, Ing., WIKOV MGI, a.s.** Praha, CZ

External Noise Measurement of Railway Vehicle in order to Noise Sources Identification
PHAMOŤÁ Lucie, Ing., VÚKV a.s., Praha, **FIEDLER Robert, Ing.,** MECAS ESI, Plzeň, CZ

Acoustic Study of Interior Noise of the NIM Express Driver Car

● **16.00 - 16.20** Coffee break

● **16.20 - 18.20** Lectures

HLAVÁČEK Jan, Ing., VUZ a.s., Praha, CZ

Effectiveness of Rail Noise Absorbers - BRENS ABSORBER - Noise measurements

DRASTÍK Petr, Ing., Siemens s.r.o., Ostrava, CZ

Study of hygienic parameters of rail vehicles observed at driver cab, operators area and passengers area and effect of high speed at high-speed vehicles

NOHÁL Libor, Ing., Ph.D., KŘEMEN Jan, Ing., NĚMEČEK Jakub, Ing., ZKL - Výzkum a vývoj, a.s., Brno, CZ

The Modern Approaches to the Railway Bearings Design

BABKA Jan, Ing., NOVOTNÝ Ondřej, Ing., Ph.D., SKF CZ, a.s., Praha, CZ

SKF TBU 1,7 mil. km – new generation of axlebox bearings with long maintenance interval

BABKA Jan, Ing., NOVOTNÝ Ondřej, Ing., Ph.D., SKF CZ, a.s., Praha, CZ

IMx-B – wireless bogie condition monitoring system

ŠIROKÝ Jaromír, Ing., Ph.D., Faculty of Mechanical Engineering, VŠB-TU Ostrava, CZ

Analysis Methodology of Recording the Movement of Rail Vehicles, and its use

19.00 Evening reception

September 17, 2015 - Thursday

✘ Session A, September 17, 2015

● **8.00 - 9.40** Lectures

MERGL Emanuel, Ing., VÚKV a.s., Praha, CZ

Aerodynamics of railway vehicles

KRULICH Pavel, Ing., MERGL Emanuel, Ing., VÚKV a.s., Praha, CZ

Evaluation of crosswind effects to railway vehicles

HAUSER Vladimír, Ing., Faculty of Mechanical Engineering, University of Žilina, SK

Running of public transport vehicles through small radius track

CHUDZIKIEWICZ Andrzej, prof., dr hab., inż. Warsaw University of Technology, Faculty of Transport, PL

Implementation of modeling process in the construction of low-floor tramcar

ZINKE Karel, Ing., Faculty of Mechanical Engineering, CVUT Prague, CZ

High speed rail vehicle on a narrow gauge

● 9.40 - 10.00 Coffee break

● 10.00 - 11.20 Lectures

VOLTR Petr, Ing., Ph.D., Jan Perner Transport Faculty, University of Pardubice, CZ
Simulation of wheel–rail contact conditions on experimental equipment

LACK Tomáš, doc., Ing., Ph.D., GERLICI Juraj, prof., Dr. Ing., Faculty of Mechanical Engineering, University of Žilina, SK

Speeding up of the rail/wheel contact stress computation by means of modified strip method

SOUKUP Jiří, Ing., VUZ a.s., Praha, CZ

Current activities of VUZ Dynamic test laboratory

MALKOVSKÝ Zdeněk, Ing., JEŽDÍK Roman, Ing., VÚKV a.s., Praha, CZ

Validation of crashworthiness of railway vehicles

✳ Session B, September 17, 2015

● 8.00 - 9.40 Lectures

JÁNOŠ Petr, Ing., Ph.D., MBA, BONATRANS GROUP a.s., Bohumín, CZ

Current trends in the design of railway wheelset

FAJKOŠ Rostislav, Ing., Ph.D., BONATRANS GROUP a.s., Bohumín, CZ

Research and application of induction hardened technology on railways axles

SIKORA Radomil, RMT s.r.o., Paskov, CZ

Measurement of geometric parameters of railway wheels, wheelsets and rails by measuring laser_s instruments

KUCHTA Jozef, doc., Ing., CSc., FRANKO Marek, Ph.D., ILONČIAK Jaroslav, Ing., EVPÚ, a.s., Nová Dubnica, SK

