

# PERNER'S CONTACTS

Faculty of Transport Engineering

University of Pardubice



Electronical technical journal of technology, engineering and logistics in transport

Number: 2 Volume: XIX Date of edition: July 2019

ISSN 1801-674X

Number 2, Volume XIX, July 2019, 59 pages.

## Editors address:

University of Pardubice, Faculty of Transport Engineering  
Department of Transport Technology and Control  
Studentská 95, 532 10 Pardubice  
Tel.: +420 466 036 199, <http://pernerscontacts.upce.cz/>

## General editor:

doc. Ing. Jaromír Široký, Ph.D. – University of Pardubice, Faculty of Transport Engineering

## Editors:

Ing. Petr Nachtigall, Ph.D., Ing. Pavlína Hlavsová – University of Pardubice, Faculty of Transport Engineering

## Editorial board:

doc. Borna Abramović, Ph.D. – Faculty of Transport and Traffic Sciences, University of Zagreb

prof. Dr. Gerhard Bahrenberg – University of Bremen, Fachbereich Sozialwissenschaften

prof. Ing. Václav Cempírek, Ph.D. – College of Logistics, Přerov

doc. dr. Zoran Čekerevac – UNION University Beograd, Faculty of Industrial Management

prof. Dr. Jürgen Deiters – University of Osnabrück, Fachgebiet Geographie

doc. Ing. Ivo Drahotský, Ph.D. – University of Pardubice, Faculty of Transport Engineering

Dipl.-Ing. Steffen Dutsch – TU Dresden, Faculty of Transportation and Traffic Sciences “Friedrich List“

Sven Erichson - Chamber of Commerce and Industry, Magdeburg

Gábor Heves - The Regional Environmental Center, Szentendre

doc. Ing. Rudolf Kampf, Ph.D. – The Institute of Technology and Businesses in České Budějovice

doc. Ing. Martin Kendra, PhD. – University of Žilina, Faculty of Operation and Economics of Transport and Communications

doc. Ing. Jaroslav Kleprlík, Ph.D. – University of Pardubice, Faculty of Transport Engineering,

doc. Ing. Bohuš Leitner, PhD. - University of Žilina, Faculty of Security Engineering

doc. Ing. Radovan Madleňák, PhD. – University of Žilina, Faculty of Operation and Economics of Transport and Communications

prof. Ing. Jozef Majerčák, PhD. – University of Žilina, Faculty of Operation and Economics of Transport and Communications

prof. dr hab. Elżbieta Marciszewska – Warsaw School of Economics, Department of Transport

Wolfgang Mihlan - Chamber of Commerce and Industry, Magdeburg

Ing. Jana Míková, Ph.D. – VŠB–Technical University of Ostrava, Faculty of Mechanical Engineering

Dr. Jesús Gabriel Moreno Navarro – Universidad de Sevilla

doc. Ing. Eva Nedeliaková, PhD. – University of Žilina, Faculty of Operation and Economics of Transport and Communications

prof. Ing. Miloslav Seidl, PhD. - College of Logistics, Přerov

Dipl.-Ing. Dr. techn. Andreas Schöbel, Institute of Transportation, Technical University Vienna

Dipl.-Ing. Stephan Schröder - Bahnzentrum Ingenieurbüro, Bielefeld

doc. Ing. Pavel Šaradín, CSc. – College of Logistics Přerov

doc. Ing. Libor Švadlenka, Ph.D. – University of Pardubice, Faculty of Transport Engineering

dr hab. inż. prof. Zenon Zamiar - Military Academy of Land Forces, Faculty of Engineering, Wrocław

**CONTENTS:**

|   |    |
|---|----|
| <b>INVESTIGATION OF THE CRACK DRIVING FORCE IN WHEEL-RAIL CONTACT</b> |    |
| Michal Kráčalík .....   | 4  |
| <b>A FREIGHT TRANSPORT CHAIN CHOICE TAKING ACCOUNT THE UTILITY</b>    |    |
| Emília Madudová, Andrej Dávid.....                                    | 22 |
| <b>POSSIBILITIES OF ROAD CARRIAGE OF FIREWORKS IN SLOVAK REPUBLIC</b> |    |
| Peter Marienka, Juraj Jagelčák .....                                  | 30 |
| <b>THE SURVEY OF DRIVING STANDARDS IN ROAD CARGO TRANSPORT</b>        |    |
| Jan Peroutka, Bedřich Rathouský.....                                  | 37 |
| <b>LONGITUDINAL PERFORMANCE OPTIMIZATION OF RWD VEHICLE</b>           |    |
| Milan Špičák.....   | 43 |
| <b>ANALYSIS OF THE TIRE CONTACT AREA PRESSURE ON THE ROAD</b>         |    |
| Lukáš Trnka, Marián Gogola.....                                       | 49 |

# PERNER'S CONTACTS

Number 2, Volume XIX, July 2019, 59 pages.

## List of papers

- A freight transport chain choice taking account the utility, 22-29
- Analysis of the tire contact area pressure on the road, 49-59
- Investigation of the crack driving force in Wheel-rail contact, 4-21
- Longitudinal performance optimization of RWD vehicle, 43-48
- Possibilities of road carriage of fireworks in Slovak republic, 30-36
- The survey of driving standards in road cargo transport, 37-42

## List of authors

- Dávid, A., 22-29
- Gogola, M., 49-59
- Jagelčák, J., 30-36
- Kráčalík, M., 4-21
- Madudová, E., 22-29
- Marienka, P., 30-36
- Peroutka, J., 37-42
- Rathouský, B., 37-42
- Špičák, M., 43-48
- Trnka, L., 49-59

# PERNER'S CONTACTS

Number 2, Volume XIX, July 2019, 59 pages.

## List of reviewers

doc. Ing. Pavel Drdla, Ph.D., University of Pardubice, Faculty of Transport Engineering

doc. Ing. Jozef Gašparík, PhD., University of Žilina, Faculty of Operation and Economics of Transport and Communications

doc. Ing. Rudolf Kampf, Ph.D., The Institute of Technology and Businesses in České Budějovice

doc. Ing. Martin Kendra, PhD., University of Žilina, Faculty of Operation and Economics of Transport and Communications

Ing. Petr Nachtigall, Ph.D., University of Pardubice, Faculty of Transport Engineering

Ing. Tomáš Skrúcaný, PhD., University of Žilina, Faculty of Operation and Economics of Transport and Communications

doc. Ing. Jaromír Široký, Ph.D., University of Pardubice, Faculty of Transport Engineering

Ing. Stephan Schröder, Bahnzentrum Ingenieurbüro Bielefeld