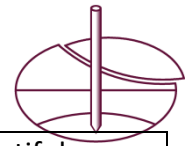




**ISSMGE FOUNDATION
REPORT ON CONFERENCE ATTENDANCE**

Your Name: Ivan Bashmakov	Your Organization: Saint Petersburg State University of Architecture and Civil Engineering (SPbGASU)	Date of report: 30.08.2023
Conference Title: 17th Asian Regional Conference on Soil Mechanics and Geotechnical Engineering 2023	Location of Conference: Hilton Astana Hotel, Astana, Kazakhstan	Dates of Conference: 14.08.2023- 18.08.2023
What you learned: Participation in this conference allowed me to significantly deepen my knowledge in the areas of numerical modeling of geotechnical problems using various methods, the behavior of soils under excess pore pressures, and the peculiarities of the operation of protective structures during excavation of deep pits. The detailed consultation with V. Kalyakin on the development of algorithms for solving geotechnical nonlinear problems using the finite element method was particularly valuable to me.		
People you met: Participation in this conference allowed me to significantly deepen my knowledge in the areas of numerical modeling of geotechnical problems using various methods, the behavior of soils under excess pore pressures, and the peculiarities of the operation of protective structures during excavation of deep pits. The detailed consultation with V. Kalyakin on the development of algorithms for solving geotechnical nonlinear problems using the finite element method was particularly valuable to me. The most significant aspect of this conference for me was the meeting with V. Kalyakin, a professor at the University of Delaware. He provided me with extremely valuable recommendations regarding the development of a model for the behavior of weak clayey soils, testing methods for weak clayey soils, and the development of algorithms for solving geotechnical nonlinear problems using the finite element method. It is important to note that on different days of the conference, Professor V. Kalyakin took several hours of his time to consult with me on the aforementioned topics. In addition, within the section where I presented two papers, I had the opportunity to meet young researchers who, like me, are involved in the development of deep pits. Among them were Munkyeong Baek from South Korea and K. Liu from China. Within the poster session, I had the chance to meet numerous researchers from Kazakhstan, China, Japan, South Korea, and various cities in Russia.		
Main features of conference: First and foremost, I would like to highlight the organization of the event. Despite the large number of presentations, including those by renowned professors and young researchers, the schedule was strictly followed, and I did not notice any delays. The conference provided excellent lunches and hot and cold beverages throughout the event.		

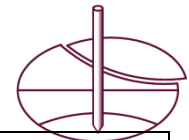


The venue of the conference, Hilton Astana, also deserves attention. It has beautiful interiors and great locations for presenting papers, coffee breaks, and networking with colleagues from around the world.

Your comments on the conference:

Based on the results of the conference, I would like to note that it was my first time attending such a significant scientific event.

One of the most valuable experiences for me was presenting the results of my research in English to representatives from other countries. Additionally, familiarizing myself with the latest scientific research conducted by scholars from around the world greatly benefited my dissertation work.



Please attach short report (maximum 400 words) suitable for publication in the ISSMGE Bulletin:

The 17th Asian Regional Conference on Soil Mechanics and Geotechnical Engineering (17ARC) took place from August 14th to 18th, 2023, at the Hilton Astana Hotel in Astana, Kazakhstan.

This conference brought together experts and researchers from around the world to exchange experiences and the latest research in all areas of geotechnics. Special attention was given to the issues of modern geotechnical development of cities at this conference. Credit should be given to the Kazakh Geotechnical Society, the organizing committee, and Professor Askar Zhussupbekov in particular for the excellent organization of the conference. Plenary sessions, technical sessions, poster sessions, lunch breaks, technical exhibitions, and excursions were impeccably organized. Skillful coordination and adherence to the schedule ensured maximum knowledge exchange among conference participants.

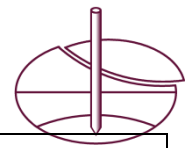
I was given the opportunity to present the results of my research in two presentations and participate in a poster session.

