

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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Content

President's Corner	2	3 rd International Symposium on Geosynthetic Clay Liners	22
IGS in Asia	3	News from the IGS Chapters and the Membership.....	22
Reports of IGS Meetings, Activities and Documents.....	4	Polish Chapter of the IGS is founded	22
IGS Council Service Recognition Certificate	4	The Dutch Design Guideline for Piled Embankments	23
IGS News Readership Questionnaire.....	4	University of Missouri – Columbia wins Fourth National ASCE Geo-Institute Paper MSE Wall Competition Held in Orlando	23
Membership renewal via IGS webpage.....	4	McWatters wins NAGS Student Paper Prize.....	25
IGS at ISSMGE Conference in Alexandria	4	Jubilee Symposium on Polymer Geogrid Reinforcement	25
Call for Candidates for the IGS President, Vice- President, and IGS Council: Term 2010 to 2014.....	5	3 rd Portuguese Seminar on Geosynthetics	26
IGS Awards: Call for Nominations 2006 – 2009.....	5	List of IGS Chapters and their Chairpersons.....	26
Summary Report of 2008 IGS Chapter Activities	6	IGS Award Winners	27
Conference Reports.....	11	IGS Recognition Recipients.....	27
Rencontres Géosynthétiques 2009	11	Official Journals of the IGS	28
Prague Geotechnical Days 2009.....	12	Geosynthetics International	28
34 th CEN/TC189 meeting.....	14	Geotextiles & Geomembranes	29
2 nd International Seminar on "Earthworks in Europe"	15	Calendar of Events	31
Geo-Environmental Engineering 2009	15	Corporate Membership	32
9 th Int. Geotechnical Conference "Geotechnical Monitoring".....	16	Corporate Members of the IGS	32
4 th Symposium Environmental Geotechnics DGGT & 5 th Freiburger Geotechnic-Colloquium.....	17	Celebrating 20 Years of Corporate Membership.....	35
Announcements of Conferences of IGS	18	Corporate Profile - SOHAMS.....	36
9 th International Conference on Geosynthetics – 9ICG Guarujá, Brazil, 23 - 27 May 2010	18	Corporate Profile - SOTRAFA	37
GeoAfrica 2009 2 - 5 September 2009, Cape Town, South Africa	19	Corporate Profile - GEOSISTEM.....	38
Announcements of Conferences under the Auspices of IGS.....	20	IGS Council.....	39
Sardinia 2009.....	20	IGS Officers	39
International Symposium on Geotechnical Engineering, Ground Improvement and Geosynthetics for Sustainable Mitigation and Adaptation to Climate Change including Global Warming	21	IGS News Editor and Chapter Correspondents.....	39
		IGS Clothing.....	40
		Hints for easy usage of this document.....	40
		IGS News Readership Questionnaire.....	41
		IGS Membership Application	42

President's Corner



Fumio Tatsuoka

Quite different from many other countries, 31st March and 1st April are respectively the end and beginning of both fiscal year and academic year in Japan. For this reason, I was quite busy those days with my many responsibilities inside and outside our university. Among them, I started three classes, *Basic Soil Mechanics* and *Ground Improvement and Soil Reinforcing* for undergraduate students and *Strength of Soil and Stability of Ground* for graduate students for the summer semester, as the previous years. When I am teaching these three classes, I often explain *Geosynthetic Engineering*. Otherwise, I cannot show my students modern cost-effective solutions in most of the fundamental geotechnical engineering subjects, soil compaction, consolidation, permeability, hydraulic stability, earth pressure/retaining wall, slope stability, bearing capacity and so on. When I was a student of the University of Tokyo about forty years ago, I was not taught anything about *Geosynthetic Engineering*, including *soil reinforcing*. Always by feeling this so big change for the last four to five decades, I can be confident with that *Geosynthetic Engineering* has grown to one of major

fields in *Geotechnical Engineering*. For the last two years, I have been working very hard as the chairperson of an ad-hoc committee of the Japanese Geotechnical Society (the JGS) of which the mission is editing of a comprehensive report including the records of all previous activities (i.e. investigation and research) of the JGS related to geotechnical disasters by earthquakes, heavy rainfall and flooding. They include failure and collapse of soil structures (embankments for highways, railways, residence areas and others, river and coastal levees, earth- and rock-fill dams including small irrigation dams and so on), cut slopes, natural slopes and grounds supporting super-structures and underground structures (pipe lines, lifeline structures). The report also includes the history, state-of-art and perspective of geotechnical design and construction practice as well as research to prevent and mitigate these geotechnical disasters with the different types of soil structures and others described above. Moreover, the report includes recommendations for actions to be taken by the central and local governments, the public organizations responsible for infrastructures, geotechnical engineers, researchers and educators and the public as well as the JGS. During the editing work, the committee members analyzed information and discussed very seriously how we should do and can do to prevent and mitigate these geotechnical disasters. The report includes a number of previous case histories

in which geosynthetic-reinforced structures (soil retaining walls, slopes ...) were used to reconstruct collapsed soil structures, rehabilitate old soil structures and construct new soil structures, which are enough to convince the other members of the committee of the usefulness and cost-effectiveness of *Geosynthetic Engineering* to achieve this end. In this report, *Geosynthetic Engineering*, in particular, geosynthetic-reinforced soil structures, has been accepted. This report will be published August 2009. I am very sorry for that the report is in Japanese. However, I will later write an article describing the essence of the report.

As one of the three invited lecturers for the Fourth Biot Conference on Promechanics, June 8-10 2009, I visited Columbia University. The title of my lecture was "Rate effects of elastic and inelastic stress-strain behaviours of geomaterials observed in experiments". Despite that the topics of this conference are not directly linked to *Geosynthetic Engineering*, by interacting with several researchers of *Material Engineering and Science*, I could confirm that modeling of the rate-dependent strength and deformation property of polymer geosynthetic reinforcement in the framework of elasto-viscoplastic model, which is the procedure adopted by our research team, is relevant also from the view point of *Material Engineering*.

Fumio Tatsuoka
IGS President

30 September 2009:

Nomination for IGS Awards (Period 2006 to 2009)

See page 5 for details

31 October 2009:

**Nomination for the IGS President, Vice-President
and IGS Council Term 2010 to 2014**

See page 5 for details

IGS in Asia



John Cowland

Asia contains about a half of the people of the world and a great deal of the world's current construction activities are taking place in this region. As befits this important area, the IGS is well represented by ten Asian Chapters, and the number of Chapters is growing. So far, most of these Chapters are in the Asia Pacific region in the east of the continent, with the Indian Chapter in South Asia. From an organizational perspective, the IGS includes Australia and New Zealand in Asia, due to their geographical location, but not Russia and Turkey, which both straddle Europe and Asia. Various Asian countries, including some in western Asia, have recently expressed an interest in forming IGS Chapters.

Japan was the first country to form an IGS Chapter in Asia; nearly 25 years ago in 1985. Japan has continued to have a large number of both IGS Members and IGS Corporate Members, making it a corner stone of our society. One sixth of all the IGS Corporate Members are Japanese. Over the years, the Japanese Chapter has held many IGS events, including the 8th International Conference on Geosynthetics in Yokohama in 2006, which was very successfully organized by our President Fumio Tatsuoka.

India was the next country to form an Asian IGS Chapter, in 1988. Since then, India has held many IGS events including the first GeoAsia Conference on Geosynthetics in 1996. India is developing rapidly and the use of geosynthetics is growing apace, with an increasing number of manufacturers.

The region of **South East Asia** formed an IGS Chapter in 1988. This encompassed Brunei, Hong Kong, Indonesia, Malaysia, Singapore and Thailand. The South East

Asian Chapter hosted the 5th International Conference on Geosynthetics in Singapore in 1994. A small group of IGS Members worked very hard to hold this first international geosynthetics event in Asia. Malaysia hosted the second GeoAsia Conference on Geosynthetics in 2000. Since then, this regional chapter has been evolving into a number of separate country chapters.

China formed an IGS Chapter in 1990. China has a large construction industry which makes considerable use of geosynthetics, and the Chinese Chapter has held up to 12 IGS events per year in various locations around the country. Indeed, it is probably the only country in the world where the Prime Minister has issued an instruction to Engineers to consider replacing some conventional construction materials with geosynthetics. China hosted the fourth Asian geosynthetics conference in Shanghai in 2008, which was called Geosynthetics Asia 2008 to distinguish our discipline from geotechnical engineering and the geotechnical conferences that were being run with the same GeoAsia name.

Indonesia formed an IGS Chapter in 1992. Indonesia is a developing nation with numerous construction activities. After the economic slowdown about ten years ago the Chapter has found that there is a renewed interest in geosynthetics in recent years.

Korea formed an IGS Chapter in 1993. This Chapter is very active and is well supported with IGS Members and IGS Corporate Members. Korea hosted the third GeoAsia Conference on Geosynthetics in Seoul in 2004.

The **West Pacific** Regional Chapter was formed in Taiwan in 1997. With an active geosynthetics manufacturing industry supplying other parts of Asia, and popular annual seminars, the West Pacific Chapter continues to exchange scientific knowledge on geosynthetics.

Thailand formed an IGS Chapter in 2002. This Chapter has a large number of IGS Members, popular annual seminars, and a very good newsletter. Thailand will host Geosynthetics Asia 2012 in Bangkok.

Australia and New Zealand formed the **Australasian** Chapter in 2002. Although they have a relatively small population, they have a significant use of geosynthetics in the transportation and mining sectors, and the Chapter organises frequent seminars utilising visiting experts.

Our newest Asian IGS Chapter was formed in the **Philippines** in 2007. The Philippines has a young and growing population, and infrastructure development using geosynthetics has commenced.

The contact people for the existing Asian Chapters can be found in the list of IGS Chapters and their Chairpersons shown later in this Newsletter.

There are many individual IGS Members in other Asian countries, and new members are welcome. Active IGS Members in **Iran, Malaysia** and **Vietnam** have shown interest in forming new IGS Chapters. They need 20 IGS Members, with each available Corporate Member counting as 5, to form a Chapter. Alternatively, an IGS Interest Group can be formed with just 5 individual members on the way to forming a Chapter.

