



IX ქართულ-პოლონური საერთაშორისო
სამეცნიერო-ტექნიკური კონფერენცია
„სატრანსპორტო ხიდი ევროპა-აზია“

შრომები



PROCEEDING

**OF THE IX GEORGIAN-POLISH INTERNATIONAL
SCIENTIFIC-TECHNICAL CONFERENCE
“TRANSPORT BRIDGE EUROPE-ASIA”**

ქუთაისი, საქართველო- KUTAISI, GEORGIA
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აკაკი წერეთლის სახელმწიფო უნივერსიტეტი
Akaki Tsereteli State University

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აკაკი წერეთლის სახელმწიფო უნივერსიტეტი, საქართველო
საქართველოს ტექნიკური უნივერსიტეტი, საქართველო
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სამეცნიერო კომიტეტი

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Georgian-Polish International Scientific Conferences TBEA. Some Results

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Georgian-Polish International Scientific Conferences are cyclical scientific events organized by Georgian and Polish universities and held in various cities of Georgia. The article reviews the results of more than 10 years of scientists' activities within the framework of these conferences.

Keywords. Georgian-Polish International Scientific Conferences; Georgian and Polish universities; Transport Bridge Europe-Asia (TBEA)

Introduction

In the early 2010s, the Caucasus region began to see intensive development of the transport industry. New transport highways were built, and automobile, rail, and air transport were developed. Accordingly, specialists were needed to serve the needs of the economy. Universities were called upon to meet these needs. But the development of higher education is also a need for scientific and pedagogical personnel. At the same time, scientists always need a platform for exchanging information, for discussing their own and colleagues' achievements. Of course, the Internet meets some of these needs. But direct contacts are also extremely important and in demand. They provide an opportunity not only to exchange information, but also to create consortia to receive international or regional grants, to create teams of researchers engaged in solving urgent problems. Obviously, such a platform could be a regular conference with the task of uniting scientists in the transport industry.

Unfortunately, there were no such conferences in the region. Individual industry conferences could not cope with the task. At that time, such an industry scientific regular annual conference had already appeared in Poland. It should be noted that the need for such a conference was not immediately understood. At first, there were industry conferences dedicated to individual types of transport, such as rail or sea, and individual critical units of vehicles, such as engines. But in 2009, the first international scientific conference was held under the name "Transport Problems", which later became an annual event. This conference was based on interaction with the scientific journal of the same name. The principles of such interaction were set out in the article [1].

Georgian scientists have repeatedly participated in the aforementioned conference in Poland. Therefore, it is not surprising that a common proposal emerged to take the Polish conference as an example and, using its positive experience, transfer it to Georgian realities. In connection with the initial approach that the first transport conference arises as a continuation of the Polish experience, i.e. is in fact a subsidiary conference, it was decided to call this scientific event a Georgian-Polish scientific conference. The issue of the name was also discussed jointly. It was taken into account that Georgia is not very important transit corridors connecting the production capacities of Southeast Asia and consumers of such products in Europe. Thus, Georgia is a connecting transport bridge between Europe and Asia.

The organizers of the first conference agreed on the basic principles for organizing such events. These provisions remained unchanged in the future and served the successful development of the

conference cycle in subsequent years:

1. A multidisciplinary and interdisciplinary approach to transportation system research requires the integration of multiple fields, including engineering, economics, logistics, management, and policy. Such conferences create a platform where these fields intersect, providing opportunities for analyzing and resolving complex problems.
2. Georgia's geostrategic role as part of the Europe-Asia transport corridor makes it important for Georgia to develop the transportation sector as one of the directions of its economic development strategy. These conferences facilitate the exchange of international experience and the implementation of best practices in this area.
3. International cooperation and knowledge transfer – Poland's experience in the transportation sector could be significant for Georgia. These conferences create opportunities for Georgian and Polish scientists to examine problems and develop innovative approaches jointly. Poland's successful experience in railway modernization, highway development, and logistics center management serves as a valuable resource for advancing Georgia's transport infrastructure.
4. In terms of the development of young scientists, these conferences promote young researchers' involvement, their qualification enhancement, and integration into the scientific community.
5. Achievement of practical results - the topics discussed include automotive, railway, maritime, aviation, and technological transportation conditions that are directly linked to the country's economic and social development.
6. Foreign conference participants should have the opportunity to get acquainted with the rich history, culture, and achievements of Georgia today. To this end, it is desirable to hold conferences in different locations and try to provide participants with opportunities to visit various attractions.

