



**Published by** ..... Pan-European University "Apeiron" Banja Luka

**Person Responsible for the Publisher** ..... Darko Uremović

**Editor of University Publications** ..... Aleksandra Vidović, Bosnia and Herzegovina

**Editor in Chief** ..... Mirsad Kulović

**Editors** ..... Drago Talijan

Danislav Drašković

**Executive Technical Editors** ..... Tanja Škorić

Slavko Davidović

**Technical Editors** ..... Sretko Bojić

**Editorial Board** ..... Vuk Bogdanović (*Serbia*)

Christopher Cherry (*USA*)

Ivan Dadić (*Croatia*)

Odić Denis (*Belgium*)

Nataša Gojković-Bukvić (*Italy*)

Lee D. Han (*USA*)

Esad Jakupović (*Bosnia and Herzegovina*)

Zoran Avramović (*Serbia*)

Jadranka Jović (*Serbia*)

Jurij Kolenc (*Slovenia*)

Krsto Lipovac (*Serbia*)

Snežana Pejčić-Tarle (*Serbia*)

Sreten Simović (*Montenegro*)

Pero Vidan (*Croatia*)

Qiang Yang (*USA*)

**Lectors** ..... Mirela Simić

Tanja Aničić

**Web Design** ..... Siniša Kljajić

**Printed by** ..... Markos, Banja Luka

Printed in 300 copies

The TTTP Journal is an international scientific journal published in English language with both electronic and printed versions.

The aim and scope of the Traffic and Transport Theory and Practice (TTTP) Journal is:

- Provide international dissemination of knowledge and contributions to the science and practice in the field of traffic and transportation
- Promote and exchange information and knowledge in the transportation research arena and its application
- Explore the new trends in development and invention related to the efficiency, reliability, safety and economically and ecologically sustainable transportation.

TTTP provides conditions and positive environment for the new idea promotion, exchange research results and achievements accomplished by the scientific community from academia and transportation industry.

#### Research Areas

- Traffic engineering operations and technology
- Transport economics
- Transport planning
- Management in transport
- Safety and security in transport
- Ecology in transport
- Vehicle and maintenance
- Transport infrastructure
- Urban transport
- Intermodal transport
- Intelligent transport systems
- Logistics in transport
- Transport policy
- Education in transportation
- Sustainable transport

#### Editorial Office

Pan-European University Apeiron  
Pere Krece 13, 78 000 Banja Luka, B&H  
Tel: +387 51 247 910  
Mob: +387 65 141 619  
Fax: +387 51 247 921  
<http://www.tttp-au.com/>  
e-mail: [redakcija@tttp-au.com](mailto:redakcija@tttp-au.com)  
[info@tttp-au.com](mailto:info@tttp-au.com)

Traffic and Transport Theory and Practice (TTTP) Journal is registered with the Ministry of Science and Technology of the Republic of Srpska by serial registration code 07.06/053-19/2016-1, date 07. 03. 2016. Traffic and Transport Theory and Practice (TTTP) Journal (ISSN 2490-3477-Print, 2490-3485 (Online) is an international journal published two time a year. Annual subscription is 30 EUR

Indexed in: LICENSE AGREEMENT, 3.22.12. EBSCO Publishing Inc., Current Abstracts

 scholar.google.com

 doisrpska.nub.rs

 crossref.org