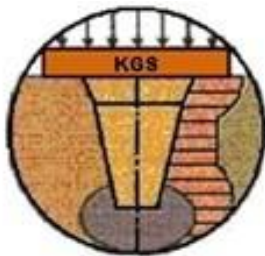


8AYGEC

The Eighth Asian Young Geotechnical Engineers Conference

Challenges and Innovations in Geotechnics

5-7 August 2016
Astana, Kazakhstan



CONFERENCE ORGANIZERS

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The Eighth Asian Young Geotechnical Engineers Conference is sponsored by the following governments and organizations:

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Website : <http://kgs-astana.wix.com/8aygec>

GENERAL INFORMATION

Registration

The registration will start an hour before the Opening Ceremony in front of the Senate Hall on the third floor at Nazarbayev University (3rd Floor, 53, Kabanbay Batyr Ave, Astana) on the 5th of August (Friday), 2016, from 08:00 to 09:00.

The registration on the 6th of August will be at the same place and during the same time as the first day.

The registration fee for nominees is US \$300. The registration fee for nominees covers technical tour, welcome reception, farewell dinner, coffee & tea breaks, lunches, accommodations and copy of the Proceedings. Visa to Kazakhstan will be prepared by the Organizing Committee for registered participants. The registration fee for a senior participant (older 35 age and not nominated participants) is US \$300 without accommodations.

Bank accounts for registration fee are following:

For USD Currency: For foreign participants	For RUB Currency: Russian Rubles for Russians participants	For KZT Currency: Kazakh tenge for Kazakh participants
BENEFICIARY: OO KAZAKHSTANSKAYA GEOTEKHNICHESKAYA ASSOCIACIYA BIN 030440009885 IBAN KZ518560000010060109 BENEFICIARY BANK Address: AO BANKCENTERCREDIT KAZAKHSTAN KARAGANDA BRANCH St. ALIKHANOVA, 5 SWIFT: KCJBKZKX Bank-correspondent JP MORGAN CHASE BANK, N.Y. SWIFT: CHASUS33 Account: 400951258	Получатель: ОО «Казахстанская Геотехническая Ассоциация» БИН 030440009885 Счет в рос.рублях – KZ878560000000142957 Адрес: В филиале АО «Банк ЦентрКредит» в г. Караганда, Ул. Алиханова, 5. SWIFT KCJBKZKX	Получатель: ОО «Казахстанская Геотехническая Ассоциация» ИИК KZ518560000000076093 Адрес: КФ АО «Банк Центркредит», Ул. Алиханова, 5 КБЕ 18, БИК KCJBKZKX, БИН 030440009885, КНП-119.

The Deadline for payment (300 USD) is the 25th of July, 2016.

***For those who are not able to pay by the deadline, have to prepare cash (amount of registration fee, 350 USD) and make a payment at the Day 1 (5th of August, 2016) of the Conference during the registration time to the Organizing Committee.**

Presentations

All young participants of the conference will have 10 minutes for oral presentation, while the Special and Keynote Lecturers are allocated with 30 minutes.

All presenters are kindly requested to copy their presentation ppt files to the computer in the conference hall (Senate Hall, before the beginning of Technical Session). The presentations should be made in English.

Award

The best paper award will be conferred with due recommendations from the Scientific Committee for the papers presented in the conference. The award ceremony will be during the Farewell Dinner.

Technical Tour

The Technical tour for the EXPO site and Abu Dhabi Plaza site will be started after breakfast at 09:30 on the 7th of August, Sunday, 2016.