TBEA 2014

The first Georgian-Polish International Scientific Technical Conference "Transport Bridge Europe-Asia" (TBEA 2014) was held on October 22-24, 2014, in Tbilisi at the Technical University (Figs. 1-3). The conference co-organizers were the Silesian University of Technology (Poland), Georgian Academy of Engineering, the Institute of Machine Mechanics, and Marabda-Kartsakhi Railway. It is obvious that the conference can only be organized by a certain team of like-minded people, which was created in Georgia. Among the most active organizers and leaders of this event, it is worth mentioning Prof. Otar Gelashvili, the Dean of the Faculty of Transportation and Mechanical Engineering at Georgian Technical University (now deceased); Prof. Tamaz Natriashvili, academician of Georgian NAN, the Director of Institute of Machine Mechanics; and Prof. George Tumanishvili. From the Polish side, Prof. Aleksander Ślaskowski actively participated in organizing the conference.

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Fig. 1. TBEA 2014. Conference participants in front of the main building





Fig. 2. TBEA 2014. Plenary session in the assembly hall of the GTU



Fig. 3. TBEA 2014. Meeting of one of the sections

Although this was the first meeting of professors from Georgian and European transportation universities in Tbilisi, the presentations discussed during the conference sparked considerable interest. A significant amount of time was dedicated to scientific discussions. To the credit of the conference organizers, the official program not only included section meetings but also featured impressive excursions for international guests to the capital and other notable locations in Georgia (Figs. 4-6).



Fig. 4. TBEA 2014. Visit to the ancient monastery of Jvari



Fig. 5. TBEA 2014. Participants of the conference in Mtskheta

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Fig. 6. TBEA 2014. In the city of love Signaghi

TBEA 2016

At the concluding session of the conference, it was decided that the next meeting would be held in 2016. In the meantime, representatives of the organizations whose efforts made the scientific conference possible were invited to participate in the traditionally established international conference “Transport Problems”, hosted by the Silesian University of Technology. This contributed to the development of mutual understanding between scientists and the establishment of new connections.

On October 12-14, 2016, the second conference TBEA was again held in Tbilisi at the Georgian Technical University’s Faculty of Transportation Systems (Figs. 7, 8). The geography of conference organizers expanded, and the Institute of Metallurgy and Materials Technology was added to the list of organizers. The number of conference participants was significantly increased.



a



b

Fig. 7. Plenary session of TBEA 2016. a) Conference Presidium; b) Vice-Dean dr. habil. Rafał Burdzik (left) presents the Dean prof. Otar Gelashvili with a commemorative gift on behalf of the Polish delegation

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Fig. 8. Sectional sessions of TBEA 2016. a) Discussions at one of the sections; b) Conference participants after meeting

In accordance with the principles of the conference, the organizers made sure that foreign guests got acquainted with the history and culture of Georgia. This time there was an opportunity to visit the I.V. Stalin Museum in Gori, as well as take an excursion to the Racha region, visiting Ambrolauri and the famous village of Khvanchkara.



Fig. 9. TBEA 2016. Excursion to the I.V. Stalin Museum in Gori



Fig. 10. TBEA 2016. Visit to the region Racha. Near regional administration in Ambrolauri

Among the participants was Akaki Tsereteli State University, specifically Prof. Pridon

Gogiashvili from the Transportation Department of the Faculty of Engineering and Technology presented at the conference. By agreement with the main founders of the conference (Prof. Aleksander Sladkowski, Prof. Otar Gelashvili) and the organizers, with unanimous support, it was decided that the mentioned conference should be held in Georgia, not once every two years, but should become annual and be conducted not only in Tbilisi, but also in Kutaisi, specifically with the Faculty of Technical Engineering of Akaki Tsereteli State University serving as host (the faculty dean is Prof. Pridon Gogiashvili).

