

INTERNATIONAL CONFERENCE ON GIS and Geoinformation Zoning for Disaster Mitigation (GIZ)

August 28-30, 2025, Rahat Palace Hotel, Almaty, Kazakhstan





















PROGRAM

BOOK



KGS-ASTANA LLP

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WELCOME MESSAGE

Dear Colleagues and Friends,



The Asian Technical Committee (ATC10) of ISSMGE, in collaboration with TC305 and the Kazakhstan Geotechnical Society, is pleased to announce the 6th International Conference on GIS and Geoinformation Zoning for Disaster Mitigation (GIZ), to be held in Almaty, Kazakhstan.

This event, which has been successfully hosted five times since its establishment, provides a platform for professionals, researchers,

engineers, and public officials to share cutting-edge research and technologies related to geoinformatics, hazard zoning, geotechnics, earthquake engineering, and disaster prevention.

In the wake of the challenges posed by the COVID-19 pandemic, we are excited to return to an inperson format and are pleased to expand the scope of ATC10 to include emerging technologies such as Building Information Modeling (BIM), Digital Twin, and Machine Learning. These advancements promise to enhance our research and practices in disaster mitigation.

This conference will also be co-organized by the Asian Regional Technical Committee 19 (ATC19) (Preservation of Historic Sites) of ISSMGE. Following the success of the previous symposium held at the Nara National Institute of Cultural Properties in Japan in 2023, this event aims to further promote the preservation of historic sites by fostering cooperation, supporting interdisciplinary studies, and addressing the impact of natural disasters on cultural heritage from a geotechnical perspective.

We look forward to welcoming participants to Almaty for an inspiring and collaborative event that will contribute to innovation and progress in these crucial fields.

Sincerely yours,

Professor Askar Zhussupbekov,

Chairman, Chair TC305 of ISSMGE, Organizing Committee of GIZ 2025

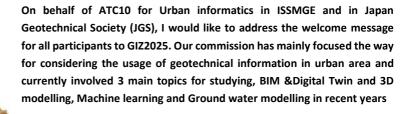
President of Kazakhstan Geotechnical Society





WELCOME MESSAGE

Dear Colleagues and Friends,

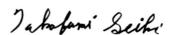


As almost every 4 years, our commission has organized international conference on GIS and Geoinformation Zoning for Disaster Mitigation (GIZ). This conference, 6th International Conference on GIS and Geoinformation Zoning for Disaster Mitigation (GIZ2025) is after 5th GIZ at Auckland, NZ in 2018. We appreciate to Kazakhstan Geotechnical Society, JGS, ATC19 and TC305 for the preparation and support for GIZ2025.

We aim to develop the commission activity to new stage through the presentations and discussions in GIZ2025 at historical city, Almaty, along ancient Silk Road and on foot of the Tian Shan Mountains.

We would like to hope to build new and international relationship on the urban informatics and others among the participants at the conference in excellent environment of Almaty.

Sincerely yours,
Associate Professor Takafumi Seiki,
Chair ATC10 of ISSMGE





WELCOME MESSAGE

Dear Colleagues and Friends,



I am delighted to say that Asian Regional Technical Committee 19 (ATC19) is joining the 6th International Conference on GIS and Geoinformation Zoning for Disaster Mitigation (GIZ) as a co-organiser. I hope that all participants enjoy inspiring discussions in this conference.

ATC19 was launched in 2010, named after TC19 of ISSMGE, which has changed its name to TC301. The first chair was Dr. Yoshinori Iwasaki. We

are an interdisciplinary team for the preservation of historic sites in Asia. We aim to: 1) exchange techniques for investigations and preservation, 2) encourage interdisciplinary collaborations, and 3) contribute to the investigation and restoration of damaged historic sites from a geotechnical engineering perspective. We deal with a wide range of topics related to the preservation of historic earth/masonry structures, including slope stability, moisture transfer, seismic behaviour, and physicochemical degradation.

In 2023, ATC19 got a new role leading the restoration of historic sites damaged by natural disasters in the Japanese Geotechnical Society. We are now working more actively than ever to assist the restoration of geotechnical structures in castles, shrines, and burial mounds damaged by the 2024 Noto Peninsula Earthquake. This practical project motivates us to study further.

The issues that historic sites are facing are different from site to site, and solutions have not been established; therefore, sharing experience and exchanging thoughts are important. This international conference will be an opportunity for face-to-face intensive discussions and finding your new collaborators.

Sincerely yours,
Dr. Mai Sawada,
Chair ATC19 of ISSMGE







CONFERENCE ADVISORY BOARDS & COMMITTEES

International Advisory Board

Members:	
<u>Prof. Mamoru Mimura</u>	<u>Dr. Yoshinori Iwasaki</u>
Geo-Research Institute, ATC10	Iwasaki Geo-Engineering Office, ATC19
<u>Prof. Susumu Yasuda</u>	<u> Prof. Askar Zhussupbekov</u>
Tokyo Denki University, ATC10	Eurasian National University, TC305
Prof. Bagdat Teltayev	Dr. Nurgul Alibekova
Joldasbekov Institute of Mechanics and	Eurasian National University, KGS
Engineering, KGS	

Organizing Committee

Chairman:

<u>Dr. Takafumi Seiki</u>
Utsunomiya University, ATC10
<u>Prof. Askar Zhussupbekov</u>
Eurasian National University, TC305

Members:

Prof. Yukiyasu Fujii Meijo University, ATC19 Mrs. Bibigul Abdrakhmanova **Eurasian National University, KGS** Mrs. Almagul Mukasheva **Eurasian National University, KGS** Mr. Diyar Mukhanov **Eurasian National University, KGS** Mr. Sultan Iskakov **Eurasian National University** Dr. Balaanym Dosmukhambetova **Eurasian National University** Mrs. Raushan Kazybek **Nazarbayev University** Mr. Askar Yessentayev **Eurasian National University**

Dr. Mai Sawada

Tokyo Institute of Technology, ATC19

Mrs. Rie Wada
Kiso-Jiban Consultants Co., Ltd., ATC10
Dr. Assem Abisheva
Eurasian National University, KGS
Dr. Zhangazy Moldamuratov
International Educational Corporation
Mrs. Gulnaz Zhairbayeva
Eurasian National University, KGS
Dr. Assel Mukhamejanova
Eurasian National University
Dr. Abdulla Omarov
Eurasian National University
Mr. Rakhman Kazybek
Nazarbayev University







Scientific Committee

Members:

MICHINE13.	
<u>Prof. Mamoru Mimura</u>	<u>Dr. Takafumi Seiki</u>
Geo-Research Institute, ATC10	Utsunomiya University, ATC10
<u>Prof. Susumu Yasuda</u>	Mrs. Rie Wada
Denki University, ATC10	Kiso-Jiban Consultants Co., Ltd., ATC10
<u>Dr. Naoko Kitada</u>	Mr. Tomohiro Yasuda
Geo-Research Institute, ATC10	Kiso-Jiban Consultants Co., Ltd., ATC10
Prof. Takayuki Shuku	Dr. Takafumi Kitaoka
Tokyo City University, ATC10	Kansai University, ATC10
Dr. Naoto Inoue	Prof. Pulod Aminzoda
Geo-Research Institute, ATC10	Institute of Geology of Tajikistan, TC305
<u>Prof. Tomofumi Koyama</u>	Dr. Ryota Hashimoto
Kansai University, ATC19	Kyoto University, ATC19
Prof. Jong-Sub Lee	Mrs. Megumi Kobayashi
Korea University, ATC19	OYO Corporation, ATC19
Prof. Keh-Jian Shou	Dr. Soichiro Wakiya
Vice President Asia, ISSMGE, Professor,	Nara National Research Institute for Cultural
National Chung-Hsing University, ATC19	Properties, ATC19
Dr. Ramli Nazir	Prof. Hoe-Ling
University Teknologi Malaysia, TC305	Columbia University, TC305
Prof. Adimoolam Boominathan	Prof. Der Wen Chang
Indian Institute of Technology Madras, TC305	Tamkang University, TC305
Dr. Ainur Montayeva	Prof. Louis Ge
Korkyt Ata Kyzylorda University	National Taiwan University, TC305
Prof. Dongsheng Xu	Dr. Abdulla Omarov
Wuhan University of technology, TC305	Eurasian National University, TC305
Prof. Eun Chul Shin	Dr. Assel Sarsembayeva
Incheon National University, TC305	Shakarim University, TC305
Prof. Assel Tulebekova	Prof. Rolf Katzenbach
Eurasian National University, TC305	Technische Universität Darmstadt, TC305
Dr. Gulzat Kadyralieva	Prof. Fayzulla Ikramov
National Academy of Sciences of the Kyrgyz	Samarkand State University named after Sharof
Republic, TC305	Rashidovich Rashidov, TC305
Prof. Bin-Chen Benson Hsiung	Dr. Anil Joseph
National Taiwan University of Science and	Managing Director, Geostructurals Private Limited
Technology, TC305	and President, Indian Geotechnical Society, ATC19
Prof. Rasin Düzceer	Prof. Masyhur Irsyam
Kasktas Ltd, Turkish Geotechnical Society	Institut Teknologi Bandung, TC305
Dr. Ankit Garg	Dr. Erlan Sabitov
Xi'an Jiaotong-Liverpool University, TC305	Eurasian National University
Dr. J.S. Dhanya	Prof. Yelbek Utepov
Indian Geotechnical Society	Eurasian National University
Dr. Shyngys Zharassov	Dr. Gulshat Tleulenova
Eurasian National University	Eurasian National University
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ACKNOWLEDGEMENT