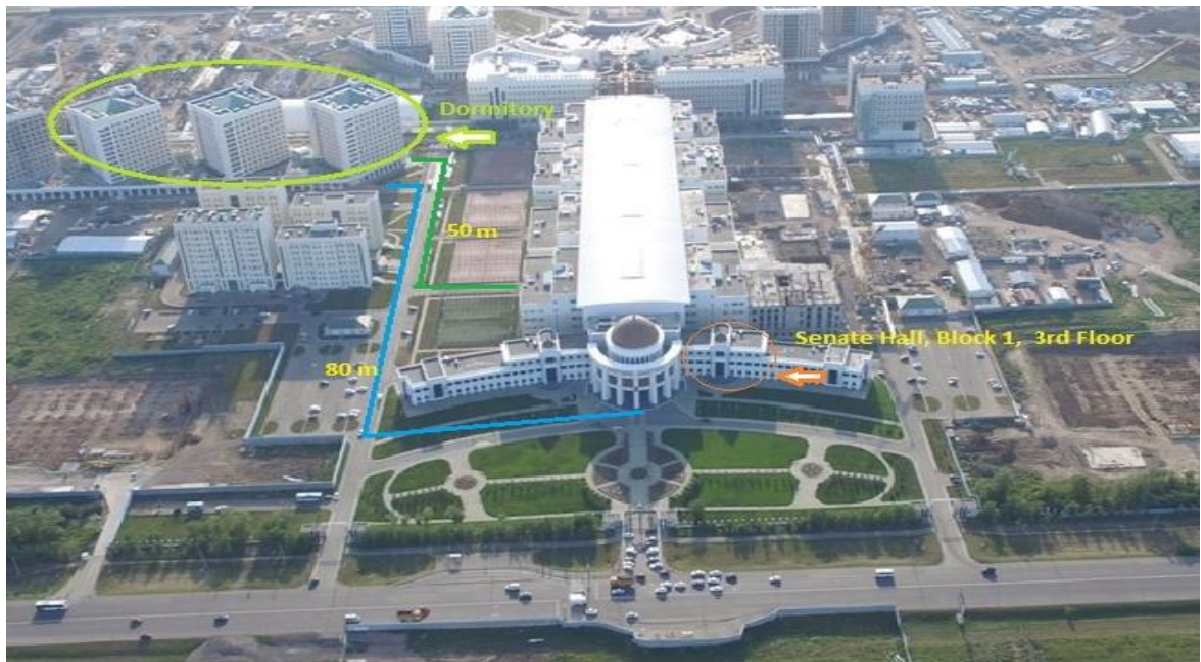
VENUE

The conference will be held at the Senate Hall of Nazarbayev University (NU) which is located in the Main Campus of NU, ave. Kabanbay Batyr, 53, 3rd Floor . It takes about 10 minutes by bus/30 minutes on foot from Astana airport.

a)



b)

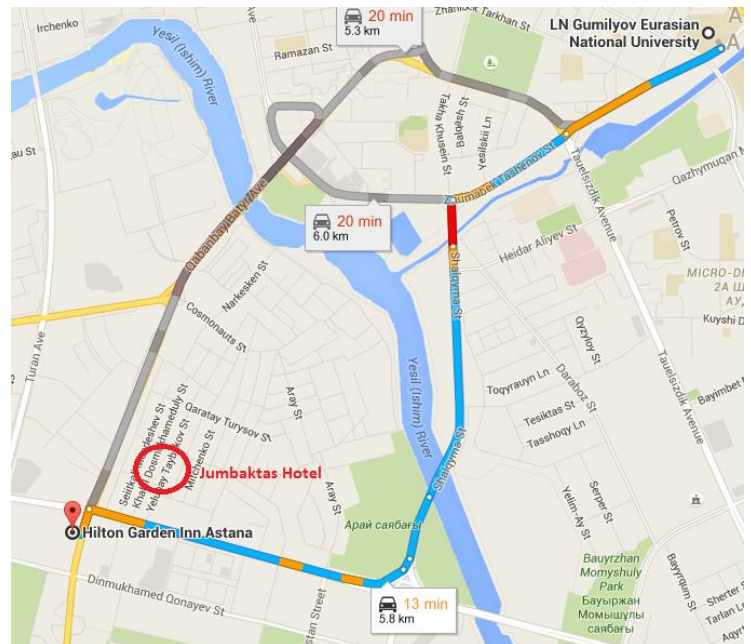
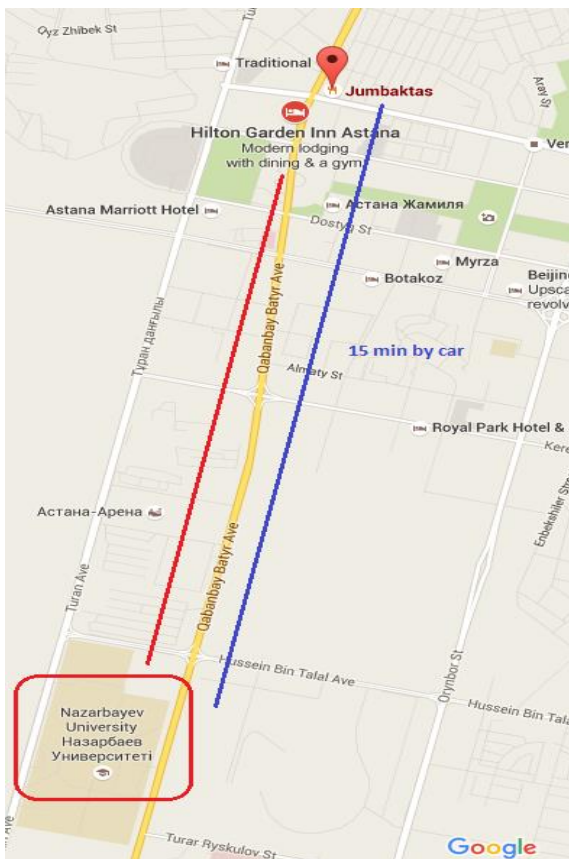


c)



- a) Campus of Nazarbayev University (main Campus)
- b) Location of Senate Hall and Dormitory (Guest House)
- c) Eurasian National University (main Campus)

Astana City Map



Accommodation:

1. Modern comfortable rooms have been already reserved for all nominees at the New Dormitory (Guest House) of the Nazarbayev University Campus.
2. Hilton Garden Inn Astana
3. Jumbaktas Hotels Astana

Welcome Reception:

Dining Hall at the Eurasian National University (7, Munaitpasov Street, Astana) – from 18:00 till 20:00

Farewell Dinner:

Hotel Ramada Plaza Astana, Puccini Hall (47, Abay Ave, Astana) - from 20:00 till 22:30

We organize transport between Nazarbayev University/Restaurant/Hotels/Eurasian National University etc.