For information and guidance on how to form a new IGS Chapter in Asia please contact the current Asian Activities Committee (AAC) Chairman Prof. Malek Bouazza in Melbourne, Australia.

His e-mail address is malek.bouazza@eng.monash.edu.au

Alternatively, you can contact the IGS Secretary, Pete Stevenson, in the USA, whose e-mail address is IGSPete@geosyntheticssociety.org

*Reported by
John Cowland, IGS Treasurer*

IGS Council Service Recognition Certificate New Recipients in 2009



**Peter E.
Stevenson**

In 2008 the council of the IGS introduced a program of recognition for council members who have retired from active service, thanking them

for their past service.

In 2009 **Masashi Kamon (Japan)**, **Bernard Myles (UK)** and **Eun-Chul Shin (Korea)** have become eligible for this recognition of service as a council member of the IGS.

The recognition consists of a certificate and if possible, a public presentation at an IGS event; for example, IGS International Conferences or IGS Regional Conferences. On some occasions the public recognition presentation has

occurred at National events.

The IGS greatly appreciates the effort and dedication of those volunteers who serve on the IGS Council and extends our highest regards and our very best wishes on behalf of the IGS membership, the IGS Council and the officers of the IGS.

*Reported by
Pete Stevenson, IGS Secretary*

IGS News Readership Questionnaire Your participation is needed!

The International Geosynthetic Society is undertaking an evaluation of the IGS newsletter, with a view to improving its quality and usefulness.

Therefore with the announcement of March 2009 issue of IGS News there was an email with the questionnaire by the IGS Secretariat approaching all members for participa-

tion. The questionnaire can also be downloaded at the web page of IGS (www.geosyntheticssociety.org).

Additionally the form is enclosed in this issue of IGS News at page 41.

We hope on a fruitful response to

be able bringing new ideas to IGS News for the benefit of our membership.

*Reported by
Gerhard Bräu, IGS News Editor*

Membership renewal via IGS webpage

The IGS announces a new feature on the IGS website: the ability to join or renew membership online. The direct link is <http://www.geosyntheticssociety.org/application.htm>.

This new benefit makes it easy for a new member to join or for a member to renew. The page connects or introduces the member to the chapters and facilitates rapid access to various membership

benefits like the official Journals. Check it out!

*Reported by
Pete Stevenson, IGS Secretary*

IGS at ISSMGE Conference in Alexandria 5 - 9 October 2009, Egypt

The IGS is invited to participate at the XVII International Conference for Soil Mechanics and Geotechnical Engineering, Alexandria, Egypt, 5 - 9 October 2009. The IGS President Fumio Tatsuoka and the Vice-President Jorge Zornberg will be present and are prepared to contact regional representatives from Africa

interested in geosynthetics applications.

They would be happy to stimulate and support regional groups to form IGS chapters. Actually the IGS is looking for proposals for the next regional geosynthetics conference in Africa ("GeoAfrica") which will follow-up the event in

will follow-up the event in Cape Town in September 2009.

*Reported by
Pete Stevenson, IGS Secretary*

Call for Candidates for the IGS President, Vice-President, and IGS Council: Term 2010 to 2014

Nominations due 31 October 2009

The 2010 IGS Election will be an electronic ballot again.

Three ballots, one each for the election of President, Vice – President, and eight Council Members, will be posted electronically on 31 January 2010 with balloting to close on 31 March 2010.

Results will be announced at the General Assembly, in Guarujá, Brazil, during the 9ICG (May 2010).

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 (2010 to 2014).

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 2010.

The eight IGS Council Members, whose term of office expires in 2010, are:

- S. Allen (USA)
- G. Bräu (Germany)
- N. Dixon (United Kingdom)
- N. Freitag (France)
- M. Maugeri (Italy)
- J. Otani (Japan)
- E. Palmeira (Brazil)
- E. Peggs (USA)

The IGS bylaws stipulate that a Council Member may be elected to two consecutive terms; hence, S. Allen, N. Dixon, N. Freitag, J. Otani and E. Peggs are eligible for re-election. They will have completed one, four-year term as Council Members by 2010.

Members co-opted in 2006 (M. Chen, J. Ferreyros, P. Legg and P. Stevenson) must stand for election or stand down from the Council.

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, F. Tatsuoka will become an IGS Officer in his capacity as Immediate IGS Past-President following the General Assembly. The Secretary and Treasurer 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 at least once per 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 October 2009**. 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 position for which they are seeking election. Biographical notes and photos will be published in the 2009 November issue of *IGS News*.

The newly formed IGS Council will meet several times in different countries around the world and, when possible, in conjunction with major geosynthetics and geotechnical engineering events. Should you require further information, please contact President F. Tatsuoka or Secretary P. Stevenson (see contact information on page 39).

*Reported by
Pete Stevenson, IGS Secretary*

IGS Awards: Call for Nominations 2006 – 2009

Nominations due 30 September 2009



**Daniele
Cazzuffi**

IGS Awards will be granted in 2010 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 recognize 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., 2006 through 2009

inclusive).

The winning entries will be publicized 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 **30 September 2009**.

The deadline for receipt of award candidate presentation packages is

31 December 2009.

Presentations will be forwarded by the Secretariat to the Award Committee by 15 January 2010, and the Committee will meet by 31 March 2010 to finalize their decisions, draft citations and report.

Awards will be presented in Guarujá, Brazil, 23 - 27 May 2010 at 9 ICG.

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 2009.

- **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 Award is automatically considered for both award categories (unless requested otherwise by the candidate). However, a candidate may only receive one award for the 2006 to 2009 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 40. 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 Awards Committee Members. Under the IGS Awards rules, any IGS Member can nominate himself/herself for any award. The Communications Committee, Education Committee, Corporate Members Committee, and IGS Chapters are 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 Awards Committee was formed in September 2008 at the IGS Council meeting, which was held in conjunction with the *EuroGeo 4* conference in Edinburgh.

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 technologies 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 from the IGS Secretary, Peter Stevenson and the IGS webpage section "[Handbook, Part 4 Benefits and Awards](#)" in the "Membership only" section.

*Reported by
Daniele Cazzuffi, Chair of IGS
Awards Committee*

Summary Report of 2008 IGS Chapter Activities



**Jorge G.
Zornberg**

One of the activities that has been traditionally undertaken by the IGS Vice-President is addressing the needs of the IGS Chapters. Continuing with this tradition, I have coordinated a new initiative aimed at enhancing communications between the IGS Chapters and the IGS Council. Specifically, and starting in 2008, new guidelines have been developed and implemented to facili-

tate such enhanced communication. The heart of this new approach is the completion by the IGS Chapters of a new Standard Reporting Form. I am pleased to report that all active IGS Chapters have submitted an annual report. This provides a cross-cutting evaluation of the full body of IGS technical activities at international, regional and chapter levels. The reports show a truly impressive number of technical activities. These activities include, to name a few, multi-lingual national conferences, free short courses aimed at regulators, and lecture series focused on educating a new generation of geosynthetic professionals.

The IGS World

Interestingly, this initiative appears to be particularly timely since, as pointed out by Dr. Giroud in his recent article on "The Origins of the IGS and a Challenge for the Future" (IGSNews, November 2008), the priorities of the IGS are now different from those of the IGS pioneers. As Dr. Giroud worded it:

We, the pioneers, met our challenge which was to bring together all people interested in geosynthetics to create a discipline. Young members of the IGS, your challenge is to bring this discipline to the world, to disseminate information. Our challenge was to converge. Your challenge is to diverge.

The IGS Chapters possibly represent the most powerful promise to diverge the message of the IGS. Thanks to the effort of geosynthetics experts, an excellent body of technical information regarding geosynthetics exists. To continue this growth it is imperative that this information be delivered for use by practitioners and regulators. Clearly the IGS Chapters have the best ability to aid in the process. Where in the World are the IGS Chapters? **Figure 1**



Figure 1: The IGS World (IGS presence in the form of IGS Chapters)

Figure 1 shows the current presence of the IGS in the form of IGS Chapters. As shown in the figure, the IGS Chapters have the potential to convey geosynthetics knowledge to a significant fraction of the world.

Figure 2 shows the formation chronology of IGS Chapters since the beginning of the IGS on 10 November 1983. An interesting characteristic of the development of IGS Chapters is that their creation has followed a remarkably constant rate. More specifically, the number of IGS Chapters has grown at an approximately steady rate of 1.2 chapters per year, which is remarkable. The concept of IGS Chapters was introduced very early in the history of our society, with Japan taking the initiative of forming the very first chapter in 1985. This initiative was soon followed by North America (NAGS) and the UK, which formed the first chapters in the Americas and

Europe in 1986 and 1987, respectively. New chapters were continuously added to the IGS ranks and, by 1993 (the 10th anniversary of the IGS), a total of 10 chapters were already operating across Asia, Europe, and North America. By the end of the second decade in the life of the IGS, a total of 24 chapters had been formed (now in all five continents, see chapters in 'green' in **Figure 2**). And by 2008, the 25th anniversary of the IGS (and the reporting period being summarized herein), the number of IGS Chapters had reached 31 after a continued focus on increasing the IGS presence in developing countries. Since then, a brand new Argentinean chapter has already been formed in 2009.

The New Reporting Guidelines

The continued growth in the num-

ber of IGS Chapters certainly serves well the important IGS objective of promoting the good use of geosynthetics. Yet, a fluid communication between the IGS Chapters and the IGS could potentially be compromised by this very growth. Good communication between the IGS Chapters and the IGS is key to:

- 1) achieve the overall objectives of the IGS,
- 2) increase the IGS membership,
- 3) document the multiple activities of the society,
- 4) Provide an opportunity to learn from one another's successes, and
- 5) provide feedback to the IGS Chapters.