In my first presentation, I presented my findings on the analytical assessment of passive soil pressure during the construction of soil berms. My proposed solutions are basing on the characteristics method of soil ultimate equilibrium theory developed by Russian scientist Professor Sokolovsky. My solutions allowed for the verification of existing approximate methods for assessing passive soil pressure during the construction of soil berms and identified a certain inaccuracy in the calculations of this pressure using the FEM.

In my second presentation, I presented the results of my research on the inverse analysis of geotechnical monitoring results for deformations of retaining structures during deep excavation in engineering-geological conditions in St. Petersburg. Based on the results of this work, several methods for assessing actual forces in retaining structures were proposed, highlighting the importance of considering the nonlinear behavior of reinforced concrete and undrained soil behavior in the calculations of excavation support systems.

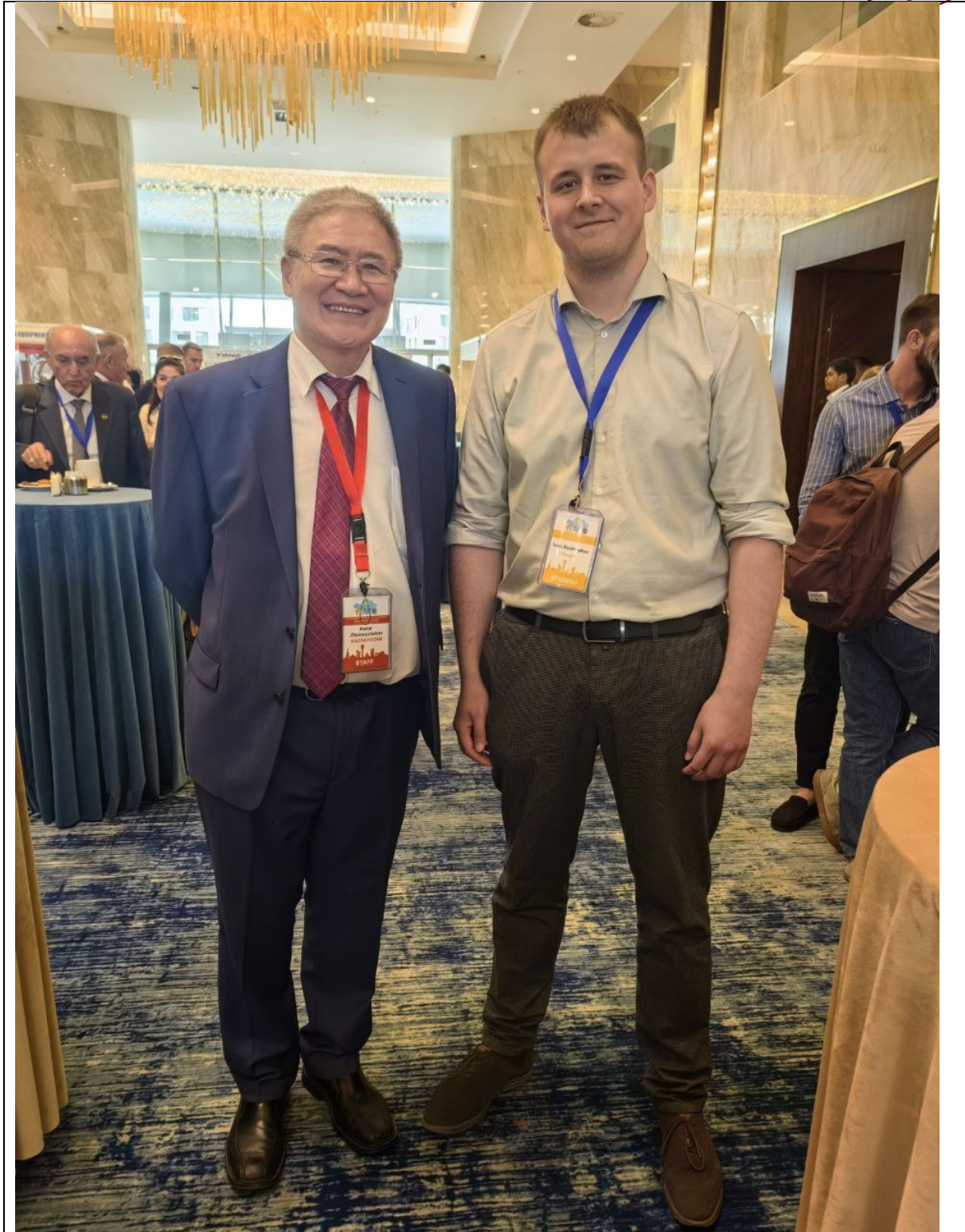
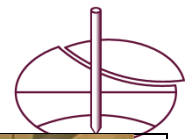
During the poster session, I presented a study related to the assessment of undrained strength of soil based on effective strength parameters. This work is basing on the combined use of A. Skempton's theory on excess pore pressure generation and Y.I. Soloviev's theory on instantaneous soil strength. The results of the study demonstrated the need for CU triaxial tests on weak clayey soils and the development of a special model for numerical simulation of their behavior.