TBEA 2017

On October 24-26, 2017, the TBEA 2017 conference in Kutaisi had many guests by the opening day. The conference was organized by Akaki Tsereteli State University (Rector, Prof. George Ghavtadze) and the Faculty of Technical Engineering (Dean Prof. Pridon Gogiashvili) (Figs. 11, 12). Co-organizers: Silesian University of Technology, Poland (Prof. Aleksander Sladkowski), Georgian Technical University, Faculty of Transportation Systems and Mechanical Engineering, Dean, Prof. Otar Gelashvili, Institute of Machine Mechanics (Director, Prof. Tamaz Natriashvili).



Fig. 11. Plenary session of TBEA 2017. a) Participants of the meeting; b) Conference Presidium, Prof. Tamaz Natriashvili speaks



Fig. 12. TBEA 2017. a) Discussions at the thematical sections; b) Conference participants in the courtyard of the faculty near the bust of the outstanding mechanic, academician N. Muskhelishvili

The conference in Kutaisi allowed the conference participants to continue their acquaintance with Georgia. They were able to visit Gelati Monastery, Prometheus Cave and other attractions near Kutaisi (Fig. 13).

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Fig. 13. TBEA 2017. a) Conference participants visit Gelati Monastery; b) Visiting Prometheus Cave

Among foreign guests, representatives from Polish technical universities predominated. There were also speakers from Baltic countries, Azerbaijan, and Uzbekistan. Interesting and diverse excursions were organized for conference participants in the Kutaisi surroundings and notable places in western Georgia. At the same conference, representatives of the Silesian University of Technology invited conference participants to their university for conferences to be held in June 2018.

TBEA 2018

The main venue for TBEA 2018 was again Georgian Technical University, and the conference was held on October 8-11, 2018. Akaki Tsereteli State University was added to the conference organizers, and Kaspi Municipality's City Hall also participated in conference organization (Figs. 14-16).



Fig. 14. TBEA 2018. a) Conference participants in the university foyer; b) Heads of delegations after meeting with the rector of the GTU



Fig. 15. TBEA 2018. a) Conference participants in front of the building of the Faculty of Transportation and Mechanical Engineering; b) Meeting of one of the sections



Fig. 16. TBEA 2018. a) Participants of the conference in the city of Kaspi; b) Samtavisi is an eleventh-century Georgian Orthodox cathedral in Eastern Georgia; c) Visiting another Kwatachewi monastery

TBEA 2019

In 2019, the honor of hosting the conference once again went to Akaki Tsereteli State University, with the event taking place from October 15–17. A significant contribution to the organization of the conference was made by ATSU's newly elected Rector, Prof. Roland Kopaliani, and the Dean of the Faculty of Technical Engineering, Prof. Omar Kikvidze (Fig. 17, 18).



Fig. 17. TBEA 2019. Meeting of delegation leaders with the Rector of the ATSU



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Fig. 18. TBEA 2019. a-c) Conference sessions; d) Interview with Prof. A. Śladowski for local television

The organizing committee arranged engaging excursions for participants to visit Georgia's historical and notable sites, placing great emphasis on this aspect throughout the conference days. Here it is enough to list the places visited by foreign guests: Borjomi, Akhaltsikhe, Motsameta, Sairme, Kutaisi, etc. The responses received from participants after returning to their home countries were particularly positive and noteworthy (Fig. 19).





e

Fig. 19. TBEA 2019. a) Conference guests in Bagrati Cathedral; b) Excursion to Borjomi; c) Visit to Akhaltsikhe; d) Foreign guests in Motsameta; e) Conference participants in Sairme

