



Number 4, Volume XI, December 2016, 143 pages.

Editors address:

University of Pardubice, Jan Perner Transport Faculty
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 Šíroký, Ph.D. – University of Pardubice, Jan Perner Transport Faculty

Editors:

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

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
Dr. Zoltán Bokor, PhD. - Budapest University of Technology and Economics
prof. Ing. Václav Cempírek, Ph.D. – University of Pardubice, Jan Perner Transport faculty
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, Jan Perner Transport faculty
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, Jan Perner Transport Faculty,
Ing. Martina Vitteková, Ph.D. – Czech Technical University in Prague, Faculty of Transportation Science
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
doc. Ing. Antonín Peltrám, CSc. – Institute for European Integration Prague
prof. Ing. Miloslav Seidl, PhD. - University of Žilina, Faculty of Special Engineering
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, Jan Perner Transport Faculty
dr hab. inż. prof. Zenon Zamiar - Military Academy of Land Forces, Faculty of Engineering, Wrocław

CONTENTS:

MODAL SPLIT IN THE ŽILINA TRANSPORT MODEL Marek Drličiak	5
SUSTAINABLE TRANSPORT INDICATORS Monika Eisenhammerová.....	13
LANE CHANGE MANEUVER OF VIRTUAL HEAVY VEHICLE EQUIPPED WITH YAW MOMENT CONTROL Jan Fojtášek	23
BUSINESS AVIATION MANAGEMENT AND MARKET Júlia Hankovská	32
HETEROGENEITY OF BUSINESS PASSENGERS IN AIR TRANSPORT James Huňak, Petr Kolář	39
ANALYSIS OF ENGINE OILS USING MODERN METHODS OF TRIBOTECHNICAL DIAGNOSTICS Ivana Hurtová, Marie Sejkorová	47
RADIAL TYRE DEFLECTION OF ROAD VEHICLE IN DEPENDENCE ON TEMPERATURE Petr Jilek, Ondřej Voltr	54
SATELLITE NAVIGATION AND ITS IMPORTANCE IN TRANSPORTATION Martin Jurkovic, Samuel Adrien Mory	61
CALCULATION OF EMISSIONS FROM TRANSPORT SERVICES AND THEIR USE FOR THE INTERNALISATION OF EXTERNAL COSTS IN ROAD TRANSPORT Vladimír Konečný, František Petro, Róbert Berežný.....	68
RISK FACTORS FOR HAZARDOUS MATERIALS TRANSPORTATION IN THE CZECH REPUBLIC Libor Krejčí	83
CALCULATION OF AEROTAXI SERVICES Eduard Niko	91
CORPORATE SOCIAL RESPONSIBILITY FROM THE PERSPECTIVE OF RETAIL FOOD CHAINS IN THE CZECH REPUBLIC Dana Sommerauerová, Jan Chocholáč, Jaroslava Hyršlová.....	99
SBAS APPROACH AND ITS COMPARISON WITH OTHER TYPES OF APPROACH Marek Štumper, Jakub Machuta, Jakub Kraus, Stanislav Szabo.....	113
MOTORWAY PATROL ON SLOVAK MOTORWAYS AND EXPRESSWAYS Miroslav Tomek, Miloslav Seidl.....	121
CARGO SECURING DURING TRANSPORT ON THE RABA VEHICLE Martin Vlkovský	128
UNIVERSAL TOOL FOR DATA ANALYSIS Lubor Zháňal, Petr Porteš.....	136

PERNER'S CONTACTS

Number 4, Volume XI, December 2016, 143 pages.

List of papers

Analysis of Engine Oils Using modern Methods of Tribotechnical diagnostics, 47-53

Business Aviation Management and Market, 32-38

Calculation of Aerotaxi services, 91-98

Calculation of emissions from transport services and their use for the internalisation of external costs in road transport, 68-82

Cargo Securing during Transport on the Raba Vehicle, 128-135

Corporate social Responsibility from the Perspective of Retail Food Chains in the Czech Republic, 99-112

Heterogeneity of business passengers in air transport, 39-46

Lane Change Maneuver of virtual heavy vehicle Equipped with Yaw moment control, 23-31

Modal Split in the Žilina Transport model, 5-12

Motorway patrol on Slovak motorways and expressways, 121-127

Radial tyre deflection of road Vehicle in dependence on temperature, 54-60

Risk factors for hazardous materials transportation in the Czech Republic, 83-90

Satellite navigation and its importance in transportation, 61-67

SBAS Approach and its Comparison with other types of Approach, 113-120

Sustainable Transport Indicators, 13-22

Universal Tool for Data Analysis, 136-143

PERNER'S CONTACTS

Number 4, Volume XI, December 2016, 143 pages.

List of authors

Berežný, R., 68-82

Drličiak, M., 5-12

Eisenhammerová, M., 13-22

Fojtášek, J., 23-31

Hankovská, J., 32-38

Huňak, J., 39-46

Hurtová, I., 47-53

Hyršlová, J., 99-112

Chocholáč, J., 99-112

Jilek, P., 54-60

Jurkovič, M., 61-67

Kolář, P., 39-46

Konečný, V., 68-82

Kraus, J., 113-120

Krejčí, L., 83-90

Machuta, J., 113-120

Mory, S., 61-67

Niko, E., 91-98

Petro, F., 68-82

Porteš, P., 136-143

Seidl, M., 121-127

Sejkorová, M., 47-53

Sommerauerová, D., 99-112

Szabo, S., 113-120

Štumper, M., 113-120

Tomek, M., 121-127

Vlkovský, M., 128-135

Voltr, O., 54-60

Zháňal, L., 136-143

PERNER'S CONTACTS

Number 4, Volume XI, December 2016, 143 pages.

List of reviewers

doc. Ing. Benedikt Badánik, Ph.D., University of Žilina, Faculty of Operation and Economics of Transport and Communications
Ing. Pavlína Brožová, Ph.D., University of Pardubice, Jan Perner Transport Faculty
prof. Ing. Václav Cempírek, Ph.D., University of Pardubice, Jan Perner Transport Faculty
doc. Ing. Pavel Drdla, Ph.D., University of Pardubice, Jan Perner Transport Faculty
doc. Ing. Jozef Gašparík, PhD., University of Žilina, Faculty of Operation and Economics of Transport and Communications
Ing. Josef Glos, Ph.D., University of Defence, Faculty of Military Technology
doc. Ing. Milan Graja, CSc., University of Pardubice, Jan Perner Transport Faculty
doc. Ing. Rudolf Kampf, Ph.D., The Institute of Technology and Businesses in České Budějovice
doc. Ing. Jaroslav Kleprlík, Ph.D., University of Pardubice, Jan Perner Transport Faculty
Ing. Pavel Kučera, Ph.D., Brno University of Technology, Faculty of Mechanical Engineering
doc. JUDr. Ing. Radek Novák, CSc., University of Economics, Prague, Department of Logistics
Ing. Stephan Schröder, Bahnzentrum Ingenieurbüro Bielefeld
doc. Ing. Jaromír Široký, Ph.D., University of Pardubice, Jan Perner Transport Faculty
prof. Ing. Marián Šulgan, PhD., University of Žilina, Faculty of Operation and Economics of Transport and Communications
Ing. Jiří Švarc, Ph.D., Univerzita of Defence, Faculty of Military Leadership
Ing. Jan Vávra, Ph.D., University of Pardubice, Faculty of Chemical Technology