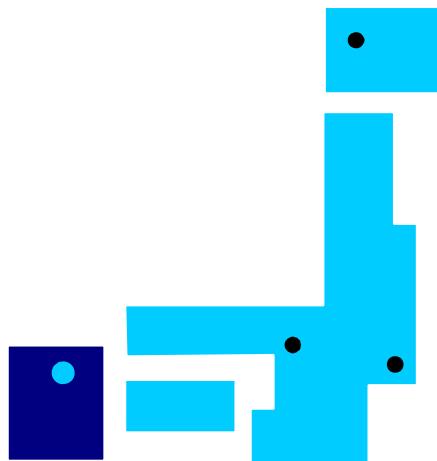


5th International symposium on Earth Reinforcement

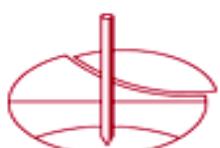
November 14-16, 2007
Fukuoka, Japan



IS Kyushu '07

– New Horizons in Earth Reinforcement –

<http://www.nda.ac.jp/cc/users/miyamiya/is-kyushu07/>



FOREWORD

The International Symposium on Earth Reinforcement, IS Kyushu 2007, will be held at Fukuoka in Japan, on 14th -16th November 2007 under the auspices of the Japanese Geotechnical Society (JGS) and Technical Committee for Ground Improvement of ISSMGE (TC-17). International Geosynthetics Society (IGS) and Japan Society of Civil Engineers (JSCE) strongly support IS Kyushu 2007.

This symposium is a continuation of the four previous international symposia IS Kyushu '88, '92 '96 and '01, which provided successful contributions to the development of the earth-reinforcement practice.

The duration of the symposium is three-days, including two special and four keynote lectures by distinguished scholars, as well as oral and poster presentations and discussions of the papers accepted for the symposium.

Over 160 abstracts were accepted. The final papers were carefully reviewed by a number of the eminent researchers and engineers specialized in this field. Special issue papers will be selected from the accepted paper and they will be published in the related International Journals. It is expected that many key-persons in the field of earth reinforcement engineering will attend the symposium.

OTANI, Jun

Chairman, organizing committee of the IS Kyushu '07

Organized by



The Japanese Geotechnical Society

Under the auspices of



The International Society for Soil
Mechanics and Geotechnical
Engineering

With support of



The International Geosynthetics Society



The Japan Society of Civil Engineers

TOPICS

Reinforcing Materials

Geosynthetics; Steel materials; New materials;
Natural materials; Composite materials and others.

Contents

Testing methods; Model tests (1g and centrifuge)
and full scale tests; Numerical analyses;
Design methods (performance based design etc.);
Construction technologies;
Case histories and others.

Recent and New Topics

Disaster prevention technologies (for earthquake,
heavy rain and other hazards);
Geo-environmental technologies (reinforcing
landfill structure; recycling geomaterials and
others);
Combined technologies (standard reinforcing
methods with other methods)
New and classical technologies and others.

VENUE

"Nishijin Plaza, Kyushu University"

2-16-26 Nishijin, Sawara-Ku, Fukuoka, Japan,

814-0002, plaz.uok@mbox.nc.kyushu-u.ac.jp

TEL:+81-92-831-8104, FAX+81-831-8105

The symposium will be held at Nishijin Plaza, Kyushu University. Fukuoka City, with a population of 1.3 million, is the largest city in Kyushu Island. Domestic flights from major cities and direct flights from abroad are also available. Natural scenes surround Fukuoka, and there are several castles near the city.

SECRETARIAT

IS Kyushu '07

Department of Civil and Environmental Engineering,
Kumamoto University, 1-39-2 Kurokami, Kumamoto
City, Kumamoto, Japan

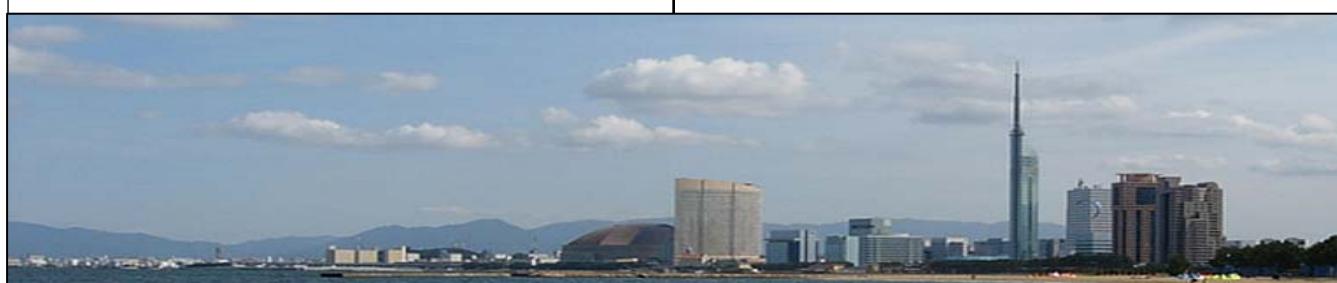
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TEL:+81-96-342-3545 & FAX: +81-96-342-3535