CONFERENCE SCHEDULE

Time	Friday, August 5th	Time	Saturday, August 6th	Time	Sunday, August 7th
07:30	Breakfast	07:30	Breakfast	08:30	Breakfast
08:00	Registration	08:00	Registration	09:30	Technical Tour 1,2
09:00	Openning Ceremony	09:00	Keynote Lecture 3	13:00-14:00	LUNCH*
09:20	Special Lecture 1	09:30	Keynote lecture 4		
09:50	Keynote Lecture 1	10:00	Coffee Break and Poster Session**		
10:20	Coffee Break	10:30	Technical Session 3, Technical Session 4		
10:45	Technical Session 1, Technical Session 2 (part 1)	13:00	LUNCH		
13:00	LUNCH	14:00	Technical Session 5		
13:45	Technical Session 2 (part2)	15:30	Coffee Break		
15:30	Tour to Eurasian National University (ENU)	16:00	Technical Session 6, Technical Session 7		
16:00	Opening Ceremony (venue:ENU)	17:20-17:50	Closing Ceremony		
16:30	Special Lecture 2 (venue:ENU)	20:00-22:30	FAREWELL DINNER		
17:00-17:30	Keynote Lecture 2 (venue:ENU)				
18:00-20:00	WELCOME RECEPTION				

***Participants, who will leave on the 7th of August, will be transferred directly to the Airport; Participants, who will leave on the 8th of August, will be transferred from Technical Tour to the Hotel/Guests House.**

**** Poster Session: only for Students of Incheon National University, South Korea**



Special and Keynote Lecturers

Dr. Wolfgang Sondermann

“The general future prospective and capabilities of geotechnical engineers”

President of German Geotechnical Society,
Keller Holding, Germany



Professor Ikuo Towhata

“Reconnaissance in and findings from the 2016 Kumamoto earthquake in Japan”

Vice President of ISSMGE for Asia, Japan



Professor Eun Chul Shin

“Application of Geosynthetics in Civil Engineers Projects”
Incheon National University, South Korea



Professor Talal Awwad

“Problems of Syrian Historical Monuments, Destroyed by Military Action:
Diagnostics, Strengthening and Reconstruction”
Damascus University, Syria



Professor Jong R. Kim

"On interim results of sand production research in weak sandstone
formations in Kazakhstan"
Nazarbayev University, Kazakhstan



Professor Askar Zhussupbekov,

“Geotechnical and construction consideration of pile
foundation on problematic soils”

President of Kazakhstan Geotechnical Society,
Eurasian National University, Kazakhstan



It is my great pleasure to welcome you all to the 8th Asian Young Geotechnical Engineers Conference of members of the International Society for Soil Mechanics and Geotechnical Engineering (ISSMGE), which is held in Astana, the capital of Kazakhstan, on August 5 – 7, 2016, hosted by Nazarbayev University and L. N. Gumilyov Eurasian National University. Your organization which unites 89 societies from 90 countries around the World is the biggest international professional association representing around 19000 engineers, academicians and contractors involved in geotechnical engineering. Let me take this opportunity to express my appreciation to the L.N. Gumilyov Eurasian National University for the strong partnership that has allowed us to organize this conference.

This conference is the eighth in the series of conferences and the first in a CIS country; it aims to provide an interactive platform for young geotechnical engineers from across Asia under the age of 35.

The young capital of Kazakhstan Astana is growing rapidly with a big volume of construction, be they public or private buildings and urban infrastructure. Astana is now preparing for the EXPO 2017 which will open in June 2017. The theme of EXPO 2017 is “Future Energy”. The title of your conference “Challenges and Innovation in Geotechnics” is a perfect fit for Astana because of the city’s accelerated development as well as its well-known weather (temperature and wind) conditions. We look forward to conference participants to contribute with innovative ideas and solutions that will improve the foundations and building techniques and thus contribute to Kazakhstan’s development.

As to the Nazarbayev University, we opened in Astana 6 years ago to educate and nurture the next generation talent who will build modern industry, and engage in science and innovation in Kazakhstan and beyond. At this point, approximately 250 undergraduate and post-graduate students are studying Civil and Geotechnical Engineering at Nazarbayev University. I hope that as a result of this conference our students and graduates will pursue research in geotechnical engineering and civil engineering practice with an even greater sense of purpose.

May you have a successful conference and a pleasant stay in Astana.

President of Nazarbayev University

Shigeo Katsu



Dear 8AYGEC participants,

First of all, I would like to welcome all participants at the 8th Asian Young Geotechnical Engineers Conference under the International Society for Soil Mechanics and Geotechnical Engineering (ISSMGE) which is held in the new capital of Kazakhstan, Astana, on August 5-7, 2016. The subtitle of this conference is “Challenges and Innovations in Geotechnics” which indicates not only new technologies and methods but also sustainability of human resources in the geotechnical engineering community.

