



Silesian
University
of Technology

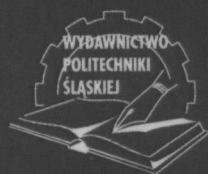
SCIENTIFIC JOURNAL OF SILESIA UNIVERSITY OF TECHNOLOGY. SERIES TRANSPORT

ZESZYTY NAUKOWE POLITECHNIKI ŚLĄSKIEJ.
SERIA TRANSPORT



Volume 115

Gliwice - Poland 2022



CONTENTS

1.	Yousaf ALI, Muhammad SABIR: Mode-route choice decisions: a case study of CPEC investment in Pakistan Railways	5
2.	Kamil KRASUSKI, Adam CIEĆKO, Damian WIERZBICKI: Accuracy analysis of aircraft positioning using GPS dual receivers in aerial navigation	23
3.	Zbigniew ŁUKASIK, Aldona KUŚMIŃSKA-FIJAŁKOWSKA, Sylwia OLSZAŃSKA, Mateusz ROMAN: Analysis and evaluation of the planning process in a transport company	35
4.	Elżbieta MACIOSZEK: Roundabouts as aesthetic road solutions for organizing landscapes	53
5.	Elshan MANAFOV, Islam ISGANDAROV, Farid HUSEYNOV: Investigating the protection system of electric motors based on its main working parameters	63
6.	Tomasz MATYJA, Zbigniew STANIK: Simulation tests of fleet vehicles periodic inspections timeliness: a case study	75
7.	Evgeny MIKHAILOV, Stanislav SEMENOV, Hanna SHVORNIKOVA, Ján DIŽO, Miroslav BLATNICKÝ, Paweł DROŹDZIEL, Kateryna KRAVCHENKO: Possibilities of improving a rail vehicle running safety with independently rotating wheels	93
8.	Olorunfemi Ayodeji OLOJEDE, Oluwatimilehin Gabriel OLUBORODE: Transportation: the agathokakological vehicle of pandemic transmission and management	107
9.	Yağmur ÖZİNAL AVŞAR, Ercan AVŞAR: Short-term traffic state estimation using breakpoint flow calculation and machine learning methods	121
10.	Lidiia SAVCHENKO, Mariya GRYGORAK, Volodymyr POLISHCHUK, Yuriy VOVK, Oleg LYASHUK, Iryna VOVK, Roman KHUDOBEI: Complex evaluation of the efficiency of urban consolidation centers at the micro level	135

11.	Mohneesh Kumar SHARMA: Cloud manufacturing: identifications and prioritization of opportunities using AHP	161
12.	Bożena SZCZUCKA-LASOTA, Tomasz WĘGRZYN: Modern materials and innovative welding technology used in the construction of antenna mounts	175
13.	Igor Alex VAKULENKO, Leonid VAKULENKO, Dariy BOLOTOVA, Bulent KURT, Hangardash ASGAROV, Ömer ÇÖLOVA: Influence structure on the plasticity of carbon steel of the railway wheel rim in operation.....	183
14.	Jan WARCZEK, Rafał WÓJAK: Good practices in the cargo preparation process in intermodal transport.....	193
15.	Greg WHEATLEY, Robiul Islam RUBEL: An autonomous braking control system for a 2017 Yamaha Grizzly 700	211
16.	Remigiusz WIEDEMANN: Method of occupancy-based traffic light priority for public transport	227
17.	Sandeep YADAV, Amit KUMAR, Abhilasha CHAUDHARY: Effect of Karanja biodiesel blends on the characteristics of diesel engine.....	249

SCIENTIFIC JOURNAL OF SILESIA UNIVERSITY OF TECHNOLOGY. SERIES TRANSPORT

ZESZYTY NAUKOWE POLITECHNIKI ŚLĄSKIEJ.
SERIA TRANSPORT



Silesian
University
of Technology



Volume 116

Gliwice - Poland 2022



CONTENTS

1.	Sulaimon Olanrewaju ADEBIYI, Oluwagbenga John AKINRINMADE, Bilqis Bolanle AMOLE: Optimizing service quality management of the bus rapid transport system in Lagos using the multi-criteria decision analysis	5
2.	Zineb ACHETOUI, Charif MABROUKI, Ahmed MOUSRIJ: A balanced performance measurement system for automotive spare parts supply chain	25
3.	Metin Mutlu AYDIN: The effect of transportation facilities on maternal mortality: the Guest Motherhood Project (GMP) in Turkey	57
4.	Adam CIEĆKO, Artur GOŚ, Kamil KRASUSKI, Kacper KRZEŚNIAK: Accuracy analysis of aircraft positioning using real radar and GPS data.....	71
5.	Piotr CZECH: Diagnosing faults in the timing system of a passenger car spark ignition engine using the Bayes classifier and entropy of vibration signals.....	83
6.	Fuad DASHDAMIROV, Ulvi JAVADLI, Turan VERDİYEYEV: Comparative analysis of the weight and quality of urban bus transport services: a case study of Baku	99
7.	Agnieszka DUDZIAK , Monika STOMA , Grzegorz ZAJĄC: Application of the CSI method to test consumer satisfaction: a case study of petrol stations	113
8.	Zohra GHAFOURI FARD, Mohammad Mahdi Khabiri, Pouya AFKHAMI MEYBODI: An innovative method in measuring permeability and evaporation parameters in porous pavements with emphasis on its effects on increasing urban transport safety.....	125
9.	Tomasz MATYJA, Andrzej KUBIK, Zbigniew STANIK: The MEMS-based barometric altimeter inaccuracy and drift phenomenon	141
10.	Aldona KUŚMIŃSKA-FIJAŁKOWSKA, Zbigniew ŁUKASIK, Jacek KOZYRA: Innovative solutions of devices within the scope of energy consumption applied in various branches of transport	163

11.	Mirosław KRZEŚNIAK, Marianna JACYNA, Piotr PRYCIŃSKI, Jakub MURAWSKI, Michał BAŃKA: Business environment of rail transport in the context of the value chain	179
12.	Elżbieta MACIOSZEK, Irena JURDANA: Analysis of the development of e-commerce in Poland from 2010-2020 and its impact on the transport sector ...	197
13.	Marek MARCISZ, Rafał MORGĄ, Eryk REMIORZ, Tomasz KRASOŃ, Bartłomiej MICHALIK, Paweł NALEPKA, Szymon POTEPA, Kacper SAKS, Gabriel SZECÓWKA: Use of unmanned aerial vehicles for water sampling in hard-to-reach water reservoirs	211
14.	Oleg ONISHCHENKO, Volodymyr GOLIKOV, Oleksiy MELNYK, Svitlana ONYSHCHENKO, Kostiantyn OBERTIUR: Technical and operational measures to reduce greenhouse gas emissions and improve the environmental and energy efficiency of ships	223
15.	Michał PUŠKÁR, Pavol TARBAJOVSKÝ, Marieta ŠOLTÉSOVÁ: Application of the biomass as a construction material of the oil filter and its influence on the performance and emission characteristics	237
16.	Bożena SZCZUCKA-LASOTA, Tomasz WĘGRZYN: MIG welding of austenitic 316L steel used in means of transport	247
17.	Greg WHEATLEY, Mohammad ZAEIMI: Anti-roll bar design for a Formula SAE vehicle suspension.....	257