In order to facilitate the reporting and subsequent synthesis of the chapter activities, new guidelines were recently developed. The new process involves completion by each chapter of a Standard IGS Chapter

Reporting Form (see **Figure 3**). The form was designed to be purposely short and straightforward, as the main objective is to collect a complete list of IGS Chapter activities. Specifically, the goal is to collect a count of all activities from all chapters in every year. While the chapters are encouraged to add more detailed information, and in order to minimize the burden on the chapters, this is not required. The Standard Reporting Form includes sections to document all annual activities including: technical events, board activities, chapter membership and preparation for future activities. Finally, the Standard Reporting Form also requires documenting com-

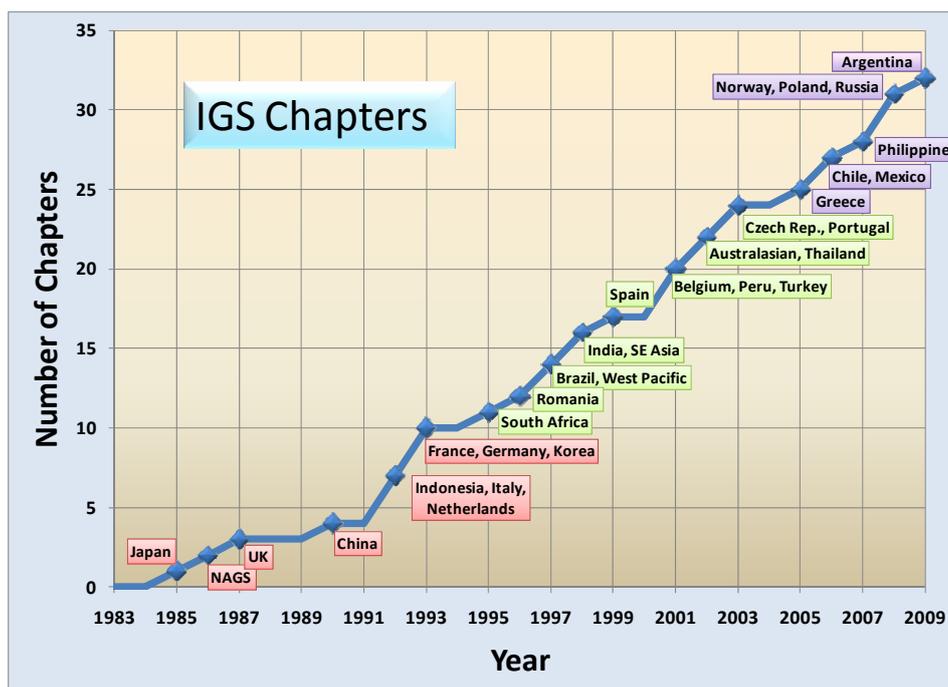


Figure 2: Chronology of the formation of IGS Chapters.

		Your Chapter's Name Here 2008 Chapter Report		Your Chapter's logo here
Standard IGS Chapter Reporting Form		Last revision: Sept 2008		
<p>Purpose: The objective of this form is to facilitate communication between the IGS Chapters and the IGS. Completion of this form satisfies current requirement of annual IGS Chapter reporting. Chapters are encouraged to submit supplemental documentation complementing the information provided in this form. Please submit the report for each year by January 31 of the subsequent year via email to igssec@aol.com.</p>				
Technical Activities				
1) Has your chapter conducted any of the following activities, as the lead organization? If yes, please indicate how many. <small>Note: Please detail the name, dates, # attendees, and additional information on these major activities in a separate page.</small>	<input type="checkbox"/> Conferences. # <input type="checkbox"/> Workshops. #	<input type="checkbox"/> Short courses. # <input type="checkbox"/> Main lectures. # <input type="checkbox"/> Other. #		
2) Has your chapter conducted any of the following activities, as a collaborative organization? If yes, please indicate how many. <small>Note: Please detail the name, dates, # attendees, lead organization, and additional information on these collaborative activities in a separate page.</small>	<input type="checkbox"/> Conferences. # <input type="checkbox"/> Workshops. #	<input type="checkbox"/> Short courses. # <input type="checkbox"/> Main lectures. # <input type="checkbox"/> Other. #		
3) Briefly summarize the main objectives of the chapter activities for the year of this report.				
Board Activities				
4) Composition of the Chapter's Board. <small>Note: Please detail in a separate page if major changes or elections took place during this calendar year.</small>	President: Secretary: Treasurer:	Other: Other: Other:		
5) Describe the type and frequency of Board meetings. <small>Note: Please indicate the approximate number of board meetings.</small>	<input type="checkbox"/> In-person. # <input type="checkbox"/> Conference calls. #	<input type="checkbox"/> Other. #		
Membership				
6) List the number of members for the year of this report.	Ind. members: Student members:	Corporate members: Chapter company members:		
7) Briefly describe if the chapter is conducting specific actions aimed at increasing the number of members.				

Activities Planned for Next Year			
8) Is your chapter planning to conduct any of the following activities, either as a lead organization or as a collaborative organization? If yes, please indicate approximately how many. <small>Note: Please detail the name, expected dates, expected # attendees, and additional information on these activities in a separate page.</small>		<input type="checkbox"/> Conference. # <input type="checkbox"/> Workshop. #	<input type="checkbox"/> Short courses. # <input type="checkbox"/> Main lectures. # <input type="checkbox"/> Other. #
9) Briefly summarize the main objectives of the chapter activities for next year.			
Communications			
10) Summarize relevant interactions with the members of your chapter. <small>Note: Please detail in a separate page any major changes in the communication strategies of your chapter.</small>		<input type="checkbox"/> Webpage update <input type="checkbox"/> Newsletters. #	<input type="checkbox"/> Other.
11) Summarize any relevant interactions of your chapter with other IGS chapters (e.g. within your region) or with the IGS.			
12) Would your chapter like to convey any specific comment or request to the IGS? Please summarize			
Contact information of the preparer of this report			
Name:		Telephone:	
Position:		E-mail:	
We appreciate your effort in completing this form. Please e-mail completed annual report (form and any attachments to: igssec@aol.com			
 International Geosynthetic Society			

Figure 3: Standard IGS Chapter Reporting Form

munications within the chapter and offers an opportunity to address issues or concerns to the IGS.

The annual reporting by IGS Chapters is expected to provide a channel for identification of activities worthy of recognition by way of the IGS-News, official IGS communications or nomination for IGS achievement awards. More importantly, the sharing of information will aid IGS Chapters in developing and improving technical activities by providing a forum for collaboration. Finally, it will also help the IGS to allocate resources and improve focus on activities of particular importance to the chapters.

The IGS Council and Officers are also required to report back to the IGS Chapters on the general activities of the society. This has been typically conducted through communications in IGSNews, informational e-mail to the IGS Membership, and communications through the Regional Activities Committees. In addition, a summary report (this document) will now be prepared annually to synthesize

the chapter activities and to address needs, issues or concerns raised by the IGS Chapters.

The Activities of IGS Chapters Conducted in 2008

So how many technical activities have been conducted by IGS Chapters in 2008? An astonishing number! The task of reviewing the many IGS Chapter Reports, while daunting, was extremely rewarding. The review put into perspective the IGS' tremendous infrastructure and its ability to disseminate

knowledge about geosynthetics. The reports from each of the IGS Chapters have been consolidated into a single file and may be downloaded by going to:

<http://geosyntheticssociety.org/2008ChapterReport.pdf>

Figure 4 summarizes the total number of technical activities conducted in 2008 by IGS Chapters. These include activities where the chapter acted either independently or as collaborating organization. As shown in the figure, a total of **18 technical**

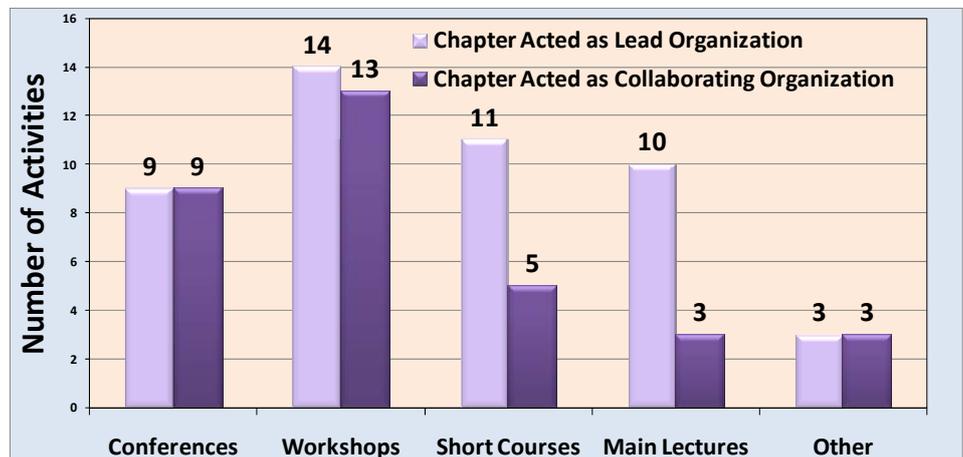


Figure 4: Number of technical activities conducted by IGS Chapters in 2008

conferences were organized by IGS Chapters in 2008. This is a truly significant number of national events, particularly considering that several of the IGS Chapters have a comparatively small number of members. Conferences conducted in 2008 by IGS Chapters acting as the lead organization include three IGS Regional Conferences: GeoAmericas 2008, **Cancún**, Mexico, GeoAsia 2008, **Shanghai**, China, and EuroGeo4, **Edinburgh**, UK. In addition, IGS Chapters led the organization of national conferences held in **Metz**, France (aimed at transportation agencies in France and Luxembourg), **Perugia**, Italy (focused on geosynthetics for soil reinforcement), **Kobe**, Japan (23rd Symposium on Geosynthetics), **Seoul**, South Korea (which was the venue of not one, but two conferences in 2008: the Spring and the Fall Geosynthetic Conferences), **Istanbul**, Turkey (3rd National Geosynthetics Conference), and **Pingtung**, Taiwan (3rd National Geosynthetics Conference).

