

IGS NEWS



NEWSLETTER OF THE INTERNATIONAL GEOSYNTHETICS SOCIETY

Dedicated to the scientific and engineering development of geotextiles, geomembranes, related products, and associated technologies

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IGS Communications Systems Natural Disasters, Conferences, and Networking

by Daniele Cazzuffi, IGS President

IGS Communications Systems

The IGS celebrated its 20th anniversary in November 2003, while *IGS News* will reach its 20th year of publication in June 2005! During these past 20 years, methods of communication worldwide have changed dramatically, from telex to fax, to current-day Internet and e-mail.

Accordingly, the IGS and *IGS News* will follow this evolution: the July 2005 issue of *IGS News* will be the last issue to be printed and mailed to IGS Members.

From the November 2005 issue and onward, the Newsletter will only be available on the IGS web site; every IGS Member (both corporate and individual) and Chapter will be able to print and circulate the issues.

A specific page of the IGS web site, which will only be available to IGS

Members, will be developed. On this web page, the most relevant key membership benefits will be available.

The results of the last IGS postal ballot were in alignment with this “electronic” trend. In fact, IGS Members, almost unanimously, decided to adopt an electronic balloting system for future voting occasions (see the November 2004 issue of *IGS News*). The first electronic ballot will be in 2006 for the election of the new IGS President, Vice-President, and eight Council Member positions.

In the meantime, Members should have received, through the national chapters, the CD containing the new fully searchable 2005 IGS Membership Directory. Users will be able to search for IGS Members based on either their country, or one of many selection criteria, including family

name, company name, etc.

The topic of communications are not only limited to the Newsletter, postal or electronic ballots, and the membership directory, but also to scientific exchange within the entire geosynthetics community and with the experts of other related disciplines, such as geotechnical, environmental, and civil engineering. In this regard, the IGS is particularly proud to have signed agreements with the publishers Thomas Telford and Elsevier, to have both official IGS journals, *Geosynthetics International* and *Geotextiles and Geomembranes*, respectively, available free in electronic format to IGS Members (corporate and individual).

Free electronic access to these journals represents a tremendous benefit for all our membership, as already emphasised by several IGS Chapters around

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IGS MEMBERSHIP REQUIRES ELECTRONIC COMMUNICATION – PLEASE ENSURE WE HAVE YOUR E-MAIL ADDRESS

Visit the IGS WWW site: www.geosyntheticssociety.org

the world. Moreover, the scientific excellence of both journals is becoming more recognised; the latest statistics confirmed that both *Geosynthetics International* and *Geotextiles and Geomembranes* are ranked amongst the top six journals in the civil engineering, with regard to “impact factor,” even ahead of very authoritative journals, such as *Geotechnique*. These statistics confirm that geosynthetics engineering maintains and refines its own tradition and reputation as a respected scientific discipline, always open to new contributions of ideas, both in terms of developing new products and new technologies, as well in terms of finding new fields of application.

Natural Disasters

Geosynthetics engineering can provide rapid, economic, and reliable rehabilitation solutions to areas that have experienced severe acts of nature, for example earthquakes. In this issue, to demonstrate the link between geohazards mitigation and rehabilitation, we include an article by IGS Vice-President, Fumio Tatsuoka, dealing with the rapid remedial works using geosynthetics in Japan, after the Niigata Chu-etsu earthquake of October 2004 (see page 11).

I am confident that geosynthetics engineering will help in the reconstruction of devastated areas surrounding the Indian Ocean after the Tsunami event of 26 December 2004. Geosynthetics can be widely used for the rehabilitation of seriously damaged coastal structures. Less than one month after the Tsunami, the IGS Council met in Austin, Texas (during the *Geo-Frontiers 2005* conference in January 2005), and unanimously decided to create a Tsunami Task Force under the coordination of IGS Council Member Mike Sadlier. For more information, see page 6 of this issue and continually updated information on the activities of the Task Force on the IGS website.

On that note, we welcome and encourage all professionals in the geosynthetics profession (manufacturers, distributors, designers, owners, contractors, controllers, etc.) to submit articles, i.e., case histories, on rebuilding Tsunami-devastated areas using geosynthetics. If you have a potential article on this subject, you are invited to contact Karina McInnis, Editor of *IGS News* for more information. The goal is to publish several articles on this issue starting with the July 2005 issue.

During the IGS Council Meeting in Austin, several other important decisions related to the IGS were made; for details, please refer to the article by IGS Secretary, Pete Stevenson, below.

Conferences and Networking

Speaking of the *Geo-Frontiers 2005* Conference – it was an outstanding success with approximately 2000 attendees and 130 exhibitors! The Conference was organised by the Geo-Institute of ASCE and by the Geosynthetics Material Association of IFAI, under the auspices of the IGS (also together with its North American Chapter, NAGS) and the International Society for Soil Mechanics and Geotechnical Engineering (ISSMGE). A special report on *Geo-Frontiers 2005* by *IGS News* Editor Karina McInnis, can be found on page 8 of this issue.

I take this opportunity to remind you about the conferences and workshops to be held in 2005 and 2006 under the auspices, or with the support, of the IGS. In chronological order, the first will be the *International Workshop Hydro-Physico-Mechanics of Landfills* to be held in Grenoble, France, on 21 and 22 March 2005. The Workshop Chair is Prof. Jean-Pierre Gourc, *IGS News* Associate Editor for Europe.

In the geo-environmental field, both the *Tenth International Waste Management and Landfill Symposium – Sar-*

dinia 2005 (S. Margherita di Pula, Sardinia, Italy, 3-7 October 2005) and the *Fifth International Congress on Environmental Geotechnics* (Cardiff, Wales, UK, 26-30 June 2006) will be held under the auspices of the IGS.

On 6 and 7 December 2005, the *International Symposium on Tsunami Reconstruction with Geosynthetics* (Protection, Mitigation and Rehabilitation of Coastal and Waterway Erosion Control) will be held with the support of IGS at the AIT Campus in Bangkok, Thailand.

As far as conferences are concerned, all of our efforts should converge on the next *International Conference on Geosynthetics*, i.e., the *8ICG*, to be held in Yokohama, Japan, from 18 to 22 September 2006. The call for papers is now open: *the deadline for receiving abstracts is 31 March 2005*. There is little flexibility in this deadline because the International Paper Selection Committee meeting for the *8ICG* is scheduled for early May 2005.

I invite every IGS Member (either corporate or individual) to send at least one abstract to this very important conference, in our field, which takes place every four years. I am confident that the Japan Chapter of the IGS (JC-IGS) will organise the *8ICG* in Yokohama in such a wonderful way that this event will represent a milestone for all our future International Conferences on Geosynthetics.

Even in the Internet era, I am deeply convinced of the importance of direct personal interactions and networking. Therefore, I hope to see most of you (both corporate and individual members) in Yokohama in September 2006, not only to be updated on the latest technical developments of geosynthetics engineering, but also to strengthen the human relationships among professionals in this very interesting and stimulating field.

IGS Council Meeting Minutes Summary (January 2005)

The IGS Council met in January 2005 in Austin, Texas, USA, during the *Geo-Frontiers 2005* conference. Present for the three days

of meetings were D. Cazzuffi, President, F. Tatsuoka, Vice-President, R. Bathurst, Past President, W. Voskamp, Treasurer, P. Stevenson, Secretary, and

Council Members, M. Bouazza, G. Bräu, J. Cowland, P. Fantini, M. Kamon, M. Maugeri, H. Miki, B. Myles, E. Palmeira, M. Sadlier, E.C.

Shin, and J. Zornberg. Regrets were received from Council Member, D. Haloran, who is leaving industry due to family commitments. Elizabeth Peggs was co-opted and attended the 23 January meeting from noon to closing. Also attending was R. Stevenson, Manager, IGS Secretariat.

Under the subject of *Matters Arising*, President D. Cazzuffi relayed a UK Chapter update; this chapter is growing in membership, which is attributed to the expansion of Member's benefits, i.e., the free electronic copies of *Geosynthetics International* and *Geotextiles & Geomembranes*. In addition, the *IGS Handbook* is due for editing and revision. The *Handbook* is a compilation of IGS policies (e.g., IGS bylaws, policies for organising conferences and elections, etc.).

In the *Secretaries Report*, it was noted that J.P. Giroud is appointed the *2005-2006 Mercer Lecture*. The provisional title of his presentation will be "Contribution of Geosynthetics to Waste and Liquid Containment." Venues for two lectures were agreed upon, *16th International Conference on Soil Mechanics and Geotechnical Engineering* (ICSMGE) Osaka, Japan, September 2005 and the *Tenth International Conference on Waste Management and Landfills*, Sardinia, Italy, October 2005. The venue for the third presentation is under discussion.

The *8th International Conference on Geosynthetics (8ICG)* in Yokohama, Japan, could have as many as **25 IGS Student Award** winners in attendance (\$1,000/student, for a total of \$25,000), which is a significant IGS budget item. A key challenge is to assist the students and the Chapters in maximising the spending power of this \$1,000 award, e.g., the Japan Chapter has been encouraged to assist in locating inexpensive accommodations.

The IGS has received requests by different organisations/web sites for permission to **reproduce IGS docu-**

The recent bylaws ballot for 2004 resulted in unanimous approval to shift to *electronic balloting and communication*. **Please ensure we have your e-mail address.** 263 ballots were cast, of which, 26 were corporate and 237 individual. Seven ballots were spoiled resulting in 256 valid ballots.

ments, e.g., articles published in *IGS News*. It is proposed that the IGS adopt a policy whereby the IGS retains the intellectual rights to the document, while the reproduced contribution belongs to the organisation.

The IGS will retain the original document on the IGS web site and create a link to the reproduced contributions on the other web site.

The **first call for nominations for the 2002 to 2006 IGS Awards** will appear in the March 2005 issue of the *IGS News* with subsequent reminders in the July 2005 and November 2005 issues. The award nomination deadline is 31 January 2006. For more details, see page 5.

The **2006 IGS Election** for President, Vice-President, and eight Council Members will be the first electronic ballot. It is noted that electronic ballots will change the process, i.e., no floor nominations are possible, and no "write ins" are possible as in general assembly elections. For more details, see page 4.

The CD version of the **IGS Directory 2005** has been distributed to the Membership through all IGS chapters and is considered to be much improved with the inclusion of a search engine. The general and historic information on the CD is a mirror image of the information presented on the IGS website.

The **IGS Website** receives 2000 to 3000 visits per week, with *Geosynthetics International*, *Geotextiles & Geomembranes*, and the corporate web pages receiving the highest activity (note that there are web links to all Corporate Members' web pages). A visit is defined as logging on and use of the site as opposed to a hit, which is not necessarily related to use.

The **Corporate Committee** discussed Corporate Members' requirements at exhibitions and the results of exhibitions associated with IGS events.