CO-ORGANIZATIONS



















SPONSORS



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BRONZE

















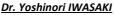


INVITED LECTURES



Kevnote I

Authenticity of Foundation of Heritage Structures and Special Character of "Angkor Sand" for the Central Tower of Bayon, Angkor Thom, Cambodia



Iwasaki Geo-Engineering Office (Japan)



Utilization of Geoinformatic database and its application to assessment of settlement of the reclaimed marine foundations due to the construction of Kansai International Airport



Emeritus Professor of Kyoto University, Principal Director | Geo-Research Institute (Japan)



Geological application of computerized geotechnical borehole

Subsurface geology and sedimental environment in Kansai Area Dr. Naoko KITADA

Director | Geo-Research Institute (Japan)



Risk assessment of rainfall-induced landslides considering regional characteristics with machine learning

Prof. Tatsuya ISHIKAWA, Ren ONO, Tomoki UENO, Kiyonobu KASAMA

Hokkaido University (Japan)

Kevnote V

Development and application of geological and geotechnical information databases in Japan and the ATC10's challenge on uncertainties

Mrs. Rie WADA

Manager, Geospatial Business Department | Kiso-Jiban Consultants co., Ltd (Japan)



Spatial and Temporal Analysis of Landslide Susceptibility- for the Case

Prof. Keh-Jian SHOU, SY. SUNG and PL.CHEN National Chung-Hsing University (Taiwan)















Invited II

Assessment of Soil Contamination in Incheon Harbor Area

<u>Prof. Eun Chul SHIN, Dabeen KIM, Jeong Ku KANG</u>

Incheon National University (South Korea)



Invited III

Design of the First Metro Line in Almaty Crossing Tectonic Fault Zones

N.S. UTEGENOV, A.A. URAZBAYEVA

Chief Engineer of LLP "Metroproekt" (Kazakhstan)



Invited IV
Engineering Solutions for Disaster Mitigation and controlled demolition techniques for buildings - Case Studies

<u>Dr. Anil JOSEPH, Ashitha JOSEPH and Dhanya J.S.</u>

Geostructurals Pvt Ltd (India)



Special I

Geobrugg experience in changing risk zones to no-risk zones by means of natural hazard protection measures. Experience in Switzerland and Kazakhstan

Ph.D. Alexander BARINOV



PhD Geography, Member of Debris Flow Association, Member of Avalanche Association, Regional partner of Geobrugg AG Switzerland





Special III

Construction of vertical cut-off walls for reducing exposure to floods

Mr. Waldemar KWIATKOWSKI

Construction Director, Geofocus LLP (Poland)















Special IV

Recent advancement in "Press-in" piling technology: contribution to disaster prevention and mitigation, and attempts for a rational project cycle using piling data

Yukihiro ISHIHARA, Koichi OKADA, Yukinori TODA, Atsushi MORI, Masashi EGUCHI and Naoki SUZUKI

Center Director, Press-in Technology R&D Center, GIKEN LTD (Japan)
Thematic I

Statistical and regression analysis of sand and clay stiffness in triaxial tests

Dr. Rafael SHARAFUTDINOV

Scientific Secretary of RSSMGFE, Director | Gersevanov Research Institute of Bases and Underground Structures (Russia)

Thematic II

Hazardous Geological Processes and Their Impact on the Condition of Architectural Monuments

Prof. Favzulla Abdullaevich IKRAMOV

Professor | Samarkand State University named after Sharof Rashidovich Rashidov (Uzbekistan)

Thematic III

Geoinformational zoning in addressing hazards from natural disasters Dr. Daulet SARSENBAYEV

Director | National Scientific Center for Seismological Observations and Research (Kazakhstan)

Bright Spark I

Environmental assessment of pyrolyzed industrial mixed plastic waste <u>Dr. Balganym DOSMUKHAMBETOVA, Assem ASKARBAY</u> Eurasian National University (Kazakhstan)

Bright Spark II

Stabilization and Ecological Restoration of Tailings: Addressing Key Challenges and Future Opportunities

Ph.D. Bharat RATTAN, Ankit GARG, Sreedeep S, Chen RUI
Postdoctoral Fellow | Harbin Institute of Technology (China)

Bright Spark III

Brittle Failure Mechanism and Evaluation Model of Reef Limestone under Multi-Factor Regulation of Mineral-Pore-Interface Interactions Mr. Yang LIU, Dong-sheng XU, Askar ZHUSSUPBEKOV Ph.D candidate in Geotechnical Engineering | Wuhan University of Technology (China)



GENERAL INFORMATION

Conference Info

Theme

GIS and Geoinformation Zoning for Disaster Mitigation (GIZ)

Date

28-30 August 2025

Coffee Break

Venue: Poster Session Area, Ground Floor

Lunch

Venue: Zhuambyl Restaurant, 1st Floor (ticket required)

Welcome Reception

Venue: Grand Hall, Medal ceremony

Gala Dinner

Venue: Zhuambyl Restaurant Room (with terrace), 1st Floor (ticket required)

Official Language

The official language of the GIZ2025 conference is English.

Internet Access

Free WI-FI is available throughout the conference period in conference venue, Hotel Rahat Palace.

Lost and Found

The lost and found items should be returned/claimed at the registration counter.

Certificate of Attendance

Certificate of the attendance will be provided to each registered participant during the checkin process.

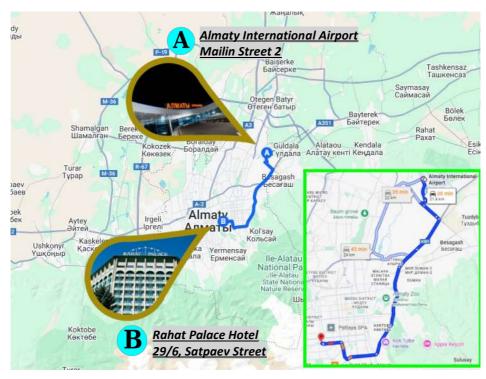
Registration & Information Counter

Venue: The lobby of Hotel Rahat Palace

Service Hours: 08:00-17:00 Thursday, August 28. 08:00-17:00 Friday, August 29.



Getting to the Venue (Rahat Palace Hotel)



How to Reach the Venue

To conveniently reach the final destination (hotel, venue, or any point in the city), we

recommend using the **Yandex Go or UBER** mobile app – a trusted local service for ordering taxis and deliveries.

You can easily book a ride without language barriers, track your driver in real time, and choose from various service levels.

For your convenience, a **QR code for downloading Yandex Go the app** is provided below:

Simply scan it and download **Yandex Go** from your app store.

Point A - Mailin Street 2

Point B - Satpaev Street 29/6



Badge Information

The badge will be provided to each registered attendee together with all the necessary coupons onsite upon checking in.

All participants are required to wear the badge all the time during the conference period for recognition.

recognition.	
VIP / INVITED LECTURES	 Participation in the Welcome Reception and Closing Ceremony. Conference kits (Conference Bag, Badge, and Program Book Included) Free lunches and coffee-breaks. Admission to all scientific sessions and industrial exhibition.
DELEGATE	 Participation in the Welcome Reception and Closing Ceremony. Conference kits (Conference Bag, Badge, Program Book Included) Free lunches and coffee-breaks. Admission to all scientific sessions and industrial exhibition.
EXHIBITION	 Participation in the Welcome Reception and Closing Ceremony. 1 Booth for 1 Conference kits (Conference Bag, Badge, Program Book Included) Admission to industrial exhibition. Free lunches and coffee-breaks.
STUDENT	 Participation in the Welcome Reception and Closing Ceremony. Conference kits (Conference Bag, Badge, Program Book Included) Admission to all scientific sessions and industrial exhibition. Free lunches and coffee-breaks.
STAFF	Please reach the staff if any assistance needed. Security personnel will allow only persons with badges to enter the meeting rooms.
ACCOMPANYING PERSON	 Participation in the Welcome Reception and Closing Ceremony. Admission to industrial exhibition. Free coffee-breaks.