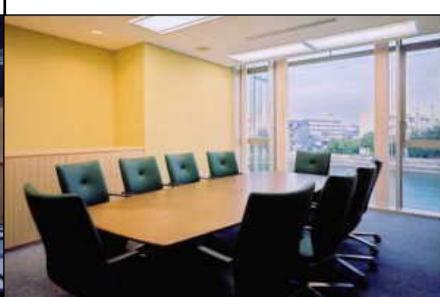
Mail address: iskyushu@kumamoto-u.ac.jp

URL:

<http://www.nda.ac.jp/cc/users/miyamiya/is-kyushu07/>



STEERING COMMITTEE	Dr. Kitazume, M. Prof. Kvasnicka, P. Prof. Lam, A. Dr. Lawson, C.R. Prof. Leshchinsky, D. Dr. Liausu, Ph. Dr. Lopes, M.G. Prof. Madav, M.R. Dr. Miki, H. Prof. Lo, R. Prof. Mathys, M. Prof. Martens, J. Prof. Moraci, M. Prof. Palmeira, E.M. Prof. Rajagopal, K. Dr. Rathmayer, H. Prof. Rowe, R.K. Prof. Scharle, P. Dr. Varaksin, S. Prof. Stanic, B. Prof. Telekes, G. Prof. Timofeeva, L.M. Dr. Uriel, S. Prof. Tatsuoka, F. Prof. Tan, S.A. Dr. Voskamp, W. Dr. Yeo, K. Prof. Yoo, C. Prof. Zornberg, J.	Prof. Omine, K. Prof. Otani, J Prof. Palmeira, E.M. Prof. Rowe, R.K. Prof. Sawada, K. Dr. Shinoda, M. Dr. Suetsugu, D. Prof. Tan, S.A. Prof. Uchimura, T. Dr. Yamada, S. Prof. Yoo, C. Dr. Yamamoto, K.
INTERNATIONAL ADVISORY GROUP		ORGANIZING COMMITTEE Prof. Otani, J. (Chairperson) Prof. Maeda, Y. (Vice-chairperson) Prof. Mukunoki, T. (Secretary General) Prof. Aramaki, S. Prof. Chen, G. Dr. Hirai, T. Prof. Hirooka, A. Dr. Irie, T. Dr. Kasama, K. Mr. Kidera, S. Dr. Kobayashi, T. Prof. Kudou, M. Prof. Kondou, F. Prof. Miyata, Y. Mr. Matsugu, H. Prof. Nagase, H. Mr. Nakayama, H. Dr. Nishida, K. Prof. Omine, K. Prof. Ohtsubo, M. Dr. Sakata, T. Mr. Sakimoto, S. Prof. Sato, K. Ms. Sato, T. (Secretary) Dr. Suetsugu, D. Dr. Sugimoto, S. Prof. Sezaki, M. Dr. Tajiri, M. Dr. Tanoue, Y. Prof. Tokashiki, N. Mr. Ueyama, Y. Prof. Yasufuku, N. Mr. Yamauchi, Y. Dr. Yamada, S. Dr. Yamamoto, K. Dr. Yakabe, H. Dr. Wada, H.



INTERNATIONAL REVIEW PANEL

Prof. Alfaro, M.	Prof. Bathurst, R.J.
Prof. Bergado, D.T.	Prof. Bouassida, M.
Dr. Cazzuffi, D.	Dr. Chew, S.H.
Prof. Gourc, J.P.	Dr. Greenwood, J.H.
Prof. Guler, E.	Prof. Han, J.
Dr. Hatami, K.	Dr. Hery, P.
Dr. Hirai, T.	Dr. Hirakawa, D.
Dr. Hironaka, J.	Prof. Hirooka, A.
Prof. Huang, C.C.	Prof. Iizuka, A.
Dr. Izawa, J.	Dr. Jenner, C.
Dr. Jeon, H.Y.	Prof. Kaneko, K.
Dr. Kasama, K.	Prof. Kawabata, T.
Dr. Kawamura, T.	Prof. Kimura, M.
Dr. Kitazume, M.	Dr. Kobayashi, T.
Prof. Kodaka, T.	Prof. Kohata, Y.
Dr. Kojima, K.	Mr. Konami, T.
Prof. Koseki, J.	Dr. Kotake, N.
Prof. Kuwano, J.	Prof. Lam, A.
Prof. Lo, R.	Prof. Michalowsky, R.L.
Prof. Miyata, Y.	Prof. Moraci, N.
Prof. Mukunoki, T.	Prof. Nabeshima, Y.
Prof. Nakamura, T.	Prof. Nishigata, T.
Prof. Otsuka, S.	Prof. Okamura, M.
Prof. Omine, H.	Dr. Otani, Y.
Prof. Palmeira, E.M.	Dr. Sankey, J.
Prof. Sawada, K.	Prof. Shin, E.C.
Dr. Shinoda, M.	Dr. Suetsugu, D.
Prof. Tan, S.A.	Prof. Tsukamoto, Y.
Prof. Uchimura, T.	Dr. Watanabe, K.
Dr. Yamada, S.	Dr. Yamamoto, K.
Prof. Yasufuku, N.	Prof. Yoo, C.
Dr. Yoshida, T.	