Astana has been a new capital of Kazakhstan since 1997. Our University is also young and it celebrates its 20th anniversary this year. The modern design and Asian color of urban architecture have turned Astana into a city with a unique look and style. Among architectural complexes of the young Kazakhstani capital the L.N. Gumilyov Eurasian National University occupies a prominent place. The history of the University starts in May 1996, when a National University of “Eurasian” type was created in accordance with the decree of the President of Kazakhstan, N. Nazarbayev. Today L.N. Gumilyov ENU offers to its students the opportunity to participate actively in cultural, social and political life of Astana and Kazakhstan. We have 14 faculties; the total number of students is 12000. The mission of ENU is to become a leading research and education center of the Eurasian region, which will provide favorable conditions for conducting research and acquiring advanced knowledge and train specialists to develop the priority sectors of the economy as well as be accountable to the Government and to the society for the outcome of their activities.

The vision of ENU is a National Research University focused on the close integration of education, science and industry and collaboration with international universities and organizations. Our University trains master degree students by using governmental program GPIID (Governmental Program of Industry and Innovation Development). The program has two major directions: production of building materials, products, structures and space technology, which are very significant for the development of Civil and Geotechnical Engineering Sectors of Kazakhstan.

Finally, we hope that all participants will enjoy all the events and sessions, and have fruitful discussion in all kinds of geotechnical issues. I am sure that you will become a witness for the new direction of geotechnical engineering.

Thank you for your attention!

I wish you to enjoy this conference and have a good time in Astana!

Best regards,

Prof. Asemgul Moldazhanova,

Vice Rector of L.N. Gumilyov Eurasian National University,

Astana, Kazakhstan



Welcome to the 8th Asian Young Geotechnical Engineers Conference in Astana.

Dear young participants and colleagues,

As the ISSMGE Vice President for Asia, I am delighted to welcome you at this wonderful conference. There are many missions for you to be engaged in the coming decades and I wish you to find new perspectives for future (geotechnical) engineering in Asia.

In the past, our discipline, soil mechanics and geotechnical engineering, developed mostly in some part of Europe and North America. Because the major concern in practice in those days addressed consolidation, bearing capacity of foundation, earth pressure and slope stability, we can find many theories and formula that carry the names of European and North American geotechnical pioneers.

Problems change with time. Geotechnical engineering is closely related with localities in such as geology, natural hazards and construction economy together with many others. It is never sufficient, therefore, to simply follow or obey those classic geotechnical engineering. There are always new elements that do not allow the blind use of traditional approaches. Nowadays we are facing in Asia such problems as extremely thick and soft soil conditions, severe natural hazards (earthquakes, extremely heavy rains and volcanic effects), difficult soils (permafrost, loess, peat, arid soil etc.), recovery of natural resources from very deep sea, and practical solutions of the effects of (global) environmental change (rising sea level, seabed discharge of CO₂, flooding etc.). Sustainability and good maintenance of geotechnical structures are certainly important for the survival of human beings. What contributions can you make to those issues?

I am sure you have more problems in your mind. What I wish to stress today is that you cannot rely on anybody for solution of those new problems. You have to develop a new idea and promote it towards completion. I do not like those who simply ask others for good ideas. Do not be satisfied to introduce something good from other countries. Your geotechnical environment is never same as somebody else's. Great pioneers in the past decided to solve the problems and continued efforts in spite of many difficulties.

During this Asian Young Geotechnical Engineers Conference, I wish you to get stimulated from others with different back grounds and learn that there are different ways of thinking and different approaches to your problems. Problems are waiting for you to solve. Last but not least, do not forget to make new friends.

Best wishes

A handwritten signature in black ink, appearing to read 'I. IAA'.



Ikuo Towhata



Distinguished guests and dear friends,

I would like to inform you that the 8th Asian Young Geotechnical Engineers Conference (8AYGEC) is being held on August 5-7, 2016 at Nazarbayev University and Eurasian National University, Astana, Kazakhstan.

This Conference is preferred under auspices of Kazakhstan Geotechnical Society (KGS), TC-305 of ISSMGE “Geotechnical Infrastructures for Megacities and new capitals”, Nazarbayev University and supported by Eurasian National University.

The aim of the Conference is to bring together young scientists, engineers, and researchers to exchange knowledge and discuss recent geo technology development of problematical soil ground, especially about challenges and innovations in geotechnics. The 8AYGEC – Astana 2016, includes two days of technical paper presentation and one day of two Technical visits (construction sites of EXPO 2017 and Abu Dhabi Plaza in Astana). The Conference programme consists of two special lectures and four keynote lectures, seven technical themed sections presentation of independent papers and session chair and co-chair within each technical session. Total 59 reviewed papers from 17 different nations, which are classified as 7 main disciplines such as research activities in Laboratory and Field testing; Foundation and Underground structures; Ground improvement; Earthquake and Environment; Numerical and Analytical modeling; Advanced soil mechanics and Historical sites.

The 8AYGEC will be provided for the first time in Kazakhstan, especially in Central Asian and CIS countries. The venue of this international forum is Astana – new capital of Kazakhstan, which is pursuing the future city with clean water and air, eco-friendly sustainable development, hospitals, welfare facilities and easy accessing transportation system. Astana having U-city functions is a self-sufficient city with zero carbon dioxide release, zero garbage release. The city which makes the quality of people’s life better attracts people to stay.

That is why ISSMGE has opened TC-305 on Geotechnical infrastructures for megacities and new capitals, which is being hosted by Kazakhstan Geotechnical Society since 2014 till 2018.