^{*} Badges are not transferable

PROGRAM AT A GLANCE

Time/Date		28 Aug. Thursday	
Venue		GRANDHALL	
9:00-9:30		Opening Ceremony	
9:30-09:55		Keynote Lecture I	
09:55-10:20		Keynote Lecture II	
10:20-10:45		Keynote Lecture III	
10:45-11:20		Coffee Break	
11:20-11:45		Keynote Lecture IV	
11:45-12:10		Keynote Lecture V	
12:10-12:35		Invited Lecture I	
12:35-12:50		Special Lecture I	
12:50-13:05	Special Lecture II		
13:20-14:20		Lunch	
Venue	Hall 1	Hall 2	Hall 3
14:20-14:50		TC-305	TC-305
14:50-15:20	ATC-10 Urban	Geotechnical Infrastructure for	Geotechnical Infrastructure for Megacities and New
15:20-15:50	Geo-informatics	Megacities and New Capitals	Capitals
15:50-16:20		Coffee Break	
16:20-16:50		TC-305	TC-305 Geotechnical Infrastructure
16:60-17:20	ATC-10 Urban Geo-informatics	Geotechnical Infrastructure for Megacities and New	for Megacities and New Capitals
17:20-17:50	deo-informatics	Capitals	MOU between IGS and KGS
18:00-19:30	Welcome Reception		
Registration	8:00-17:00		
Poster session	10:45-11:20; 16:15-16:45		
Exhibition	9:00-18:00		



Time/Date		29 Aug. Friday	
Venue	Hall 1	Hall 2	Hall 3
9:00-9:30	ATC-10	ATC-19	TC-305
9:30-10:00	Urban Geo-informatics	Geo-engineering for conservation of heritage monuments and	Geotechnical Infrastructure for Megacities and New
10:00-10:30		historical sites	Capitals
10:30-11:00		Coffee Break	
11:00-11:30	ATC-10	TC-305	TC-305
11:30-12:00	&	Geotechnical Infrastructure for	Geotechnical Infrastructure for
12:00-12:30	ATC-19	Megacities and New Capitals	Megacities and New Capitals
12:30-13:00		Poster Session	
13:00-14:00		Lunch	
Venue		GRANDHALL	
14:00-14:15	Special Lecture III		
14:15-14:35	Invited Lecture II		
14:35-14:55	Invited Lecture III		
14:55-15:15	Invited Lecture IV		
15:15-15:30		Thematic Lecture I	
15:30-15:45	Thematic Lecture II		
15:45-16:00	Thematic Lecture III		
16:00-16:30		Coffee Break	
16:30-16:50		Special Lecture IV	
16:50-17:10		Bright spark Lecture I	
17:10-17:30	Bright spark Lecture II		
17:30-17:50	Bright spark Lecture III		
18:00-18:30	Closing ceremony		
19:00-21:30	GALA DINNER (TICKET REQUIRED)		
Registration	8:00-17:00		
Poster session	10:30-11:00; 12:30-13:00; 16:00-16:30		
Exhibition		9:00-18:30	

DAILY PROGRAM

Chair: Prof. Keh-Jian Shou

Authenticity of Foundation of Heritage Structures and Special Character of "Angkor Sand" for the Central Tower of Bayon, Angkor Thom, Cambodia

Dr. Yoshinori Iwasaki

Iwasaki Geo-Engineering Office (Japan)

09:55-10:20 Keynote lecture II GrandHall

Chair: Prof. Eun Chul Shin

Utilization of Geoinformatic database and its application to assessment of settlement of the reclaimed marine foundations due to the construction of Kansai International Airport *Prof. Mamoru Mimura*

Emeritus Professor of Kyoto University, Principal Director | Geo-Research Institute (Japan)

10:20-10:45 Keynote lecture III GrandHall

Chair: Dr. Yoshinori Iwasaki

Geological application of computerized geotechnical borehole database

Subsurface geology and sedimental environment in Kansai Area

Dr. Naoko Kitada

Geo-Research Institute (Japan)

10:45-11:20 Coffee Break

11:20-11:45 Keynote lecture IV GrandHall

Chair: Prof. Bagdad Teltayev

Risk assessment of rainfall-induced landslides considering regional characteristics with machine learning

Prof. Tatsuya Ishikawa, Ren Ono, Tomoki Ueno, Kiyonobu Kasama Hokkaido University (Japan)

11:45-12:10 Keynote lecture V GrandHall

Chair: Dr. Rafael Sharafutdinov

Development and application of geological and geotechnical information databases in Japan and the ATC10's challenge on uncertainties

Mrs. Rie Wada

Kiso-Jiban Consultants Co., Ltd. (Japan)



12:10-12:35 Invited lecture I GrandHall

Chair: Prof. Jong-Sub Lee

Spatial and Temporal Analysis of Landslide Susceptibility—for the Case in Taiwan Prof. Keh-Jian Shou, SY. Sung and PL.Chen

National Chung-Hsing University (Taiwan)

12:35-12:50 Special Lecture I GrandHall

Chair: Dr. Zhanbolat Shakhmov

Geobrugg experience in changing risk zones to no-risk zones by means of natural hazard protection measures. Experience in Switzerland and Kazakhstan

PhD. Alexander Barinov

PhD Geography, Member of Debris Flow Association, Member of Avalanche Association, Regional partner of Geobruag AG Switzerland

12:50-13:05 Special Lecture II GrandHall

Chair: Dr. Balganym Dosmukhambetova

Soil Mixing Around the World - Application and Solution Examples

Mr. Franz-Werner Gerressen

BAUER Maschinen GmbH, (Germany)

13:20-14:20 Lunch

14:20-15:50 AsRTC10 «Urban Geo-informatics» Hall 1

Chairs: Mrs. Rie Wada

Mr. Tomohiro Yasuda

Principles of creating an effective territorial planning model in complex engineeringgeological conditions

Marinichev M. B., Polishchuk A.I., Vadachkoria O. A., Bushueva V. O.

Department "Bases and Foundations", Kuban State Agrarian University named after I. T.

Trubilin (Russia)

Changes in land reclamation seen through borehole data

Naoko KITADA, Mamoru MIMURA and Naoto INOUE

Geo-Research Institute (Japan)

Application of the Engineering Geological Database of Taiwan to Develop Vs Prediction Models

wodels

Chi-Chin Tsai and Louis Ge

National Taiwan University (Taiwan)

Chung Hsing University (Taiwan)



Creation of the representative ground model utilizing Geo-informatic database and its application to deformation analysis due to reclamation Mamoru MIMURA, Kenji HAYASGI, Naoko KITADA and Hiroko ITO Geo-Research Institute (Japan)

Testing GIS techniques for the determination of soil intermediate properties Indira S. Makasheva, Yelbek B. Utepov, Assel T. Mukhamejanova and Sabit A. Karaulov Eurasian National University (Kazakhstan)

Innovative approaches to system design considering the mutual influence of urban environment

Silicheva Catherine Dmitrievna, Hüsnü Korhan Ozalp, Demin Nikita Vladimirovich ELBA ENGINEERING LLC (Russia)

Stability Assessment of Ash Mound Using Traditional and Advanced GIS-enabled Modelling Approaches

Avinash Sajwan, Pranjal Singh, and G. V. Ramana Indian Institute of Technology Delhi, New Delhi (India)

14:20-15:50	TC-305 Geotechnical Infrastructure for	Hall 2
	Megacities and New Capitals	

Chairs: Dr. Divya Priya

Mr. Abdurakhim Abdullaev

Simulation of the resistance of a deep-sea soil base by moving loads

Andrey A. Ananyev

Saint Petersburg State University of Architecture and Civil Engineering; (Russia)

Mechanical properties of soil during scenario earthquakes Mirsayapov Ilizar T. and Koroleva Irina V.

Kazan State University of Architecture and Engineering (Russia)

Assessment of the stability of bulk soils under dynamic loads caused by seismic effects predicted for the conditions of the construction site of a nuclear power facility *E.S. Sobolev, Ya.A. Boqdanov, A.V. Manukyan*

Moscow State University of Civil Engineering (Russia)

Efficacy of fly ash-based water-absorbing polymers in improving unsaturated soil properties and promoting vegetation growth under drying conditions

Bharat Rattan, Ankit Garg, Sreedeep S, Chen Rui, Haowen Guo, Askar Zhussupbekov Department of Health and Environmental Sciences (HES), Xi'an Jiaotong-Liverpool University, Suzhou (China),

Xi'an Jiaotong-Liverpool University (China),

Harbin Institute of Technology (China),



L.N. Gumilyov Eurasian National University (Kazakhstan)

Influence of deep foundations on high-rise buildings during a seismic impact Cesar Alfonso Alanoca Chambi SOCHIGE, SIMSG, ISSMGE (Bolivia)

Experimental study of the physico-mechanical properties of bedrock soils G.O. Anzhelo, L.YU. Ermoshina, V.A. Lunin MSUCE (Russia)

Experimental investigation of side resistance in bored piles embedded in rock Rafael Sharafutdinov, Dmitrii Botanin Gersevanov Research Institute of Bases and Underground Structures (Russia)

14:20-15:50	TC-305 Geotechnical Infrastructure for	Hall 3
	Megacities and New Capitals	

Chair: Prof. Louis Ge

Ms. Tatiana Tronda

Geosynthetic-reinforced retaining walls for flooding scour protection

Anna Kuznetsova, Svetlana Park Soterra Engineering (Russia)

Experimental study of the influence of geosynthetic materials on the strength characteristics of dispersed soils

G.O. Anzhelo, L.YU. Ermoshina, A.O. Kravtsov

Moscow State University of Civil Engineering (Russia)

Deformation characteristics of sand with liquefaction history considering sand particle orientation