PROCEEDING

The proceeding will be published from A.A. Balkema publishers – Taylor & Francis The Netherlands. CD-ROM proceeding is included to it. These are distributed at the registration desk of this symposium.

SCIENTIFIC AND TECHNICAL PROGRAMS

Two of special lectures and four of keynote lectures are given during this symposium.

SPECIAL LECTURES

**Prof. H. Ochiai, Kyushu University, Japan;
Chairperson of organizing committee of IS Kyushu '92, '96, 01.**

"Earth reinforcement technique as a role of new geotechnical solutions" – Memory of IS Kyushu

Prof. J. Zornberg, The University of Texas at Austin, USA; Vice-president of International Geosynthetics Society

"New horizons in reinforced soil technology"

KEYNOTE LECTURES

**Mr. S. Allen, TRI Geosynthetic Services, U.S.A.;
Chairperson of ASTM D35 Geosynthetics**

**"Newly standardized procedures for assessing
the reduction factors for high strength
geosynthetic reinforcements"**

Prof. M. Davies, University of Auckland, New Zealand.

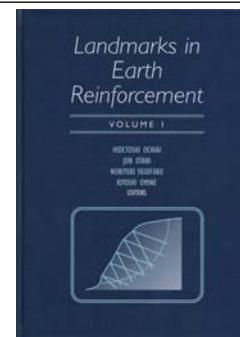
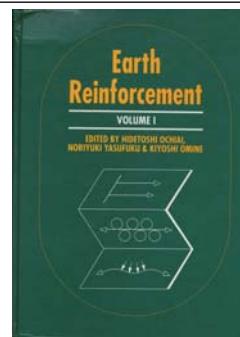
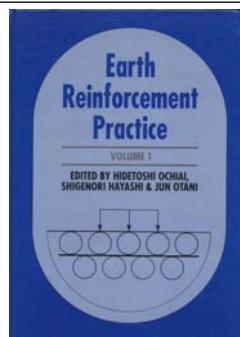
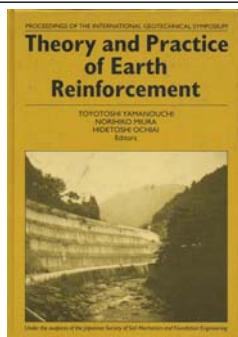
**"Model testing to evaluate the performance of
soil nailed structures"**

**Prof. D. Bergado, Asian Institute of Technology,
Thailand**

**"Combined technology with other technique" –
Current innovation on earth reinforcement
technique**

Dr. Y. Mohri, National Institute for Rural Engineering, Japan

**"New direction of earth reinforcement" –
Disaster prevention**



IS Kyushu '88

IS Kyushu '92

IS Kyushu '96

IS Kyushu '01

TECHNICAL SESSIONS

- 5 technical sessions will be organized.
- TS-I Materials and New Testing
 - TS-II Advanced numerical-modeling
 - TS-III Physical modeling
 - TS-IV Combined technologies
 - TS-V Geo-hazards and Mitigation

In the technical session, oral presentations will be given by authors and special topics will be discussed.

POSTER SESSIONS

2 poster sessions will be organized in the evening at 1st and 2nd days of the conference. During session, authors and audiences can enjoy exchanging information with drinking and snacks.

ISSMGE/TC17 ORGANIZING SESSION

"Recent case histories of earth reinforcement"

The TC17 have two working groups related to earth reinforcement, as Working Group F "Earth reinforcement in fill" and Working Group G "Earth reinforcement in cut". In this session, recent case histories in the world are summarized.

IGS ORGANIZING SESSION

"Design and measurement on full-scale behavior of reinforced structure"

The rationalization of the design is work to bury the difference between actual behavior and assumption. In this session, without distinguishing the technology by the kind of reinforcement, both task and improvement are discussed based full-scale behavior.

DISCUSSION SESSION

"New design philosophy of reinforced soil wall"

There are many design method in the world. Each design method has a different advantage. Purpose of this session is to discuss what is excellent in each design method.

