

## Opening ceremony

Prof. Hidetoshi Ochiai  
(*Chairman of IS Kyushu '92*)

Good Morning, Ladies and Gentlemen. It is my great honor and pleasure, as the chairman of the symposium committee, to declare the opening of the International Symposium on Earth Reinforcement Practice. Earth reinforcement is a useful and economical technique to solve many problems in geotechnical engineering.

Recent expansion of knowledge in this area has promoted increasingly both fundamental and practical studies, as well as the development of various types of reinforcing materials. And it succeeds in developing new techniques and their applications to geotechnical engineering problems. So, it is a great advantage to us to integrate the latest information on earth reinforcement and to offer an opportunity for scholars and engineers to talk about their experiences and knowledge.

"IS Kyushu " is the short name for the International Symposium on "Earth Reinforcement" to be held here in Kyushu, Japan. Four years ago, in 1988, the first symposium was held under leadership of Professor Yamanouchi and it provided successful contributions for the development of earth reinforcement. This second symposium is a continuation and expansion of the first one. In this symposium, one special and five keynote lectures are delivered by six internationally distinguished scholars in this area. And 126 papers submitted from 25 countries are

presented in technical or poster sessions during the symposium. I am sure that the presentations and discussions for these papers as well as special and keynote lectures will be great help for further promotion of earth reinforcement.

The symposium is held under the auspices of the Japanese Society of Soil Mechanics and Foundation Engineering, and is supported by the Japan Society of Civil Engineers and the International Geotextile Society. I would like to express my sincere gratitude to these societies for their encouragement and support to the symposium.

Finally, there are 390 participants attended here for the symposium, including about 80 overseas participants. On behalf of the symposium committee, I would like to extend a hearty welcome to all of you.

Thank you.

Prof. Koichi Akai  
(*President of the Japanese Society of Soil Mechanics and Foundation Engineering*)

Good morning, distinguished guests, my dear colleagues, ladies and gentlemen.

The Japanese Society of Soil Mechanics and Foundation Engineering has 8 chapters besides Tokyo Metropolis area. Among them, Kyushu Chapter which was founded in 1956 is one of the oldest ones and has been performed the most remarkable activities in the field of geotechnique in Japan.

The first international symposium entitled "Theory and Practice of Earth Reinforcement" was held in 1988 in this city of Fukuoka with a lot of participants. Today's meeting "IS Kyushu '92" is its continuation and expansion. Earth reinforcing techniques have become a useful and economical solution to many problems in geotechnical engineering practice, such as improvement of soft ground, stabilization of slopes, reduction of earth pressure and so on. New techniques for earth reinforcement and their applications to geotechnical engineering practice are developing rapidly. It is hoped that this symposium will be in full success in the sense that various problems and topics on the subject are discussed broadly and frankly with each other in order to collect and exchange new knowledges in this field.

On behalf of the Japanese Society of Soil Mechanics and Foundation Engineering, I would like to express my great esteem for Professor Ochiai, Chairman of the symposium, and their committee members who have devoted their effort to arrangement of this International Symposium. In addition, I am much obliged to the International Geotextile Society and the Japan Society of Civil Engineers who kindly support this Symposium.

Four years ago, I attended the first international symposium on Earth Reinforcement held in this city, which was organized by Professor Yamanouchi, Professor Miura and Professor Ochiai.

As all of you well know, Kyushu is situated at the west end of Japan Islands. And it is also believed that the ancient culture of Japan was transported from Chinese Continental or Korean Peninsula which are very close to this island. Today we have a rush of protection or preservation of ancient ruins in this country from the environmental point of view. Here in northern Kyushu there are many famous ruins, most of which are needed to be protected by a technique of earth reinforcement. In such a meaning, the international symposium is appropriately set up in this district of Japan. I hope that you have a good

chance to contact with such ancient Japanese cultures and enjoy yourself during and after this symposium. Thanks for your kind attention.

Prof. Toshinobu Akagi

*(Representative of Japan Society of Civil Engineers)*

Good morning , Ladies and Gentlemen. I am Professor Akagi of Toyo University. Currently I serve as Chairman of the Committee on Earth Structures and Foundations for the Japan Society of Civil Engineers. JSCE President, Mr. Toshio Fujii asked me to relay his heartfelt greetings welcoming all the participants of IS Kyushu '92. He also wanted me to express our strong interest in the recent developments of the reinforced earth as well as rapidly increasing use of geosynthetics in various civil engineering projects.

We, civil engineers, have long been familiar with the idea of reinforcing concrete with steel bars. Why not reinforce and improve soil with something strong and durable enough to make it a better construction material. The idea is not new and the origin of it is often traced back several decades. Personally, however, I believe dogmatically that the origin could be traced back a little further. I recall an old story told when I was a little boy and I am sure many of you in this hall have the same recollection.

In the old days of London or somewhere when many streets were not even paved, a beautiful young princess was ready to step out of her beautifully decorated coach and four, but she could not because there was a muddy spot in front of her and there seemed no way to avoid it. After moments of hesitation, however, she found suddenly a gorgeous mantle thrown and spread out covering the muddy spot and a handsome young man standing beside it extending his hand ever so gracefully to help her get off the coach. Now the beautiful young princess stood elegantly and proudly on the young man's mantle with her feet and shoes unspotted and of

course with no sliding, no dirty leachate seeping out around her, no bearing capacity failure taking place beneath her. The legend has it that it was this young lady who later became Queen Elizabeth I. Should it be the case, the first successful application of geotextile dates back to an old era roughly 450 years ago. The legend does not say if the handsome young man was indeed a civil engineer, but in any event the material he used was so expensive it did not attain a wide spread use up until 20 or 30 years ago when abundant good-quality petrochemical synthetics became available at reasonable prices.