Mohammad Mahfujur Rahman, Hirofumi Toyota, Susumu Takada, and Ngoc Bao Le Nagaoka University of Technology (Japan)

Consideration of input data influence for geotechincal parameter identification of rock dynamics

Rui Huang, Takafumi Seiki and Qinxi Dong

School of Regional Development and Creativity, Utsunomiya University (Japan)

Changes in geotechnical properties of embankments made of crushed solidified soils over time

Atsuko Sato and Masahiko Yamaki

Civil Engineering Research Institute for Cold Region (Japan)

Horizontal Prestressing Effects of Stone Columns: Numerical Insights into Installation and

Analysis Methods Pavel Dolgov, Wilhelm S. Degen Geotechfem LLC, Dubai (UAE) Soilmechanics GmbH (Germany)

16:50-16:20

Coffee Break

16:20-17:50 AsRTC10 «Urban Geo-informatics» Hall 1
Chairs: Dr. Naoko Kitada

Chairs: Dr. Naoko Kitada Mrs. Rie Wada

Boring Data Base to Characterize Hidden Active Fault for Urban Safety in Osaka and Almaty Yoshinori IWASAKI and Askar Zhussupbekov

Iwasaki Geo-Engineering Office (Japan), Eurasian National University (Kazakhstan)

Insights into liquefaction risk associated with microtopography of Tokyo lowland K. Ishikawa and S. Yasuda

Tokyo Denki University (Japan)

Seismic Response Study in Krishna-Godavari Offshore Region of India A. Boominathan, R.Vijaya and V.Bhakya Varshiny

Indian Institute of Technology Madras, Chennai (India)

Development of GIS-Based Mapping for Ground Shaking Susceptibility Using Microtremor in Densely Populated Areas of Sukumo City, Japan Tadashi HARA, Muhammad Agra Rully Putra, Masayuki Yamada, Koji Hada

Kochi University (Japan)

Glacier Lake Outburst Flood (GLOF) Hazard Assessment and Modelling in parts of Himalaya Lucky Shukla, Ajanta Goswami

Indian Institute of Technology Roorkee (India)

Landslide Dam Hazard Zonation in the Alaknanda Catchment, Uttarakhand, India Using Frequency Ratio Modelling

Shivani Joshi, Srikrishnan Siva Subramanian Indian Institute of Technology Roorkee (India)

Preliminary Note on Utilization of Geo-informatics Database - Spatial Visualization and Clustering

Naoto Inoue

Geo-Research Institute (Japan)





16:20-17:50	TC-305 Geotechnical Infrastructure for	Hall 2
	Megacities and New Capitals	

Chairs: Prof. Ikramov Fayzulla Prof. Khomyakov Vitaliy

Damage measures of low-rise building foundations on layered sands due to earthquake impacts

D.W. Chang, S.H. Cheng, L. Ge, A. Zhussupbekov, and R. K.-N. Wong

Tamkang University (Taiwan)

Taiwan Building Technology Center, National U. of Science and Technology (Taiwan)

Department of Civil Engineering, National Taiwan University

Sanshin Corporation (Taiwan)

Department of Civil Engineering, L.N. Gumilyov Eurasian National University (Kazakhstan)

Dynamic Analyses of a Fill Dam by Elasto-Plastic Constitutive Models Tadatsugu Tanaka

University of Tokyo (Japan)

Effect of strength reduction factor on settlement of a single pile V.V. Sidorov, A.S. Almakaeva, A.Z. Ter-Martirosyan Moscow State University of Civil Engineering (National Research University) (Russia)

Numerical Analysis on Response of Battered Pile under Combined Lateral and Uplift Loading Vaishnavi Pandey, B. Janaki Ramaiah and Ramanathan Ayothiraman Indian Institute of Technology Tirupati (India)

Studying the mixing of problematic soils

Lamyaa Najah Snodi

Department of Civil Engineering, College of Engineering, University of Tikrit (Iraq)

Unlocking the Potential of Construction Waste Reuse in Slovenia: Challenges and Solutions Tamara Bračko, Bojan Žlender and Borut Macuh University of Maribor (Slovenia)

16:20-17:50	TC-305 Geotechnical Infrastructure for	Hall 3
	Megacities and New Capitals	
Chairs: Dr. Rafael Sharafutdinov		
Dr. Ankit Garg		
Cose Study of Detaining Wall Beinforcement on Clar Stability		

Case Study of Retaining Wall Reinforcement on Slop Stability M.H. Ahn, B.S. Kim, W.H. Kim, S.K. Lee, C.M. Kim, J.K. Kang



Semyung University (Republic of Korea)

Study of rutting on roads of Shymkent city
B.B. Teltayev, G. Loprencipe, U. Kalybayev, E. Aitbayev and A. Zhaisanbayev
LLP "Road Research and Production Center" (Kazakhstan)

Fast-moving seismically induced hazardous geological phenomena in South-Eastern Kazakhstan as a factor in assessing natural hazards and ways of their systematic mitigation A. Abdullaev, V. Borisov, E. Yesenzhigitova, A. Urkembayeva

LLP "National Scientific Seismological Observations and Research" Ministry of Emergency Situations of the Republic of Kazakhstan (Kazakhstan)

Results of demercurisation works in Central Kazakhstan and monitoring of ecological state of the environment

Kamberov I.M., Duisebayeva T., Abdullaev A.U., Ilyushchenko M., Nussbaumer M. LLP "National Scientific Seismological Observations and Research" Ministry of Emergency Situations of the Republic of Kazakhstan (Kazakhstan)

NAC Kazatomprom JSC, Volkovgeologiya JSC (Kazakhstan)

AUEC (Kazakhstan)

"Posch & Partners" Consulting Engineers (Austria)

18:00-19:30 Welcome Reception GrandHall

Chairman: Dr. Shyngys Zharassov







Friday 29 August 2025

9:00-10:30 AsRTC10 «Urban Geo-informatics» Hall 1

Chairs: Dr. Takafumi Seiki Dr. Rui Huang

Regional modeling for flood simulation using MIKE+ and MIKE SHE

Akbilek Seitmukhanbet, Alfrendo Satyanaga, Robby Yussac Tallar, Sung-Woo Moon, Jong Kim Nazarbayev University (Kazakhstan)

Universitas Kristen Maranatha (Maranatha Christian University), Bandung (Indonesia)

Debris Flow Modelling using FLO-2D

Luiza Tanzhanova, Alfrendo Satyanaga, Budijanto Widjaja, Sung-Woo Moon, Jong Kim Nazarbayev University (Kazakhstan)

Universitas Katolik Parahyangan, Jawa Barat (Indonesia)

Simple methods for measuring groundwater levels to estimate damage to low-rise housings due to liquefaction

Susumu Yasuda and Keisuke Ishikawa

Tokyo Denki University (Japan)

On detailed seismic zoning of regions of Kazakhstan using GIS technologies Natalya Silacheva

National Center for Seismological Observations and Research, MES RK (Kazakhstan)

Application of GIS to assess permafrost degradation in southern Taimyr P.I. Kotov, A.Yu. Gunar

Fedorovsky Polar State University (Russia)

Development of an accessible remote method for monitoring landslide processes Habibov F.G., Zeynalov F.Z., Bayramova K.K.

Azerbaijan Scientific Research Institute of Construction and Architecture (Azerbaijan), Azerbaijan Architectural and Construction University (Azerbaijan)

Al-Powered Smart Sensors for Enhancing Safety in Mining and Construction Kumar Pradeep, JS Dhanya, Askar Zhussupbekov

Onlilo Technologies LLP (India)

Conticorium Technologies Pvt. Ltd (India)

L.N. Gumilyov Eurasian National University (Kazakhstan)



		.8
9:00-10:30	AsRTC19 «Geo-engineering for conservation	Hall 2
	of heritage monuments and historical sites»	

Chairs: Dr. Mai Sawada Prof. Yukiyasu Fujii

Geotechnical investigations in earthquake-damaged burial mounds toward restoration Mai Sawada, Tomoya Ikeuchi and Tamotsu Fujita

Institute of Science Tokyo (Japan)

Development of GIS for monitoring of dams in Kazakhstan: processing, analyses, and functionality

Kamila Tanyrbergenova, Balgaisha Mukanova, Tolkyn Mirgalikyzy, Nurtilek Assankhan, Arynbek Bekdaulet, and Abulkhair Islamov

Department of Computer Engineering, Astana IT University, Astana
Department of Computer and Software Engineering, L.N.Gumilyov Eurasian National
Faculty of Information Technology, Abay Myrzakhmetov Kokshetau University (Kazakhstan)

Seismic and resistivity surveys to assess the damage to the Sakuradani Kofun tumuli caused by the Noto earthquake

Yutaro Hara, Shotaro Hijikata, Reiko Kuwano

The university of Tokyo (Japan)

Institute of Industrial Science (Japan)

Artificial Stone Construction and its Heritage Structures in Japan: Traditional and Ecological Method for SDGs

Yukiyasu Fujii, Kantetsu Asano, Takehiro Amano, Kentaro Iwashita, Koki Takeuchi Department of Civil Engineering, Faculty of Science and Technology, Meijo University (Japan)