The IGS Chapters also reported a total of **27 workshops** conducted in 2008. A sampling of the workshops includes those held in **New Delhi**, India (focused on geosynthetics in erosion control), **Syracuse**, USA (geosynthetic advancements in soil reinforcement applications), **Lima**, Peru (applications of geosynthetics in mining), **Bucharest**, Romania (geosynthetics in railway infrastructure), **Gauteng**, South Africa (workshop on lessons learned in GeoAmericas 2008 and EuroGeo4), and **Valencia**, Spain (geosynthetics in hydraulic applications). The chapters also reported a total of **16 short courses** conducted in 2008, including a basic geosynthetics short course in **Sao Paulo**, Brazil (the pilot of an itinerary short course planned to be offered six times per year), **Valparaiso**, Chile (on design and construction involving geomembranes), and **Hyderabad**, India (introductory course on geosynthetics). This brief summary is only a small fraction of the many activities conducted by the chapters, but it provides a flavor of their variety, both in geographic location and in technical emphasis. These technical activities have been complemented with a total of **170 reported board meet-**

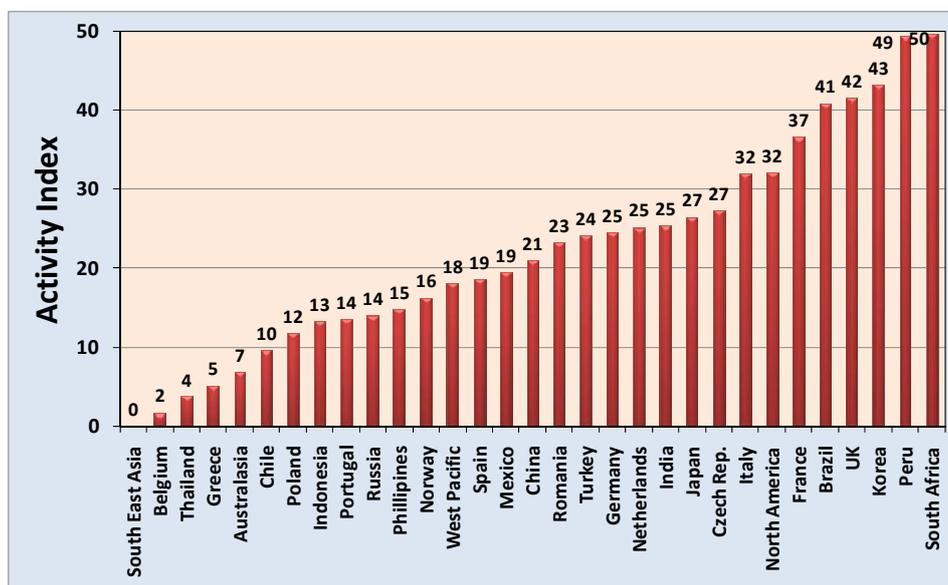


Figure 5: "Activity Index" (or number of Main Lecture Equivalents) conducted by each IGS Chapter in 2008

ings (in-person, conference calls), and **59 major communication activities** (newsletters, web page updates).

What have been the most active IGS Chapters in 2008? This is a difficult question to answer because of potential inaccuracies in the reports and, more importantly, because of the range of criteria that could be defined to assess the technical activities. Yet, I felt it was important to define a *qualitative* index to assess the productivity of the IGS Chapters, as measured by their technical activities. This may help identifying IGS Chapters that are worth recognition as well as those that may benefit from help in coordinating future activities. More importantly, each chapter may potentially learn from the experience of other chapters and undertake a new range of activities.

Figure 5 shows a measure of the level of activities conducted by each of the IGS Chapters in 2008. Specifically, the "Activity Index" was defined as a weighted average of the self-reported technical activities. Since there are innumerable ways of attributing weights, I will just admit that the process is not scientific and just one of the many that could have been used. Yet, the selected process has one merit: it is consistent. Specifically, conferences are worth more than workshops, which in turn are worth more than main lectures. Also, activities conducted by chapters acting as the lead organization are worth more than those conducted by chapters acting as a

collaborating organization. As a reference, a main lecture conducted by an IGS Chapter acting as a lead organization carries a weight of 1.0. In other words, the Activity Index shown in Figure 5 could be thought of as the number of "main lecture equivalents" that have been organized by each IGS Chapter in 2008. The top score goes to GIGSA (the South African chapter), which shows an Activity Index of 50. That is, our South African colleagues have coordinated technical activities in 2008 equivalent to the effort of having organized a main technical lecture every single week of the year. *Kudos for GIGSA!* The Peruvians, South Koreans, Britons, and Brazilians also deserve a pat in the back for a job well done in 2008. While the approach used to calculate the Activity Index is certainly subjective, an important finding can be drawn from inspection of Figure 5 that is expected to be insensitive to the weighting approach. This is that the level of activities is significantly uneven among the various IGS Chapters. Consequently, a possible course of action for the IGS to take is to help homogenizing the level of activities among IGS Chapters by providing assistance to those chapters that have shown inactivity in 2008.

The Perceived Needs of IGS Chapters

The Standard Reporting Form offered an opportunity for the chapters to convey requests or concerns to the IGS. Unfortunately, this was the one field in the Standard Reporting

Table 1: Specific Comments from IGS Chapters to the IGS

Chapter	Comment/Request	To Be Addressed by:
IGS Brasil	The IGS should require that Corporate members have personnel with specialization on geosynthetics. This is to avoid that companies technically unqualified become IGS corporate members with the sole objective of promoting themselves.	IGS Corporate Committee
French Chapter	The IGS should work on international rules (recommendations)	IGS Technical Committee
NAGS (North American Chapter)	As the number of geosynthetics conferences continues to grow, there is a need for the IGS and the regional chapters to work with other geotechnical organizations to minimize the total number of geotechnical conferences, while maximizing participation.	IGS Strategic Committee
Portuguese Chapter	Preparation of short courses, by experts of international reputation, which could be carried out in different countries, upon request of the interested Chapters. Topics of interest include, for example, application of geosynthetics on high speed railways, application of geosynthetics on landfill covers, or geosynthetics durability.	IGS Education and European Activities Committee
Romanian Chapter	Support for our activity of disseminating information in Universities.	IGS Education and European Activities Committees
GIGSA (South African Chapter)	We would encourage the IGS and its Chapters to participate in GeoAfrica in September. We have had a good response to paper submissions and hope that delegates from all over the world will register and attend for a unique African geosynthetic experience.	African Activities Committee
UK Chapter	We fully support the recent initiative to revise the membership finance interface.	Council

Form that received a comparatively small number of responses. This is possibly because chapters may have suspected that their issues or concerns may go unanswered. The plan, however, is to specifically address each and every one of the issues raised by the IGS Chapters and to encourage future exchanges of type. **Table 1** lists the specific comments from IGS Chapters.

The chapters that posed the questions listed in Table 1 have already been contacted to provide possible clarifications. Several of the issues listed in Table 1 will be addressed during the committee meetings that will take place in September (during the GeoAfrica 2009 Conference). However, some of the issues are

already being addressed by the IGS. Specifically, and in response to inquiries by the Portuguese and Romanian chapters (IGS support to technical activities), it should be pointed out that chapters could work with the corresponding IGS Activities Committees on receiving help to organize national technical activities. Some Regional Activities Committees have focused, for example, on helping chapters that have been recently formed. Also, in response to the comment by the UK chapter (on the benefits of online membership registration), I should point out that the online membership interface is now fully functional and available (without any charge) to chapters interested in collecting membership dues

online. Finally, in response to the comment by GIGSA (regarding support in promoting GeoAfrica 2009), there have been several activities aimed at making our very first African Conference a major success.

An issue that has been often listed as a major objective by several of the IGS Chapters is the need to identify strategies to increase the number of individual members. I am personally involved, with the help of Council Member Elizabeth Peggs, on a new initiative aimed at sanitizing and evaluating our historical membership data. This is because insight into past membership trends is expected to provide opportunities for future membership increases in each IGS Chapter. Also, courses of action aimed at increasing the IGS membership have recently been the focus of much of the discussion by our Strategy Committee and have led to actions such as the new online membership registration. More initiatives to address this important issue are being currently evaluated and the Council will deliver on these soon.

Closure

The IGS Chapters have also reported on a healthy number of technical activities planned

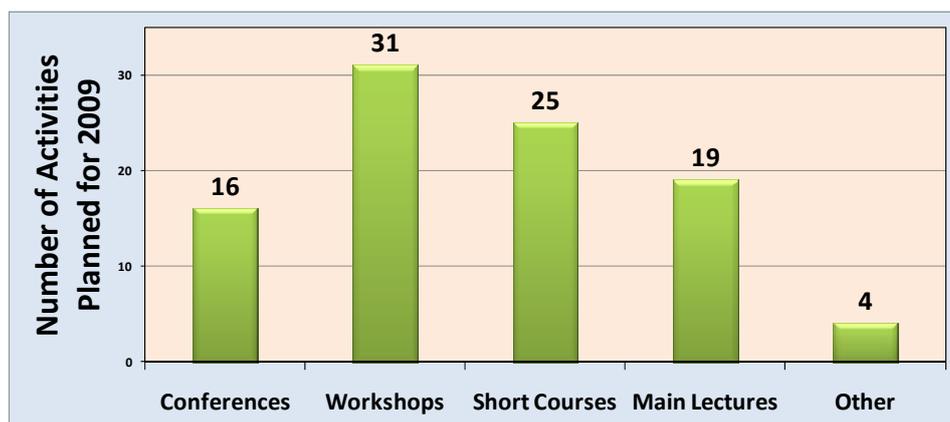


Figure 6: Number of technical activities planned by IGS Chapters for 2009

for 2009. Figure 6 summarizes the number of conferences, workshops, short courses and main lectures being planned for the next year. According to this information, the level of activities is expected to continue to be significant, which is very encouraging. I should note that one of the fields in the Standard Reporting Form asks to summarize the main chapter objectives for the next year. It will be very useful to keep this information in mind during preparation of the 2009 IGS Chapter Reports and, hopefully, most of the objectives will be met.