Chairperson / E.M. Palmeira (Brazil)

Panelists

- a) Working stress design / R.J. Bathurst (Canada)
- b) Seismic design / J. Koseki (Japan)
- c) Limit state design / C.J.F.P. Jones (UK)
- d) Execution of works / P. Segrestin (France)

14 November (Wed.)

Opening Ceremony
(8:30-9:00)

Special Lecture
by H.Ochiai
(9:00-10:00)

Short Break (10:00-10:20)

ISSMGE/TC17 organizing session
(10:20-12:00)

Lunch (12:00-13:00)

Keynote Lecture
by S. Allen
(13:00-13:35)

Short Break (13:35-13:40)

TS-I "Materials and New Testing"
(13:40-15:20)

Coffee Break (15:20-15:50)

TS-II "Advanced numerical-modeling"
(15:50-17:30)

Poster Session I
(17:30-19:00, with drink)

Program of IS Kyushu 2007

15 November (Thu.)

Special Lecture
by J. Zornberg
(09:00-10:00)

Short Break (10:00-10:20)

IGS organizing session
(10:20-12:00)

Lunch (12:00-13:00)

Keynote Lecture
by M. Davies
(13:00-13:35)

Short Break (13:35-13:40)

TS-III "Physical modeling"
(13:40-15:20)

Coffee Break (15:20-15:50)

TS-IV "Combined technologies"
(15:50-17:30)

Poster Session II
(17:30-19:00, with drink)

16 November (Fri.)

Keynote Lecture
by D. Bergado
(09:00-09:35)

Short Break (09:35-09:40)

Keynote Lecture
by Y. Mohri
(09:40-10:15)

Short Break (10:15-10:30)

TS-V "Geo-hazards and Mitigation"
(10:30-12:10)

Lunch (12:10-13:30)

Discussion Sessions
(13:30-15:50)

Short Break (15:50-16:00)

Closing Ceremony
(16:00-16:30)

Farewell Party
(18:00-20:00)

LIST OF SUBMITTED PAPERS

Recent case histories of each earth reinforcement

- The influence of backfill settlement or wall movement on the stability of reinforced soil structures (C.J.F.P. Jones & D. Gwede)
- An innovative connection between a nailed slope and an MSE structure: application at Sishen mine, RSA (N. Freitag, A.C.S. Smith & H.J.L. Maritz)
- Walls over compressible soils and unstable slopes. Examples (A. Ramirez, F. Valero & C. Perez)
- SeaTac third runway: design and performance of MSE tall wall (J.E. Sanky, M.J. Bailey & B. Chen)
- Case study of a MSE wall supporting a multi-story building (F.W. Fordham, M. Louis & K.M. Truong)
- Multiple applications of reinforced earth technologies for industrial mining structures – Georgia Pacific Mining design/build project (P. Proctor & P. Wu)
- Reinforced fill for temporary work in Hong Kong (G. Ng)
- Design of roadside barrier systems for MSE retaining walls (P.L. Anderson, R.A. Gladstone & K. Truong)
- Design considerations of earth reinforced structures using inextensible reinforcements in heavy load surcharge support capacity (P. Wu & W.J. Brockbank)
- Environmental friendly reinforced retaining wall by using traditional stone masonry (N. Fukuda, Y. Kameda, T. Yoshimura, K. Abe, K. Watanabe, T. Hara & Y. Kochi)
- Steel nails for stabilizing forested slopes (N. Iwasa, M.Q. Nghiem & T. Ikeda)
- Study of a 15m vertical soil nailed wall at Capella@Sentosa (S.A. Tan & A. Rumjeet)
- Case study of geotextile method on extremely soft ground (K. Iwataki, K. Zen, K. Sakata, H. Yoshida, N. Kitayama & T. Fujii)
- Reactivation of a geogrid-bridged sinkhole: a real life solution approval (D. Alexiew)
- Two examples of recent innovation linked to optimization of soil reinforced structures (Ph. Delmas & A. Nancey)
- Special process techniques with project specified geosynthetics for sludge lagoon covers (O. Syllwasschy, O. Detert, D. Brokemper & D. Alexiew)
- Construction of a large geogrid reinforced fill structure to increase landfill capacity (J.W. Cowland)
- Tire chips for geotechnical applications (K. Yasuhara, H. Hazarika, Y. Mitarai & A.K. Karmokar)

■ Jute Geotextile and its application in civil engineering, agri-horticulture and forestry (P.K. Choudhury, A. Das & T. Sanyal)

- Geotechnical problems on reinforcement soil ground in Kazakhstan (A. Zhusupbekov & R. Lukpanov)
- Case study on deep excavation works by soil nailing on adjacent building (Y.S. Cho & H. Imanishi)