Mapping Geological Hazards – Problems and Trends Ivan Bogdanov, Pavel Alexandrov, Ilya Bezruchko GEOIZOL Project LLC (Russia)

Features of the construction of buildings in the historical center of the city *Elena Gryaznova*

National Research Moscow State University of Civil Engineering (Russia)

Accounting for resonant phenomena in the upper layers of dispersed soils in predicting the dynamic behavior of pile foundations

Leonid V. Nuzhdin and Victor S. Mikhailov



Novosibirsk State University of Architecture and Civil Engineering (Russia)

Underpinning of historical buildings, geotechnical and structural engineering Kari Christer Avellan

KAREG Consulting Engineers (Finland)

9:00-10:30	TC-305 Geotechnical Infrastructure for	Hall 3
	Megacities and New Capitals	

Chairs: Dr. Pavel Dolgov Dr. Anora Karimova

Establishing characteristics of cyclic freeze-thaw of a road pavement and subgrade in Almaty region

B.B. Teltayev, G. Loprencipe, G.I. Salgarayeva and A.N. Muta

Kazakh National Women's Teacher Training University (Kazakhstan)

Change of seismic properties of the base as a result of soil strengthening by deep mixing method

Khomyakov Vitaliy, Yemenov Yusuf, Zhamek Nurken, Dursynov Said, Kanatova Zhanna, Aliev Ismat

Kazakh Leading Academy of Architecture and Civil Engineering, Department of Civil Engineering (KazGASA) (Kazakhstan)

Kazakh Research Institute of Construction and Architecture (Kazakhstan)

Geological features of rough masses in landslide sites in the area of motor roads along mountain slopes

Aymurzaev A., Kutlumuratov B., Kiyalbayev A., Sagybekova A., Abdykalykov A, Madanbekov N.

Department of Transport Construction and Production of Building Materials (Kazakhstan) N. Isanov Kyrgyz State University of Construction, Transport and Architecture (KSUCTA), Bishkek (Kyrgyzstan)

Geotechnical fiber-optic monitoring of the technical condition of bridges and tunnels in the Arctic coastal infrastructure

S.Kudryavtsev, I.Granev, D.Tsvigunov, T.Valtseva and I.Shestakov Department of Bridges and Tunnels, FESTU, Khabarovsk (Russia)

Tech Pro Industries, Moscow (Russia)







Justification of changings in parameters of stressed-strained state of oil-contaminated sandy soils

Rashid A. Mangushev, Alina V. Kvashuk, Alena V. Belkova, Anna A. Tatarinova Saint-Petersburg State University of Architecture and Civil Engineering (Russia)

Application of hemihydrate and dihydrate calcium sulfate in road constructions

Talal Awwad, Pavel A. Kravchenko, Baira B. Galdgaeva, and Tatyana B. Ivanskaya

Emperor Alexander I Petersburg State Transport University, Saint Petersburg (Russia)

10:30-11:00 Coffee Break

11:00-12:30	AsRTC10 «Urban Geo-informatics»	Hall 1
	AsRTC19 «Geo-engineering for conservation	
	of heritage monuments and historical sites»	

ATC10 Chairs: Dr. Naoto Inoue

Dr. Lamyaa Najah Snodi

ATC19 Chairs: Dr. Mai Sawada Dr. J.S Dhanya

Study on Methods for Extracting Landslide Risks Using Airborne LiDAR Data on Expressways

Katsushi Sasak, Koji Nishimura and Toko Takayama

Nippon Expressway Research Institute Company Limited (Japan)

iAsia Air Survey Company Limited (Japan)

Use of sand covers for soil moisture control in archaeological sites

Wei Wo and Mai Sawada

Institute of Science Tokyo (Japan)

Detection of Landslide Potential Based on Regular Deformation Using DInSAR: A Case Study of Taipei City

Kuo-Lung Wang, Jun-Tin Lin, Min-Hsi Hsieh, Huei-Ling Lin, and Wei Fang

National Chi Nan University (Taiwan)

RST Inc., Puli, Nantou (Taiwan)

Taipei City Government, Taipei (Taiwan)

Underground space of a metropolis. A case history

A.Shaposhnikov, A.Misuk and D.Antonenko

Gersevanov Research Institute of Bases and Underground Structures, Department for Soil

improvement, Moscow

Research Institute of Bases and Underground Structures, Department for Soil improvement, Moscow (Russia)

Borehole information system and subsurface modelling using GIS

Divya Priya Balasubramani, Kanagavel P and Prasanna P

Assistant Professor, Institute of Remote Sensing, Department of Civil Engineering, Anna University, Chennai (India)

Integration of 3D Geological Model and Architectural Model for Design and Construction of Bored Tunnel in Singapore

Keisuke Tada, Tomohiro Yasuda

Kiso-Jiban Consultants Co., Ltd. Singapore Branch (Singapore)

Snow Avalanche Hazard Zonation in the Indian Himalayas: A case study of Rudraprayag region, Uttarakhand, India

Joshal Kumar Bansal, Ajanta Goswami, Snehmani

Defence Geoinformatics Research Establishment (DGRE)

Indian Institute of Technology Roorkee (India)

11:00-12:30	TC-305 Geotechnical Infrastructure for	Hall 2
	Megacities and New Capitals	

Chairs: Dr. Tatsuya Ishikawa Prof. Bagdad Teltayev

Advance preparedness for earthquakes is the key to seismic safety

Pulod Aminzoda

leading researcher, Institute of Geology, Earthquake Engineering and Seismology of the National academy of sciences of Tajikistan

Results of numerical modeling of ground improvement with rigid inclusions as dry concrete columns

Tatiana Tronda

Association of Surveying Organizations and Geological Engineers (Belarus)

Dynamic stability evaluation of underground structures considering back analysis of rock mechanics parameters: a case study of the Oya tuff quarry

Rui Huang, Takafumi Seiki and Qinxi Dong

Xihua University (China).



Utsunomiya University (Japan), Hainan University (China)

Patterns of Activation and Manifestation of Landslide Processes (on the Foothill Slopes of the Zarafshan Oasis, Uzbekistan)

Fayzulla Ikramov, Muqim Yakubov, Akbar Ravshanov, Ziyo Normamatov, Mamatkul Amirkulov

Samarkand State University named after Sharof Rashidovich Rashidov (Uzbekistan)

Seismic resistance of continuous monolithic bridges, accounting for post-tensioning cable tension during the interaction between support foundations and soil

Ibrakhim Mirzaev, Ulugbek Shermukhamedov, Askar Zhussupbekov, Abdurakhim Abdullaev, Anora Karimova, Dilbar Askarova

Tashkent State Transport University, Tashkent (Uzbekistan)

L.N. Gumilyov Eurasian National University, Astana (Kazakhstan)

Influence of fibre and carbon negative material on the stability of infinite slopes Anuj Pal, Akash Ramenini, Bharat Rattan, Ankit Garg, Neelima Satyam and Askar Zhussupbekov

Xi'an Jiaotong-Liverpool University (China)

Harbin Institute of Technology (China)

L.N. Gumilyov Eurasian National University (Kazakhstan)

11:00-12:30	TC-305 Geotechnical Infrastructure for	Hall 3
	Megacities and New Capitals	

Chairs: Prof. Tadatsugu Tanaka Dr. Anatoliv Osokin

The concept of employing monitoring systems on roadways and railways situated in permafrost regions, with consideration of potential climate change

K. Usherovich, I. Granev, A. Cherkasov, D. Epifantsev, R. Paliy and S. Artamonova PC «TECH PRO INDUSTRIES» LLC, Moscow (Russia)

Department «Transport Construction in Extreme Conditions», Moscow (Russia) Russian university of transport (Russia)

Unlocking the Potential of Construction Waste Reuse in Slovenia: Challenges and Solutions Tamara Bračko, Bojan Žlender and Borut Macuh

University of Maribor (Slovenia)

Underpinning and deep foundations load transfer of a ten-storey building in Lisbon



Alexandre Pinto, Carlos Martins, Catarina Fartaria, Rui Tomásio JETsj Geotecnia (Portugal)

Dewatering and its complexities in design and implementation Silicheva Catherine Dmitrievna, Hüsnü Korhan Ozalp, Demin Nikita Vladimirovich Mining University, Saint-Petersburg (Russia) Elba engineering Ilc (Russia)

Justification of the choice of dust suppression materials for roadside areas with low coverage and construction sites: international and Kazakhstan experiences

Kutlumuratov B., Sagybekova A., Mukashev D., Kiyalbayev A

Department of Transport Construction and Production of Building Materials (Kazakhstan)

Detection of the unbonded sections of fully grouted rock bolts using acoustic waves Seonghun Kang, Jong-Sub Lee

School of Civil, Environmental and Architectural Engineering, Korea University (South Korea)

A study of ground vibration characteristics of Sakuradani Tomb damaged during the 2024 Noto Peninsula Earthquake using microtremor measurements

Kohei Hara, Tomofumi Koyama and Mai Sawada

Kansai University (Japan)

12:30-13:00	Poster Session	
13:00-14:00	Lunch	

14:00-14:15	Special Lecture III	GrandHall

Chair: Dr. Abilkhair Issakulov

Construction of vertical cut-off walls for reducing exposure to floods <u>Mr. Waldemar Kwiatkowski</u> Geofocus LLP (Poland)

14:15-14:35 Invited lecture II GrandHall

Chair: Prof. Mirsayapov Ilizar

Assessment of Soil Contamination in Incheon Harbor Area <u>Prof. Eun Chul Shin, Dabeen Kim, Jeong Ku Kang</u> Incheon National University (South Korea)



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14:35-14:55 Invited lecture III GrandHall

Chair: Dr. J.S. Dhanya

Design of the First Metro Line in Almaty Crossing Tectonic Fault Zones

N.S. Utegenov, A.A. Urazbayeva

LLP "Metroproekt" (Kazakhstan)

14:55-15:15 Invited lecture IV GrandHall

Chair: Dr. Alexandre Pinto

Engineering Solutions and Case Studies in Disaster Mitigation

Dr. Anil Joseph, Ashitha Joseph and Dhanya J.S.