I would like to express my sincere thanks to all members of Local Organizing Committee, International Advisory and Scientific Committees of 8AYGEC – Astana 2016 for their great efforts and contributions. Through the conference I hope that every participant will get acquainted with each other and will make international global networks. I wish to thank the Authors for their cooperation and timely completion of the manuscripts. I sincerely appreciate you to take part in the 8AYGEC – Astana 2016.

Thank you for your participation at the 8AYGEC – Astana 2016.

Professor Askar Zhussupbekov,

Chair of Organizing Committee of 8 AYGEC,

Astana, Kazakhstan, 5-7th August, 2016.

PROGRAM

8AYGEC

The Eighth Asian Young Geotechnical Engineers Conference
Astana, KAZAKHSTAN

Day 1: 5th of August, Friday, 2016

Venue: Nazarbayev University, block 1, Senate Hall, 53 ave. Kabanbay Batyr, 3rd Floor

07:30 -08:30 **BREAKFAST (Canteen at Nazarbayev University, 3rd Floor)**

08:00-09:00 **REGISTRATION at the Senate Hall**

Chairman: Jong R. Kim

09:00-09:20 **Opening Ceremony:**

Shigeo Katsu, *President of Nazarbayev University, Kazakhstan*

Assemgul Moldazhanova, *Vice Rector of Eurasian National University, Kazakhstan*

Zhasulan Suyunchaliev, *Vice Chairman of Committee for construction, housing and communal services and land management, Ministry of National Economy of the Republic of Kazakhstan, Kazakhstan*

Ikuo Towhata, *Vice President of ISSMGE for Asia, Japan*

Askar Zhussupbekov, *President of Kazakhstan Geotechnical Society, Kazakhstan*

Chairman: Talal Awwad

09:20-09:50 **Special Lecture 1 :**

Future Challenges for Geotechnical Engineers (a more contractor orientated perspective)

W. Sondermann, *German Geotechnical Society, Germany*

C. Kummerer, *Keller Holding GmbH, Germany*

Chairman: Bagdat Teltayev

09:50-10:20 **Keynote Lecture 1:**

APPLICATION OF GEOSYNTHETICS IN CIVIL ENGINEERING PROJECTS

E. C. Shin, M. K. Jung and J. K. Kang, *Incheon National University, Korea*

10:20-10:40 **COFFEE BREAK (in front of the Senate Hall)**

10:45-11:55 **Technical Session 1:**

Laboratory and field testing

Chairman: Sudheesh Thiyya Kkandi

Co-Chairman: Zhanbolat Shakhmov

CENTRIFUGE APPLICATIONS IN MICROPILE FOUNDATIONS

A. Alnuaim, *King Saud University, Saudi Arabia*

M. H. El Naggar, *The University of Western Ontario, Canada*

H. El Naggar, *Dalhousie University, Canada.*

ANALYZING OF SOIL GROUND TO FROST HEAVING OF STRUCTURES

Zh. Shakhmov, A. Tleubayeva, E. Smagulova, L. Utepbergenova,

Y. Togabayev and D. Bazarbayev, *Eurasian National University, Kazakhstan*

A COMPARISON OF METHODS OF PILE TESTING BASED ON AMERICAN AND KAZAKHSTAN STANDARDS

A.S. Tulebekova, N.T. Alibekova, I.T. Zhumadilov and G.R. Alipbayeva
Eurasian National University, Kazakhstan

MEASURED TEMPERATURE AND MOISTURE DISTRIBUTION IN SUBGRADE OF "ALMATY-BISHKEK" HIGHWAY

A. Nugmanova and B. Teltayev, *Kazakhstan Highway Research Institute, Kazakhstan*

RESEARCH OF THE MECHANICAL PROPERTIES OF SOIL BASIS BY AN EQUIVALENT MATERIAL

B. Kaldanova, G. Zhukanova, A. Zhussupbekov, Y. Muzdybayev and
T. Muzdybayeva, *Eurasian National University, Kazakhstan*

INFLUENCE OF BLOW ENERGY OF HAMMER ON BEARING CAPACITY OF PILES DURING DYNAMIC TESTING

R.E. Lukpanov, D. Tsigulov, S. B. Yenkebayev and D. T. Askarov,
Eurasian National University, Kazakhstan

11:55-12:55 **Technical Session 2 (part 1)** **Foundation and Underground Structure**

Chairman: Sergey Kudryavtsev

Co-Chairman: Ahmed Alnuaim

A CASE STUDY ON ZONED EXCAVATION OF A LARGE FOUNDATION PIT IN PROXIMITY TO EXISTING TUNNELS

Q. Li, Z. H. Xu, J. Li and X. J. Wang
East China Architectural Design and Research Institute, People's Republic of China
Shanghai Engineering Research Center of Safety Control for Facilities Adjacent to Deep Excavations, People's Republic of China

RELIABILITY EVALUATION OF BEARING CAPACITY ON NODULAR CAST-IN-PLACE CONCRETE PILE

K. Watanabe and A. Mitsumori, *Obayashi Corporation, Japan*
H. Nishioka and M. Koda, *Railway Technical Research Institute, Japan*