In summary, new guidelines have been implemented for annual communications between the IGS Chapters and the IGS. The response by

the chapters to this initiative has been simply superb, as shown by number and quality of the annual reports. Several clear facts can be identified after synthesizing the information in the Chapter Reports. Specifically, the overall level of activity of the IGS Chapters is very high as clearly illustrated by a total of 80 technical events reported by the chapters for 2008. Another important observation is that, in 2008, the level of activity has been quite uneven among chapters; this deserves particular attention. This reporting exercise also offered an opportunity for chapters to bring issues or concerns to the attention of the IGS, and all issues have or are being addressed or evaluated. This type of exchange is expected

to improve communication between the IGS Chapters and the IGS for the benefit of both. Finally, with 95 technical events reportedly being planned for this year, 2009 promises to be an equally (or even more) active year for the IGS Chapters.

I am looking forward to continued, rich communication exchanges between the IGS Chapters and the IGS. Comments from chapters and individual members on this initiative are encouraged and welcomed!

*Reported by
Jorge G. Zornberg
Vice-President of the IGS*

Conference Reports

Rencontres Géosynthétiques 2009 2 - 3 April 2009, Nantes, France

The 7th francophone conference of the French Chapter of the IGS, *Rencontres Géosynthétiques 09*, was held on 2 and 3 April 2009 under the auspices of the IGS in Nantes. It was the first time that the conference was held in the west of France. The conference was very successful with approximately 360 participants,

The conference was opened by Daniele Cazzuffi, IGS Past-President, Jean-Pierre Magnan, President of the IGS French Chapter CFG, and by Nathalie Touze-Foltz, Co-chair of the Conference Scientific Committee.

This conference, which is held every two years, provides the opportunity to disseminate information to the French-speaking public on the state-of-the-art geosynthetics practice particularly for individuals not familiar with the use of geosynthetics, with a focus on:

- updated applications of geosynthetics for various hydraulic applications and environmental protection,
- the long-term behaviour of earthworks including geosynthetics, and
- standardization and quality control policy.

Also, the participation of practitioners was encouraged since presentation of case histories was as usual a substantial part of the program.

Specific sessions were dedicated to:

- Landfills and geosynthetics lining systems,
- Roads and railways,
- Reinforcement structures,
- Hydraulic works.

Training Course and Exhibition

On the 1st of April, one day before the conference a training course was held with an audience of 58 people. This course provided essential background information on geosynthetics and their use in civil engineering works. In addition, a successful technical exhibition was held during the conference with 37 different companies or public research laboratories presenting the latest geosynthetic products, technologies and research activities, which enabled the exchange of information between individuals in the private sector and academia.

Proceedings

The proceedings include 57 papers reviewed by two members of

the Scientific Committee. 42 papers out of those 57 papers were orally presented. The other 15 papers were presented under poster form. Many of the authors were young and new to the geosynthetics field, which bodes well for the future of the CFG and the IGS. The proceedings are available in hard copy and electronically and can be obtained by contacting the secretariat of the French Chapter of IGS (www.cfg.asso.fr).

Closing Banquet

The *Rencontres Géosynthétiques* Conference has a great reputation for its traditional banquet in a wine-producing area, this time around the Muscadet wines; the "Château de la Poterie" provided the opportunity to gather all participants and their companions in a friendly atmosphere to enjoy dinner and a glass of local wine.

*Reported by
Nathalie Touze-Foltz
Co-Chair of the Scientific Committee
"Rencontres Géosynthétiques 09"*



from left to right JP Gourc (Scientific Committee), Thierry Gisbert(Keynote lecturer and Organizing Committee), Daniele Cazzuffi (IGS past-president), Nathalie Touze-Foltz (Keynote Lecturer and Scientific Committee), Hugues Girard (Scientific committee)



Françoise Bourgain (organizing committee) and Jean-Pierre Magnan (president of CFG) during the gala dinner



View of auditorium during the sessions

Prague Geotechnical Days 2009 20 – 21 May 2009

It has become a tradition that in the middle of May Czech and Slovak National Committee of ISSMGE and SG GEOTECHNIKA (recently re-named to ARCADIS GEOTECHNIKA) organize a prestigious event Prague Geotechnical Days which contains a half day seminar on a selected topic, Prague Geotechnical Lecture delivered in the afternoon by a prominent geotechnical personality and a workshop on actual geotechnical problems the following day. Tradition of this conference was established by Prof. Jaroslav Feda from the Academy of Science and Alexandr Rozsypal, General Manager of SG Geotechnika, in 1993. First Prague Geotechnical Lecture was delivered by Prof. Michael Jamiolkowski who gave presentation on "Leaning Tower of Pisa". The

venue of Prague Geotechnical Days is a beautiful conference hall in the presidium of the Czech Academy of Science with a limited capacity of 120 persons. That's why the conference is only for invited experts.

This year the program of Prague Geotechnical Days was the following:

- 20th May 2009 AM
Seminar: "Reinforced soil structures"
- 20th May 2009 PM
Awarding "Quido Zaruba Award" for young engineering geologists and geotechnical engineers.
17th Prague Geotechnical Lecture: Prof. Zdenek Eisenstein "Interaction of Rock Mass with Underground Structures"

- 21st may 2009 AM
Workshop: "Influence of tunnelling on the ground surface"

As mentioned above the seminar concentrated on reinforced soil structures. After opening of the seminar by Alexandr Rozsypal the first presentation was given by Prof. Ivan Vanicek from Prague Technical University and fresh vice chairman for Europe of ISSMGE. Under the title "Development of Reinforced Soil Structures" he described step by step the progress of this interesting field of soil mechanics. He showed the advantages and drawbacks of this type of structures, their long-term behaviour, problem of creep and how to include it in advanced geotechnical numerical models. At the end he tried to predict possible

direction of evolution of this interesting subject.

The following lecture was presented by Arnstein Watn from Sinteff. He chose the title "Lessons Learned from Failures of Reinforced Soil Structures". In his highly dynamic and witty presentation he showed and commented three projects in different parts of the world where low professional knowledge, negligence and underestimation of the first warnings given by the structures led to the failures. One project was a retaining wall in Sweden where designer neglected the global stability, underestimated the deformations and the contractor built the structure in improper way. Another example was a failure of the soil slope cover that occurred in a waste disposal in Germany. The reason for failure was use of unrealistic reinforcement properties in the design and wrong construction work (dumping of the soil cover from the slope top). Last project was in Taiwan where a very high (approx. 60 m) reinforced soil slope collapsed after the earthquake, however the severe crack had developed at the top and the foot of the slope prior to the failure.

Vitezslav Herle from Arcadis Geotechnika gave presentation under the title "Prediction and Real Behaviour of High Reinforced Soil Structure". The presentation was prepared jointly with Josef Rott from Arcadis Geotechnika. The biggest reinforced soil structure realised up to now in Czech Republic reaches

max. height of 15 m with the slope changing from 60° to 90° and its total length exceeding 1500 m. Polyester geogrids from 55 to 110 kN/m was used as reinforcement. To limit the cost to minimum the facing was soft (wrap around) with steel mesh made on site as protective cover. Local colluvial medium plastic clay soil with variable rock fragments was used into the structure. Due to higher than optimum water content the soil was improved by approx. 1 % of lime (first use of lime improved soil in reinforced soil structure in Czech Republic). Detailed monitoring of the reinforced soil structure (inclinometers, pore pressure cells, extensometers for reinforcement extension) made possible comparison of predicted values with real behaviour. Predicted values were very close to measured.

Use of steel mesh in reinforced soil structures was described in the presentation of Marco Vicari from Officine Maccaferri. He shared his wide experience with use of steel mesh and combinations of steel mesh with polymer geogrids (hybrid systems) for use reinforcement of high slopes. He showed both numerical analysis and full scale tests used to study the behaviour of these mixed structures. He discussed whether the conventional limit equilibrium concept can be applied to non-uniformly reinforced structures and recommended the approach called "displacement method" proposed by

Gourc. He presented numerical modelling of hybrid structures from 16 m high in UK (1997) up to 38 m height in Albania finished recently. This last project was very impressive with excellent views of an audacious reinforced soil structure.

Last presentation of the seminar was prepared by Helena Rubisarova and Frantisek Kresta both from Arcadis Geotechnika. Ms Rubisarova who gave the presentation showed results of laboratory and field studies of the soil reinforced with polymer fibres. Interaction of soil with fibres was studied on three materials: medium plastic loess soil, silty sand and fly ash. Polyester staple fibres and polypropylene fibrillated fibres of 24 and 70 mm were used for the experiments. Concentration of fibres in the soil mix was changing in the following range: 0 – 0.5 – 1.0 – 1.5 %. Results of compaction tests, CBR tests, permeability, compressibility and shear tests were presented. At the end the trial field was shown where the soil mixer (used for e.g. lime improvement of soil) mixed the selected quantity of fibres in the soil. The experiments are very interesting and the work still continues.

There were a lot of questions after the seminar which showed high interest of the audience. The lecturers then enjoyed a wonderful lunch at the Savarin restaurant overlooking the Vltava River and with the magnificent view of Prague Castle.

*Reported by
Vitezslav Herle, IGS member*



Lecturers at the opening of the seminar on 20 May 2009



View of the audience



High reinforced soil structure with soft facing (lecture of V. Herle)



Mixing PET fibres into the soil (lecture of H. Rubisarova)

34th CEN/TC189 meeting 28/29 May 2009, Würzburg, Germany

The annual meeting of CEN/TC189 "Geosynthetics" was held in Würzburg, Germany on 28/29 May 2009 at the facilities of SKZ. On Thursday, 28 May, five working groups in total with more than 55 delegates from 14 European member countries were working in parallel on:

- WG1, convenor Philippe Delmas application standards for geotextiles and geotextile-related products for CE marking
- WG3, convenor Daniele Cazzuffi standards for testing of mechanical properties
- WG4, convenors Nathalie Touze-Foltz and Matthias Maisner on behalf of Bernard Myles standards for testing of hydraulic properties
- WG5, convenor Jan Retzlaff standards for testing durability of properties
- WG6, convenor Kent von Maubeuge application standards for geosynthetic barriers

On Friday, 29 May, the plenary session was held under the chairmanship of Adam Bezuijen.