Thus the origin of the geotextile involves such a romantic ambition of a daring young mind it comes as no surprise to see ever-expanding, eye-opening applications of a great variety of geosynthetics to civil engineering problems which were once considered just impossible.

Just a few minutes before I came up to this podium Professor Ohta told me my speech should not exceed 4 minutes and I realize I am quickly running out of time, so let me reiterate the wishes from JSCE that you will have an exciting and rewarding symposium, IS Kyushu '92. Very best wishes to all of you from the 35,000 members of the Japan Society of Civil Engineers.

Thank you for your kind attention.

## Closing ceremony

Prof. R.Kerry Rowe  
(*President of International Geotextile Society*)

Mr. Chairman, Ladies and Gentlemen. It is a very great pleasure to have this opportunity to present some closing remarks as president of the IGS.

This conference has focussed on many different types of materials including traditional woven and nonwoven geotextiles, geogrids, steel strips and meshes, and soil nails. We have also seen discussion of geotextiles constructed from both natural and synthetic fibers.

The IGS, the International Geotextile Society, is a professional society dedicated to the scientific and engineering development of geotextiles, geomembranes, related products and associated technologies. It includes all of the things we have been discussing at this conference. Two of the objectives of the IGS are to promote the exchange of knowledge through seminars, symposia and conferences, and to promote an understanding of the appropriate use of geotextiles, geomembranes and related products. Thus we are delighted to co-operate with other professional societies such as the JSSMFE to support the promotion of conferences such as this. Of course reinforcement, although important, is only one of many possible applications for geosynthetics and related materials. These materials provide a very cost effective means of solving many engineering problems and the task of education and communication is a large one.

As a consequence, the IGS is growing quickly by 20% in 1992 and is developing local chapters so as to provide local activities. We currently have nine chapters-China, Indonesia, India, Italy, Japan, North America, the Netherlands, South East Asia and the United Kingdom and I am optimistic that by next year we will also see chapters in France, Germany and Korea. The chapters play a very important role in our society. For example, our Japanese Chapter, under the excellent leadership of Professor Fukuoka, has been very active and indeed next Monday will be organizing a seminar in Tokyo which, in addition to soil reinforcement, will deal with geoenvironmental engineering and dams. The South East Asian Chapter of IGS under the leader of Professor Ramaswamy, is hosting the 5th International Conference on Geotextiles, Geomembranes and Related Products to be held in Singapore, in September of 1994.

Turning to this conference, I must say that I have been impressed by the quality of many of the papers. The tone was set by Professor Yamanouchi with his excellent historical review. I think that I can say that the keynote lecturers have worked very hard to produce a group of lectures which will provide useful reference for the future-however the real key to the success of a conference such as this is the quality of the individual papers whether they be presented in one of the formal sessions or in a poster session. I would very much like to congratulate all of you who have prepared papers for this

conference. It is through your efforts that our discipline will advance. Of course, not all authors will agree on some points and there is much that we can learn from soundly based technical discussions and arguments. However we must also be very careful to ensure that these differences of opinion are not misused to discredit materials for commercial reasons. Being in the geo business, we should know better than anyone that those who throw mud will be left with it on their own hands and face.

I would like to conclude my comments by expressing our appreciation to the JSSMFE under whose auspices this conference was held and to Professor Ochiai and the organizers of IS Kyushu '92 for an excellent conference. The organization has been perfect, and anybody who has been involved in organizing a conference knows how very much hard work goes into such a successful conference as this. The hospitality has also been wonderful and I would like to extend thanks to Professors Ochiai, Yamanouchi and Fukuoka. One person who is often neglected is the wife of the chairman, and I would like to extend a special thanks to Mrs. Ochiai because I am sure she missed a great deal due to the efforts involved in organizing this symposium.

Soil Reinforcement is a very important issue worldwide and has very special significance in Japan and other parts of Asia. I am delighted to see the rapidly increasing applications for geosynthetics including both natural and synthetic fibers and related products for use in soil reinforcement. All these materials have a place and it is for the design engineer to choose the most cost effective, suitable product for any given application. I am sure that the work presented at this conference will be of considerable assistance in advancing the appropriate use of these materials in soil reinforcement. And so to conclude, I wish you all a safe trip back home and look forward to seeing you in Singapore in September of 1994.

Prof. Shigenori Hayashi  
(*Chairman of Technical Committee, IS Kyushu '92*)

Thank you Mr. Chairman, Ladies and Gentlemen. First of all, I wish to express my appreciation to Professor Kerry Rowe for his excellent closing remarks.

In closing this International Symposium on Earth Reinforcement Practice, IS Kyushu '92, on behalf of all the members of our Symposium Committee, I wish to thank all the special and keynote lecturers, chairmen, discussion leaders, speakers, poster presenters and other participants for their valuable contributions and their active cooperations. Without such help it would have been impossible to organize the Symposium and bring it to a successful conclusion.

I had the good fortune of getting to know personally many of the active and experienced workers in this field. I now extend best wishes to all of you as you return home and to work, and I look forward to seeing you again.

I now have the duty and the honor to declare the International Symposium on Earth Reinforcement Practice, IS Kyushu '92, officially closed.

Thank you.