

Preface

Earth reinforcing techniques are increasingly becoming a useful, powerful and economical solution to various problems encountered in geotechnical engineering practice. Expansion of the experiences and knowledge in this area has succeeded in developing new techniques and their applications to geotechnical engineering problems. In order to discuss the latest experiences and knowledge, and with the purpose of spreading them all over the world for further development, the IS Kyushu conference series on the subject of earth reinforcement have been held in Fukuoka, Japan, every four years since 1988. The symposia were titled "Theory and Practice of Earth Reinforcement" for the first one in 1988, "Earth Reinforcement Practice" for the second one in 1992 and "Earth Reinforcement" for the third one in 1996. They have provided successful contributions towards the development of the earth reinforcement practice.

This fourth symposium, entitled "Landmarks in Earth Reinforcement", is a continuation of the series of IS Kyushu conferences, and also aims at being one of the landmarks in the progress of the modern earth reinforcement practice. With this objective, one special lecture and five keynote lectures are arranged to deliver by internationally distinguished scholars, in addition to the presentations of the papers accepted for the symposium. A total of 212 abstracts from 32 countries were submitted for this symposium. The Scientific Committee carefully reviewed both the abstracts and full-length papers, and finally selected 137 papers for presentation during the symposium, some in technical sessions for oral presentations, and the rests in poster sessions. They were included in Volume 1 of the proceedings.

The special session on "Soil Nailing" and the summary discussion session on "Design Procedure" have also been organized to summarize the results of fundamental and practical aspects on these areas developed in the recent years. These valuable reports will be included in Volume 2 of the proceedings to be published after the symposium.

In the activities of the technical committees (TC) of the International Society for Soil Mechanics and Geotechnical Engineering (ISSMGE), the TC-9 covers the professional area on the subjects of geosynthetics and its applications to geotechnical engineering, and it had been called "Geotextiles and Geosynthetics" until 1997. But it was renamed as "Geosynthetics and Earth Reinforcement" in order to match the activities that are expected to develop in the future. This was due to the great successes of the previous IS Kyushu conferences. The report of TC-9 activities during the period of 1997-2001 will be included in Volume 2 of the proceedings.

This symposium is being held under the joint-auspices of the Japanese Geotechnical Society (JGS) and the TC-9 of ISSMGE, and is being supported by the International Geosynthetics Society (IGS) and the Japan Society of Civil Engineers (JSCE). We would like to express our sincere gratitude to the members of the International Advisory Group for their encouragement and support to the symposium.

It is our hope that this symposium will stand out as one of the notable landmarks in the progress of the modern earth reinforcement practice.

Hidetoshi Ochiai
Chairman of IS Kyushu 2001

ORGANIZATION

SYMPOSIUM COMMITTEE OF IS KYUSHU 2001

Prof. H.Ochiai (Chairman)	Dr. K.Matsui
Prof. S.Hayashi (Co-Chairman)	Prof. Y.Mitani
Prof. J.Otani*(Secretary General)	Dr. Y.Miyata
Prof. G.Chen	Prof. N.Nagase
Prof. T.Esaki	Prof. M.Ohtsubo
Mr. T.Fujii	Dr. K.Omine
Dr. N.Fukuda	Mr. Y.Saito
Dr. H.Hazarika	Prof. K.Sato
Prof. A.Hiro-oka	Mr. T.Sekiguchi
Dr. H.Imanishi	Prof. Y.Tanabashi
Prof. Y.Jiang	Mr. T.Tashima*
Mr. K.Kasama	Dr. H.Yakabe
Prof. S.Kato	Prof. A.Yashima
Mr. S.Kidera	Prof. N.Yasufuku*
Prof. R.Kitamura	Prof. H.Yokota
Dr. N.Kotake	Prof. K.Zen
Prof. T.Koumoto	
Prof. J.Kuwano	
Prof. Y.Maeda	

*Division Head

SCIENTIFIC COMMITTEE OF IS KYUSHU 2001

Prof. H.Ochiai (Chairman)
Prof. S.Hayashi (Co-Chairman)
Prof. J.Otani*(Secretary General)
Prof. G.Chen
Prof. T.Esaki
Mr. T.Fujii
Dr. N.Fukuda
Dr. H.Hazarika
Prof. A.Hiro-oka
Dr. H.Imanishi
Prof. Y.Jiang
Mr. K.Kasama
Prof. S.Kato
Mr. S.Kidera
Prof. R.Kitamura
Dr. N.Kotake
Prof. T.Koumoto
Prof. J.Kuwano
Prof. Y.Maeda

Dr. K.Matsui
Prof. Y.Mitani
Dr. Y.Miyata
Prof. N.Nagase
Prof. M.Ohtsubo
Dr. K.Omine
Mr. Y.Saito
Prof. K.Sato
Mr. T.Sekiguchi
Prof. Y.Tanabashi
Mr. T.Tashima*
Dr. H.Yakabe
Prof. A.Yashima
Prof. N.Yasufuku*
Prof. H.Yokota
Prof. K.Zen