An ongoing dialogue was initiated with members of the **European Activities Committee** (EAC) to meet in Vienna in February 2005 at the *Austrian Geotechnical Conference* (see page 10). EAC Chair and IGS

The July 2005 issue will mark the **20th anniversary of the IGS News!** At the recommendation of the **Communication Committee**, the mode of distribution of the *IGS News* will shift solely to the IGS web site by the November 2005 issue. Thus, the March and July 2005 issues will be the last issues distributed by mail. Electronic publication of *IGS News* will be a major cost savings for the IGS.

Council Member, Gerhard Bräu, was invited to the European Association of Geosynthetic Manufacturers meeting in April 2005.

The **Education Committee** has developed six geosynthetics "how to" pamphlets for electronic distribution (geosynthetics in pavement engineering, landfills, hydraulic structures, erosion control, embankments on soft soils, and drainage and filtration), and six more are planned. In addition to posting the brochures on the web site, Chapters can translate the documents and distribute or reproduce them.

The **Strategy Committee** addressed the issue of how the IGS could provide assistance to those areas affected by the December 2004 Tsunami. The concept is for the IGS to serve as a referral interface connecting people that require expertise/products for rapid construction of temporary and permanent structures using geosynthetics to people with resources or vice versa. For more details, see page 6.

The review of the proposal to **restructure the IGS**, and the subsequent survey of the Council Members, resulted in broad support for the current system in which Individual Members cast a vote for the President, Vice-President, and Council Members. There was general consensus that the Treasurer and the Secretary should continue to be elected from the Council by the Council and that Regional conferences should continue to be selected by regional committees. The international venue for the quadrennial International Conference on Geosynthetics should continue to be selected by Council and confirmed by the Membership as is currently practiced. Finally, the Council agreed with and supported the postal ballot results on shifting the voting system from both general assembly and postal ballots to electronic ballots.

Are you an "IGS Pioneer"?

If you attended all seven international conferences dedicated to geosynthetics and plan to attend the 8/ICG in Yokohama, Japan, please contact the IGS Secretary at IGSsec@aol.com.

Technical Committee: Nine people participated in the review of the proposed document on specifications and support the objectives as stated, which are to provide generic guidance to those writing specifications and to provide information to those who use specifications. The fundamental concept is to provide appendices representing proven specifications from established authorities from all around the world.

International Liaison Committee: President D. Cazzuffi reported that the World Road Association (PIARC) has not responded to IGS overtures of cooperation by Philippe Delmas. Concerning the International Commission on Large Dams (ICOLD), President Cazzuffi approached Kelvin Legge (Past President, South African Chapter and involved with ICOLD) to investigate the possibility of updating the content of the ICOLD Bulletin on geotextiles as filters (the first bulletin was published approximately 20 years ago). K. Legge will report on this proposed cooperation after ICOLD meetings in spring 2005. In January 2005, the International Commission on Irrigation and Drainage (ICID) published

a guide on the "Application of Geosynthetics in Irrigation and Drainage Projects"

edited by P. Stevenson with a foreword by J.P. Giroud.

Concerning the 8/ICG to be held in Yokohama, Japan, in September 2006, a major effort is underway to secure abstracts. A campaign was conducted at *Geo-Frontiers 2005* supported by communications with the various chapters soliciting their support in gathering and submitting abstracts. Additional efforts to secure abstracts will be conducted in March 2005, in connection with other events, e.g., International Workshop on Landfills, in Grenoble, and the Rankine Lecture, in London, UK.

The Officers proposed that the IGS sponsor a recognition event in Yokohama for *IGS Pioneers*, i.e., individuals who have attended all eight international conferences, Paris (1977) through Yokohama (2006). A special lecture session on the history of the IGS is also proposed at the beginning of the 8/ICG. Corporate members, the Council, and past Council Members, as well as selected dignitaries and all IGS Members will be invited.

Past President, R. Kerry Rowe, has received the honour of the *2005 Rankine Lecture*. To recognise this honour,

President D. Cazzuffi, Vice-President F. Tatsuoka, Secretary P. and R. Stevenson, and Council Members G. Bräu, S. Corbet, J. Cowland, M. Maugeri, and B. Myles will attend the lecture to be held 23 March 2005 at the Imperial College, in London, UK.

IGS auspices has been granted to the *International Workshop on Landfills* (Grenoble, France, March 2005), *Sardinia 2005* (Cagliari, Italy, October 2005), and the *5th International Conference on Environmental Geotechnics* (Cardiff, UK, June 2006). A *Pan American Regional Conference on Geosynthetics* will be organised by the IGS and the several chapters in the Americas (Brazil, Peru, and NAGS). Council Member Jorge Zornberg is the Conference Chair, and tentative plans are to hold the conference in Cancun, Mexico, in March 2008.

The *next meetings of the Council* will be held in Kyoto, Japan, in conjunction with and immediately following ICSMGE in Osaka in September 2005 and in Cardiff, Wales, UK, in conjunction with the *5th International Conference on Environmental Geotechnics*, in June 2006.

reported by Peter E. Stevenson
IGS Secretary

Call for Candidates for the IGS President, Vice-President, and IGS Council: Term 2006 to 2010

Nominations due 31 January 2006

The 2006 IGS Election will be the first IGS electronic ballot. **Three ballots, one each for the election of President, Vice-President, and eight Council Members, will be posted electronically on 1 June 2006 with balloting to close on 31 July 2006.** Results will be announced at the General Assembly, in Yokohama, Japan, during the 8/ICG (September 2006).

The election of the IGS President, Vice-President, and the eight new Council Members, and the appointment of the Immediate Past-President, will be for a four-year period (2006 to 2010).

IGS Council Member Election

The IGS bylaws prescribe that up to half of the Council be elected every two years. IGS Members will have the opportunity to elect eight Members to the IGS Council for a four-year term, starting in July 2006.

The eight IGS Council Members, whose term of office expires in June 2006, are:

- G. Bräu (Germany)
- S.P. Corbet (UK)
- Ph. Delmas (France)
- M. Maugeri (Italy)

- H. Miki (Japan)
- E. Palmeira (Brasil)
- P.E. Stevenson (USA)
- W. Voskamp (The Netherlands)

The IGS bylaws stipulate that a Council Member may be elected to two consecutive terms; hence, G. Bräu, M. Maugeri, H. Miki, E. Palmeira, and W. Voskamp are eligible for re-election. They will have completed one, four-year term as Council Members by June 2006.

Under a special bylaw provision, Elizabeth Peggs was co-opted in January 2005 due to D. Halloran's resignation, thus, E. Peggs is eligible to stand

for election in 2006.

The IGS encourages any IGS Member, who is able to attend all IGS Council meetings, to consider standing for one of the Council positions. It is important that all geographical regions are represented on the Council and that its Members reflect the scope of the geosynthetics discipline.

IGS Secretary, Treasurer, and Immediate Past-President

According to the IGS bylaws, Dr. D. Cazzuffi will become an IGS Officer in his capacity as Immediate IGS Past-President following the General Assembly. The Secretary and Treasurer (the other two officers of the IGS) will be elected by the new IGS Council at a meeting of the Council, after the General Assembly.

Information/Instructions for All Candidates

Under the bylaws of the IGS, only IGS Members are eligible for these positions. Candidates must be able to travel to and attend the IGS Council meetings, which are held once a year. Meetings of the IGS Council are generally held in conjunction with international and regional conferences.

A signed letter of application together with a biographical note (not exceeding 12 lines) and a photograph should reach the IGS Secretary no later than **31 January 2006**. Candidates must strictly adhere to the 12 line limit to ensure equal presentation space for all candidates. In their letter to the IGS Secretary, candidates must clearly identify their country of residence and posi-

tion for which they are seeking election. IGS Members may run for more than one position, in which case a separate statement for each position is required.

Biographical notes and photos will be published in the March 2006 issue of *IGS News*.

The newly formed IGS Council will meet at least four times (typically in Asia, America, or Europe) and, when possible, in conjunction with a major industry event. At least three additional meetings will be held for those Members whose terms expire in 2008.

Should you need further information, please contact Secretary P. Stevenson, or President D. Cazzuffi (see contact information on p. 23).

reported by Karina McInnis
IGS News Editor

IGS Awards: Call for Nominations 2002 to 2005

Nominations due 31 January 2006

IGS Awards will be granted in 2006 to individuals or groups of individuals who have made an outstanding contribution to the development and use of geotextiles, geomembranes, related products, or associated technologies through their scientific and technological achievements.

The Awards recognise the achievements completed and/or the validity of which has been demonstrated during a four-year period preceding the year of the Award (i.e., 2002 through 2005 inclusive).

The winning entries will also be featured at the IGS booth at any conference held under the auspices of the IGS and will be publicised in *IGS News*, in a special press release on the IGS web site, and in other publications.

Timeline and Deadlines

Nominations must be received by the IGS Secretary no later than **31 January 2006**.

The deadline for receipt of award candidate presentation packages is 31 March 2006. Presentations will be forwarded by the Secretariat to the Award Committee by 15 April 2006, and the Committee will meet in Cardiff, UK, in

June 2006 to finalise their decisions, draft citations, and report by 30 June 2006. Awards will be presented in Yokohama, Japan, in September 2006 at the *8ICG*.

The Two IGS Awards

The Young IGS Member Award

This Award is for IGS Members who are less than 36 years of age on 31 December 2005.

The IGS Award

A maximum of five IGS Awards will be granted. Each award will consist of a specially commissioned medal and a diploma.

Candidates

Each entry is restricted to a maximum of four persons, at least one of whom, must be an IGS Member. All IGS Members are eligible with the exception of the IGS President and Members of the Awards Committee.

In the case of a group submission to the Young IGS Member Award, all members of the group must satisfy the age requirement. Any individual or group that is a candidate for the Young IGS Member Achievement Award is

automatically considered for both award categories (unless requested otherwise by the candidate). However, a candidate may only receive one award for the 2002 to 2005 period.

Nominations

Candidate nominations must be typed in English on plain paper (i.e., not letterhead paper) and submitted to the IGS Secretariat (see address on page 23). The nomination should include:

- a clear statement of the considered candidate's contribution (e.g., if the contribution is a product, provide a clear definition of the product; if it is a paper(s), book, and/or report, provide a full reference for each; if it is a construction method, provide a clear description of the method and any references, etc.) and;
- a statement indicating the originality and significance of the candidate's contribution to the discipline (i.e., in the field of geotextiles, geomembranes, related products and/or associated technologies).

Nominations may be made by any IGS Member except for Members of the Awards Committee. Under the IGS Awards rules, any IGS Member can

nominate himself/herself for any award. The Publications Committee, Education Committee, Corporate Members Committee, and IGS Chapters will be invited to make nominations.

Nominated candidates will be contacted by the IGS Secretary and asked to agree to stand for an award and will be required to submit materials as directed by the Awards Committee. All correspondence and activity related to nominations and award entries will be carried out in the strictest confidence by the IGS

Secretary and the Awards Committee.

IGS Awards Committee

The Award Committee, which was nominated in Austin, Texas, at *Geo-Frontiers 2005*, will be formed between July and December 2005.