It was the last meeting organized by the secretary Fred Foubert. He did a perfect job over the past 15 years. All delegates thanked Fred for his excellent work.

The next meeting will possibly be organized by the Greek national standardization body.

It is a tradition for these meetings of CEN/TC189 that an evening event



CEN/TC189 delegates in front of the Residenz, Würzburg, Germany before the wine tasting on 28 May 2009

on Thursday night is organized by the hosting country. As Würzburg is famous for its wine, the delegates from all over Europe were invited for a wine tasting inside the Würzburg Residenz (the former Prince Bishop's Palace) at the rambling and labyrinthine corridors of the Court Cellar.

The Residenz is one of the most significant baroque buildings north of the Alps and it has been granted UNESCO world culture heritage status.

The atmosphere of the candlelit corridors and vaults of the Residenz wine cellar makes it one of

the most beautiful in the world.

At the latest after this impressive wine tasting the attendees were definitely convinced of the superb quality of Müller-Thurgau, Silvaner, Weißburgunder, Riesling, Scheurebe and Rieslaner from Lower Franconia.

*reported by
Helmut Zanzinger, convenor of
CEN/TC 189 WG2*

2nd International Seminar on "Earthworks in Europe" 3 - 4 June 2009, London, UK

This international seminar was organised by The Engineering Group of the Geological Society and supported by the UK Chapter of IGS, British Geotechnical Association and the Institute of Highways and Transportation. It was held at the Royal Geographical Society, London, on 3rd and 4th June 2009. The seminar attracted 180 delegates from across Europe to discuss and promote technical progress and understanding of recent issues in the design and construction of earthworks in European countries.

The seminar was divided into six seminar themes:

- Optimum use of material
- Quality control
- European Standards / Specifica-

- tions including applying EC7
- Geotechnical risk and performance
- Measuring and mitigating environmental impact
- Asset management and climate change

Each session was on an individual theme, and was introduced by an invited keynote speaker. These were followed by a series of short presentations by European practitioners and academics on hot topics and case histories that highlight recent advances in practice. Several of the 29 short presentations involved the use of geosynthetics in earthwork construction, and it was clear that their use was con-

sidered standard practice and appropriate by delegates from across Europe. An overarching theme at the seminar was the need to re-use waste and marginal materials in earthworks. There were a number of contributions on the role that geosynthetics can play to produce designs using such materials, and there is little doubt that production of design and construction methods, and demonstrating performance of geosynthetic solutions, will be a significant area for the future.

*reported by
Neil Dixon, President of IGS-UK and
IGS Council member*



The Chair of the Organising Committee Tracey Radford opens the Seminar



Delegates enjoy an English Summer Day!

Geo-Environmental Engineering 2009 Conference cancelled - Abstracts available for download



Due to problems with the swine flu epidemic the conference had to be cancelled.

In order that the work that has gone

into preparing abstracts is not lost, all the abstracts will be placed on the conference website available for download (gee2009.civil.ubc.ca)

For more Information

Conference Chair:
Loretta Li, Ph.D., Ph.D., P.Eng.
Associate Professor (Geo - Environmental Engineering), Depart-

ment of Civil Engineering, University of British Columbia
6250 Applied Science Lane, Vancouver, Canada V6T 1Z4
Tel: 604-822-1820
Fax: 604-822-6901
E-mail: lli@civil.ubc.ca
<http://gee2009.civil.ubc.ca>

9th Int. Geotechnical Conference "Geotechnical Monitoring"

1 - 2 June 2009, Bratislava, Slovak Republic

In June 1 – 2 2009 was held the 9th international geotechnical conference in Bratislava (Slovakia) with title **Geotechnical monitoring**. The conference took place in celebratory time: 50th anniversary of establishing the Department of Geotechnics at the Slovak University of Technology and 70th anniversary starting education in Faculty of Civil engineering.

The last decade in Slovak and Czech region (but also in other parts of the Europe) was typical for increasing of loads for various types of structures, and at the same time the geological conditions are every year worse. This was the reason to focus to problems connected to structures on the 3rd geotechnical category.

The topics of the conference were divided to 5 groups with many geosynthetic related papers in each of them:

- building structures
- transportation engineering
- underground structures,
- water constructions
- fills and tailing dams.

Intensive cooperation of the people from organizing committee with important geotechnical engineers from various countries brought success: beside the participants from Slovakia and Czech Republic we shared our experiences with colleagues from Germany, Austria, France, Spain, Portugal, Switzerland, Hungary, Slovenia and Belorussia. Totally there were 150 participants at the conference. In the proceedings 66 papers were printed (the proceeding have 403 printed pages plus CD).

During 2 days 4 key lectures and 48 papers were presented. The main interest was concentrate to the key lectures:

- Prof. H. Brandl (A): Semi-empirical design of structures in unstable slopes based on observational method.
- Prof. P. Pinto, J. Barradas, A. Sousa (P): Lessons learned from two case histories of retaining structures.
- Prof. G. Heerten, L. Vollmert, J. Klompaker (D): The geomechanical behaviour of geogrids – current design and future aspects of research linked to the reological behaviour of soil – geogrid - composite materials.
- Prof. D. Adam (A), Prof. P. Turček (SK), I. Paulmichl (A): Innovative hybride ground improvement and deep foundation concept for the CCPP Malzenice (Slovakia).

From the other interesting lectures I can refer to these:

- Prof. J. Mecsi (H): Influence of the water-table fluctuation to the stress/deformation condition in the subsoil.
- M. Siegwart (CH), J. Kušnir (SK): Customised monitoring systems for tunnelling projects.
- A. Thut, P. Steiner (CH): Neue Entwicklungen aus dem Bereich der Messtechnik und des Monitoring.
- G. Siebenborn, P. Schulze, Prof. E. Ott (D): Monitoring of slope deformation of the Lauenburg lock.
- Prof. J. Hulla, V. Gróf (SK):

Monitoring of foundation excavation and settlement of high-rise building.

- M. Kopecký, V. Gróf, M. Ondrášik, S. Hric (SK): Monitoring of landslides below rest area of highway D1 in Považská Bystrica.
- R. Szepesházi (H): Interpretation of the measured results of structures deformations.
- J. Frankovská, S. Mikita, Vybíral (SK): Field testing methods for landfills monitoring.

All conference was situated at the building of Faculty of Civil Engineering including refreshment and the evening banquet and held in a friendly atmosphere full of discussion a promising cooperation. Most of the people left banquet very late for its great atmosphere.

Organizing committee believe, that the participants of this conference received the newest information from the field of geotechnical monitoring. It was also the dress rehearsal for the 14th Danube-European Conference on Geotechnical Engineering, which will be held on June 2010. I recommend you for this occasion visit the web site: www.decge2010.sk and utilize the possibility for registration. We look forward to meet together in Bratislava next year.

*reported by
Peter Turček
Chairman of the geotechnical conference*



Podium with keynote lecturers



Delegates during coffeebreak with keynote lecturers Prof. Adam, Prof. Brandl, Prof. Pinto

4th Symposium Environmental Geotechnics DGGT & 5th Freiburger Geotechnic-Colloquium

4 - 5 June 2009, Technical University Freiberg, Germany

The 4th Symposium Environmental Geotechnics DGGT & 5th Freiburger Geotechnic-Colloquium was held at Technical University Freiberg, Germany, 4 - 5 June 2009. The conference was organized by German Geotechnical Society (DGGT), Institut für Geotechnik (IFGT) of Technical University of Freiberg, Verein Freiburger Geotechniker (VFG), Kompetenzzentrum für interdisziplinäres Flächenrecycling (CiF e.V.) with the conference chairs Herbert Klapperich, Rolf Katzenbach, Karl. J

- Germany
- Largest increase belongs to reinforcement products such as Geogrids
- Geosynthetics allow resource-saving constructions and in comparison with steel a more energy efficient and emission reduced way of construction

G. Heerten presented in "personal free style" the opening statement because of M. Zieglers absence.

Seven presentations covered the

fer platforms on the load bearing behavior of controlled modulus columns

- Dr.-Ing. D. Alexiew (Huesker Synthetic GmbH, Gescher), C. Moormann, Dipl.-Ing. H. Jud (Smoltczyk & Partner, Stuttgart): Foundation for large stock yard for coal on soft soils by Geosynthetics
- Dipl.-Ing. L. Vollmert (BBG Bauberatung Geokunststoffe GmbH & Co. KG, Espelkamp), Prof. Dr. Ing. G. Heerten (NAUE GmbH & Co. KG, Espelkamp-Fiestel): Current Status and Future Prospects for Modelling the Composite Material Geogrid/Soil
- Dr.-Ing. J. Retzlaff (Geoscope.eu, Steinfurt): Chemical Analysis to Assess the Aging of Geosynthetics
- Priv.-Doz. Dr.-Ing. habil. N. Tamaskovics, Prof. Dr.-Ing. H. Klapperich (TU Bergakademie Freiberg): Multi-stage Large Shear-Frame Tests to the Fast Interface Parameter Determination for Geosynthetics



Opening ceremony with organizers and keynote lecturers: Dr. Griessl, Prof. Katzenbach, Prof. Heerten, Dr. Franzius, Prof. Witt (from left)

Josef Witt, Dietmar Grießl.

The wide variety of topics focused naturally on the main topics in an overlapping fashion. 80 presentations like research reports new design approaches and practical applications as well as construction reports presented an update of prominent fields and demanding questions.