Materials and new testing

- Durability evaluation of various geogrids by index and performance tests (H.Y. Jeon & M.S. Mok)
- Lifetime prediction of PET geogrids under dynamic loading (H. Zanzinger, H. Hangen & D. Alexiew)
- Load-deformation behaviour of virgin and damaged non-woven geotextiles under confinement (M.J.A. Mendes & E.M. Palmeira)
- Evaluating in-plane hydraulic conductivity of non-woven geotextile and plastic drain by laboratory test (K. Hara, J. Mitsui, K. Kawai, S. Shibuya, T. Hongoh & T.N. Lohani)
- A theoretical method to predict the pullout behaviour of extruded geogrids embedded in granular soils (N. Moraci, G. Cardile & D. Gioffrè)
- Ultimate pullout forces of orthogonally horizontal-vertical geosynthetic reinforcement (M.X. Zhang, S.L. Zhang, J. Huang & A.A. Javadi)
- Pullout response study for cellular reinforcement (M.S. Khedkar & J.N. Mandal)
- Resistance of steel chain in pullout tests with and without sliding box (M. Fukuda, T. Hongo, A. Kitamura, Y. Mochizuki, S. Inoue, E. Fujimura & M. Kimura)
- Pullout load tests of the anchor plates in compacted sand used for typical backfill embankment in Thailand (J. Sunitsakul & A. Sawatparnich)
- Pullout resistance of reinforcement bar due to bearing capacity of expanded toe (T. Hayashi, T. Konami, H. Ito & T. Saito)
- Soil/reinforcement interface characterization using three-dimensional physical modeling (A. Abdelouhab, D. Dias, Y. Bourdeau & N. Freitag)
- Installation method and overburden pressure on soil nail pullout test (K.C. Yeo, S.R. Lo & J.H. Yin)
- Shear tests on fiber reinforced sand (A. Diambra, E. Ibraim, D.M. Wood & A. Russell)
- Effect of plasticity index and reinforcement on the CBR value of soft clay (S.A. Naeini & M.R. Yousefzadeh)
- Effects of palm fibers on CBR strength of fine sand (H. Ghiassian & H. Sarbaz)
- Shear behavior of waster tire chip-sand mixtures using direct shear tests (M. Ghazavi & F. Alimohammadi)

- Mechanical properties of lightweight treated soil under water pressure (Y.X. Tang & T. Tsuchida)
- Analysis of geofiber reinforced soils (A.T. Sway & S. Bang)
- Particle and shear characteristics of granulated coal ash as geomaterial (N. Yoshimoto, M. Hyodo, Y. Nakata, R.P. Orense, T. Hongo & A. Ohnaka)
- Improvement of geotechnical characteristics of slits deriving from washing quarry gravel (R. Meriggi, M.D. Fabbro & E. Blasone)

Advanced numerical modeling

- Anisotropy of fiber-reinforced soil and numerical implementation (R.L. Michalowski)
- Modelling fiber reinforced sand (A. Diambra, E. Ibraim, D. M. Wood & A. Russell)
- Numerical analysis of fiber-reinforced granular soils (E. Ibraim & K. Maeda)
- Development of multiphase model of reinforced soils considering non-linear behavior of the matrix (E.S. Hosseinina & O. Farzaneh)
- Numerical analysis of stability of slope reinforced with piles subjected to combined load (T.K. Nian, M.T. Luan, Q. Yang & G. Q. Chen)
- Effect of restraint deformation on stability of cut slope with soil nailing (T. Nishigata, S. Araki & Y. Nakayama)
- An in-depth numerical analysis of 25m tall reinforced earth wing walls, built back-to-back and supporting a bridge approach (K.M. Truong, S. Aziz & N. Freitag)
- Parametric analysis of a 9-m high reinforced soil wall with different reinforcement materials and soil backfill (B. Huang, K. Hatami & R.J. Bathurst)
- Parametric study of geosynthetic reinforced soil retaining structures (S.J. Chao)
- Influence of interference on bearing capacity of strip footing on reinforced sand (M. Ghazavi & A.A. Lavasan)
- The counteracting effects of rate of construction on reinforced embankments on rate-sensitive clay (R.K. Rowe & C. Taechakumthorn)
- Numerical simulation of stone column installation using advanced elastoplastic model for soft soil (Z. Guetif, M. Bouassida & F. Toumekti)
- Rigid plasticity based stability analysis of reinforced slope (S. Ohtsuka, Y. Inoue, T. Tanaka)
- Static analysis of slopes reinforced with stone columns (M. Ghazavi & A. Shahmandi)
- Bearing capacity of reinforced foundation subjected to pull-out loading: 3D model tests and numerical simulation (T. Nakai, F. Zhang, M. Hinokio, H.M. Shahin, M. Kikumoto, S. Yonaha & A. Nishio)

- Numerical simulation on bearing capacity of soilbag-reinforced ground considering finite deformation (D. Muramatsu, F. Zhang & H.M. Shahin)
- 3D soil reinforcement modeling by means of embedded pile (E.G. Septanika, P.G. Bonnier, K.J. Bakker & R.B.J. Brinkgreve)