The Awards Committee comprises five IGS Members; one of whom serves as Chair. The Committee is appointed by the Council. The Members are selected so as to represent a broad cross section of geosynthetic-related technol-

ogies and experience. The IGS Secretary will attend all meetings of the Awards Committee as an observer and coordinator.

Additional Information

The full text of the IGS Awards rules can be obtained by contacting the IGS Secretary, Mr. Peter Stevenson.

reported by Karina McLinnis
IGS News Editor

IGS Student Awards: 2005 to 2006

The IGS Student Awards will continue its successful inauguration with the third Award period of 2005 to 2006. The Awards will be assigned in 2006, and all successful candidates will attend the IGS international conference in 2006.

The IGS Student Award was established to disseminate knowledge and to improve communication and understanding of geotextiles, geomembranes, related products, and associated technologies among young geotechnical and geoenvironmental student engineers around the world.

An IGS Student Award will consist of a cheque of US\$1,000 for each winner. This award amount must be used to cover conference participation costs.

An IGS Student Award will be assigned to only one student per Chapter; the selected student should be an undergraduate, M.Sc., or Ph.D. student. Students must be no older than 35 in the year the award is granted.

To ensure student representatives from each chapter participate in the program to the fullest extent possible, the chapters must accomplish the following:

- Chapters must hold a contest or conduct a nomination process to select the student candidate to represent them.
- Chapters must notify the IGS of the name of the student selected by **31 July 2006**.
- The IGS will transfer US\$750 to the student immediately upon receipt of

chapter notification. IGS Student Awards recipients will be asked to submit a written report to the IGS on the regional conference and on the IGS-related conference activities. Upon receipt of the report, which is due 30 days after the conference, the remaining US\$250 will be transferred to the student.

To ensure the maximum benefit to the students, the *conference organisers* must provide the student with a copy of the proceedings and admission to the sessions, and organise a recognition event for the students.

reported by Karina McLinnis
IGS News Editor

9th International Conference on Geosynthetics in 2010

Conference Sponsors Sought

The IGS invites Chapters and interested organisations to express their interest in organising and hosting the *9th International Conference on Geosynthetics (9ICG)*, which will be held in 2010. The history of the ICGs is as follows:

- First ICG, Paris, France, 1977
- Second ICG, Las Vegas, USA, 1982

- Third ICG, Vienna, Austria, 1986
- Fourth ICG, The Hague, The Netherlands, 1990
- Fifth ICG, Singapore, 1994
- Sixth ICG, Atlanta, USA, 1998
- Seventh ICG, Nice, France, 2002
- Eighth ICG, Yokohama, Japan, 18-22 September 2006

The IGS Secretary will provide prospective hosts with a detailed information package that informs and instructs interested parties on the proper procedure to prepare a bid to host the Conference. Interested Chapters and organisations should contact the IGS Secretary (see contact information on page 23).

Tsunami Relief Initiative

The IGS Asian Activities Committee (AAC) and the IGS Council and Officers propose

to assist in Tsunami relief efforts in the immediate period and the long-term by facilitating contact with and communi-

cation with IGS Members and resources both locally and world wide.

A major advantage of geosynthetics

in civil works is that geosynthetics facilitate low-cost, easy to transport, and rapid construction of temporary and permanent structures; thus, IGS Members have expertise that can directly benefit rapid rebuilding in the areas devastated by the Tsunami of December 2004.

Individuals, who can contribute their expertise and skill toward rebuilding facilities and infrastructure in the affected areas surrounding the Indian Ocean are urged to contact the IGS.

IGS Council Members Participating in the Tsunami Relief Initiative

Daniele Cazzuffi
President IGS, Italy
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Mike Sadlier
Tsunami Coordinator
Member AAC, Australia
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Masami Kamon
Chair AAC, Japan

Peter E. Stevenson
IGS Secretary
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John Cowland
Member AAC
Hong Kong, China

E.C. Shin
Member AAC, Korea

Cheng-Gang Bao
Member AAC, China

G.V. Rao
Member AAC, India

Call for Articles on the "Use of Geosynthetics to Rebuild Areas Devastated by the December 2004 Tsunami." Contributions will be published in upcoming issues of IGS News. Please contact the Editor for more information.

International Conference on the Use of Geosynthetics in Soil Reinforcement and Dynamics

Held on 5 to 8 September 2004, Schloss Pillnitz, Dresden, Germany

The *International Conference on the Use of Geosynthetics in Soil Reinforcement and Dynamics* was held on 5 to 8 September 2004 in Schloss Pillnitz, Dresden, Germany. The Conference was organised by Engineering Conferences International (New York, USA) in cooperation with the Association of German Engineers (VDI, Düsseldorf, Germany) under the auspices of the IGS and the DGGT (German Society for Geotechnics). The Geotechnical Institute at the TU Bergakademie Freiberg (Prof. H. Klapperich) was the local organiser.

The principal objective of the Conference was to present the state of the art and the state of the practice of soil reinforcement techniques, including research results (with a special emphasis on traffic-induced vibrations) to demonstrate the growing significance and innovativeness of *geosynthetics* in

the world of geotechnical construction.

The strong and growing interest in the potential of geosynthetics for various geotechnical construction projects was evidenced with participants from 23 countries and 15 exhibitors from all over the world.

Conference Program

The International Scientific Committee evaluated the more than 80 abstracts, resulting in a program that featured specialised contributions from practice and theory. New and more economical methods of construction were equally represented, as were approaches for design and product development.

Welcome and Opening Lectures

The Conference welcoming addresses were presented by Prof. Dr. H. Klapperich, Dr. D. Cazzuffi, and Mrs. B. Hickernell (ECI) and were followed by a greeting and introductory speech by the

Vice-President of the German Society for Geotechnics, Prof. Dr. G. Heerten. Prof. Heerten presented the goals of the Conference and spoke about a vision: "In the future, the use of geosynthetic reinforced soil constructions will be just as natural as steel reinforced concrete." This goal can only be achieved, if the effectiveness of geosynthetic-reinforced soil with top-quality geosynthetic reinforcements is made transparent by systematic research and application and is documented comprehensibly to enable safe, cost-efficient, and environmentally friendly constructions.

Sessions

The 30 presentations were thematically arranged into the following sessions:

- Session A – Reinforcement
- Session B – Enhanced Soil Reinforcement Applications
- Session C1 – Material Technology
- Session C2 – Design Approach: Numerical Models
- Session C3 – Behavior versus Time and Failures: Case Histories
- Session C4 – Experimental Investigations
- Session D1 – Dynamics
- Session D2 – Soil Reinforcement Interaction and Dynamics

Each session comprised, a keynote lecture, a state-of-the-art report, a "statement," and oral paper presentations, followed by lively discus-



International Geosynthetics Conference (Schloss Pillnitz 2004) lecturers, in front of the artistic and picturesque former summer residence of the Kings of Saxony.

sions. A “statement” consisted of a selected presenter giving their statement/opinion/explanation on a special topic. Thereafter, this statement was discussed and/or commented upon by the Session Chairs and the participants.

An additional forum, “Design Approach - Numerical Models,” was also offered (Chair, D. Cazzuffi). The Chair of Working Group AK 5.2 (Reinforced Structures with Geosynthetics) of the DGGT, Gerhard Bräu, TU Munich, presented the current state of work as well as already published versions of proposals from the “German Recommendation for Earth Reinforcement with Geosynthetics” (EBGEO). Under the topic “Dynamic Loads of Railway Traffic,” Dr. W. Rücker from the Federal Institute for Materials Research and Testing (BAM) in Berlin presented a numerical method for a

realistic acquisition of dynamic loads in traffic and railways. The final lecture was given by Dr. P. Rankilor, UK, “Soil Reinforcement Theory – We May Have Been Wrong for Forty Years.” He reported results of his micro-model experiments and the resulting design process consequences.

Special Event: Technical Exhibition

The Special Event was held with additional guests from politics, government authorities, and clients. After the welcome addresses by the Conference organisers, Dr. A. Klengel, Prof. Lieberenz, H. Denzer, and Dr. R. Pöttler, among others, greeted the Conference participants. The Special Event provided an excellent opportunity to speak with decision makers, who usually do not visit such conferences, and to demonstrate to them the tremendous bene-

fits and continuing potential of using geosynthetics as a building material.

Conference Proceedings

A hard copy of the proceedings can be obtained from the Geotechnical Institute, TU Bergakademie Freiberg, www.ifgt.tu-freiberg.de :

Proceedings of the International Conference on The Use of Geosynthetics in Soil Reinforcement and Dynamics, Schloss Pillnitz, Dresden, Germany, 5-8 September 2004. Eds.: H. Klapperich, D. Cazzuffi, L. Vollrath, R. Koerner. VGE - Essen, 2005.

For Further Information Contact:

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*reported by Taner Aydogmus
IGS Member*

Geo-Frontiers 2005 Conference and Exhibition

Held in Austin, Texas, USA, 24 to 26 January 2005

Geo-Frontiers 2005 was a tremendous success, with approximately 2000 participants and 130 exhibitors! The Conference combined the *Geo-Institute 2005 Congress*, the Geosynthetic Materials Association *Geosynthetics 2005 Conference*, and the *18th GRI Annual Conference on Geosynthetics*.

The Conference was organised by the Geo-Institute (G-I), the American Society of Civil Engineers (ASCE), Geosynthetic Materials Association (GMA), and the Industrial Fabrics Association International (IFAI) and was held under the auspices of the IGS (together with its North American Chapter) and the International Society for Soil Mechanics and Geotechnical Engineering (ISSMGE).

Opening Plenary Session

Dr. Bob Gilbert, Conference Co-Chair (U of Texas), officially opened *Geo-Frontiers 2005*, followed by an introductory speech by Arlan Rippe, P.E. (President of G-I). Arlan stressed the importance and need for integration of all organisations participating in the Conference.

Professor William van Impe, ISSMGE President, then spoke to the need for symbioses between all geotechnical engineering organisations and the development of the Federation of GeoEngineers, which has been in progress for the past two years. Dr. Daniele Cazzuffi, IGS President, addressed the two goals of the IGS: broad geographical representation and synergy as a result of no boundaries between geotechnical groups.

GeoFrontiers: The Perspective from Space

All Conference participants were given the opportunity to listen and watch the

engaging and fascinating experiences in Space of NASA Astronaut and geologist, James F. Reilly III. Dr. Reilly has logged more than 517 hours in space, including three spacewalks totaling 16 hours and 30 minutes!

Dr. Reilly emphasised the importance of research in space and its role in advancing our knowledge of the earth and its processes, in addition to its importance as an educational tool to get children interested in science. His slide presentation showed the various research projects and studies carried out by himself and his NASA colleagues, ranging from human tumor growth, to the use of satellite images to



Opening Plenary Session (left to right): Sam Allen and Bob Gilbert (Conference Co-Chairs), Daniele Cazzuffi (IGS President), Prof. William van Impe (ISSMGE President), NASA astronaut James Reilly III, and Arlan Rippe (G-I President).

assess tsunami damage, and sediment transport, to name but a few.