The conference session "Geosynthetics in Geotechnique" chaired by Gerhard Bräu & Georg Heerten started with an impulse-statement by Martin Ziegler "Geosynthetics" - Innovation & Acceptance in Construction World" (see proceedings):

- More than 100 Million square meters of Geosynthetic products have been installed last year in

wide field of basic research, design recommendations for reinforcement with Geosynthetics, international reports and modeling of the compound system "Geogrid/Soil":

- G. Bräu, A. Herold: Recommendation for Reinforcement with Geosynthetics
- Dipl.-Geol. U. Blume (BAST Bundesanstalt für Straßenwesen, Bergisch-Gladbach): Testing of Geosynthetics according the "Supplementary Technical Conditions of Contract, Specifications, and Guidelines for Earthworks in Road Construction 09"
- Prof. Dr.-Ing. N. Meyer, Dipl.-Ing. A. Emersleben, Dipl.-Ing. J. F. Kirstein (TU Clausthal): Influence of different load trans-

The exhibition with the presentation of companies as an accompanying and welcome addition to the scientific program is equally found in the conference document and demonstrates a successful and active integration of development with application and implementation.

Among them geosynthetic-related companies

- Huesker Synthetic GmbH,
- Naue GmbH & Co. KG
- IBH Herold & Partner Ingenieure
- Tensar International GmbH

Due to the two combined conferences the event was a great chance for interchange between geotechnical and geosynthetics experts as well as specialists from mining technologies and geothermal investigation. There were lots of interesting discussions during the conference and the festive evening that impressed with its folkloristic atmosphere local participants and the

many international guests from Bulgaria, Czech Republic, Hungary, Russia and Turkey.

The Conference Proceedings are available at CiF e. V., pub 7, 2009,

765 p, € 50.-, www.cif-ev.de,
Email: info@cif-ev.de

reported by
Herbert Klapperich

Conference chairman and IGS member



Organizing committee: Prof. Klapperich, TU Freiberg, D. Heidrich, Prof. Katzenbach, TU Darmstadt, Dr. Griessl, (from left)



Festive evening with typical saxonian miners musicians

Announcements of Conferences of IGS

9th International Conference on Geosynthetics – 9ICG Guarujá, Brazil, 23 - 27 May 2010



The 9th ICG Brazil - 2010 will provide the participants designers, consulting engineers, manufacturers, installers, distributors, environmental agencies and academics the most recent developments, improvements and new technologies from the international geosynthetics community.

The conference is being organized by IGS Brazil, the Brazilian Chapter of the International Geosynthetics Society, and ABMS, the Brazilian Association for Soil Mechanics and Geotechnical Engineering, under the auspices of IGS, the International Geosynthetics Society (IGS) and supported by ABINT, the Brazilian Association of Nonwoven and Technical Textiles Industries.

Conference Aims

The aims of this conference are to offer:

- an outstanding opportunity of exchange knowledge and experiences between geosynthetic researchers, consultants, owners, geotechnical and environmental engineers, geosynthetic manufactures, project regulators, contractors and academics through discussion about the main geosynthetics themes, which comprises keynote lectures, paper presentations and debates.
- an overview of new technologies and innovations, by offering a large forum to engineers and researchers.

The conference will be conducted at high scientific and technical levels, and will present applications information to match the expectations of all participants.

Technical Program

The conference will highlight the main topics in the geosynthetic

industry and applications. The traditional Giroud Lecture will be delivered in a special session. Keynote lectures and selected papers will be presented on the main themes, which are:

- Case Histories
- Design Approaches and Numerical Solutions
- Drainage and Filtration
- Durability and Long Term Performance
- Geosynthetics in Agriculture and Aquaculture
- Geosynthetics in Dynamic Applications
- Geosynthetics in Environmental Applications
- Geosynthetics in Highways and Railways
- Geosynthetics in Hydraulic Applications
- Geosynthetics in Mining Applications
- Geosynthetics Properties
- Innovative Uses and Solutions
- New Geosynthetic Products
- Reinforced Walls and Slopes
- Reinforcement of Embankments

- and Unpaved Roads
- Soil-Geosynthetic Interaction

Special Lectures

Giroud Lecture:

- “Geosynthetics Applications for the Mitigation of Natural Disasters”, H. Brandl

Keynote Lectures :

- “Geosynthetics in Dams”, D. Cazzufi et al.
- “Geosynthetics in Pavements”, S. Perkins et al.
- “Geosynthetics in Mining-Applications”, A. Fourie et al.

Short Courses

Five 3-hour Short Courses will be offered on Sunday May 23. Some of the most recognized specialists on each subject were selected to present their experience and the basic concepts on important applications related to geosynthetics. The following short courses will be delivered:

- “Geosynthetics in Pavements, Unpaved Roads and Working Platforms”, Jeb Tingle;
- “Geosynthetics in Mining”, Richard Thiel;
- “Geosynthetics in Dams”, Paulo Abrão;

- “Geosynthetics in Landfills”, Sam Allen and Patrick Pierson
- “Geosynthetics Reinforced Walls” Bob Holtz and Jonathan Fannin.

Education Committee contact:

education@9icg-brazil2010.info

Exhibition

Over the 4 days of exhibition, companies will show their products, services, solutions, and exchange information with every visitor, who may be a potential customer.

The conference venue has outstanding exhibition facilities, with 2,000 m² of available space for about eighty exhibitors (manufacturers, laboratories, consultants, contractors, suppliers, installers, agencies, project offices, and all organizations related to geosynthetics). Detailed information for both the 9ICG and the international exhibition will be available at the conference website: www.9icg-brazil2010.info

Venue

The 9ICG will be held at Sofitel Jequitimar Hotel in Guarujá, Brazil. Guarujá is a beautiful coastal town about 90 km from the city of Sao Paulo, which is the biggest metropolis in South America and of-

fers a large variety of cultural, touristic and gastronomic attractions.

Language

English will be the official language of the Conference.

Important Deadlines

Papers submission for individuals:
July 31st 2009

Papers submission for IGS Chapters:

July 31st 2009

Final papers due:

December 14th 2009

Registration

Please register early until November 22nd, 2009 at:

www.9icg-brazil2010.info,

to get several advantages.

Conference Secretariat

9ICG - Brazil 2010
Av. Brigadeiro Faria Lima, 1478 sala 314, São Paulo, SP, 01451-001, Brazil.
Tel.: + 55 11 3032 3399
Fax: + 55 11 3819 6311
E-mail: info@9icg-brazil2010.info
website: www.9icg-brazil2010.info

GeoAfrica 2009

2 - 5 September 2009, Cape Town, South Africa



GeoAfrica 2009 will present a forum for consulting engineers, manufacturers, installers and academics to exchange information about current and potential applications for geosynthetics in Africa.

This will be the first conference to be held under the auspices of the IGS and in association with the Geotechnical Division of the South African Institution of Civil Engineering (SAICE) in the region, and will present an opportunity to meet the top

geosynthetics specialists and prospects on the continent. Every visitor to the exhibition floor will be a potential customer, and professionals seeking geosynthetic solutions to their challenges will attend each technical session. This will be the largest gathering of geosynthetics professionals seen in Africa to date.

Technical Program

At least 70 papers will be presented in two parallel sessions, covering the themes of reinforcement, barriers, filtration and drainage, and erosion control. In addition a number of poster papers will be displayed at the conference. The actual program is available at: http://www.geoafrica2009.org/geoafrica_2009/technical_programme.asp

Keynote Lectures

There will be three keynote speakers for GeoAfrica 2009, whose papers will be presented in plenary session:

- Wednesday 2 September, Prof Kerry Rowe of Queen's University, Canada
“Long-term performance of leachate collections systems and geomembrane liners for MSW landfills”
- Thursday 3 September, Kelvin Legge of the Department of Water & Environment Affairs, South Africa
“Geosynthetics for Africa”
- Friday 4 September, Prof Jorge Zornberg of University of Texas at Austin, USA
“Geosynthetic Capillary Barriers: Principles and Applications”

Special Lectures

In addition, there will be two special lectures presented in plenary session:

- Prof Richard Bathurst
"Recent Developments in Reinforced Soil Wall Testing, Analysis and Design"
- Prof Malek Bouazza and Prof Jean-Pierre Gourc
"Overview of geosynthetics applications in Northern Africa through case histories"

Awards Presentation

During the conference, the IGS Council will make a number of IGS Corporate awards, and GIGSA will present its annual awards.

Social Program

On the social side, there will be a "Meet and Greet" cocktail function in the exhibition area after the first day's technical proceedings. At this function, two well known pioneers of the geosynthetics industry in South Africa, Mr Glen Lawson and Mr Clifford Gundle, will each give a short talk on the history and development of geotextiles and geomembranes in South Africa.

Language

English is the official language of the conference.

Registration Critical Dates

Registration and payment closes:
31 July 2009

Exhibition

The conference will include an exhibition for the specification and trade of geosynthetic products and technology to users throughout Africa, as well as those wishing to make an entry into the continent. All exhibition space has been sold!

Build-up: 1 September 2009

Breakdown: 4 September 2009

For more Information

Conference & Exhibition & Secretariat: Lesley Ferreira, Email: lesley@cebisaconferences.co.za

Tel: +27 21 559 4574

Fax: +27 21 559 4574/086 692 7220

Web site: www.gigsa.org

or www.GeoAfrica2009.org

Announcements of Conferences under the Auspices of IGS

Sardinia 2009

Twelfth International Waste Management and Landfill Symposium 5 - 9 October 2009, S. Margherita di Pula, Cagliari, Italy



Waste management strategies and technologies are currently undergoing rapid development. The Sardinia Symposia were established in order to make knowledge and experiences in this field readily available. The Symposia have become the Reference Forum, where leading experts meet and present their research activities and experiences and discuss new concepts and technologies. The Symposia have witnessed and contributed worldwide to the development of modern waste management strategies such as the integrated waste management hierarchy, recovery of energy and sustainable landfilling.

The Symposium will focus on innovative aspects of Sustainable Waste Management, presenting new tech-

nologies, describing the state of the art and related case studies, discussing controversial subjects, sharing experiences among different countries, and evaluating social and economical balances.