Design and measurement on full-scale behavior of reinforced structure

- Full-scale model test and numerical analysis of reinforced soil retaining wall (K. Arai, K. Yoshida, S. Tsuji & Y. Yokota)
- Stability analysis of back-to-back MSE walls (J. Han & D. Leshchinsky)
- Analysis of RE wall using oblique pull for linear subgrade response: coherent gravity approach (P.V.S.N. Pavan kumar & M.R. Madhav)
- Recent developments in the K-Stiffness Method for geosynthetic reinforced soil walls (R.J. Bathurst, Y. Miyata & T.M. Allen)
- High capacity geostrap reinforcement for MSE structures (M.J. Grien & J.E. Sankey)
- Ultimate bearing capacity tests on an experimental geogrid-reinforced vertical bridge abutment without stiffening facing (D. Alexiew)
- Full-scale behavior of a surface loaded geosynthetic reinforced tired segmental retaining wall (C. Yoo, S.B. Kim & Y.H. Kim)
- Subgrade reaction of reinforced earth wall underneath the facing panel (T. Kumada & K. Watanabe)
- Performance of auxiliary bearing plates in active zone for multi-anchored reinforced soil retaining wall (T. Konami, Y. Kudo, K. Miura, T. Tatsui & S. Morimasa)
- Stability assessment of geogrid reinforced soil wall by using optical fiber sensor (S.Tsuji, K. Yoshida, Y. Yokota & A.Yashima)
- Deformation measurements of test embankments reinforced by geocell (H. Omori, T. Ajiki, M. Okuyama, K. Yazawa, K. Kaneko, K. Kumagai & M. Horie)
- Full-scale experiments on bend of pressure pipeline using geogrid (Y. Sawada, T. Kawabata, K. Uchida, A. Totsugi & J. Hironaka)
- Simplified design method for reinforced slopes considering progressive failure (J.C. Jiang, T. Yamagami & S. Yamabe)

Physical modeling

- Steep slope reinforcement with geogrids- deformation behaviour under static & cyclic loading (G. Heerten & J. Klompmaier)
- Behavior of reinforced sand: effect of triaxial compression testing factors (I.N. Markou & A.I. Droudakis)
- Centrifuge model tests of static and dynamic behavior of multi-anchored sea revetment (Y. Kikuchi & M. Kitazume)
- Surface holding conditions of reinforced slope and slope stability (Y. Nabeshima & S. Kigoshi)
- Stability analyses of nailed sand slope with facing (C.C. Huang, W.C. Lin, N. Mikami, K. Okazaki, D. Hirakawa & F. Tatsuoka)
- Effect of facing rigidity on the stability of nailed sand slope in model tests (N. Mikami, K. Okazaki, D. Hirawakawa, F. Tatsuoka & C.C. Huang)
- The effect of inclination of reinforcement on the horizontal bearing capacity of the ground reinforcing type foundation (J. Izawa, H. Kusaka, M. Ueno, N. Nakanani, H. Sato & J. Kuwano)
- Visualization of failure pattern of reinforced soil with face bolts on direct shear tests (D. Takano, J. Otani, T. Mukunoki & N. Lenoir)
- Improvement in bearing capacity of shallow improvement ground by mixing short fibers (H. Matsui, H. Ochiai, K. Omine, N. Yasufuku, T. Kobayashi & R. Ishikura)
- Fundamental mechanical properties of geocell reinforced sands (K. Yazawa, T. Ajiki, H. Ohmori, K. Kaneko & K. Kumagai)
- Experimental study on bearing capacity of geocell-reinforced soil (T. Ajiki, H. Ohmori, K. Yazawa, K. Kaneko & K. Kumagai)
- Effect of soil dilation on performance of geocell reinforced sand beds (S.K. Dash)
- Laboratory investigation into effectiveness of thixotropic gel compaction method (A.M. El-Kelesh, K. Tokida, T. Oyama & S. Shimada)
- Deformation behaviour of clay cap liners of landfills from centrifuge and full-scale tests- influence of reinforcement inclusion (J.P. Gourc, S. Camp, B.V.S. Viswanadham & S. Rajesh)
- Geosynthetic liners on landfill cover slope: possible reinforcement of the stability of veneer soil layer (J.P. Gourc & H. N. Pitanga)

Combined technology

- Mechanism of reinforcement using soil nails, rope nets for slope stability (H. Kimura & T. Okimura)
- Development of rational design method for the geogrid reinforced soil wall combined with soil cement and its application (H. Ito, T. Saito, M.Ueno, J. Izawa & J. Kuwano)
- Effect evaluation for the geocomposite reinforced embankment of cohesive soil (Y. Tanabashi, Y.Jiang, S. Sugimoto, R. Katoh & K. Tsuji)
- Toughness improvement of hybrid sandwiched foundations and embankment reinforced with geosynthetics (S. Yamazaki, K. Yasuhara, S. Murakami, & H. Komine)
- Electrokinetic soil nailing for the strengthening or repair of failures of clay slopes and cuttings (J. Lamont-Black, D. Huntley, C.J.F.P. Jones, S. Glendinning & J. Hall)
- Stability analysis of a new type of reinforced earth slope (Y. Yokota, K. Arai, S. Tsuji & H. Ohta)
- Pullout resistance of strip embedded in cement-treated soil layer for reinforced soil walls (M. Suzuki, Y. Tasaka, O. Yoneda, A. Kubota & T. Yamamoto)
- Design and construction of a composite nailed and mechanically stabilized embankment structure across a talus slope (T. Bergmann & A.C.S. Smith)
- Shaking table model tests on retaining walls reinforced with soil nailings (S. Nakajima, J. Koseki, K. Watanabe & M. Tateyama)
- Geogrid reinforcement for cement stabilized soil (Y. Miyata, S. Shigehisa & K. Okuda)
- Bending tests on a beam of grid-reinforced and cement-mixed well-graded gravel (T. Uchimura, Y. Kuramochi & T.T. Bach)
- Support of MSE walls and reinforced embankments using ground improvement (F. Masse, S. Pearlman & R.A. Bloomfield)
- Two geogrid-reinforced steep slopes as combined structures on columns and piles: case histories (D. Alexiew, S. Jossifowa & H. Hangen)
- Reinforced soil wall and approach embankment for Cliff Street overpass constructed on stabilized foundations (N. Fok, G. Power & P. Vincent)
- Load transfer mechanism in the reinforced embankment over the pile elements (J. Hironaka, T. Hirai, J. Otani & Y. Watanabe)
- Laboratory test on the performance of geogrid-reinforced and pile-supported embankment (S.L. Shen, Y.J. Du & S. Hayashi)
- Geosynthetic encased stone columns in soft clay (S.R. Lo, J. Mak & R. Zhang)
- FEM analysis of the effect of the prestress induced in micropiles (K. Miura, S. Morimasa, Y. Otani & Y. Tsukada)