The concept of traction and auxiliary converters for DE locomotives

KUCHTA Jozef, doc., Ing., CSc., ZÁRUBA Jaromír, Ing., Ph.D., ILONČIAK Jaroslav, Ing., EVPÚ, a.s., Nová Dubnica, SK

Traction Equipment to eliminate idling cycle of DE shunting locomotives

● 9.40 - 10.00 Coffee break

● 10.00 - 11.00 Lectures

KOLÁŘ Josef, doc., Ing., CSc., Faculty of Mechanical Engineering, CVUT Prague, CZ

The design study of partially low-floor rail bus with hybrid drive

ŠTASTNIAK Pavol, Ing., Ph.D., Faculty of Mechanical Engineering, University of Žilina, SK

Structural Design of Long Railway Wagon for Intermodal Transport

MIKOLAJČÍK Martin, Ing., KALINČÁK Daniel, prof., Ing., Ph.D., Faculty of Mechanical Engineering, University of Žilina, SK

New trends for decreasing fuel consumption of rail vehicle of independent traction

✳ Session C, September 17, 2015

● 8.00 - 9.40 Lectures

ŠTOČEK Luděk, Ing., DAKO-CZ, a.s., Třemošnice, CZ

News of pneumatic brakes for rail vehicle

PÁDIVÝ Jan, Ing., DAKO-CZ, a.s., Třemošnice, CZ

Brake unit and brake disc located between the engine and gearbox, for the chassis 11Mt, a.s. TSI with the application in improving operational properties

GERLICI Juraj, prof., Dr. Ing., LACK Tomáš, doc., Ing., Ph.D., HARUŠINEC Jozef, Ing., Ph.D., Faculty of Mechanical Engineering, University of Žilina, SK

Rail vehicles brake components test stand RAILBCOT constructional solution

GERLICI Juraj, prof., Dr. Ing., LACK Tomáš, doc., Ing., Ph.D., HARUŠINEC Jozef, Ing., Ph.D., Faculty of Mechanical Engineering, University of Žilina, SK

Loading collectives for experimental research on the test stand RAILBCOT specification

LACK Tomáš, doc., Ing., Ph.D., GERLICI Juraj, prof., Dr. Ing., Faculty of Mechanical Engineering, University of Žilina, SK

RAILBCOT test stand dynamics properties analysis

● 9.40 - 10.00 Coffee break

● 10.00 - 11.20 Lectures

STOKŁOSA Józef, dr inż., University of Economics and Innovation in Lublin, Faculty of Transport and Computers Science, **JAŚKIEWICZ Marek, dr hab. inż.**, Kielce University of Technology, Faculty of Mechatronic and Machine Design, PL

Rail-Road Intermodal Transport Chain - Problems and Opportunities in Poland

GALLIKOVÁ Jana, Ing., Ph.D., GREŇČÍK Juraj, doc., Ing., Ph.D., POPROCKÝ Roman, Ing., STUHLÝ Vladimír, doc., Ing., Ph.D., ZVOLENSKÝ, prof., Ing., CSc., Faculty of Mechanical Engineering, University of Žilina, SK

ECM certification - tool to improve operational safety and quality railway freight wagons

LUŽÁK Miloslav, Ing., BUC Miroslav, Ing., Railway Company Cargo Slovakia, a.s., Bratislava, SK

Implementation of ECM in ZSSK CARGO

ELSTNER Martin, Ing., KOTRBA Alois, Ing., Ph.D., ČD DKV Brno, CZ

Train delays as a source of information for quality control

◆ 12.00 Departure of the buses from Žilina to Vychylovka

◆ 13.00 Lunch and visit of the Historical Logging Switchback Railway and the Open air museum in Vychylovka

◆ 17.25 Departure of the buses from Vychylovka to Žilina

September 18, 2015 - Friday

✳ Session A, September 18, 2015

● 8.00 - 10.00 Lectures

BENEŠ Petr, Ing., Ph.D., Faculty of Mechanical Engineering, West Bohemian University in Pilsen, CZ

Utilization of the new NDT trends in materials research