



EVROPSKÁ UNIE
Evropský fond pro regionální rozvoj
Operační program Podnikání
a inovace pro konkurenceschopnost



FAKULTA
DOPRAVNÍ
CVUT V PRAZE



NÁRODNÍ TECHNOLOGICKÁ PLATFORMA
Interoperabilita železniční infrastruktury
CZECH TECHNOLOGY PLATFORM
Interoperability of Railway Infrastructure

Student Scientific Conference

NEW TECHNOLOGY AND LOGISTICS ON THE RAILWAY

Project SGS – SVK 48/22/F6

ORGANISATIONAL FRAMEWORK:

Event Venue: Congress Centre - U Hájků, hotel Grandior, Na Poříčí 42, Prague 1

Language: Czech, English

Dates: 5. 5. 2022

Schedule: 09:00 to 10:00 Registration
10:00 to 17:30 Lectures, forum of discussion

Organizer: Czech Technical University in Prague

Guarantor of the conference: prof. Ing. Ondřej Příbyl, Ph.D., the Dean of FTS CTU in Prague

PROGRAMME OF THE CONFERENCE:

09.00 – 10.00 REGISTRATION

10.00 prof. Ing. Josef Jíra, CSc.
Opening the Conference

INVITED LECTURES

Moderator: doc. Ing. Vít Fábera, Ph.D.

10.00 – 10.20 doc. Ing. Josef Kolář, CSc. (ČVUT)
MODERN VEHICLES FOR REGIONAL RAILWAYS

10.20 – 10.40 Ing. Jaroslav Vašátko (SIZI)
ROADMAP MODERN TECHNOLOGIES IN THE HIGH-SPEED LINES PREPARATION AND
IMPLEMENTATION IN THE CZECH REPUBLIC

10.40 – 11.00 doc. Ing. Martin Leso, Ph.D. (ČVUT)
PROBLEMS OF ASSESSMENT OF INTEGRAL INTERLOCKING ACCORDING TO REQUIREMENTS OF
EUROPEAN STANDARDS

11.00 – 11.30 COFFEE BREAK

SECTION A

Moderator: Ing. Martin Jacura, Ph.D.

11.30 – 11.50 Petr Nachtigall, Erik Tischer
CALCULATION OF THE TRACK CAPACITY UNDER THE ETCS L3

11.50 – 12.10 Přemysl Šrámek, Jaromír Široký, Martin Vojtek
ARTIFICIAL INTELLIGENCE IN OPERATIONAL APPLICATIONS OF RAILWAY INFRASTRUCTURE
MANAGER

12.10 – 12.30 Lukáš Křížan, Martin Vojtek
BENEFITS OF REMOTE CONTROL ON THE RAILWAY LINES

12.30 – 13.30 LUNCH



SECTION B

Moderator: Ing. Petr Nachtigall, Ph.D.

- 13.30 – 13.50 Vojtěch Dybala**
THE MEASUREMENT OF THE INFLUENCE OF THE ADHESION LOSS ON THE DYNAMIC LOAD OF THE DRIVE REACTION ROD ON THE ROLLER RIG
- 13.50 – 14.10 Jakub Seidl**
THE INFLUENCE OF THE CONSTRUCTION OF TRAM FRONTS ON THE CONSEQUENCES OF ACCIDENTS WITH PASSENGER CARS
- 14.10 – 14.30 Jan Vrba**
COOPERATION OF ACTIVE STEERING CONTROL OF WHEELSETS WITH SUBSYSTEMS OF AN AUTONOMOUS URBAN ROLLING STOCK
- 14.30 – 14.50 Jakub Hora, Antonín Suk, Filip Baran**
INTEGRATED CYCLIC TIMETABLE ON THE RAILWAYS IN THE KARLOVY VARY REGION
- 14.50 – 15.10 Martin Jacura, Lukáš Týfa**
PROPOSAL OF OPERATIONAL CONCEPT FOR BULK SUBSTRATES TRANSPORT BY FREIGHT TRAINS AND ITS APPLICATION WITHIN CASE STUDY OF AGGREGATE TRANSPORT FOR CONSTRUCTION OF VLACHOVICE DAM
- 15.10 – 15.30 COFFEE BREAK**

SECTION C

Moderator: Ing. Jaroslav Vašátko

- 15.30 – 15.50 Adam Hlubuček**
DETERMINING THE COORDINATES AND POSITIONS OF 3D POINTS BASED ON THE TRACK GEOMETRY DESCRIPTION
- 15.50 – 16.10 Pavel Purkart, David Vodák**
EXPERT QUESTIONNAIRE ON THE ISSUE OF ECONOMICAL USE OF THE RAILWAY TRAFFIC PATH CAPACITY AND BUILDINGS PREPARATION ON THE RAILWAY
- 16.10 – 16.30 Martin Chýle, Michal Drábek**
ECOLOGICAL SOLUTIONS FOR FREIGHT TRAINS
- 16.30 – 16.50 Tomáš Kohout, Luboš Nouzovský, Pavel Vrtal, Karel Kocián**
ECOLOGICAL SOLUTIONS FOR FREIGHT TRAINS
- 16.50 – 17.10 Jan Froněk, Jaroslav Chlumecký, Daniel Vymětal**
LENGTH OF TRANSFER TIME BETWEEN CONNECTING TRAINS – IS THERE AN IDEAL VALUE?

FINAL SECTION

Moderator: doc. Ing. Vít Fábera, Ph.D.

- 17.10 – 17.30 Expert Discussion**
- 17.30 CLOSE OF THE CONFERENCE**