Geo-hazards and mitigation

- Earthquake performance of reinforced earth embankment subjected to strong shaking and ground deformations (C.G. Olgun, J.R. Martin II, H.T. Durgunoğlu & T. Karadayılar)
- Study on the performance of a reinforced earth wall during earthquake based on Tottori-ken Seibu earthquake event (K. Watanabe & T. Kumada)
- Rainfall seepage analysis and dynamic response analysis for the railway embankments seriously damaged in the 2004 Niigata-ken Chuetsu earthquake (T. Matsumaru, M. Tateyama, K. Kojima, K. Watanabe, M. Shinoda & M. Ishizuka)
- Seismic stability of reinforced soil structure constructed after the mid Niigata prefecture earthquake (M. Shinoda, K. Watanabe, K. Kojima, M. Tateyama & K. Horii)
- Damage to Terre Armée structures from the Mid-Niigata Earthquake and measures and actions taken to date (H. Nagakura, H. Oota & G. Berard)
- Behaviour of reinforced earth structures founded on soft slit deposit in seismically active hilly terrains (P. Mahajan, S. Biswas & A. Adhikari)
- A new type integral bridge comprising of geosynthetic-reinforced soil walls (F. Tatsuoka, D. Hirakawa, M. Nojiri, H. Aizawa, M. Tateyama & K. Watanabe)
- Effects of the tensile resistance of reinforcement in the backfill on the seismic stability of GRS integral bridge (D. Hirakawa, M. Nojiri, H. Aizawa, H. Nishikiori, F. Tatsuoka, K. Watanabe & M. Tateyama)
- Validation of high seismic stability of a new type integral bridge consisting of geosynthetic-reinforced soil walls (H. Aizawa, M. Nojiri, D. Hirakawa, H. Nishikiori, F. Tatsuoka, M. Tateyama & K. Watanabe)
- Improvement of earthquake resistance by reinforcing toe of embankments (K. Oda, K. Tokida, Y. Egawa & K. Tanimura)
- Shaking table tests on the mechanism to stabilize slopes by steel nails during earthquakes (S. Yasuda, C. Higuchi, C. Ishii & N. Iwasa)
- Shaking table test for lightweight spillway with geogrid (T. Kawabata, K. Uchida, T. Kitano, K. Watanabe & Y. Mohri)
- Shaking table tests on seismic behavior of sand slopes reinforced by carpet strips (H. Shahnazari, A. Fooladi & B. Ghosairi)
- Seismic design of mechanically stabilized wall structures (J.H. Wood, D.E. Asbey-Palmer & C.W. Lawson)
- Physical and numerical modeling of EPS geofoam buffers for seismic load reduction on rigid walls (S. Zarnani & R.J. Bathurst)

- Numerical assessment of the performance of protecting wall against rockfall (E. Sung, A. Yashima, D. Aminata, K. Sugimori, K. Sawada, S. Inoue & Y. Nishida)
- Full-scale tests on a new type of debris flow trapping fence (H. Ohta, K. Kumagai, H. Takahashi, H. Motoe, S. Hirano, Y. Yokota & S. Tsuji)
- Displacement and failure characteristics of model geogrid-reinforced structure subjected to impact load (N. Yasufuku, H. Ochiai, K. Omine, T. Kobayashi & K. Shomura)
- Large-scale overflow failure tests on embankments using soil bags anchored with geosynthetic reinforcements (K. Matsushima, S. Yamazaki, Y. Mohri, T. Hori, M. Ariyoshi & F. Tatsuoka)
- Application of geotextile technology to reduce surface erosion on natural slope (E. Purwanto)



REGISTRATION

Reinstallations are urged to register before Aug. 31, 2006 to obtain the early registration fee.