Geo-Challenge Student Competition

University student teams were challenged to build an 18-inch high MSE wall with paper strip reinforcement and sand, which was to withstand a 50 lb load and experience less than 0.5 inches of horizontal movement. Judging was based on the time used to build the wall, whether or not the wall sustained the load, how much paper was used, and a written paper on the design.

All participating universities demonstrated excellent creativity, technical know-how, and team spirit.

And, ..., the winning team was the University of Missouri-Columbia: Alexandra Wayllace, Daniel Huacco, Raphal Baltonado, and Elizabeth Freeman (Advisor: Dr. Erik Loehr), who went on to compete in GeoJeopardy (more details on the "nail-biting" events of GeoJeopardy are below).

Terzaghi Lecture

The 2005 Terzaghi Lecture, one of the highest honors in geotechnical engineering, was given by Professor Delwyn Fredlund, Saskatoon, Canada.

The topic of Prof. Fredlund's lecture was "Unsaturated Soil Mechanics in Engineering," which looked at the six challenges faced by geotechnical engineers from the 1950s to 2000 and beyond in characterising the mechanics of unsaturated soil.

Heroes and Award Luncheon

The ASCE H. Bolton Seed Medal for outstanding geotechnical contributions in teaching, practice and research was presented to *James K. Mitchell*, and the Wallace Hayward Baker Award for outstanding contributions to grouting and ground improvement technologies was presented to *Joseph P. Welsh*.

The honoured ASCE Heroes, who have made significant contributions and have demonstrated innovation and leadership in geo-technology and industry, were *Dr. J.P. Giroud* (intro-

duced by Dr. Rudy Bonaparte, GeoSyn-tec Consultants), *Dr. Robert Koerner* (introduced by Dr. David Daniel, U of Illinois), and *Dr. Lymon C. Reese* (introduced by Dr. Clyde Lee, U of Texas). Unfortunately, due to the large snowstorm that hit the northeastern states, Bob Koerner did not make it to the awards ceremony; his son, George Koerner accepted on his behalf.

It was fascinating to hear that Lymon Reese was Dr. Seed's first Ph.D. student. Also, we were delighted to hear of J.P.'s first "reinforced soil" challenge. The burning question is ... why did you have your mother's car on the beach?

J.P. Giroud was also presented with a 2004 IGS Award by Daniele Cazzuffi, IGS President, for his contributions to "Criteria for Geotextile and Granular Filters" (see the November 2004 IGS News for more information). In addition, *Donald Bruce*

(of Geosystems, L.P.), Chair of the Grouting and Soil Improvement Committee was given the Technical Committee of the Year Award in recognition of his contributions to his leadership and participation in this Committee.

McNicol Lecture: "The Big Dig"

Dan McNicol is a nationally recognised expert on the Big Dig in Boston, Massachusetts and the U.S. Interstate System. His riveting lecture reviewed the



Geo-Challenge students in action.



J.P. Giroud (middle) receives IGS Award (D. Cazzuffi on the right and P. Stevenson on the left).



G. Koerner (left) accepts ASCE Hero Award on behalf of his father R. Koerner (introductory speech by D. Daniel on the right).

200 years of history on the building of highways in the US and focused on the incredible technical feats being conducted at the Big Dig in Boston: the construction of which is equivalent to the building of 23 Hoover Dams! Mr. McNicol left us with the message that "We don't have highways because we are a great country ... We are a great country because we have highways."

It would be remiss of me not to mention pre-lecture entertainment of "Esther's Follies," Austin's renowned comedy troupe, who delighted the crowd with impersonations of "well-known" politicians and celebrities, of course, George Bush and Bill Clinton were amongst those honoured.

Peck Lecture

The 2005 Peck Lecture was given by Prof. Thomas D. O'Rourke of Cornell University. The Award was established in honor of Ralph B. Peck. This annual lecture is awarded to and given by a geotechnical engineer for outstanding contributions to the profession through the analysis and publication of case histories. The title of Prof. O'Rourke's



J.P. Giroud (left) receives ASCE Hero Award (introductory speech by R. Bonaparte on the right).



The audience enjoys GeoJeopardy – contestant Bob Koerner provides “creative” questions!

paired with future geotechnical professionals (i.e., Student GeoChallenge winners). Game show host, Rich Ray, was able to keep the contestants on their toes with questions of unparalleled difficulty. The grand winners were J.P. Giroud and Elizabeth Freeman – congratulations to you both!

Apparently, amongst the useless prizes was a monogrammed set of holiday Mohr-Coulomb envelopes ... to open and tear across failure line...

18th GRI Symposium

The 18th *Geosynthetics Research Institute (GRI) Symposium on Geosynthetics in Transportation/Geotechnical and Geoenvironmental/Hydraulic Engineering* was held on 26 January 2005. The Symposium was an exploratory trial that looked beyond the horizon as to what research and development needs are necessary to propel geosynthetics to the next level. The next GRI

conference, which will be a combined effort between GRI and NAGS, will be held in Las Vegas, Nevada, USA on 14 to 16 December 2005.

Other Conference Activities

- *Seven short courses*
- *Geotech/Geosynthetics Exhibition*
- *Field demonstrations and applications of new technologies*
- *Observations of Tsunami Damage in Sri Lanka, by P.J. Lynett (Texas A&M)*

Conference Proceedings

A CD-Rom of the *Geo-Frontiers 2005* proceedings can be ordered from the ASCE. Papers are organised into 14 individual volumes comprising 13 Geotechnical Special Publications, and one GRI publication. For more information, visit the ASCE web site: www.asce.org/bookstore/search.cfm

reported by Karina McInnis, IGS News Editor, with contributions from David Elton, IGS Member

lecture was “Lessons Learned from Ground Movements and Soil Stabilisation on the Boston Central Artery.”

Barbeque Bash and GeoJeopardy

All Conference participants had the opportunity to “a taste of Texas barbeque” and all the “fixin’s” – it was a delicious feast!

The geotechnical game show, GeoJeopardy, resulted in many laughs and many unanswered questions ...

The ASCE Heroes (J.P. Giroud, Bob Koerner, and Lymon Reese) were

5th Austrian Geotechnical Conference and the “Vienna Terzaghi Lecture” presented by J.P. Giroud

Held on 21 to 22 February 2005, in Vienna, Austria

The 5th *Austrian Geotechnical Conference* took place in Vienna on 21 and 22 February 2005 and was organised by the ÖIAV (Austrian Society of Engineers and Architects) and the Austrian Member Society of the ISSMGE.

Vienna Terzaghi Lecture

The highlight of this biennial Conference is the “Vienna Terzaghi Lecture.” This year Dr. J.P. Giroud delivered this prestigious lecture, which he titled “Geosynthetics Engineering: Successes, failures and lessons learned,” in the historical Festivity Hall of the Palais Eschenbach.

Dr. Giroud delivered the Vienna Terzaghi Lecture from a podium where engineering history has been written since the mid-19th century. For example, Karl Terzaghi, presented his revo-

lutionary “Theory of Clay Settlement” for the first time from this podium. The very critical audience was severely split, and intensive, sometimes aggressive debates followed. Luckily, present-day Vienna Terzaghi Lecturers are not in such a danger – only unanimous applause followed Dr. Giroud’s outstanding lecture, not scientific war!

Approximately 350 individuals, from 24 different countries, attended the Conference. The organisers were especially honoured that Dr. D. Cazzuffi, IGS President, and the IGS European Activities Committee Members were also present.

The Conference Chair, Professor Brandl, introduced Dr. Giroud to the audience and recommended that J.P. (Jean Pierre) Giroud be changed to “Jean Paul” Giroud stressing that

Dr. Giroud can be considered the “Pope of Geosynthetics.” Prof. Brandl’s introduction ended by comparing the three fathers of their discipline: Prof. K. Terzaghi for soil mechanics, Prof. L. Müller for rock mechanics, and Dr. J.P. Giroud for geosynthetics engineering.

Dr. Giroud combined theory and



Prof. Dr. H. Brandl, Dr. J.P. Giroud, and Dr. D. Cazzuffi standing in front of the traditional flag of the ÖIAV (from 1848).

practice in an optimal way, covering almost the entire field of geosynthetics applications. Some contradictions between “common sense” and rational analyses illustrated the danger of ignoring theory and overestimating mere practice. The first portion of the lecture was devoted to failures as an excellent means of learning from them. The remaining portion focused on lessons learned from successes.

Dr. Giroud’s lecture was outstanding, and the audience thanked him with long-lasting enthusiastic applause (this enthusiastic feedback continues to this day)!

The written version of Dr. Giroud’s Vienna Terzaghi Lecture, which is included in the Conference Proceedings, is shorter than the oral version; however, the latter has been stored on CD-Rom in the “Vienna Terzaghi Museum” that is being created under the auspices of the ISSMGE at the Technical University of Vienna.

Austrian Geotechnical Prize

Following the Vienna Terzaghi Lecture, the “Austrian Geotechnical Prize” for an outstanding Doctoral or Master Thesis in geotechnical or civil engineering was awarded. The Award went to Dr.

Roman Markiewicz for his Doctoral Thesis “Numerical and experimental investigations for utilization of geothermal energy using earth-coupled structures and new developments for tunnels,” which combines geotechnical and geothermal engineering in an innovative way.

Dr. Markiewicz’s work focuses on energy foundations, energy wells, energy tunnels, and other thermo-active systems to extract or store “clean” energy from, or into, the ground, thus, heating or cooling buildings. An innovative geosynthetics application is energy tunnels using “energy geocomposites.”

Conference Topics and Exhibition

The Conference was not devoted to a specific topic; however, due to J.P. Giroud’s Vienna Terzaghi Lecture, the majority of conference contributions were related to geosynthetics. The following topics were also covered (occasionally involving geosynthetics):

- Special cases of ground engineering
- Landslides, slope stability, and stabilisation
- Retaining walls and other restraining measures
- Deep excavations and foundations

- Tunnelling
- Roads, railways, and airfields
- Laboratory and field testing

All lectures were of high calibre and lively discussions from the panels and the floor made the Conference an interesting event.

In addition, 24 exhibitors from several countries participated in the technical exhibition.

Conference Proceedings

The proceedings are available from the Austrian Association of Engineers and Architects (e-mail: office@oiav.at) or the Technical University of Vienna (e-mail: f.kopf@tuwien.ac.at).

6th Austrian Geotechnical Conference

The 6th Austrian Geotechnical Conference will take place on 26 to 27 February 2007. The “Vienna Terzaghi Lecturer” will be Professor Dr. Harry Poulos from Australia. He was ISSMGE Vice-President and is currently an ISSMGE Board Member and considered the leading expert in pile foundations.

reported by Heinz Brandl, IGS Member

2004 Niigata Chu-etsu Earthquake Reconstruction of Geogrid-reinforced Soil Retaining Walls with a Full-Height Rigid Facing

On 23 October 2004 at 17:56 PM (Japan local time), a magnitude 6.8 earthquake struck 80 km south of Niigata, on the west coast of Honshu, Japan. The earthquake epicenter was 195 km north-northwest of Tokyo, Japan. This is one of the deadliest earthquakes to hit Japan in the last decade. On 5 November 2004, 40 people were reported killed and 2,900 injured. The main event was followed by a series of strong aftershocks of magnitude 6.5 and less.