COMPARATIVE ANALYSIS OF ALLOWABLE LOAD CARRYING CAPACITY OF LATERALLY LOADED PILES

F.N. Sheikh, A. A. Gill and T. Masood, *Berkeley Associates (Pvt.) Ltd., Pakistan*
M. Irfan, *University of Engineering & Technology Lahore, Pakistan*

MID-TUNNEL UNDERGROUND DOCKING OF TUNNEL BORING MACHINES IN SINGAPORE

Senthilnath GT, Oskar Sigl, *Geoconsult Asia Singapore, Singapore*

RELIABILITY ANALYSIS OF PILE DRIVING FORMULA FOR CONCRETE DRIVEN PILES IN STIFF SOIL LAYER: CASE STUDY IN CHIANG MAI PROVINCE

S. Thongmunee and A. Thongchai, *Chiang Mai University, Thailand*

13:00-13:45 **LUNCH (Canteen at Nazarbayev University, 3rd Floor)**

13:45-14:25 **Technical Session 2 (part 2)** **Foundation and Underground Structure**

TWO-LANE VEHICLE UNDERPASS USING PIPE ROOF METHOD AT SENTOSA GATEWAY TUNNEL

S.C. Teo, T.G. Ng, I. Yogarajah, K.X. Woon & H.P. Dang,
Golder Associates (Singapore) Pte Ltd, Singapore

STRESS STRAIN BEHAVIOUR OF URBAN ROAD WITH UNDERGROUND COMMUNICATION STRUCTURE

K. Tileu and B. Teltayev, *Kazakhstan Highway Research Institute, Kazakhstan*

DEVELOPMENT OF A REINFORCED CONCRETE FOUNDATION SYSTEM FOR RENEWABLE ENERGY STORAGE USING COMPRESSED AIR TECHNOLOGY

A. Sabirova, *Kazakhstan Geotechnical Society, Kazakhstan*

D. Zhang, J.R. Kim, M. Nguyen and Chang-Seon Shon, *Nazarbayev University, Kazakhstan*

PROSPECTS OF USING AN INNOVATIVE CRUSHED STONE (LIGHTWEIGHT, SOLID, HEAT-INSULATING) AND AN AGGREGATE FOR CONCRETE STRUCTURES AS WELL AS IN BUILDING PROCESS OF UNDERGROUND PART

A. Montaeva, *The George Washington University, USA*

THE ANALYSIS OF THE PILING TEST ON CONSTRUCTION SITE "THE FUTURE OF THE FREE COUNTRY"

A.R. Omarov, A. Zhussupbekov, A.D. Tulegenov, G.A. Zhukenova and G.K. Tanyrbergenova, *Eurasian National University, Kazakhstan*

14:30 Departure from Nazarbayev University

15:30 Arrival and Tour to the Eurasian National University

Chairman: Askar Zhussupbekov

16:00-16:30 **Welcome Address :**

Assemgul Moldazhanova, *Vice Rector of Eurasian National University, Kazakhstan*

Chairman: Dong-Soo Kim

16:30-17:00 **Special Lecture 2:**

RECONNAISSANCE IN AND FINDING FROM THE 2016 KUMAMOTO EARTHQUAKE IN JAPAN

Ikuo Towhata, *Japanese Geotechnical Society, Japan*

Chairman: Leonid Nuzhdin

17:00-17:30 **Keynote Lecture 2:**

PROBLEMS OF SYRIAN HISTORICAL MONUMENTS, DESTROYED BY MILITARY ACTION: DIAGNOSTICS, STRENGTHENING AND RECONSTRUCTION

Talal Awwad, *Damascus University, Syria*

Chairman: Tursyn Zhunisov

Co-Chairman: Bibigul Abdrakhmanova

18:00-20:00 **WELCOME RECEPTION** (Eurasian National University, 9th Floor)

Day 2: 6th of August, Saturday, 2016

Venue: Nazarbayev University, block 1, Senate Hall

07:30-08:30 **BREAKFAST** (Canteen at Nazarbayev University, 3rd Floor)

08:00-09:00 **REGISTRATION** at the Senate Hall

Chairman: Tatsunori Matsumoto

09:00-09:30 **Keynote Lecture 3:**

ON INTERIM RESULTS OF SAND PRODUCTION RESEARCH IN WEAK SANDSTONE FORMATIONS IN KAZAKHSTAN

J. R. Kim and M. H. Nguyen, *Nazarbayev University, Kazakhstan*

09:30-10:00 **Keynote Lecture 4:**

GEOTECHNICAL AND CONSTRUCTION CONSIDERATION OF PILE FOUNDATION ON PROBLEMATIC SOILS

A. Zh. Zhussupbekov and A. R. Omarov, *Eurasian National University, Kazakhstan*

Chairman: Daniyar Bazarbayev

Co-Chairman: Asel Tulebekova

10:00-10:30 **COFFEE BREAK and Poster Session *** (in front of the Senate Hall)

10:30-12:40 **Technical Session 3,4:**

**Ground Improvement;
Earthquake and Environment**

Chairman: Andrei Ponomarev

Co-Chairman: Farooq Naveed Sheikh

ROLE OF CONSIDERING NON-CONSTANT SOIL THERMAL PARAMETERS IN THE SIMULATION OF GEOTHERMAL HEAT STORAGE SYSTEMS IN THE VADOSE ZONE