Geostructurals Pvt Ltd (India)

15:15-15:30 Thematic lecture I GrandHall

Chair: Dr. Fayzulla Ikramov

Statistical and regression analysis of sand and clay stiffness in triaxial tests

Dr. Rafael Sharafutdinov

Gersevanov Research Institute of Bases and Underground Structures (Russia)

15:30-15:45 Thematic lecture II GrandHall

Chair: Dr. Alfrendo Satyanaga

Hazardous Geological Processes and Their Impact on the Condition of Architectural Monuments

Prof. Favzulla Abdullaevich Ikramov

Samarkand State University named after Sharof Rashidovich Rashidov (Uzbekistan)

15:45-16:00 Thematic lecture III GrandHall

Chair: Prof. Adimoolam Boominathan

Geoinformational zoning in addressing hazards from natural disasters

Dr. Daulet Sarsenbayev

16:00-16:30

National Scientific Center for Seismological Observations and Research (Kazakhstan)

Coffee break

16:30-16:50 Special Lecture IV GrandHall

Chair: Prof. Sergey Kudryavtsev

Recent advancement in "Press-in" piling technology: contribution to disaster prevention and mitigation, and attempts for a rational project cycle using piling data



Yukihiro ISHIHARA, Koichi OKADA, Yukinori TODA, Atsushi MORI, Masashi EGUCHI and Naoki SUZUKI

Center Director, Press-in Technology R&D Center, GIKEN LTD (Japan)

16:50-17:10 Bright Spark Lecture I GrandHall

Chair: Prof. Keh-Jian Shou

Environmental assessment of pyrolyzed industrial mixed plastic waste

Dr. Balganym Dosmukhambetova, Assem Askarbay

Eurasian National University (Kazakhstan)

17:10-17:30 Bright Spark Lecture II GrandHall

Chair: Prof. Tadashi Hara

Stabilization and Ecological Restoration of Tailings: Addressing Key Challenges and Future

Opportunities

Ph.D. Bharat Rattan, Ankit GARG, Sreedeep S, Chen RUI

Postdoctoral Fellow | Harbin Institute of Technology (China)

17:30-17:50 Bright Spark Lecture III GrandHall

Chair: Dr. Irina Koroleva

Brittle Failure Mechanism and Evaluation Model of Reef Limestone under Multi-Factor Regulation of Mineral-Pore-Interface Interactions

Dr. Yang Liu, Dong-sheng XU, Askar ZHUSSUPBEKOV

Ph.D candidate in Geotechnical Engineering | Wuhan University of Technology (China)

18:00-18:30	Closing ceremony	GrandHall
19:00-21:30	GALA DINNER (TICKET REQUIRED)	Zhuambyl Restaurant Room

Chairman: Prof. Yelbek Utepov





POSTER SESSION

10:45-11:20

Poster session 1-1 / 28.08.2025

Poster session area

Calculation of building sediments taking into account the creep of the base soils composed of dislocated Proterozoic (Cambrian) clays

H.Z. Bakenov, S.A. Kudryavtsev

St. Petersburg State University of Architecture and Civil Engineering (Russia)

Application of Airborne Laser Scanning for Monitoring Deformations of the Nadym–Salekhard Highway under Permafrost Conditions

A. Erofeev, S. Shemyakov, S. Pogrebnyak, O. Li and A. Sinitsky

Problem Research Laboratory of Glacioclimatology, National Research Tomsk State University, Tomsk

Tomsk State University of Architecture and Building, Tomsk Geotechnics Sector, Arctic Research Center, Salekhard (Russia)

GIS-based landslide risk assessment in Karo Regency, North Sumatera, Indonesia *Ika Puji Hastuty, Fauziah Ahmad and Sania Salwa Ferahain*

ISSMGE University

Geotechnical University

Universitas Sumatera Utara (Indonesia)

Computational justification of the use of protective measures in the construction of excavation pits in dense urban areas on weak soils

Mangushev R.A., Osokin A.I., Kalach F.N., Maltseva K.A.

Saint-Petersburg State University of Architecture and Civil Engineering (Russia)

Modeling of stress strain state of water saturated weak soil when injected along the lateral surface of the pile to increase bearing capacity of the bored pile

Kozyrev K.S., Kondratieva L.N., Voznesenskaya E.S., Osokin A.I.

Saint-Petersburg State University of Architecture and Civil Engineering (Russia)

Information modelling in geotechnics

G. Boldyrev, I. Idrisov, A. Ivanov

LTD "NPP-Geotek" (Russia)

15:50-16:20 Poster session 1-2 / 28.08.2025

Poster session area

Investigation of laboratory and field tests of piles installed by displacement technology Askar Zhussupbekovi, Abdulla Omarov, Abilkhair Issakulov, Isatai Utebayev, Samat



Zhekeyev and Ryskulov Begim

L.N. Gumilyov Eurasian National University, Astana

Department Transport equipment, transportation organization and construction, Aktobe Regional University named after K. Zhubanov (Kazakhstan)

Thermodynamic parameters of earthquake swarms

I.N. Litovchenko and V.S. Lyutikova

Leading Researcher Laboratory of Geodynamic and Seismic Processes National Scientific Center for Seismic Observations and Research (NSCSR EMERCOM RK)

Master of Engineering and Technology, Junior Research Fellow Laboratory of Geodynamic and Seismic Processes, National Scientific Center for Seismic Observations and Research (NSCSR EMERCOM RK) (Kazakhstan)

Enhancing Slope Stability Under Extreme Rainfall Conditions Through Biomineralization Technology

Yuyuan Chen, Hemanta Hazarika, Nadella Marchelina Kyushu University (Japan)

 $\label{thm:endown} \mbox{Effect of rice husk ash geopolymer amendments on the strength of sandy soils }$

<u>Taichi Hyodo , Keigo Fujishima and Masafumi Tateda</u>

Department of Environmental and Civil Engineering, Toyama Prefectural University (Japan)

The influence of engineering and geological conditions on the zoning of urban development Assem Abisheva, Nurgul Alibekova, Saltanat Mussakhanova, Ilyas Zhumadilov, Kaldybai Arvnov

L.N. Gumilyov Eurasian National University (Kazakhstan)

Toraighyrov University, Pavlodar (Kazakhstan)

Shakarim University, Semey (Kazakhstan)

Environment - preservation and development of folk crafts in the settlement structure of Kazakhstan

K.K. Arynov , Sh.Zh.Surankulov, N.A.Tursynbaev , S.Sh.Sadykova , A.K. Abisheva

L.N. Gumilyov Eurasian National University (Kazakhstan)

Department of Architecture and design Kazakh Agrotechnical Research University named after S. Seifullin, Astana (Kazakhstan)

10:30-11:00 Poster session 2-1 / 29.08.2025 Poster session area

Quantitative Risk Assessment of Ground Deformations in Azerbaijan Onshore Petroleum and Gas Fields

E. Bayramov, M. Buchroithner, M. Kada, J. Neafie, A. Duisenbiev and S. Aliyeva Nazarbayev University, Astana (Kazakhstan)



Dresden University of Technology, Dresden (Germany)

Technical University of Berlin, Berlin (Germany)

Kazakhstan Maritime Academy, Kazakh-British Technical University, Almaty (Kazakhstan) ADA University, Baku (Azerbaijan)

Experimental study of changes in the patterns of freezing and thawing of the ground base of the pavement

K.A. Aitbaev, K.B. Tileu and M.B. Zhumamuratov

Department of the Scientific Research Center, KazdorNII JSC, Almaty

KazdorNII JSC. Astana

Department of Science, KazdorNII JSC, Astana (Kazakhstan)

Case Study of Retaining Wall Reinforcement on Slop Stability

M.H. Ahn, B.S. Kim, W.H. Kim, S.K Lee, C.M. Kim and J.K. Kang

Disaster and Safety Engrg., Semyung University

Dept. of Civil Engineering., Daejin University

Dept. of Civil and Environmental Engrg., Incheon National University

Incheon Disaster and Prevention Center, Incheon National University (Korea)

Reconstruction of the ventilation system of the automobile tunnel of Too-Ashuu named after K.Kolbaev