A total of 395 buildings were destroyed and 3,473 damaged in Niigata Prefecture in addition to serious damage done to a large number of embankments and retaining walls for railways, highways, and residential areas.

Compared to the damage to steel-reinforced concrete structures, the scale and extent of the damage to soil structures and its effect on the transportation system and associated civilian life were much more extensive. In particular, a number of embankments that had been constructed in narrow valleys and on slopes, where ground and surface water tends to concentrate, experienced the greatest damage. It is likely that the effect of heavy rainfall two days before the earthquake resulted in the backfill becoming more saturated than under typical conditions.

Three embankments on the Jo-etsu railway line constructed on the slope of the right bank of the Shinano River completely failed and are a typical

example of the damage done by the earthquake (Figures 1a, 1b, and 1c: Sites 1, 2, and 3, respectively). The failure of these three embankments delayed the re-opening of the railway line.

At Site 2 (Figure 1b, Figures 2a and 2b), a Highway No. 17 embankment (retained by a gravity wall) and one of the previously mentioned railway embankments on the Jo-etsu line (located at the lower level) failed together. The toe of the slope of the railway embankment had been supported by a gravity-type retaining wall (Figure 2a). At Site 3 (Figure 1c, Figures 3a and 3b), the railway embankment was also supported by a gravity wall at its slope toe.



Figure 1. Three severely damaged embankments between Ojiya and Kawaguchi on the Jo-etsu railway line: (a) Site 1; (b) Site 2, compound failure of embankments on Highway No. 17 and the Jo-etsu railway line; and (c) Site 3, failure adjacent to a railway tunnel (7 November 2004, photo taken by F. Tatsuoka).

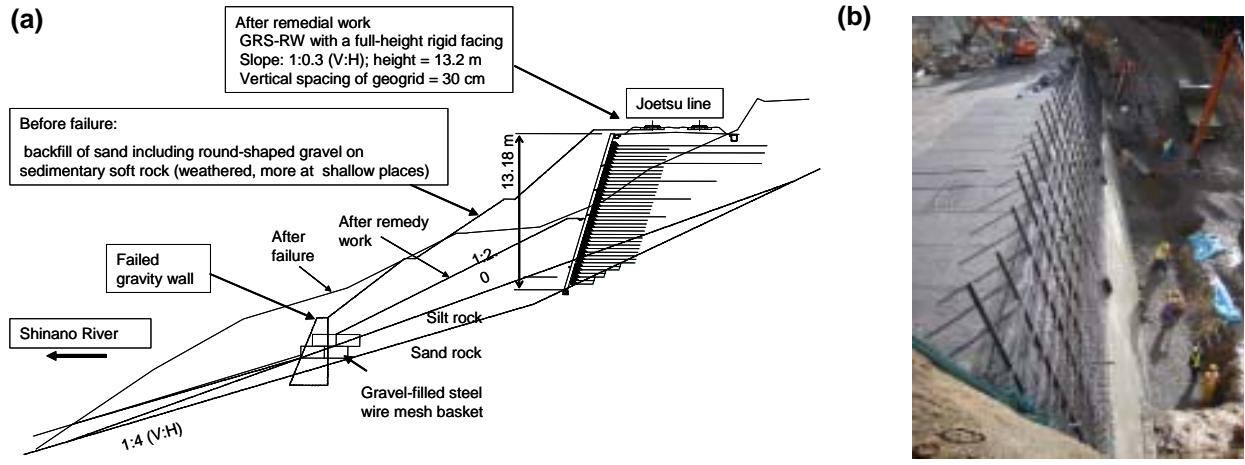


Figure 2. Site 2: (a) cross-sections before and after failure and after reconstruction of the railway embankment (photo courtesy of East Japan Railway Company); and (b) reconstruction of a GRS retaining wall with a full-height rigid facing (the bottom half of wall completed, 5 December 2004, photo taken by F. Tatsuoka).

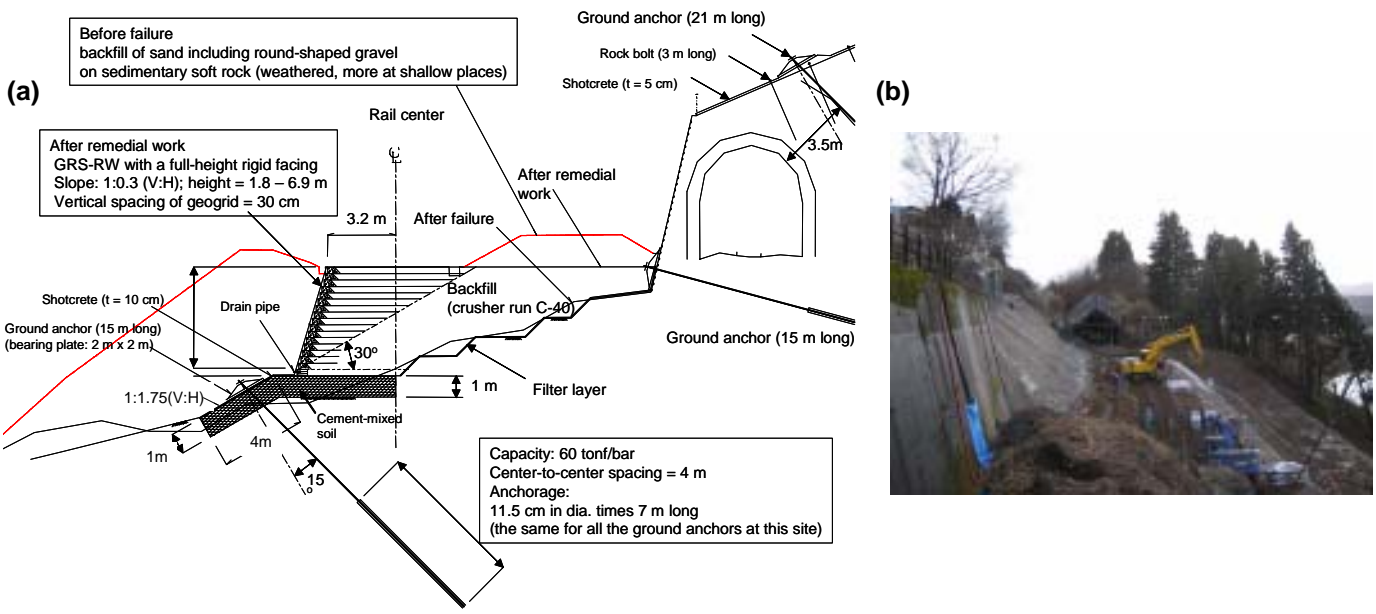


Figure 3. Site 3: (a) cross-sections before and after failure and after reconstruction of the railway embankment (photo courtesy of East Japan Railway Company); and (b) immediately before the start of reconstruction of a GRS retaining wall with a full-height rigid facing (5 December 2004, photo taken by F. Tatsuoka).



Figure 4. Reconstructed geogrid-reinforced soil (GRS) retaining wall at Site 1 with a full-height rigid facing built using the staged construction method: (a) 5 December 2004, photo taken by F. Tatsuoka; and (b) the first train running on the wall, 26 December 2004 (photo is courtesy of East Japan Railway Company).

A total of four failed embankments at these three sites (one on Highway No. 17 and three along the railway) were reconstructed into four geogrid-reinforced soil (GRS) retaining walls within *two* months after the failure. The GRS retaining walls had a full-height rigid facing (i.e., a thin, slightly steel-reinforced concrete facing) constructed using the staged construction method (Tatsuoka et al., 1997). The GRS retaining wall at Site 1 was completed first (Figures 4a and 4b).

This type of GRS retaining wall was chosen for reconstruction for the following reasons:

- Several GRS retaining walls of this type performed very satisfactorily during the 1995 Hyogoken-nambu Earthquake (the so-called 1995 Kobe Earthquake). A number of conventional-type retaining walls (gravity, leaning, masonry, and cantilever RC) failed during this earthquake and many were reconstructed into GRS

retaining walls within a short period of time (Tatsuoka et al., 1997, 1998).

- For this case, it was estimated that this type of GRS retaining wall is superior to other types of structures (i.e., conventional sloped embankments supported by RC cantilever walls that are supported with a pile foundation, bridges, etc.) in terms of construction costs, construction time, and performance in terms of deformation and ultimate stability.

This case history validates that geosynthetic-reinforced soil retaining walls can be a very competitive construction method for critical wall structures, such as railways and highways.

References

- Tatsuoka, F., Tateyama, M., Uchimura, T. and Koseki, J. (1997), "Geosynthetic-Reinforced Soil Retaining Walls as Important Permanent Structures", 1996-1997 Mercer Lecture, *Geosynthetics International*, Vol.4, No.2, pp. 81-136.
- Tatsuoka, F., Koseki, J., Tateyama, M., Munaf, Y. and Horii, N. (1998), "Seismic Stability Against High Seismic Loads of Geosynthetic-Reinforced Soil Retaining Structures", Keynote Lecture, *Proc. 6th Int. Conf. on Geosynthetics*, Atlanta, Georgia, Vol.1, pp.103-142.

*reported by Fumio Tatsuoka
IGS Vice-President*

First National Peruvian Conference on Geosynthetics

Held on 27 to 29 October 2004 in Lima, Peru

The *First National Conference on Geosynthetics* was held on 27 to 29 October 2004 at the Museo de la Nación, in Lima, Peru. The Conference was organised by the Peruvian Chapter of IGS, under the auspices of TDM Tecnología de Materiales, CIDELSA Ingeniería en Geosintéticos, AMANCO del Perú S.A., and Maccaferri de Perú S.A.C.

The Conference was attended by 84 delegates from Peru, Ecuador, USA, Colombia, Chile, Brasil, and Argentina and covered the following topics:

- Design
- Construction
- Management/Quality Control
- Case Histories

On the last day of the Conference, Mr. José Ferreyros, Chair of the Organ-

ising Committee, with the cooperation of Mr. Germán Vivar, President of the Peruvian IGS Chapter, Mr. Juan Apaclla, Ministry of Transportation, and



Germán Vivar, President of the Peruvian IGS Chapter.

Juan Torrejón, Independent Consulting Engineer, made a speech on the *State of the Art of Geosynthetics in Peru*. Themes that emerged from the speech were the need to develop geosynthetics testing laboratories and the development of geosynthetics commercialisation ethics and protocols in Peru.

During the General Assembly held at the end of the Conference, it was agreed to continue with national conferences, with the next one to take place in 2006.

Additional copies of the Conference Proceedings are available from the Peruvian IGS Chapter by contacting Fabiola Vivar at administracion@igsperu.org.

*reported by Germán Vivar
Peruvian IGS Chapter President*

German IGS Chapter Activity Update

The German IGS Chapter looks back to a year of many interesting and successful events that were held with the participation of the German Geotechnical Society (DGGT).