T. Baser, *University of California San Diego, USA*

Y. Dong and N. Lu, *Colorado School of Mines, USA*

J. S. McCartney, *University of California San Diego, USA*

STRENGTHENING OF PILE FOUNDATION UNDER DYNAMIC LOADS BY HIGH-PRESSURE INJECTION

M. L. Nuzhdin, *SPEC Company "O&F", Russia*

L. V. Nuzhdin, *Novosibirsk State University of Architecture and Civil Engineering (Sibstrin), Russia*

NEW DESIGN OF THE COMBINED TAPE BASES PROVIDING FULLER USE OF THE BEARING ABILITY OF THE BASIS

T. A. Krahmal'ny, S. I. Evtushenko and M. P. Krahmal'naya

Platov South-Russia State Polytechnic University (NPI), Russia

PROPERTIES OF COLLAPSIBLE SOIL - A CASE STUDY

A. Zhakulina, *Karaganda State Technical University, Kazakhstan*

Y. Akhmetov, *ACCL, Kazakhstan*

A. Akhmetov, *National Research Tomsk State University, Russia*

A. Zhakulin, *Guangdong University of Foreign Studies, China*

IMPROVEMENT OF SOFT SOIL CHARACTERISTICS THROUGH APPLICATION OF DRY CONCRETE MIX PILLARS

T. Tronda, *Belarusian National Technical University, Republic of Belarus*

LABORATORY MODELING OF SOIL DAM REINFORCED BY GEOSYNTHETIC MATERIAL

Lukpanov R. E., *Eurasian National University, Kazakhstan*

*Poster Session: only for Students from Incheon National University, South Korea

ESTIMATION OF LIQUEFACTION POTENTIAL: A CASE STUDY IN SAN FRANCISCO, CALIFORNIA
A. Mussa, E. Satekenova, D. Zhang, S. Thiyyakkandi and J.R. Kim
Nazarbayev University, Kazakhstan

APPLICATION OF LOCAL BENTONITE AS BUFFER AND BACKFILL MATERIAL IN LOW-LEVEL
RADIOACTIVE DISPOSAL FACILITY
F. Teng, *Sinotech Engineering Consultants, Taiwan*

GEOTECHNICAL APPROACHES TO SEISMIC RISK ASSESSMENTS FOR ARCHITECTURAL HERITAGES
AT HISTORICAL SITES USING FIELD AND CENTRIFUGE TESTS
H. J. Park and D.S.Kim, *KAIST, Korea*

LIQUEFACTION SUSCEPTIBILITY ANALYSIS BASED ON SPT AND MICROTREMOR
N. Shrestha and S.K. Jha, *Institute of Engineering, Tribhuwan University, Nepal*

FOUNDATIONS ON ARTIFICIAL BATES STABILIZED ALSO (STRENGTHENED) BY VERTICAL ARMO -
ELEMENTS (VAE) WITH A SEISMIC - PROTECTIVE DAMPING LAYER
Z.A. Khasanov, A.Z. Khasanov, *State Architectural and Civil Engineering Institute named after M. Ulugbek , Uzbekistan*
I.I. Usmankhojaev, *YPUU "Kishlok qurilish loyiha" , Uzbekistan*

MONITORING AND PROTECTION OF THE FOUNDATIONS OF BUILDINGS OF DANGEROUS
PRODUCTION PLANTS ON SEASONALLY HEAVING GROUND
S.A. Kudryavtsev, S.A. Bugunov, *Far Eastern State Transport University, Russia*
V.V. Kogay, *NIIOSP named after N. M. Gersevanov - Research Centre of Construction JSC, Russia*
A.A. Moldazhanova, *Eurasian National University, Kazakhstan*
I.V. Shestakov and A.V. Kazharsky, *Far Eastern State Transport University, Russia*

13:00-14:00 LUNCH (Canteen at Nazarbayev University, 3rd Floor)

14:00-15:30 **Technical Session 5:** **Numerical and Analytical Modeling**

Chairman: Tugce Baser

Co-Chairman: Nitesh Shrestha

NUMERICAL SIMULATION FOR THE ESTIMATION THE JACKING FORCE OF PIPE JACKING
J. Yen, *CECI Engineering Consultants Inc., Taiwan*
K. Shou, *National Chung-Hsing University, Taiwan*

APPLICATION OF 3-d STATIC ANALYSIS PROGRAM FOR RESIDUAL DEFORMATION DUE TO
LIQUEFACTION
Y. Tadano, H. Uno and A. Tateishi, *Taisei Corporation Technology Center, Japan*

EVALUATION OF DAMAGE MORPHOLOGY IN THREE-HINGE PRECAST ARCH CULVERT BASED ON
SHAKING TABLE TESTS AND NUMIRICAL ANALYSES
Y. Sawamura, K. Kishida and M. Kimura, *Kyoto University, Japan*
H. Ishihara, *Kajima Corporation, Japan*