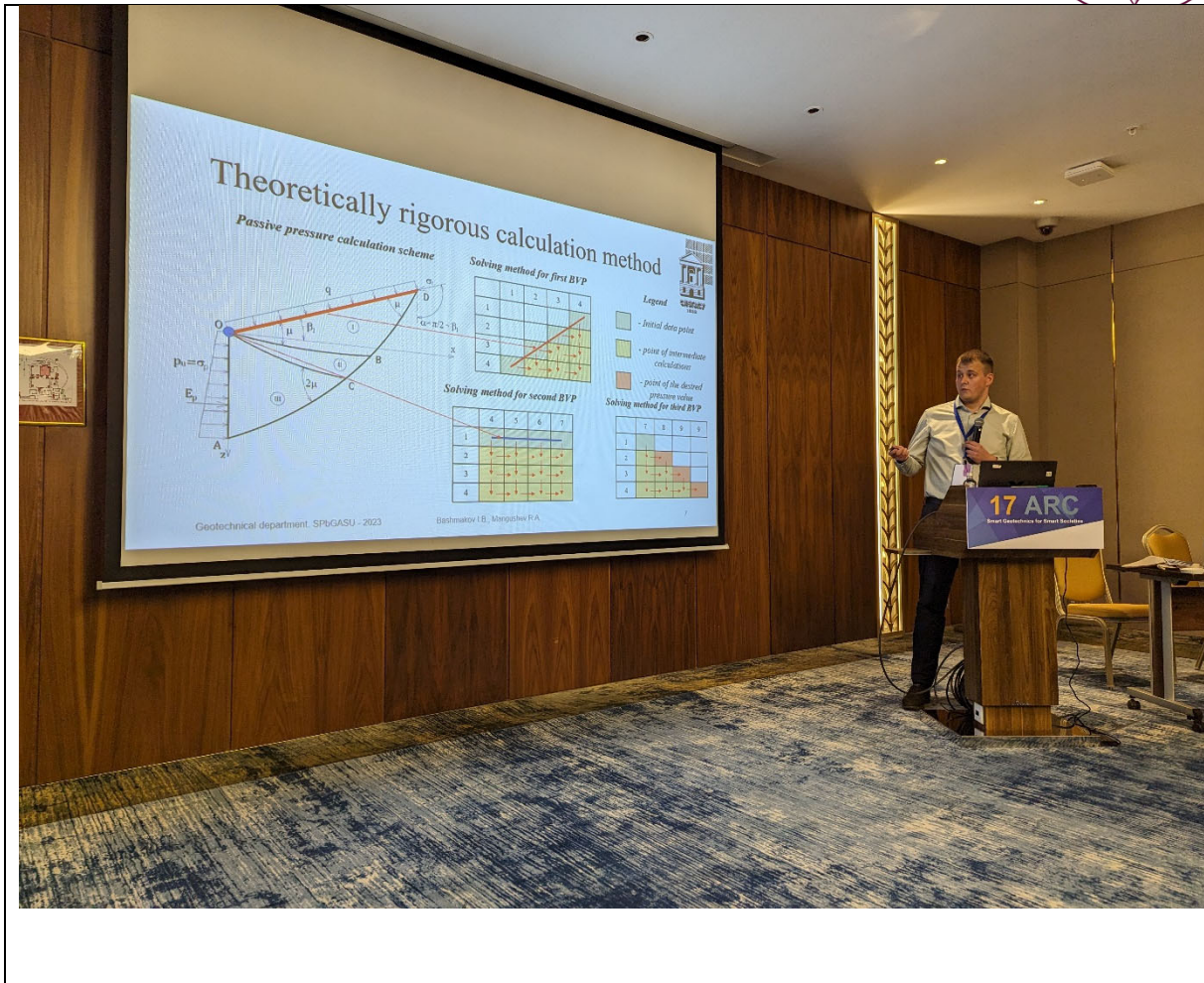
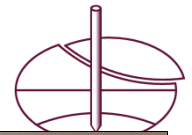
At the end of the conference, I would like to express my deepest gratitude to the conference organizers and the ISSMGE for the opportunity to participate in such a large-scale scientific event.