TBEA 2022

The events that developed worldwide, which were caused by the COVID pandemic, left a distinctive mark on the development of conference organization traditions, and accordingly, the holding of conferences in Georgia was delayed in 2020-2021. However, existing connections were not disrupted, and the Silesian University of Technology, personally Prof. Aleksander Ślaskowski, ensured continuous remote communication with the organizers, and at the first possible opportunity in 2022, Georgian Technical University, together with co-organizers, restored the history of conference organization. TBEA 2022 was held on September 26-28 and was hosted by the Faculty of Transport Systems and Mechanical Engineering of Georgian Technical University (Figs. 20, 21).



a



b



c



d

Fig. 20. TBEA 2022. a) Presidium of the Conference; b) Meeting of the heads of delegations of Katowice and Kutaisi; c) Ceremony of awarding the certificate of participation in the conference; d) Foreign participants and conference organizers at the entrance to the faculty



Fig. 21. TBEA 2022. a) Excursion to the I.V. Stalin Museum in Gori; b) Cave city Uplistsikhe; c) Visit to a winery in Kakheti

TBEA 2023

In 2023, the joint conference TBEA 2023 held in the city of Kutaisi was outstanding among conferences of this direction held in Kutaisi. Representatives from 17 foreign universities from five different countries participated in the conference. The conference program, both scientific and cultural, was loaded with significant events, as the conference was dedicated to the 90th anniversary of Akaki Tsereteli State University (Figs. 22-24). Within the framework of the anniversary day agenda, conference guests participated in the opening ceremonies of the new academic year and receptions arranged for honorary guests, hosted by the Rector of Akaki Tsereteli State University, Dr. Shalva Kirtadze. During these days, Prof. Aleksander Ślaskowski from Silesian University of Technology was awarded the title of Doctor Honoris Causa of Akaki Tsereteli State University, and a cooperation memorandum was signed between the two universities, which provides for dual degree programs for master's program students in the transport direction. The initial results of inter-university cooperation practically emerged. Very interesting and impressive for the foreign guests of the conference was the field visit to the Maritime and Transport Faculty of Akaki Tsereteli State University in the city of Poti. At this faculty, a significant meeting and exchange of ideas took place between the faculty's teaching staff and students. It should be noted that TBEA 2023 was the first conference where sad information was announced about the tragic death of Prof. Otar Gelashvili, one of the inspiring figures and organizers of the conference.

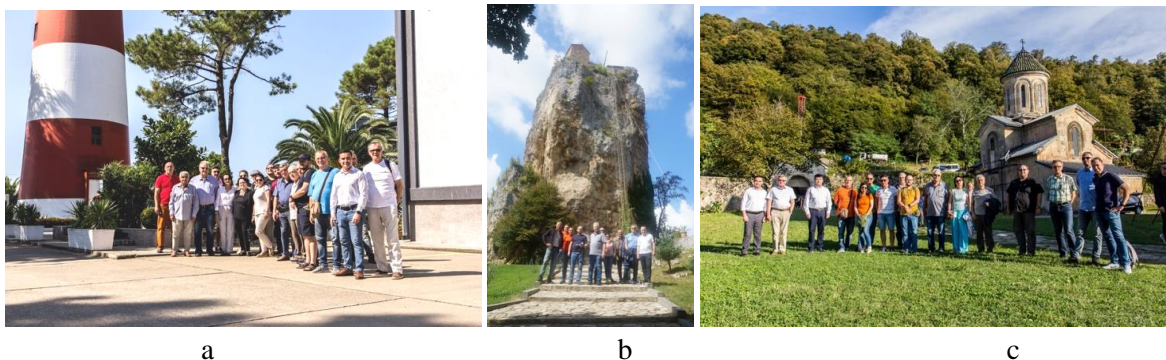


IX ქართულ-პოლონური საერთაშორისო სამეცნიერო-ტექნიკური კონფერენცია
 „სატრანსპორტო ხიდი ევროპა-აზია“
 IX Georgian-Polish International Scientific-technical Conference
 „Transport Bridge Europe-Asia“