In March 2004, the *EuroGeo3* Conference was held in Munich (see the July 2004 issue of *IGS News* for a detailed report). *EuroGeo3* was the highlight in the Chapter's work and its success was evident from the comments of all participants. The abstracts of all presented papers are published on the web site (www.gb.bv.tum.de/eurogeo3) providing a brief overview on the state of the art at *EuroGeo3*. The proceedings are available in hardcopy (two volumes, approximately 800 pages, 75 EUR) or CD-Rom (20 EUR) and may be ordered from eurogeo3@bv.tum.de.

With the success of *EuroGeo3* still fresh in everyone's mind, the German Chapter was uncertain as to whether or not it should continue with its regular cycle of national conferences in 2005. As it turned out, the decision to hold the 9th National Conference on Geosynthetics in Geotechnics (*FS-KGEO 2005*) on 16 to 17 February 2005 was a decision well made!

There were approximately 50 presentations in the technical program and approximately 280 participants; thus, there was no indication of "slowing down" on behalf of the engineers, researchers, and producers to present their work, even given the recent *EuroGeo3* conference. German was the official language of *FS-KGEO 2005*, which, combined with holding the Conference in the two days prior to "Geo-

technik-Tag" (soil mechanics conference), attracted many new conference participants. In fact, approximately 40% of all *FS-KGEO 2005* participants had never attended a conference dedicated to geosynthetics. The theme of *Geotechnik-Tag* was improvement of subsoil and attracted 500 participants. The *FS-KGEO 2005* program, paper abstracts, and event photos are published on the web (www.gb.bv.tum.de/fachsektion/).

A major theme of *FS-KGEO 2005* was showcasing the results of the German Chapter technical working groups. Working Group AK 5.1 (Chair: Dr.-Ing. Fokke Saathoff) presented its new regulations for sealing tunnels with geomembrane layers. While the former regulation focused on tunnels built in closed construction, the new regulation incorporates all types of tunnelling with different sealing systems. The paper will be the basis of government regulations for road and railroad applications.

Working Group AK 5.2, "Reinforced Structures with Geosynthetics" (Chair: Dipl.-Ing. Gerhard Bräu), presented the state of the art in geosynthetic-reinforced structures. Drafts of the paper will be published, chapter by chapter, allowing user comments to be incorporated into the final version. The draft version of the "reinforcement layers over piles" chapter has already been published on the web (www.gb.bv.tum.de/fachsektion/b_ak-ak52.htm) and is open for commentary until July 2005. On-line discussion forums on the chapters are also available (<http://ftp.grundbau.bauwesen.tu-muenchen.de/discus/>).

Working Group AK 5.3, "Geosynthetics in Road Construction," (also AA5.15 of FGSV, Chair: Dipl.-Ing. Albert Lippert) has finalised the paper on "Applications of Geosynthetics in Road Constructions - Anwendung von Geokunststoffen im Erdbau des Straßenbaus" and the terms for the delivery of geosynthetics in road applications under its former Chair, Dr. Wilmers. The papers are published at FGSV-Verlag (www.fgsv-verlag.de).

The past year has also been witness to several personal highlights for various German Chapter Members. After 25 years of outstanding work as Chair of AK 5.3, Dr. Wilhelm Wilmers resigned from this position in September 2004, which also corresponded to reaching the age of 70. Dr. Wilmers is a founding member of the German IGS Chapter has been its Vice-Chair ever since. He is still active in several soil mechanics and geosynthetics working groups (e.g., WG1 of TC 189).

At the end of September 2004, Dr.-Ing. Georg Heerten, also Vice-Chair of the German IGS Chapter, was appointed an Honorary Professor of Aachen University for his work as a "Geosynthetics in Geotechnics," associate lecturer within the Geotechnical Engineering Department at Aachen University, since 1995. This is the first time this title has been given to an individual representing the geosynthetics profession in Germany.

To commemorate his appointment, a celebratory colloquium, "Constructing with Geosynthetics," was held on 2 December 2004 at Aachen University. Numerous individuals from Germany and abroad attended and celebrated the event with Dr. Heerten.

Chair of the German IGS Chapter, Prof. Dr.-Ing. Dr.-Ing. E.h. Rudolf Floss, also had reason for celebration; in January 2005, he celebrated his 70th birthday! Prof. Floss was an IGS Council Member from 1986 until 1994, holding the position of IGS Vice-President from 1990 to 1994. He was founder and Chair of the section "Kunststoffe in der Geotechnik" since its formation in 1988 and Chair of the



Gerhard Bräu presenting gift to Dr. Wilhelm Wilmers upon his retirement.



Fokke Saathoff presenting gift to Rudolf Floss upon his 70th birthday.

German IGS Chapter, which was formed in 1993. In addition to the official celebration held at the *Geotechnik-Tag* conference on 18 February 2005,

the German Society of the Geosynthetics Producers (IVG), represented by Dr.-Ing. Fokke Saathoff (Chair), presented Prof. Floss with an award during

the *FS-KGEO 2005* conference.

*reported by Gerhard Bräu
IGS Council Member*

IGS Indonesian Chapter Revival

The Indonesia Chapter of IGS (INA-IGS) was formed in 1992. A two-day Inaugural Symposium was held in November 1992, with Keynote Lecturers Profs. R. Kerry Rowe, Bengt Broms, and Masami Fukuoka, together with a wide range of presenters from Indonesia and overseas. Since that time, few activities have been organised, and the 1997 Asian financial crisis plunged the Indonesian economy, especially the construction industry, into the doldrums.

The situation in Indonesia is now changing and improving, thus, in late 2004, actions were taken to reactivate the INA-IGS Chapter. Few of the original committee members have remained active in the industry. Fortunately the original Treasurer, Krisnawarman Oetomo, was able to help establish a temporary committee with the aim of renewing the activities of the Chapter.

A new Chair was appointed, Prof. Chaidir Makarim, and a Secretariat was established at the Universitas Bina Nusantara (BINUS), organised by the head of the Civil Engineering Department, Amelia Makmur. A number of meetings were held toward the end of 2004, and it was decided that a one-day seminar should be organised with the joint goals of providing geosynthetics information to Indonesian Engineers and acting as a showcase for INA-IGS to help attract new members. The date of 14 February 2005 was chosen, and Ir Agfiedjoemiedhal was chosen as Chair of the Seminar Organising Committee.

A total of 140 people attended the Seminar! The Seminar was introduced with short addresses from Ir Agfiedjoemiedhal, Prof Chaidir Makarim, and Envermy Vem, MSc, the Rector (tem-

porary) of BINUS, followed by presentations from seven individuals.

Following the terrible events that took place on the northernmost tip of Indonesia, in Aceh, on 26 December 2004, it was fitting that background information on the tsunami should be made available to the audience. Bob Scouller, Senior Infrastructure Engineer with the World Bank in Indonesia, gave a short description of his own observations following his visit to the tsunami-affected area in January 2005. He presented a series of photographs of the damage that occurred and provided statistics concerning the losses, as well as the expected costs of reconstruction. It was clearly demonstrated that construction techniques using geosynthetics can help to provide both rapid and cost-effective reconstruction solutions.



Participants at the one-day geosynthetics seminar organised by the IGS Indonesian Chapter (INA-IGS), 14 February 2005.

The program for the remainder of the seminar was aimed at providing the audience with information about Indonesian soils and describing how geosynthetics may be used in a number of important applications. Dr. Laurie Wesley introduced the technical sessions by describing the important and interesting properties of Indonesian soils, concentrating mainly on the soils of volcanic origin. Although many other soil types are present, volcanic soils dominate in many parts of Sumatra, Java, and Bali,

where much of the economic development is taking place. The properties and performance of these soils can be quite different to soils of sedimentary origin. Dr. Wesley also included important advice on their use as a fill material.

Presentations were then made by speakers from both Indonesia and overseas. The use of geosynthetics in erosion control was presented by Su Su Kyi, on behalf of the senior joint author, Prof. Kabul Basah Suryolelono, both of Gadjah Mada University in Jogjakarta. John Cowland (IGS Council Member) described the wide ranging use of geosynthetics in landfills, based on experience gained in Hong Kong. Following lunch, John Cowland described the activities of the IGS and the benefits of becoming a member.

The remaining three presenters were Chris Lawson (Ten Cate Nicolon, Kuala Lumpur), Prof. Paulus Rahardjo (Parahyangan Catholic University, Bandung), and Dr. Hedy Arcadian (Instit. of Road Engineering, Bandung). Chris Lawson described the use and benefits of geosynthetics for construction over soft foundations, which are present over much of the low lying parts of Indonesia, covering soil-supported and pile-supported embankments.

Prof. Paulus Rahardjo described types of slope failures that can occur and provided advice on the use of geosynthetics to prevent slope failures. Lastly, Dr. Hedy Arcadian presented an overview of the use of geosynthetics in road pavements for separation, filtration, stabilisation, and reinforcement of granular layers, as well as asphalt reinforcement. He also provided solutions for constructing pavements over swelling subgrade soils.

The Seminar was concluded with a short summation by Mike Dobie (member of the Seminar Organising Committee). It was concluded that the main competitor to the use of geosynthetic solutions in Indonesia is simply the lack of knowledge of what can be achieved and the savings that can be achieved by their proper application.

Thanks were extended to all participants: to the speakers for their work in preparing and presenting their papers; to the audience for attending; and to the Committee for organising the event, especially the staff and students of BINUS, who carried out the administrative duties and all of the "behind the scenes" organisation. It was also

announced that over the coming few weeks, a new committee would be formed at a meeting where all members would be invited, and that the new committee would start to plan further events.

reported by Mike Dobie
IGS Member

South Africa (GIGSA) Chapter Report



Newly Elected Chapter Officers

For the first time since the inception of GIGSA, an electronic ballot was conducted in October 2004 to elect the new committee for the term November 2004 to November 2006. Fourteen nominations were received, and the ten persons were elected to the committee.

Activities: August to December 2004

Lecture Series

On 25 August 2004, Alan Parrock and Garth James gave lectures in the South African Institution of Civil Engineers (SAICE) Wits/Pretoria Branch lecture series on *Geosynthetic Reinforcement* and *Geosynthetics in Road Rehabilitation*, respectively. Following the success of the Lining CQA seminar held in Midrand in June, Peter Hardie organised a repeat seminar in the Western Cape on 14 September, with the same presenters, Anton Bain, Liza du Preez and Stan Jewaskiewitz.

International Technology Transfer

At the invitation of the Institute of Waste Management of Southern Africa's *WasteCon 2004* Conference Organising Committee, GIGSA provided a special conference workshop

on international technology transfer. The workshop was presented by Professor Ed Kavazanjian (Arizona State University, USA), who is an internationally recognised expert on waste properties and the dynamic loading of landfills.

Prof. Kavazanjian led the approximately 50 delegates through the subject areas of waste properties and seismic design of landfill, as well as a discussion on alternative capping systems for landfill sites.