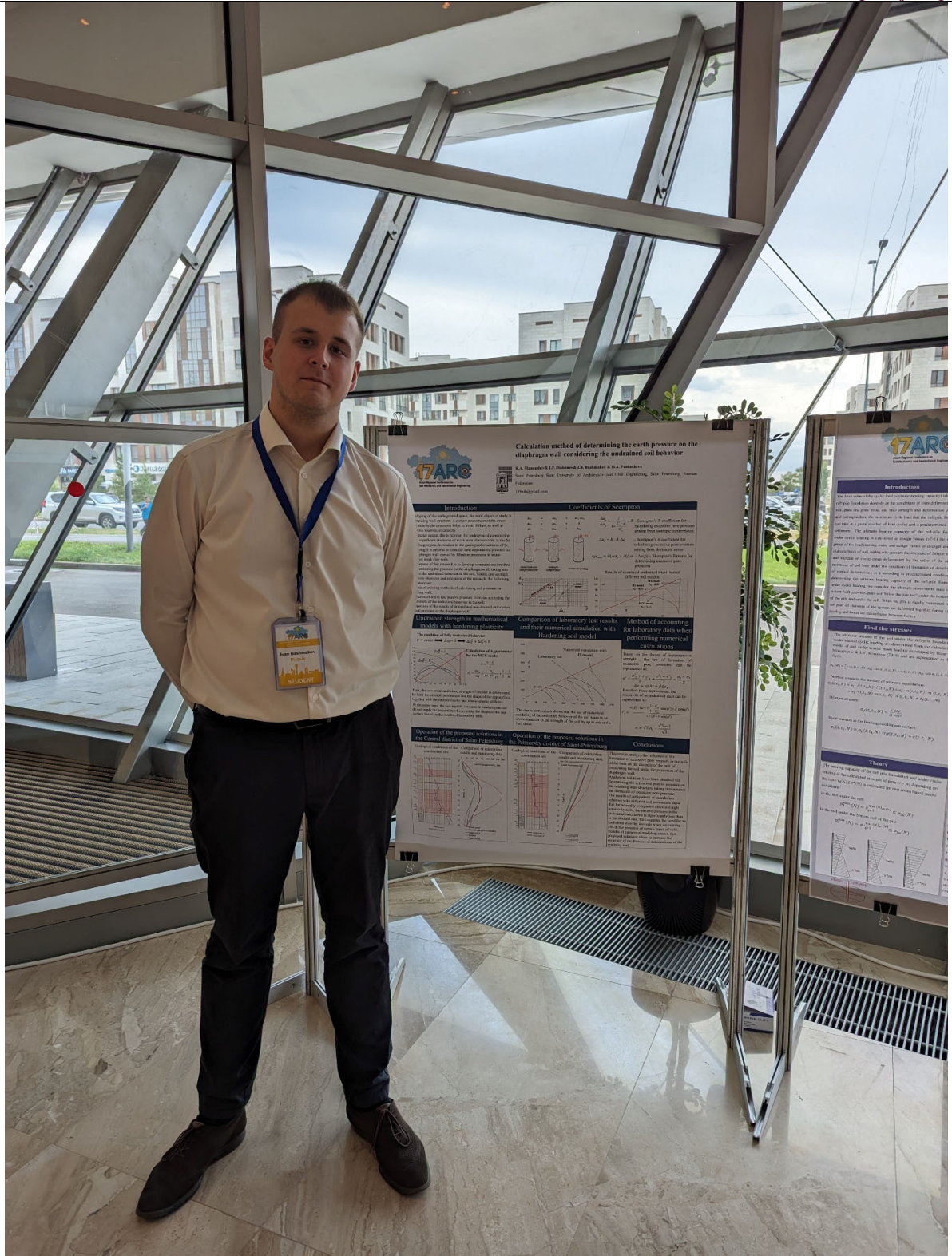


Photographs from Conference:









Calculation method of determining the earth pressure on the diaphragm wall considering the undrained soil behavior

B.A. Shapovalov, I.P. Shabanov, I.B. Kabanov, D.S.A. Pashchenko
Inst. For Advanced Study, University of Architecture and Civil Engineering, East Faculty, Faculty of Architecture, Faculty of Architecture
17ARC

Introduction

The paper is devoted to the problem of determining the earth pressure on the diaphragm wall of a retaining structure in undrained soil. The authors propose a method for determining the earth pressure on the diaphragm wall of a retaining structure in undrained soil, taking into account the influence of the undrained soil behavior on the earth pressure distribution. The authors propose a method for determining the earth pressure on the diaphragm wall of a retaining structure in undrained soil, taking into account the influence of the undrained soil behavior on the earth pressure distribution.

Coefficients of Scattering

The authors propose a method for determining the earth pressure on the diaphragm wall of a retaining structure in undrained soil, taking into account the influence of the undrained soil behavior on the earth pressure distribution. The authors propose a method for determining the earth pressure on the diaphragm wall of a retaining structure in undrained soil, taking into account the influence of the undrained soil behavior on the earth pressure distribution.

Method of accounting for laboratory data when performing numerical calculations

The authors propose a method for determining the earth pressure on the diaphragm wall of a retaining structure in undrained soil, taking into account the influence of the undrained soil behavior on the earth pressure distribution. The authors propose a method for determining the earth pressure on the diaphragm wall of a retaining structure in undrained soil, taking into account the influence of the undrained soil behavior on the earth pressure distribution.

Conclusion

The authors propose a method for determining the earth pressure on the diaphragm wall of a retaining structure in undrained soil, taking into account the influence of the undrained soil behavior on the earth pressure distribution. The authors propose a method for determining the earth pressure on the diaphragm wall of a retaining structure in undrained soil, taking into account the influence of the undrained soil behavior on the earth pressure distribution.

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Find the stress

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Theory

The authors propose a method for determining the earth pressure on the diaphragm wall of a retaining structure in undrained soil, taking into account the influence of the undrained soil behavior on the earth pressure distribution. The authors propose a method for determining the earth pressure on the diaphragm wall of a retaining structure in undrained soil, taking into account the influence of the undrained soil behavior on the earth pressure distribution.