*Division Head

INTERNATIONAL ADVISORY GROUP OF IS KYUSHU 2001

Prof. T.Akagi (Japan)
Prof. A.S.Balasubramaniam (Thailand)
Prof. R.J.Bathurst (Canada)
Prof. M.Bouassida (Tunisia)
Prof. F.Bucher (Switzerland)
Prof. A.Cancelli (Italy)
Ing. D.Cazzuffi (Italy)
Mr. R.K.S.Chan (Hong Kong, China)
Prof. H.S.Chung (South Korea)
Prof. E.Dembicki (Poland)
Prof. R.Floss (Germany)
Dr. A.Fourie (South Africa)
Dr. E.Gartung (Germany)
Dr. R.Gnanendran (Australia)
Prof. J.P.Gourc (France)
Prof. E.F.Guler (Turkey)
Prof. C.J.F.P.Jones (U.K.)
Prof. M.H.Kabir (Bangladesh)

Prof. G.P.Karunaratne (Singapore)
Prof. S.K.Kim (South Korea)
Prof. R.M.Koerner (USA)
Dr. C.R.Lawson (Malaysia)
Ir. C.Legrand (Belgium)
Prof. D.Leshchinsky (USA)
Prof. G.X.Li (China)
Prof. M.R.Madhav (India)
Prof. A.McGown (U.K.)
Dr. Z.C.Moh (Taiwan R.O.C.)
Prof. H.Ohta (Japan)
Prof. E.M.Palmeira (Brazil)
Prof. R.K.Rowe (Canada)
Prof. J.Sun (China)
Dr. F.Schlosser (France)
Prof. F.Tatsuoka (Japan)
Ir. W.Voskamp (The Netherlands)

ISSMGE/TC-9 (GEOSYNTHETICS AND EARTH REINFORCEMENT)

CHAIRMAN

Prof. H.Ochiai (Japan)

SECRETARY

Prof. J.Otani (Japan)

CORE MEMBERS:

Prof. J.P.Gourc (France)

Prof. J.Kuwano (Japan)

Mr. C.R.Lawson (Malaysia)

Prof. D.Leshchinsky (USA)

Prof. R.K.Rowe (Canada)

MEMBERS:

Dr. M.Abramento (Brazil)

Dr. D.K.Atmatzidis (Greece)

Dr. M.Bouassida (Tunisia)

Prof. A.Cancelli (Italy)

Ing. D.A.Cazzuffi (Italy)

Dr. S.D.Cho (Korea)

Dr. P.Delmas (France)

Prof. E.Dembicki (Poland)

Mr. G.Didier (France)

KProf. R.Floss (Germany)

Dr. C.T.Gnanendran (Australia)

Prof. E.F.Guler (Turkey)

Prof. M.R.Hausmann (Australia)

Dr. G.Heerten (Germany)

Dr. S.Hermann (Norway)

Prof. C.J.F.P.Jones (UK)

Mr.C. Legrand (Belgium)

Dr. M.D.G.A.Lopes (Portugal)

Dr. M.Matys (Slovak Republic)

Dr. O.Murata (Japan)

Prof. E.M.Palmeira (Brazil)

Prof. L.Paredes (Chile)

Dr. S.Paskauskas (Lithuania)

Prof. G.V.Rao (India)

Ms.Y.Rogbeck (Sweden)

Prof. L.M.Timofeeva (Russia)

Dr. S.Uriel (Spain)

Mr. W.Voskamp (Netherlands)

Dr. A.Watn (Norway)

Dr. K.C.Yeo (Hong Kong)

Prof. J.G.Zornberg (U.S.A.)

ISSMGE/TC-9 SUPPORTING COMMITTEE OF THE JAPANESE GEOTECHNICAL SOCIETY

CHAIRMAN

Prof. H.Ochiai

TC9 MEMBERS:

Prof. J.Otani

Prof. J.Kuwano

Dr. O.Murata

MEMBERS:

Dr. H.Abe

Dr. N.Fukuda

Prof. S.Hayashi

Dr. T.Hirai

Dr. M.Hirata

Prof. S.Imaizumi

Mr. K.Kojima

Prof. K.Kumagai

Prof. K.Makiuchi

Dr. H.Miki

Dr. Y.Miyata

Mr. H.Miyatake

Mr. K.Nakamura

Dr. J.Nishimura

Mr. K.Ogata

Dr. E.Ogisako

Mr. Y.Otani

Prof. T.Shimaoka

Dr. S.Tayama

Dr. T.Uchimura

Mr. A.Yamamoto

Prof. A.Yashima

Mr. Y.Yokota