<u>S. U. Isagalieva, Zh. M. Ganiev, G.A. Kadyralieva, Meimanbek kyzy Aizirek and B.T. Djakupbekov</u>

Kyrgyz State Technical University named after I.Razzakov, Bishkek (Kyrgyzstan)

Application of geosynthetic materials to increase the strength of road foundation soils *Mukashev D., Kutlumuratov B., Baratova T.*

Department of Transport Construction and Production of Building Materials (Kazakhstan)

Retrofitting Urban Drainage Systems to Mitigate Flooding: A Case Study of Groundwater-Induced Basement Flooding at Semey Emergency Hospital, Kazakhstan

A. Sarsembayeva, G. Orazbekova, I. Zhumadilov, G. Sadvakassova, K. Babosinova and Rakhman Kazybek

Shakarim University, Semey

Nazarbayev University, Astana (Kazakhstan)

12:30-13:00

Poster session 2-2 / 28.08.2025

Poster session area

The main risk factors in soil reinforcement using by "Geocomposite" method <u>Dmitry Chunyuk, Selviyan Serafima</u> <u>MGSU (Russia)</u>

Geotechnical analysis of the causes of dam failure in Central Kazakhstan and recommendations for its rehabilitation

Zhanbolat A. Shakhmov, Gulshat T. Tleulenova and Khafiz Kairat

L.N. Gumilyov Eurasian National University (Kazakhstan)

Geotechnical support for mechanical safety of underground water supply structures taking into account complex soil conditions and extraordinary impacts

Nikolai A. Perminov

Emperor Alexander I St. Petersburg Transport University (Russia)

Numerical study of bearing capacity of composite stone column *Sharaf Hani M*.

KSUAE University (Russia)

Load-bearing capacity of span structures of transport facilities under dynamic effects Saule Dostanova, Saulet Shayakhmetov, Erkin Isakhanov, Zaure Kalpenova, Kamilya Tokpanova, Gulsum Kasymova

Satbayev University (Kazakhstan)

Application of Electrical Tomography for Studying the Lithological Structure of Foundation Soils for the Construction of a Unique High-Rise Building in Astana

Nuguzhinov Zh.S., Zhumadilova N.Zh. and Beketova M.S.

KazMIRD Institute of the NJC "KarTU named after Abylkas Saginov", Karaganda (Kazakhstan)

"KarTU named after Abylkas Saginov", Karaganda (Kazakhstan)

16:00-16:30

Poster session 2-3 / 29.08.2025

Poster session area

Evaluating the Effect of Groundwater Table Variations on the Seismic Resilience of Residential Buildings in Almaty City

Amanbayev Chingis, Nazari Azizulla, Shakhmov Zhanbolat

L.N. Gumilyov Eurasian National University (Kazakhstan)

Study of the Stiffness of Floor Diaphragms Made of Hollow-Core Reinforced Concrete Slabs *U. Altigenov, A. Bespaev, A. Tulebekova*

L.N. Gumilyov Eurasian National University (Kazakhstan)

Kazakh Research and Design Institute of Construction and Architecture Investment (JSC "KazNIISA"), Almaty (Kazakhstan)

Behavior of sandy soils of different particle sizes under dynamic loads

<u>Lidiya N. Kondratieva, Vyacheslav M. Polunin, Konstantin V. Mchedlidze and Alexandra V. Vaqurina</u>

St. Petersburg State University of Architecture and Civil Engineering (Russian Federation)

Study of seismic hazard in Zhambyl region of Kazakhstan $\,$

<u>Aigul Danabayeva, Zauresh Sailaubayeva, Asel Katubayeva</u>

National Scientific Center for Seismological Observation and Research LLP, The Ministry of Emergency Situations RK (Kazakhstan)

Monitoring of permafrost conditions in built up areas with thermal imaging *Ilyichev V.A., Nikiforova N.S., Abramova E.V., Konnov A.V.*

Scientific-Research Institute of Building Physics of the Russian Academy of Architecture and Construction Sciences, Moscow (Russia);

National Research Moscow State University of Civil Engineering (Russia)

Study of the possibility and efficiency of using geosynthetic reinforcement of weak soils in seismic-prone regions of Kazakhstan

N. V. Surovtseva, T. D. Abakanov

National Scientific Center for Seismological Observations and Research of the Ministry of Emergency Situations of the Republic of Kazakhstan (Kazakhstan)

Investigation of Pile-Soil Interaction in Bridge Foundations for Complex Ground Conditions

<u>Bibigul Abdrakhmanova, Akira Hasegawa, Askar Zhussupbekov, Gaukhar Nigmetova</u>

<u>Kazakhstan Geotechnical Society (Kazakhstan)</u>

L.N. Gumilyov Eurasian National University, Astana

Investigation of the bearing capacity of drilling piles by field testing under static loads A. Zhussupbekov, A. Mukasheva, N. Shakirova, G. Zhairbayeva and Ruslan Bazilov L.N. Gumilyov Eurasian National University (Kazakhstan) Manager of "KGS-Astana" LLP, Astana (Kazakhstan)

Assessment of the bearing capacity of driven piles in subsiding soils based on static tests <u>Askar Zhussupbekov, Eun Chul Shin, Gulnaz Zhairbayeva, Nurgul Shakirova, Ruslan</u> <u>Bazilov, Almagul Mukasheva</u>

Eurasian National University (Kazakhstan)

Incheon National University Incheon National University Incheon (South Korea) "KGS-Astana" LLP, Astana (Kazakhstan)





jouko.pasanen@ilmi.fi

EXHIBITORS INFORMATION

Address Leirintie 83, Hiltulanlahti, Finland, 70870 Kuopio Contact Jouko Pasanen Job Position Sales Director +358 40 5787527

Website www.ilmi.fi

ILMI SOLUTIONS OY (Finland) is the official representative of LLAMADA S.L. (Spain), which is designing and manufacturing LLAMADA pile drilling rigs without any compromises for all common pile drilling techniques as:

-CFA, -DTH, -FDP, -SP, -CP, -CMC, -soilmixing, -micropiles.

Email

ILMI is designing and supplying monitoring applications and special components to pile drilling industry.

LLAMADA pile drilling rigs significantly differ from competitor's rigs and provides following advantages:

-high drilling capacity, -compact size, -high stability, -minimal weight, -very long piles without Kelly extension

LLAMADA is the reliable supplier and partner to professional piling companies around the world.

Address Akzhol street 82, Astana, Kazakhstan010000 Contact Azamat Zhussupbekov Job Position Director TEL +7 777 211 9321 KGS-ASTANA Email kgs-astana@mail.ru Website kgs-astana.kz

KGS-Astana Limited Liability Partnership (LLP) was established in May 2002, We render the following services: pile driving, installing of bored piles, testing of soils and all types of piles, geological investigations and piles testing. Having wide working experience, advanced equipment and highly qualified staff the company is able to perform any volume of work related to installation of pile foundations and their scientific and technical support. KGS- Astana is equipped by the most reliable and high-technology rigs, such as Bauer, Junttan and etc.





GEOBRUGG AG (LLP «GEOSTEIN»)

E3 & S3

BRUGG Geobrugg Address

office 207/1, drop 1, Kunaev street, Almaty, Kazakhstan, 050016

Klara Toxanbayeva

Contact
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Safety is our nature - true to this guiding principle, we have been developing and manufacturing protection solutions since 1951. High-strength steel wire nets and matching services monitor and protect against natural hazards such as rockfall, landslides, debris flows, avalanches or coastal erosion. They ensure safety in mining and tunneling as well as on motor sports tracks, in industry and in test facilities. With experience, a spirit of research, continuous internal training and close cooperation with research institutes, we drive innovation and industry standards. TOO Geostein is the official representative of Geobrugg AG in Kazakstan, Almaty.

SENSORS ONE LLP

E4



Address #1A building, Kozheduba street, 050056, Almaty, Kazakhstan

Contact Kretova Svetlana
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Email kretova@sensors.kz
Website https://www.sensors.kz

Sensors ONE LLP provides a full range of Engineering Services for the Development and Implementation of Automated Geotechnical Monitoring Systems, which includes the following stages: Pre-design Survey of the site; Development of Technical

Solutions; Development of Design Documentation; Instrumentation Supply; Software Supply; Installation and Commissioning; Putting into Commercial Operation Training of Service Personnel; Technical and Service Maintenance.

Our geotechnical monitoring tools allow us to monitor changes in key parameters of the site such as ground displacement (settlement or lateral movement), groundwater levels, dam seepage, etc. We, as a team of professionals with 10 years of systematized experience in the Mining Industry, successfully implement

geotechnical monitoring projects at the following sites: Tailings Dams, open pits, mines, ash ponds. We are the authorized distributor of RST Instruments Ltd. and Sommer Messtechnik in the countries of Central Asia.

Address Komsomolsky avenue 34, Perm, Russia, 614000

Malin n soft

Russia, 614000
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Job Position Sales manager
TEL +7 342 204-02-08
Email info@malininsoft.ru
Website www.malininsoft.ru

MalininSoft software is designed to various types of underground structures calculations: strength and stability of pit fences with anchors and spacers, stability of slopes, settlement of slab foundations. A distinctive feature of MalininSoft programs is interface simplicity and convenience, which allows you to calculate different options and choose right design solution quickly.