e

Fig. 22. TBEA 2023. a) Rector Shalva Kirtadze opens the conference; b) One of the sectional sessions; c) Congratulations to students on the beginning of the academic year on behalf of the conference participants; d) Group photo at the monument in the university courtyard; e) Lectures for students in Poti



a

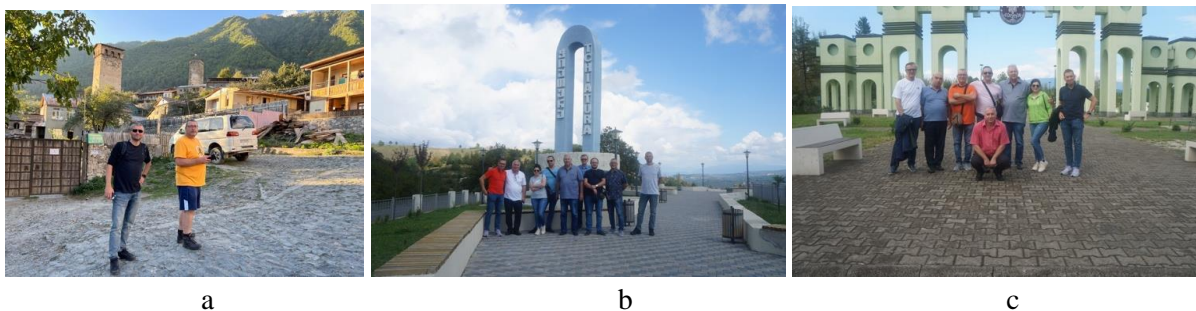
b

c

Fig. 23. TBEA 2023. a) Excursion to the lighthouse in Poti; b) Near the Katskhi Pillar; c) Conference participants in the Gelati Monastery

TBEA 2024

In 2024, the newly appointed Dean of the Faculty of Transport Systems and Mechanical Engineering at Georgia Technical University, Dr. Boris Gitolendia, together with the university administration, despite the great loss expressed by the death of Prof. Otar Gelashvili, managed to organize the conference TBEA-2024. The co-organizers were again Silesian University of Technology and Akaki Tsereteli State University. The host university, concentrating the accumulated experience, created the best working and leisure conditions for the conference participants (Figs. 25, 26).



a

b

c

Fig. 24. TBEA 2023. a) Excursion to Svaneti; b) Chiatura; c) Tskhaltubo



Fig. 25. TBEA 2024. a) Conference organizers at the faculty; b) Visit to the GTU laboratories; c) Evening on Mount Mtatsminda; d) Meeting at the Institute of Machine Mechanics

At the time of writing this article, organizational activities for “TBEA-2025” are already underway. The past decade has demonstrated significant achievements. Many young scientists, including doctoral students, have presented their research at the conferences. In most cases, collections of the presented works were published shortly after each event. For many participants, these conferences marked their first visit to Georgia, offering them the opportunity to experience Georgian culture and meet the Georgian people.

An essential aspect of each conference is the possibility of publishing conference proceedings. By agreement between the organizers, it was decided that conference proceedings can be published in English, Georgian and Polish, which are the official languages of the conference. The best articles can be published in an expanded journal version in the journal “Transport Problems”, which is indexed in Scopus and WoS. The main mistakes of the authors, which they unfortunately make when preparing their publications, were analyzed in the article [2]. Each of the conferences described above ended with the publication of conference proceedings, which are presented in Fig. 27 [3-10]. The indicated publications have the status of peer-reviewed monothematic monographs, which have been assigned ISBNs.

IX ქართულ-პოლონური საერთაშორისო სამეცნიერო-ტექნიკური კონფერენცია
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 „Transport Bridfe Eorope-Azia“



Fig. 26. TBEA 2024. a) Ananuri Fortress; b) Trip to Manavi; c) Our friend Prof. Otar Gelashvili; d) At the foot of Kazbek



Fig. 27. Conference TBEA proceedings published in different years

An important aspect of each conference is its geographical scope. The conference, despite its full name, initially covered not only the two titular countries. The first conference TBEA included 5 countries (Georgia, Poland, Slovakia, the USA and Uzbekistan) (Fig. 28).