NUMERICAL STUDY ON ELECTRICAL RESISTIVITY TOMOGRAPHY FOR PREDICTION OF ANOMALY IN MECHANIZED TUNNELING JOB-SITES

Kang-Hyun Lee, *Korea Expressway Corporation Research Institute, Korea*

In-Mo Lee, *Korea University, Korea*

MATHEMATICAL MODELING OF MASSIF STATE AROUND THE MOUNTAIN ROAD SLOPES AND HIGHLAND PIT

S. Zh. Kuvakov, K. Kozhogulov, *Institute of Geomechanics and Development of Subsoil of National Academy of Sciences of the Kyrgyz Republic, Kyrgyz Republic*

G. Dz. Kabaeva, *Kyrgyz-Russian Slavic University named after B.N. Yeltsin, Kyrgyz Republic*

FINITE ELEMENT ANALYSIS OF DEEP EXCAVATION: A CASE STUDY OF UNDERGROUND PARKING UNDERNEATH RUSSEL SQUARE, LONDON

K. Bekish, A. Ulykbanov, T. Mukashev, Y. Serik, M. Nguyen and J. Kim,
Nazarbayev University, Kazakhstan

ANALYSIS OF EXCAVATION-INDUCED GROUND MOVEMENTS IN URBAN AREAS

C. Hung, *National Cheng Kung University, Taiwan*

STABILIZATION OF STRAIN MOUND ROAD TO PARTIALLY THAWING PERMAFROST BASE USING GEOCELLS

N.V.Kushnareva, D.O. Grigoriev., S.A. Kudryavtsev, S.A. Bugunov
Far Eastern State Transport University, Russia

15:30-16:00 COFFEE BREAK (in front of the Senate Hall)

16:00-16:40 **Technical Session 6:** **Advanced Soil Mechanics**

Chairman: Rauan Lukpanov

Co-Chairman: Tatiana Tronda

LONG-TERM DURABILITY OF SOIL-BENTONITE CUTOFF WALLS USED FOR CONTAINMENT OF GROUND CONTAMINATION

A. Takai, T. Katsumi, T. Inui, *Kyoto University, Japan*

M. Kamon, *Research Institute for Environmental Geotechnics, Japan*

S. Araki, *Raito Kogyo Co., Ltd., Japan*

STRENGTH AND DEFORMATION CHARACTERISTICS OF SAND-GEOSYNTHETIC INTERFACES THROUGH DIGITAL IMAGE ANALYSIS

P. Vangla and M. L. Gali, *Indian Institute of Science, India*

ANALYSIS OF STRESS-STRAIN STATE OF ANISOTROPIC SOIL BASEMENT

L.V. Nuzhdin and K. Pavlyuk,

Novosibirsk State University of Architecture and Civil Engineering (Sibstrin), Russia

THE USE OF EXPRESS METHOD FOR DETERMINING THE MODULUS OF DEFORMATION OF FILL SOIL

A.B. Ponomaryov and S.A. Sazonova,

Perm National Research Polytechnic University, Russia

EXPERIMENTAL RESEARCH OF DEFORMED STATE OF UNIFORM SOIL MASSIF DEPENDING ON THE STEP OF BARRETS

K.Y. Stepanishev and P.V. Buryak, *Moscow State Building University, Russia*

D.A. Vnukov and F.F. Zekhniev, *NIIOSP named after N. M. Gersevanov - Research Centre of Construction JSC, Russia*

16:40-17:10

Technical Session 7:

Historical Sites

Chairman: *Kamchibek Kozhogulov*

Co-Chairman: *Serik Yenkebayev*

THE REHABILITATION OF HISTORIC BUILDING - CASE STUDY AL-THAKANA AL-HAMIDIEH IN SYRIA

L. Awwad, N. Rahme and T. Awwad, *Damascus University, Syria*

ENGINEERING - GEOLOGICAL CONDITIONS AND ANALYSIS OF DEFORMATION OF HISTORICAL MONUMENTS OF ARCHITECTURE IN KAZAKHSTAN

A.Z. Issina, S.Sh. Sadykova, Zh.S. Bisenova and A.S. Temirova,
Eurasian National University, Kazakhstan

STRENGTHENING OF HYDRAULIC STRUCTURE ON UNDERMINED TERRITORIES

A.K. Aldungarova, M.K. Kuderin and V.A. Kozionov,
S. Toraighyrov Pavlodar State University, Kazakhstan

Chairman: *Rauan Lukpanov*

Co-Chairman: *Tattygul Seidmarova*

17:20-17:50

Closing Ceremony (Senate Hall, Nazarbayev University)

Chairman: *Natalia Zhumagazina*

Co-Chairman: *Ainur Sabirova*

20:00-22:30

FAREWELL DINNER (Hotel Ramada Plaza Astana, Puccini Hall, 47 ave. Abay)

Day 3: 7th of August, Sunday, 2016

08:30-09:00

BREAKFAST (Canteen at Nazarbayev University, 3rd Floor)

Chairman: *Abdulla Omarov*

Co-Chairman: *Sultan Iskakov*

09:30-13:00

Tour 1 to EXPO 2017-Astana (construction site); Tour 2 to the Abu Dhabi Plaza in Astana

13:00-14:00

LUNCH

14:15

Participants, who will leave on the 7th of August, will be transferred directly to the Airport;
Participants, who will leave on the 8th of August will be transferred from Technical Tour to the Hotel/Guests House.