GIGSA Inaugural President's Award

At the GIGSA Workshop held on 13 October in support of *WasteCon 2004*, the GIGSA Inaugural President's Award was presented by Kelvin Legge to Clifford Gundle (London, UK) to acknowledge Clifford's excellent and dedicated service to the South African geosynthetics industry. The President's Award consists of a shield donated by the Legge family, in memory of their daughter Kelley Nicole, who was well known throughout the geotechnical and geosynthetic industry as the individual who had become her father's eyes since the loss of his sight in 1992.

4th International Conference on Filters (19 to 21 October)

Geofilters 2004 was held at the Spier Estate, Stellenbosch and was organised by Prof. Andy Fourie under the auspices of the IGS. See the November 2004 issue of *IGS News* for more information on the Conference.

New GIGSA Committee Elected Officers

President: Peter Legg (second term)
Vice-President: Garth James
Secretary: Matthew Gordon-Watt
Treasurer: Peter Hardie
Immediate Past President: Kelvin Legge

Assigned GIGSA Portfolio Responsibilities

Membership: Rod Drayton
Newsletter: Peter Hardie
Events: Falk Hedrich (assisted by Kim Barnard, co-opted member)
Education: Stan Jewaskiewitz
Standards & Specifications: Anton Bain
Kwazulu-Natal regional subcommittee: Peter Davies
Sponsorship, Archives: Kelvin Legge
Marketing: Garth James
SAICE Geotech Division Rep: Peter Legg
Western Cape regional subcommittee: Peter Hardie

GIGSA Annual General Meeting

For the first time since its inception, IGS President, Dr. Daniele Cazzuffi, attended and addressed the GIGSA AGM. Daniele's address was inspiring and motivating, and he challenged GIGSA to host a Regional African Geosynthetics Conference in 2008-2009.

Geotextile Pioneers Honoured

GIGSA honoured two South African geotextile industry pioneers. The Honorary Life Membership was bestowed on Glen Lawson,



The late Gavin MacLeod receives GIGSA Honorary President's Award



Glen Lawson becomes an Honorary Life Member of GIGSA.

retired Managing Director of Kaytech. In a similar manner, Gavin McFarlane was honoured posthumously with a

Special President's Award for Outstanding Service to the geosynthetics industry.

reported by Vanessa Davies
GIGSA Newsletter Editor

8th International Conference on Geosynthetics

Yokohama, Japan, 18 to 22 September 2006: Abstracts due 31 March 2005

The 8th International Conference on Geosynthetics (8ICG) will be held at Yokohama, Japan, 18-22 September 2006. The Conference is being organised by the Japan Chapter of the International Geosynthetics Society (JC-IGS) under the auspices of the IGS and with the support of The Japanese Geotechnical Society and The International Society for Soil Mechanics and Geotechnical Engineering (ISSMGE).

The 8ICG will appeal to all participants in the field of geosynthetics engineering, e.g., project managers, designers, contractors, manufacturers, suppliers, inspectors, regulators, researchers, instructors, consultants and laboratories, etc.

Conference Subjects

- Transport (roads, railways, tunnels, airports, etc.)
- Hydraulic structures (dams, canals,

reservoirs, etc.)

- Erosion control and coastal works
- Soil improvement and reinforcement
- Mining
- Waste landfills
- Remediation of contaminated sites
- Landscaping and environmental mitigation
- Prevention of natural and technological risks
- Agriculture and forests
- Innovative geo-materials and construction methods
- Education and technology transfer
- Others

The abstracts and final manuscripts will be reviewed by international experts appointed by the organising committee in cooperation with the International Paper Selection Committee. These papers must be original, previously unpublished work and must not be of any

commercial nature.

Key Deadlines

Deadline for receiving abstracts: 31 March 2005

Decision of Organising Committee sent to authors: July 2005

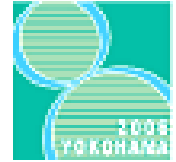
Deadline for receiving completed papers: 31 October 2005

For details on abstract submission, please visit the Conference web site.

Contact Information

Conference Secretariat
8ICG-Yokohama 2006
E-mail: info@8icg-yokohama.org
www.8icg-yokohama.org

reported by Junichi Koseki, Vice Chair of Scientific and Program Division, Organising Committee of 8ICG and IGS Member



Sardinia 2005

S. Margherita di Pula (Cagliari), Italy, 3 to 7 October 2005

The Tenth International Landfill Symposium, Sardinia 2005, will be held in S. Margherita di Pula, Cagliari, Italy, on 3 to 7 October 2005 under the auspices of the IGS.

The International Landfill Symposia in Sardinia were established to disseminate knowledge and experience in waste management and landfills. The Symposia have rapidly become the international reference forum, where leading experts present their research activities and experiences and discuss new concepts and technologies.

Specific Symposium Topics

- Waste policy and legislation
- Waste management strategies
- Public concern and education



- Waste management assessment and decision tools
- Waste characterisation as a tool for waste management strategies
- New concepts for waste collection
- Waste minimisation and recycling
- Biological treatment
- Thermal waste treatment
- Mechanical biological treatment prior to landfilling
- Sanitary landfilling

- Integrated wastewater and solid waste management
- Special sessions

The Symposium will include oral presentations, poster sessions, specialised sessions, a "Landfill Products Forum" for company presentations, a small exhibition, as well as specific Workshops focused on the main controversial aspects of waste management and landfilling.

Official Language

The official language will be English. All papers must be written and presented in English. Authors will be expected to attend the Symposium and present their papers.

More Information

For further enquires and information on registration, exhibition, etc., contact the

Organising Secretariat:

Tel: 39/049 8726986

Fax: 39/049 8726987

E-mail: info@sardiniasymposium.it

www.sardiniasymposium.it

5th International Congress on Environmental Geotechnics

Opportunities, Challenges and Responsibilities for Environmental Geotechnics, Cardiff, Wales, UK, 26 to 30 June 2006

The International Society of Soil Mechanics and Geotechnical Engineering (ISSMGE) and the British Geotechnical Association (BGA, the British member society of the ISSMGE) are pleased to announce the *Fifth International Congress on Environmental Geotechnics (5ICEG)*, which will be held between the 26 and 30 June 2006 in Cardiff, Wales, UK – Europe's youngest capital city. The Congress will be held under the auspices of the IGS.

To stimulate communication and discussion, a number Plenary Sessions will be held, which will cover a wide range of issues with invited experts presenting the state of the art, supported by well-documented case histories and "real industrial examples." These will be followed by panelled open Discussion Sessions, where the most challenging aspects of each topic will be cast open for debate. A Poster Session at the Exhibition Hall will compliment the formal Plenary and Discussion Sessions.

This Congress is the fifth in the series of prestigious international congresses on environmental geotechnics held by



the ISSMGE. Following the successes of the previous congress held in 2002 in Rio de Janeiro, Brazil, the 5ICEG promises to be a truly global affair of prestigious international calibre.

The congress will provide a unique forum for academics, industry, and government practitioners to share their findings and expertise.

Session Themes

Papers under the following session themes will be presented:

- Remediation
- Barrier Design (Nuclear Waste Disposal)
- Testing and Monitoring
- Sustainability
- Fate and Transport
- Waste Reuse/Waste Management (Radioactive Waste)
- Regulation and Risk Management

- Tailings/Sludge Ponds/Underwater Geoenvironmental Issues
- Mine Sites, Tailing Dams, Dredgings, and Lagoons
- Integrated Management of Groundwater & Contaminated Land

The above are intended to be indicative of themes and are not intended to be exclusive or to discourage the submission of other relevant papers.

Abstracts were due 1 December 2004.

Conference Organisers

The Congress is being organised by the Geoenvironmental Research Centre, Cardiff University, supported by the Transport Research Laboratory (TRL) and the Building Research Establishment (BRE).

More Information

A bulletin containing details of the Congress program, registration procedure, accommodation, and other details will be issued in the spring of 2005 (see page 21 for contact information).

Order of the British Empire: Professor Stephen Brown

Professor Stephen Brown, IGS Member and Director of the Nottingham Centre for Pavement Engineering, at the University of Nottingham, was awarded the "Order of the British Empire" by Her Majesty Queen Elizabeth for services to Road Engineering.

Prof. Brown's research is in pavement and rail track engineering and geotechnics, in which he has published over 200 papers. His numerous accomplishments and awards include Fellow of the Royal Academy of Engineering and of the Institution of Civil Engineers (ICE),

the British Geotechnical Society's 36th Rankine Lecturer, Honorary Member of the US Association of Asphalt Paving Technologists, Honorary Fellow of the Institute of Asphalt Technologists in the UK, James Alfred Ewing Gold Medal of the ICE for his contributions to engineering research, Chair of the ICE in 2001, Royal Society's Senior Mercer Award for Innovation for research on rail track, Annual Paviers Medal of the Worshipful Company of Paviers, and the Ronald D Kenyon Award from the US National Asphalt Pavement Association's Research and Education

Foundation.

The Order of the British Empire was created during the First World War in 1917 by George V. Valuable service is the only criterion for the award, and the Order is now used to reward service in a wide range of activities. There are more than 100,000 living members of the Order throughout the world.



Geosynthetics International

An Official Journal of the IGS: Electronic Journal Free to IGS Members

Geosynthetics International is an official journal of the IGS and has established itself as a premier peer-reviewed journal on geosynthetics. The Journal publishes technical papers, technical notes, discussions, and book reviews on all topics relating to geosynthetic materials (including natural fiber products), research, behaviour, performance analysis, testing, design, construction methods, case histories, and field experience.

Geosynthetics International is only published electronically starting Volume 10 (2003) by Thomas Telford and is free to IGS Members. All others, e.g., corporations, companies, and university libraries, can subscribe at a rate of £325/US\$585. An individual rate for those non-members whose organisation subscribes, but would like an additional personal subscription (including the update CD) will be available for £60/US\$108.

The update CD is issued annually as part of the subscription for non-IGS Members and includes all papers published in that year. IGS Members can opt to buy the CD for US\$100.

Visit the Journal's web site given below for subscription information and instructions for accessing the latest issues.

Papers should be work not published in full elsewhere and should be sent to any of the following individuals:

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For subscription details visit the Journal's web site at:
www.thomastelford.com/geosynthetics
or contact:

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Fax: 44/20 7538 9620
E-mail: maria.davis@thomastelford.com

Geotextiles & Geomembranes

An Official Journal of the IGS: Electronic Journal Now Free to IGS Members

Geotextiles and Geomembranes is dedicated to the mission of the IGS, which is to promote the scientific and engineering development of geotextiles, geomembranes, related products, and associated technologies.

The Journal publishes technical papers, technical notes, discussions, and book reviews on all topics relating to geosynthetics, research, behaviour, performance analysis, testing, design, construction methods, case histories, and field experience.

Papers should be submitted electronically as a Microsoft Word or pdf file to: kerry@civil.queensu.ca. Please ensure the text is double spaced, there is an abstract with keywords included, and tables and figures are at the end following the text. Please check the Journal's instructions for authors for additional information regarding submissions. The Journal strives to provide the authors

with quick, constructive reviews, and we appreciate the author's hard work in addressing these comments and quick return of revised papers.