Registration Fee

Category	Until Aug. 31, 2007	From Sep. 1, 2007
ISSMGE / IGS members	50,000(JPY)	55,000(JPY)
Non-members	55,000(JPY)	60,000(JPY)
Students	25,000(JPY)	30,000(JPY)

Payment

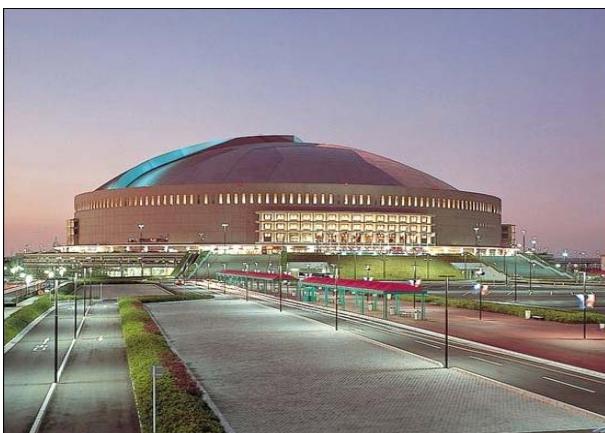
Payment must be made in Japanese yen and can be made in only the credit card (Visa, Master Card, American Express) via website.

Confirmation

Upon receiving the registration from and confirming the payment, the registration office will send you a confirmation e-mail. Please bring this confirmation with you and present it at the registration desk at congress site.

Cancellation of registration fee

We cannot refund you the registration fee after you register with payment.



ACCOMMODATION

Official Travel Agent

Nippon Travel Agency has been appointed as the official travel agent for the symposium and will handle hotel accommodation.

Nippon Travel Agency

Amano (Mr.) / Masuda (Mr.) / Miyaoka (Ms.)

2-2-1,Maizuru,Chuo-ku,
Fukuoka, 810-0073, JAPAN

TEL: +81-92-732-6363 FAX: +81-92-715-2827

E-mail: fukuoka_ec@nta.co.jp

Official Hotel

Nippon Travel Agency has booked rooms at hotels in Fukuoka for the conference period. You can reserve the room via website.

GENERAL INFORMATION

Access to Fukuoka

Fukuoka International Airport (http://www.fuk-ab.co.jp/english/frame_index.html) is one of the most conveniently located airports of Japan. Access to Fukuoka is convenient from Narita (Tokyo), Nagoya, and Kansai (Osaka) International Airports, principal international gateways to Japan. The domestic airlines from Fukuoka extend to 30 cities with approximately 300 flights a day.

Passport and Visa

To visit Japan, you must have a valid passport. A visa is required for citizens of countries that do not have visa-exempt agreements with Japan. Please contact the nearest Japanese Embassy or Consulate for visa requirements.

Climate

The temperature in Fukuoka during the period of the symposium ranges between 10-18 degrees Celsius.

No.	Hotel Name (Check-in & out time)	Room Rates (JPN yen)		Address & Access
		Single	Twin	
1	JAL Resort Sea Hawk Hotel Fukuoka (14:00 / 11:00)	11,000	20,000	2-2-3,Chigohama,Chuo-ku, Fukuoka +81-92-844-8111 10 min. walk to the conference venue
2	Hotel Twins Momochi (15:00 / 10:00)	6,500	---	1-7-4,Momochihama,Sawara-ku,Fukuoka +81-92-852-4800 10 min. walk to the conference venue
3	Hakata Green Hotel Tenjin (13:00 / 12:00)	6,930	---	2-9-11,Daimyo,Chuo-ku,Fukuoka +81-92-722-3636 3 min. walk to Akasaka Sta.
4	Hakata Green Hotel (12:00 / 12:00)	6,930	---	3-11 Hakataeki-Chuogai, Hakata-ku, Fukuoka +81-92-451-4111 1 min. walk to JR Hakata Sta.

TRAFFIC INFORMATION

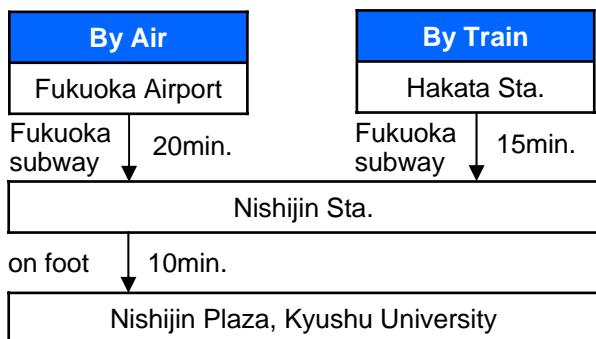
<http://subway.city.fukuoka.jp/eng/index.html>

From Fukuoka Airport by subway

Take the subway to go to Meinohama. 9th station from the Fukuoka airport is Nishijin station.

From Hakata Station by subway

Take the subway to go to Meinohama. 7th station from the Fukuoka airport is Nishijin station.



MAP OF FUKUOKA CITY

