



XII International Conference on Transport Infrastructure: Territory Development and Sustainability  
Editorial

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**Abstract**

The Editorial describes the main directions and results of the XII International Conference on Transport Infrastructure: Territory Development and Sustainability (TITDS-XII 2021) held in Irkutsk and Krasnoyarsk from October 6 to October 8, 2021. It gives the details about the participants and the proceedings.

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*Keywords:* transport infrastructure; territory development; sustainability.

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**1. Introduction**

These Proceedings contain selected peer-reviewed papers submitted and presented at TITDS-XII-2021, the XII International Conference on Transport Infrastructure: Territory Development and Sustainability, held in Irkutsk-Krasnoyarsk, Russia, on 6-8 October 2021. The conference was organized by the Irkutsk State University of Railway Transport and Krasnoyarsk Science and Technology City Hall, under the patronage of the Government of the Irkutsk Region and the Russian Federal Agency for Rail Transport.

Admiral Makarov State University of Maritime and Inland Shipping (Saint-Petersburg, Russia), Siberian Transport University (Novosibirsk, Russia), Irkutsk Scientific Centre of the Siberian Branch of the Russian Academy of Sciences (Irkutsk, Russia), East Siberian Railway (Russia), The Ulaanbaatar Railway (Mongolia), East China Jiaotong University (China), Seoul National University of Science and Technology (South Korea), Belarussian State University of Transport (Gomel, Belarus) and Belarussian-Russian University (Mogilev, Belarus) are partner organizations and universities of the Conference.

TITDS Conference has been held on a regular basis since 2009 in Irkutsk. Since its foundation, the purpose of the Conference is to share the experience of leading experts in the application of innovative technologies, mathematical methods and information management systems in transport logistics, technosphere and environmental safety, traffic support systems, transport electric power industry design, construction and operation of railway tracks and artificial structures as well as in legal, historical, socio-cultural and psychological aspects of transport development.

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## 2. TITDS-XII-2021 Conference

The Program Committee and Editorial Board included prominent professors and scientists from the Russian Academy of Sciences, Admiral Makarov State University of Maritime and Inland Shipping (Saint-Petersburg, Russia), Siberian Transport University (Novosibirsk, Russia), East China Jiaotong University Nanchang (Jiangxi Province, China), Seoul National University of Science and Technology (Seoul, South Korea), Belarussian State University of Transport (Gomel, Republic of Belarus), Belarusian-Russian University, (Mogilev, Republic of Belarus), Irkutsk Scientific Centre of the Siberian Branch of the Russian Academy of Sciences (Irkutsk, Russia), East Siberian Railway (Irkutsk, Russia), Ulaanbaatar Railway (Ulaanbaatar, Mongolia), Irkutsk State University of Railway Transport (Irkutsk, Russia), Omsk State Technical University (Omsk, Russia).

The event has offered a platform for bringing together students, postdocs, innovative academics and industrial experts to exchange their ideas in the field of transport infrastructure development for sustainable development of territories.

Although the schedule of the Conference was very tight, there were very vivid discussions among the participants. The program of the Conference consisted of keynote and plenary talks and numerous presentations.

The programme of the Conference included the following scientific directions:

- Transport logistics and cooperation of transport market participants
- Technosphere and environmental safety
- Railway transport and railway management systems
- Information technologies and big data in transport
- Design, construction and operation of railway tracks and artificial structures
- Transport energy efficiency and power industry
- Economics and management of transport
- Natural-scientific foundations of modern technologies in transport
- Legal, historical, socio-cultural and psychological aspects of transport development
- Urgent problems of water/maritime transport in the region.

TITDS-XII was organized in a hybrid format with both physical and virtual participation. The participants who could not come to the Conference due to different reasons including the problem of restrictions connected with COVID-19 and high transportation costs presented on-site presentations which are available on the web-site of the Conference and took part in the online session with reports which had been prepared and sent to the Organizing Committee beforehand. The online session was held on the Zoom platform (zoom.us) which let all the participants to watch the reports and ask questions online as well as to write them in the chat format. The speakers answered the questions online (Fig. 1).



Fig. 1. Scientific sessions.

The overall technical quality of the conference was good, the platform let to add up to 500 participants simultaneously. The participants could watch the reports, write questions and communicate. The moderator could change the roles so that the speaker could answer questions and make comments.

All participants were invited to present their papers in this Volume and all submitted manuscripts went through the independent peer review process. We are very grateful to all reviewers from Russia, China, USA, Slovenia, France, Uzbekistan, Germany, Belarus and Republic of Kazakhstan for their time and highly professional comments. We deeply believe that their reviews gave opportunity to improve the scientific quality of the presented papers which may be useful for academic, scientific and industrial partners.

More than 300 reports were submitted to the Organizing Committee of the Conferences TITDS-XII. 111 reports were selected for inclusion into this Volume after the review process. All the papers were subjected to rigorous peer-review by conference committee members and international reviewers. The papers were selected based on their quality and relevance to the Conference directions. The proceedings present to the readers the recent advances in the field of transport logistics, technosphere and environmental safety, railway transport and railway management systems, information technologies and big data in transport, design, construction and operation of railway tracks and artificial structures, transport energy efficiency and power industry, economics and management of transport, natural-scientific foundations of modern technologies in transport, legal, historical, socio-cultural and psychological aspects of transport development and urgent problems of water and maritime transport. We hope that the papers included into the Volume will be useful for scientists and engineers all over the world.

We chose Transportation Research Procedia to provide all contributors with the opportunity to publish their papers in an international, peer-reviewed journal. This is understood and appreciated by all the participants of our Conference, and therefore this Volume provides an excellent overview of the main topics of our Conference.

### **Acknowledgements**

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On behalf of the conference committee and organizers, we would like to thank all the authors who contributed to this Volume as well as to the reviewers, speakers and all the conference participants for their support to TITDS-XII 2021.