Geotextiles and Geomembranes is now available free in electronic format to IGS Members. To activate free access and to create your personal account, you will need your IGS Membership Number, which can be found on your IGS mailing label. If you do not know your Membership Number, please contact the IGS Secretariat at IGSsec@aol.com.

For instructions on how to activate access and create your personal account, go the following web site:
www.geosyntheticsociety.org/Journals_GG.htm

A hardcopy of *Geotextiles and Geomembranes* is available at a reduced subscription rate to individual and Corporate Members of the IGS.

Individual IGS Members may subscribe at an 82.5% discount: US\$154 for six issues. IGS Corporate Members may subscribe at a 59.5% discount: US\$356 for six issues. Please indicate that you are an IGS Member when requesting the special price.

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For more information on obtaining electronic and hard copy subscriptions to Geotextiles and Geomembranes please go to the following IGS web site:
www.geosyntheticsociety.org/Journals_GG.htm

CORPORATE PROFILE

Corporate Members of the IGS are encouraged to publish a Corporate Profile in IGS News. A maximum of three profiles can be published in each issue of IGS News. The criteria for the preparation and submission of Corporate Profiles are available from the Editor. There is no charge for having a Corporate Profile published; it is a benefit of corporate membership.

ALPE ADRIA TEXTIL Srl

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highways, motorways, and airports

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- river and marine banks erosion prevention
- construction and/or enlargement of waste landfills

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For more information, please visit the Alpe Adria Textil Srl website: www.mfriulana.it



**International Workshop on
Hydro-Physico-Mechanics of Landfills
Grenoble, France
21-22 March 2005**

Contact: Prof. Jean-Pierre Gourc
E-mail: gourc@ujf-grenoble.fr
www.geosyntheticssociety.org/Calendar/
GrenobleLandfillWorkshop05.pdf

**45th Rankine Lecture: R. Kerry Rowe
"Long term performance of barrier
systems: theory and practice;
geotechnics and geosynthetic"
Imperial College London, London, UK
23 March 2005**

Contact: Dr. Jamie Standing
E-mail: j.standing@imperial.ac.uk

**National Conference on "Geotechnics in
Environmental Protection"**

Allahabad, India
9-10 April 2005
Contact: Prof. R.K. Srivastava
E-mail: rksciv@rediffmail.com, or
mnnitgen2005@yahoo.co.in
www.geocities.com/mnnitgen2005

**Fifth International Conference on
Ecosystems & Sustainable Development
Cadiz, Spain
3-5 May 2005**

Contact: Caroline Weaver
E-mail: cweaver@wessex.ac.uk
www.wessex.ac.uk/conferences/2005/
eco05/index.html

**Solutions to Coastal Disasters 2005
Charleston, South Carolina, USA
8-11 May 2005**

Contact: Louise Wallendorf
E-mail: lou@usna.edu
www.asce.org/conferences/cd05/

**Geotechnique Symposium 2005: Risk and
variability in geotechnical engineering
Instit. of Civil Engineers, London, UK
9 May 2005**

Contact: Sue Frye
E-mail: sue.frye@ice.org.uk
www.geotechnique-ice.com

**GEOPROB 2005 - International
Conference on Problematic Soils
Famagusta, Cyprus
25-27 May 2005**

Contact: Conference Secretariat
E-mail: geoprob2005@emu.edu.tr
www.geoprob2005.org

**2005 International Conference on
Landslide Risk Management
Vancouver, British Columbia, Canada
31 May - 4 June 2005**

Contact: Oldrich Hungr
E-mail: o.hungr@eos.ubc.ca

www.cgs.ca/2005ICLRM

**Symposium on Geosynthetic and
Geosynthetic-Engineered Structures
Honoring Robert M. Koerner
Baton Rouge, Louisiana, USA
1-3 June 2005**

Contacts: Dr. Hoe I. Ling
E-mail: hil9@columbia.edu
www.civil.columbia.edu/~ling/koerner.html

**IACMAG 11th International Conference
Turin, Italy
19-24 June 2005**

Contact: Organizing Secretariat
E-mail: iacmag@iacmag2005.it
www.iacmag2005.it

**6th International Conference on Ground
Improvement Techniques
Coimbra, Portugal
18-19 July 2005**

Contact: John S Y Tan
E-mail: cipremie@singnet.com.sg, or
Contact: Prof Isabel Pinto
E-mail: isabelmp@dec.uc.pt
www.cipremier.com

**16th International Conference on Soil
Mechanics and Geotechnical Engineering
Osaka, Japan
12-16 September 2005**

Contact: Prof. Masashi Kamon
E-mail: 16ICSMGE@jiban.or.jp
www.jiban.or.jp

**3rd International Young Geotechnical
Engineers' Conference
Osaka, Japan
12-16 September 2005**

Contact: Prof. Ikuo Towhata
E-mail: towhata@geot.t.u-tokyo.ac.jp
www.jiban.or.jp/e/events/3iygec.html

Sardinia 2005

**Tenth International Waste Management
and Landfill Symposium
S. Margherita di Pula, Sardinia, Italy
3-7 October 2005**

Contact: EuroWaste Srl
E-mail: info@sardiniasymposium.it
www.sardiniasymposium.it

**Landfill 2005 - Landfilling in
Challenging Environments
Kwazulu-Natal, South Africa
20-21 October 2005**

Contact: Peter Davies, Conference Chair
E-mail: nphuntpld@kaymac.co.za

**3rd Central Asian Geotechnical
Symposium
Dushanbe, Tajikistan
10-12 November 2005**

Contact: Dr. Jamshed Akhmedov

E-mail: saniosp@tajnet.com

**Tsunami Reconstruction with
Geosynthetics: Protection, Mitigation
and Rehabilitation of Coastal and
Waterway Erosion Control
Pathumthani, Thailand
6-7 December 2005**

Contact: Prof. Dennes T. Bergado
E-mail: bergado@ait.ac.th

**GRI-19 and NAGs
Las Vegas, Nevada, USA
14-16 December 2005**

Contact: Jane Harris, NAGS
E-mail: janeharris@nagsigs.org

**Geo-Congress 2006: Geotechnical
Engineering in the Information Age
Atlanta, Georgia, USA
19-22 February, 2006**

Contact: ASCE
E-mail: conferences@asce.org

**XIIIth Danube-European Conference on
Geotechnical Engineering
Ljubljana, Slovenia
7-9 June 2006**

Contact: Dr. Janko Logar
E-mail: jlogar@fgg.uni-lj.si

**5th International Congress on
Environmental Geotechnics
Cardiff, Wales, United Kingdom
26-30 June 2006**

Contact: Dr. David-Huw Owen
E-mail: OwenDH@cf.ac.uk
www.grc.cf.ac.uk/5iceg

**International Conference on Physical
Modelling in Geotechnics
Hong Kong, China
4-6 August 2006**

Contact: Ms. Shirley Tse
E-mail: gcf@ust.hk
www.icmg2006.ust.hk

**VIth European Conference on Numerical
Methods in Geotechnical Engineering
Graz, Austria
6-8 September 2006**

Contact: Helmut F. Schweiger
E-mail: helmut.schweiger@tugraz.at
www.geotechnical-group.TUGraz.at

**8th International Conference on
Geosynthetics (8ICG)
Yokohama, Japan
18-22 September 2006**

Contact: 8ICG Conference Secretary
E-mail: info@8icg-yokohama.org
www.8icg-yokohama.org

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Saint-Gobain Technical Fabrics *China (People's Republic) (2004)*
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Shenzhen Sheng Yi Environmental Co., Ltd. *China (PR) (2002)*
Shimizu Corporation *Japan (1990)*
SI Corporation *USA (1991)*
Solmax International, Inc. *Canada (1997)*
SVG (Swiss Association of Geotextile Professionals) *Switzerland (1984)*
Taiyo Kogyo Co., Ltd. (Ocean) *Japan (1996)*
Taiyo Kogyo Corporation (Sun) *Japan (1991)*
Tanaka Co., Ltd. *Japan (1993)*
Tele Textiles AS *Norway (1995)*
Tenax S.p.A. *Italy (1991)*
Ten Cate Nicolon B.V. *The Netherlands (1984)*
Tenox Corporation *Japan (1998)*
Tensar Earth Technologies *USA (1989)*
Tensar International *UK (1989)*
Tensar-Kaile Geosynthetics (Wuhan) *China (People's Republic) (2004)*
Tension Technology s.r.l.-TTM *Italy (2004)*
Terram Ltd. *UK (1988)*
Thai Nam Plastic Public Co., Ltd. *Thailand (1994)*
Tingeo, S.L. *Spain (2003)*
TMA, S.L. *Spain (2000)*
Tokyu Construction Co., Ltd. *Japan (1984)*
Werkos *Croatia (1999)*

Note: date is earliest year of continuous membership

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The International Geosynthetics Society



OBJECTIVES OF THE IGS

The International Geosynthetics Society was formed with the following objectives:

- to collect, evaluate, and disseminate knowledge on all matters relevant to geotextiles, geomembranes, related products, and associated technologies;
- to improve communication and understanding regarding geotextiles, geomembranes, related products, and associated technologies, as well as their applications;
- to promote advancement of the state of the art of geotextiles, geomembranes, related products, and associated technologies; and
- to encourage, through its Members, the harmonization of test methods, and equipment and criteria for geotextiles, geomembranes, related products, and associated technologies.

WHY BECOME A MEMBER OF THE IGS?

First, to contribute to the development of our profession.

By becoming an IGS Member you can:

- help support the aims of the IGS, especially the development of geotextiles, geomembranes, related products, and associated technologies;
- contribute to the advancement of the art and science of geotextiles, geomembranes, related products, and their applications;
- provide a forum for designers, manufacturers, and users, where new ideas can be exchanged and contacts improved; and
- become increasingly informed, involved, and influential in the field of geotextiles, geomembranes, related products, and associated technologies.

Second, to enjoy the benefits.

The following benefits are now available to all IGS Members:

- the IGS Membership Directory, published yearly;
- the newsletter, *IGS News*, published three times per year;
- electronic issues of *Geosynthetics International* and *Geotextiles & Geomembranes*;
- a CD containing the 19 IGS Mini Lecture Series;
- a DVD containing the three IGS Videos;
- information on test methods and standards;
- discount rates on the purchase of any future documents published by the IGS and on the registration cost of all international, regional, or national conferences organized by or under IGS auspices;
- preferential treatment at conferences organized by or under IGS auspices;
- a reduced subscription fee for IGS-endorsed journals; and
- the possibility of being granted an IGS award.

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Membership of the International Geosynthetics Society (IGS) is open to individuals or corporations "... engaged in, or associated with, the research, development, teaching, design, manufacture or use of geotextiles, geomembranes, and related products or systems and their applications, or otherwise interested in such matters.". The annual fee for membership is US\$45 for individuals and US\$1000 for Corporate Members. Individuals of, or not of, corporations who voluntarily contribute a minimum of US\$200 annually to the IGS, in excess of their membership dues, will be mentioned in the IGS Directory in a separate list as benefactors.

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