SPONSORS INFORMATION

LLP «KGS-ASTANA»

S1 & E2



Address Akzhol street 82, Astana,

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Job Position Director

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Website kgs-astana.kz

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BAUER MASCHINEN GMBH

S2



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Email tanja.kopold@bauer.de
Website www.bauer.de/bma

Specialist foundation engineering machinery from Bauer has been a byword for top performance and quality and for continuous innovation since the late 1960s. BAUER Maschinen GmbH, which designs and manufactures rotary drilling rigs, diaphragm wall equipment and all related tools, has been operating on the market as an independent entity within the BAUER Group since 2001. With the subsidiaries of BAUER Maschinen GmbH we provide the full range of specialist foundation engineering equipment and equipment for exploration, mining and safeguarding of valuable natural resources.





GEOBRUGG AG (LLP «GEOSTEIN»)

S3 & E3

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BRUGG Geobrugg

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«GEOFOCUS» LLP



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Saida Tulemissova

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Geofocus LLP, the geotechnical specialist contractor providing a wide portfolio of advanced foundation and ground improvement techniques used across the entire construction sector. Geofocus LLP offers a wide range of technologies for ground improvement, retaining structures and deep excavations, ensuring the stability of slopes, as well as special injection grouting, including design and monitoring.



«SPECINGGEO» LLP

Address

st. Prigorodnaya 3/2, office 305,

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Shenvizov Rudolf Contact Job Position Director

TEL +7 775 218 2806 Email Spetsinggeo@mail.ru

Website spengeo.kz

«SpecIngGeo» LLP is a Kazakhstan-based engineering company providing a full range of services in the field of engineering surveys. We conduct geotechnical, geophysical, and geodetic investigations, as well as field and laboratory soil testing. The company operates its own fleet of drilling rigs, geophysical instruments, dilatometers, advanced measurement systems, and equipment for the construction of bored piles. Our key clients include Qarmet (Atansor mine, mine water accumulation pond), KGS Astana (Ertis Hydrometallurgical Plant), KazNIPI (engineering surveys for the MGIMO branch campus in Astana). Our portfolio covers industrial, residential, and infrastructure projects across Kazakhstan. We rely on advanced technologies, our in-house equipment, and strict compliance with national and international standards.

STUDIO PROF. MARCHETTI S.R.L.

S6



Via Cassia, 990, Rome, Italy, 00189 Address Contact Raffaella Breglia Job Position TEL

Sales Assistant +39 06 30 31 12 40 r.breglia@marchetti-dmt.it

Email Website www.marchetti-dmt.it

Studio Prof. Marchetti is the Italian manufacturing company and patent owner of the following in situ geotechnical equipment: Marchetti Flat Dilatometer (DMT), Seismic Dilatometer (SDMT) and Automated Dilatometer (Medusa (S)DMT). The company headquarters and laboratories are located in Rome (Italy). All products are manufactured, assembled and tested inhouse. Since 1980, the international distribution is active in over 85 countries in 6 continents. The equipment was employed successfully in numerous international projects, onshore and offshore.

The company is constantly active in research projects, mostly in cooperation with academic international partners, published in technical journals and conference proceedings. Over 300 technical presentations were delivered in International Conferences, Universities and Research Institutes worldwide.





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GERSEVANOV RESEARCH INSTITUTE OF BASES AND S7 UNDERGROUND STRUCTURES (NIIOSP NAMED AFTER N.M. GERSEVANOV) JSC RESEARCH CENTER OF CONSTRUCTION



Address 109428, Moscow, 2nd
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Contact Rafael Faritovich

Sharafutdinov

Job Position Director

TEL +7499 170 6312 Email office@niiosp.ru Website www.niiosp.ru

A structural subdivision of JSC Research Center of Construction, Gersevanov Research Institute of Bases and Underground Structures (NIIOSP named after N.M. Gersevanov) is a leading in Russia and well-known all over the world specialist institute operating in the field of soil mechanics, geotechnical engineering, foundation and underground construction. The Institute provides solutions to a comprehensive range of geotechnical engineering issues and offers multiple geotechnical services including engineering and geotechnical surveys, research, geostructural design and construction of foundations and underground structures. NIIOSP delivers geotechnical solutions for the most complex ground conditions and design challenges. Our top priority is to ensure safety and stability of a construction project and surrounding infrastructure, and to provide quality control to the project throughout its lifecycle. Possessing contemporary experimental facility and skilled-in-the-art personnel, Institute develops new efficient decisions on foundations and underground structures. NIIOSP is the first to render services on scientific and technical support for design and construction of remarkable and unique facilities.

«LKS ENGINEERING» LLP			S8
1	Address	Orlova street	113/2,
		Karaganda, Kazakhs	tan
4 60	Contact	Satan Nurkadyr	
	Job Position	Technical director	
71111100	TEL	+7 776 357 05 72	
LUKOS	Email	lukosgroupkz@gmai	l.com
GROUP	Website	www.lukosgroup.kz	

Our organization provides comprehensive services in structural inspection of buildings and facilities, industrial safety expertise, as well as non-destructive testing and defectoscopy of technically complex devices and equipment.





KARAGANDA SURVEY INSTITUTE LLP



Address Ermekova Street 3/2, Karaganda 100012
Contact Dmitry Yuryevich Shelukhin

Job Position Director
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Email krgiiz@mail.ru

INSTITUTE Website

Our company offers a full range of engineering-geological and engineering-geodetic surveys necessary for preparing project documentation, obtaining expert approval, and successfully implementing construction projects.

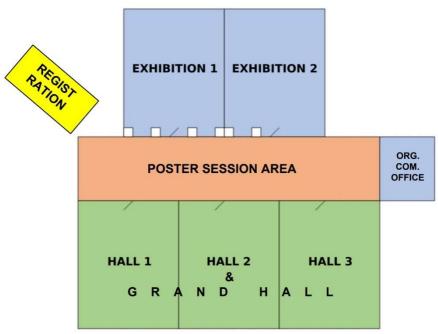
Our services help minimize risks, reduce costs, and ensure compliance with regulatory requirements. We operate throughout Kazakhstan, carrying out surveys of any complexity with full support and a quality guarantee.

We have our own trained team of highly qualified specialists in all areas of engineering and surveying, equipped with drilling rigs, a laboratory base, and all the necessary permits. Our experienced geologists, geophysicists, hydrogeologists, surveyors, drilling rig operators, laboratory technicians, and other specialists are ready to complete the most complex surveying tasks promptly and to the highest standard.





GROUND FLOOR



Session's rooms / Space				
Hall 1	Session room	Keynote, Invited, Special,		
Hall 2	Session room	Thematic, Bright Spark		
Hall 3	Session room	Lectures		
Exhibition 1	Exhibition, Coffee break			
Exhibition 1	Exhibition, Coffee break			
Poster session area	Poster sessions, Coffee break			

Technical Tour

№	Time	Name of sites
	(fromto)	
1	7:30 - 8:00	Rahat Palace Hotel (Almaty)
2	8:20 - 9:00	Installation of debris flow protective netting by Geobrugg AG along Dostyk Avenue, Almaty
3	11:00 – 12:00	Medeu Debris-Flow Retention Dam, Almaty
4	13:00 – 14:00	Medeu – Shymbulak Mountain cableway with an ascent to an altitude of 3,200 m above sea level and a descent to 1,691 m (Medeu) – Route length: 4,500 m (Almaty)
5	15:00	Rahat Palace Hotel (Almaty))

The technical tour is scheduled to take place approximately from 8:00 to 17:00.

The total route length is around with ≈ 80 km, 3 planned stops at key locations.

Please note that the timing may slightly vary depending on traffic conditions and unforeseen circumstances.



Thank you for your understanding!

For any questions about Technical Tour, please contact Dr. Abdulla Omarov.

& WhatsApp: +7 707 846 6622,

Email: omarov_01@bk.ru





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Almaty, Kazakhstan

Almaty is the largest city and former capital of Kazakhstan, located in the foothills of the majestic Trans-Ili Alatau mountains in the southeast of the country. Known as the cultural, economic, and educational hub of Kazakhstan, Almaty harmoniously combines modern urban development with stunning natural landscapes. The city is surrounded by picturesque mountain peaks, lush valleys, and crystal-clear rivers, offering a unique blend of vibrant city life and pristine nature.

Almaty's architecture reflects both its historical heritage and contemporary growth — from classical Soviet-era buildings to modern skyscrapers and business centers. It is home to significant landmarks such as the Kok-Tobe Hill, the Medeu high-altitude ice-skating rink, the Shymbulak ski resort, and the Central State Museum of Kazakhstan. The city is also famous for its green spaces, including Panfilov Park and the Botanical Garden.

As a major venue for international events, Almaty hosts forums, cultural festivals, and sports competitions, attracting guests from all over the world. Its unique atmosphere, rich history, and breathtaking mountain backdrop make it a true gateway to the heart of Central Asia.