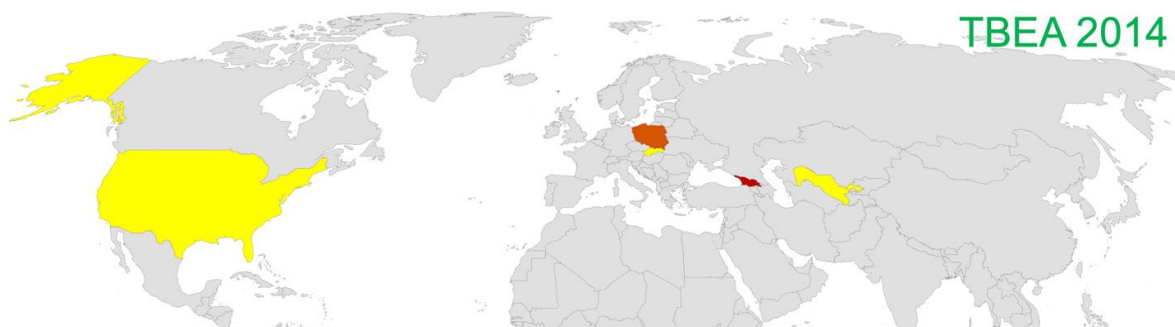


Fig. 28. Participants in the first TBEA conference represented the countries shown on the map

Over the past decade, the conference's geography has expanded threefold. During this time, scientists from 15 countries (Azerbaijan, Bulgaria, Georgia, Hungary, Israel, Kazakhstan, Latvia, Lithuania, Poland, Russia, Slovakia, Slovenia, Ukraine, USA, Uzbekistan) participated in the conference.

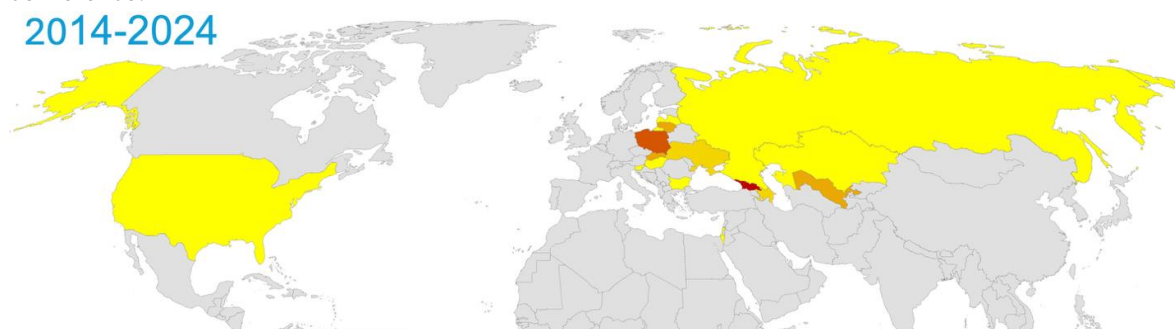


Fig. 29. Participants in the TBEA conferences represented the countries shown on the map

The International Scientific and Practical Conference “Transport Bridge Europe-Asia” has already become a significant platform that unites science, practice, and international cooperation. The 9th International Conference TBEA-2025 represents not only a continuation of previous efforts but also a significant step taken towards future development.

Conclusions

- Despite the fact that the conference “Transport Bridge Europe-Asia” was organized by scientists from two countries (Georgia and Poland), which was reflected in its name, the conference was initially of an international nature.
- In the period 2014-2024, 8 conferences were organized, and conference proceedings were published at the end of each conference. In total, 306 articles were published, which contained 1889 pages of text.
- Some articles previously presented at the conference were later published in the International Scientific Journal «Transport Problems».
- New conference, already the ninth in this cycle, continues the established traditions and is an effective platform for expanding scientific contacts and discussing new promising research in the transport industry.

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