The Symposium will include oral presentations, poster sessions, specialized sessions and specific workshops. Training courses will be offered by the IWWG under the supervision of international leading experts before the start of the Symposium.

The Symposium will be organised by IWWG - International Waste Working Group and CISA - Environmental Sanitary Engineering Center under the auspices of the IGS.

VENUE AND LOCATION

Sardinia 2009 will be held on the Forte Hotel Village Complex situated near S. Margherita di Pula (Caligari), Sardinia

SYMPOSIUM THEMES

The Symposium will last five days and will deal with municipal and commercial solid waste, hazardous waste and special waste including

the following topics:

- Waste policy and legislation
- Waste management strategies
- Public participation 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 treatment and advanced conversion technologies
- Mechanical biological treatment prior to landfilling
- Sanitary landfilling
- Integrated wastewater and solid waste management
- Waste management and climate change
- Waste management in developing and low income countries
- Special sessions

EXHIBITION

A commercial exhibition will be held during the conference where associations and companies can display technical literature and other material.

Contact

Sardinia 2009 Organising Secretariat - Eurowaste Srl
Via Beato Pellegrino 23 - 35137 Pa-

dova (Italy)

E-mail: eurowaste@tin.it
<http://www.sardiniasymposium.it/sardinia2009/>

International Symposium on Geotechnical Engineering, Ground Improvement and Geosynthetics for Sustainable Mitigation and Adaptation to Climate Change including Global Warming 3 - 4 December 2009, Bangkok, Thailand

During the recent past, the intensity of torrential rainfall and its subsequent destructive influence on human community has become severe and unpredictable due to climate change including global warming. Major water related hazards in the soil slopes with weak geological conditions are sediment related hazards or debris flows that initiate from rain-triggered landslide, massive slope failure or soil erosion or simply remobilization of deposited materials on high-gradient rainfall run-off channel beds. The effect of climate change including global warming, however, is not only limited in causing landslide disasters with an increased frequency but also in increasing the frequency of occurrence of a variety of natural disasters, for example flooding because of rising sea level. These, densely populated and low-lying areas where adaptive capacity is insufficient, and which are already under threat owing to tropical storms, land subsidence, river bank and coastal erosion, are at an increased risk. Moreover, recent news items has identified that insurance companies blaming bad weather slashing down their profit forecasts by millions of dollars. Consequently, the insurance companies have been forced to raise the insurance premium to recoup their losses. Recent technological advancements in general and those particularly in the areas of Geotechnical Engineering, Ground Improvement together with Geosynthetic Engineering have been contributing greatly in undertaking scientific and systematic methodologies for assessing the risk associated with natural hazards of all kinds

as well as the associated sustainable mitigation and adaptation strategies. In the interest of sharing the advancements in the state-of-the-art, and as a follow up to the previous International Symposium on Geotechnical Engineering, Ground Improvement and Geosynthetics for Human Security and Environmental Preservation held in December 2007, an International Symposium on Geotechnical Engineering, Ground Improvement and Geosynthetics for Sustainable Mitigation and Adaptation to Climate Change including Global Warming is jointly organized from 3 to 4 December 2009 to be held in Bangkok, Thailand by

- Southeast Asian Geotechnical Society (SEAGS),
- International Geosynthetics Society Thailand (IGS – Thailand) and
- Asian Center for Soil Improvement and Geosynthetics(AC-SIG)

The conference themes will be

- Geosynthetics for Climate Change due to Global Warming
- Geosynthetics for Coastal and Riverbank Erosions
- Geosynthetics for Sustainable Infrastructures including Limited Life Geosynthetics
- Geosynthetics for Human Security
- Geosynthetics for Water Conservation
- Geosynthetic for Food and Agriculture
- Landslides and Debris Flows due to Rainfall during Storms and Typhoons
- Mechanics of Rain-Triggered

Landslides and Debris Flows

- Early Warning System for Landslides and Debris Flows
- Risk Assessment of Rain-Triggered Landslides and Debris Flows
- Case Studies of Coastal Erosion and Mitigation
- Case Histories of Riverbank Erosion and Mitigation

Technology Visit and Exhibition

A comprehensive technical exhibition for ground improvement and geosynthetics as applied to disaster control, mitigation and rehabilitation will be organized at the venue of the Symposium which is to be announced in due course. For booking, please contact the Conference Secretariat.

Important Dates

Deadline of camera-ready papers:
30 September 2009

Language

English is the official language of the conference

For more Information

Prof. Dennes T Bergado, Director / ACSIG

E-mail: bergado@ait.ac.th

Mr. Sonny Montablo, Manager/AC-SIG

Phone: +66-2-524-5523

E-mail: acsig@ait.ac.th

www.set.ait.ac.th/acsig/conference

reported by

Dennes T Bergado, President of IGS Thai Chapter and IGS Council Member

3rd International Symposium on Geosynthetic Clay Liners

15 - 16 September 2010, Würzburg, Germany

GBR-C 2k10

The 3rd International Symposium on Geosynthetic Clay Liners will be held at the Fortress Marienberg in Würzburg, Germany from 15 till 16 September 2010.

The Symposium will include oral and poster presentations on the topics mentioned below. Abstract and papers for that presentations are invited.

GBR-C 2k10 will be organised by SKZ and will be held under the auspices of the IGS. The Scientific Committee is formed by Robert M.

Koerner, P.E. (USA), Nathalie Touze-Foltz (France), Helmut Zanzinger (Germany)

Symposium Themes

The Symposium will deal with the following topics:

- Application / case studies
 - Landfills
 - Canals
 - Reservoirs / Dams
 - Transportation Infrastructure
- Durability / Lifetime
- Laboratory testing
- Performance
 - Cation exchange
 - Desiccation

- Experience from excavation
- Regulations / Approvals

Important Dates

Deadline of Abstract Submission: 30 September 2009

Language

English is the official language of the conference

For more Information

E-mail: gbr-c2k10@skz.de

News from the IGS Chapters and the Membership

Polish Chapter of the IGS is founded



The Polish Chapter of the IGS (Polskie Stowarzyszenie Geosyntetyczne – PSG) has finally been approved in September 2008 during the Council meeting in Edinburgh, on the occasion of EuroGeo 4. The Chapter is headquartered in the capital city of Warsaw and operates within the geographical boundaries of Poland. At present PSG comprises 33 individual members and the group is constantly growing.

The idea of forming a Polish Chapter of the IGS goes back to the 8th International Conference on Geosynthetics (Yokohama, 2006) where the IGS leaders, primarily J.P. Giroud, inspired us to catch up with the rest of the world and develop a chapter to promote geosynthetics locally.

In June 2007 we organized a geosynthetics seminar in Warsaw which was meant to be followed by the first official general meeting. The seminar hosted three distinguished IGS speakers: J.P. Giroud, Alan McGown and Chris Jenner and over 80 participants. At that time we were

too enthusiastic about forming a chapter to remember about all formal procedures. Soon we found out that gathering a group of optimistic people is not enough to establish a chapter.

Working on the bylaws took over one year (many thanks to Pete Stevenson for his valuable comments and advice). Finally the bylaws have been agreed and the Chapter has been officially approved in Edinburgh. Our second general assembly took place in Gdansk on the 1st of December

2008. This time we made sure not to miss any paperwork. We have also elected the first officers: prof. Adam Bolt (president), dr. Jacek Alenowicz, dr. Angelika Duszynska, Jakub Bryk and Joanna Borkowska. We still had some legal work to be done in order to comply with the local regulations concerning societies but it seems we are almost done with the procedure.

Now it is time for us to focus on the statutory objectives. The PSG cooperates constantly with the Polish Geotechnical Committee (Polish group in ISSMGE), the Road and



Officers of the PSG (left to right): Jakub Bryk, Joanna Borkowska, Jacek Alenowicz, Angelika Duszynska, Adam Bolt

Bridge Research Institute (IBDiM) and Gdansk University of Technology. Only this year PSG, together with its partners, is planning to organize two seminars on geosynthetics. We are working on the Polish

translations of the IGS educational leaflets and planning to appoint special task committees to continuously collect, evaluate and disseminate knowledge on all matters relevant to geosynthetics.

*Reported by
Joanna Borkowska, Board member
of the Polish Chapter and IGS News
Correspondent*

The Dutch Design Guideline for Piled Embankments

In November 2009, the Dutch Design Guideline for the design of piled embankments will be introduced. In May 2010, the Dutch Design Guideline will be presented in a paper in Brazil, together with several relating papers on theoretical subjects, monitoring in and experiences with piled embankments.

For the design of the geosynthetic reinforcement, the Dutch Design Guideline adopts major parts of the German EBGEO. However, constraints are adapted for Dutch circumstances. The choice for the EBGEO design method is – among others – based on measurements in three Dutch piled embankments. A comparison shows that the EBGEO forms a conservative approach of

the measurement. For large dynamic loads, or very thin embankments, the arching-reduction (κ)-model of Heitz is recommended.

The safety philosophy is also adapted to the Dutch practice. In the Netherlands, the load and resistance factors design approach is commonly used. For piled embankments a new set of load and resistance factors is determined. Monte Carlo analyses show that the Eurocode reliability index is satisfied with this set of safety factors.

The Dutch Design Guideline recommends calculating with the maximum of the spreading forces and membrane forces, according to Love & Milligan (2003) and de-

scribes how to use the finite element method to determine lateral mechanisms (due to for example spreading forces, brake application) and bending moments in the piles. Finally, deformation differences of the surface can be determined numerically using finite elements, but also an analytical method is suggested, namely a 3D version of Peck's method.

*Reported by
Suzanne van Eekelen, IGS member
and Chair person of the Dutch Task
Group 'Design Guideline Piled Em-
bankments'*

University of Missouri – Columbia wins Fourth National ASCE Geo-Institute Paper MSE Wall Competition Held in Orlando

The University of Missouri – Columbia (UM-C) student GeoCompetition team took top honors in the 2009 ASCE / Geo-Institute event in March in Orlando, FL, USA. Thirteen teams competed from all around the US. Drexel University took second place honors with California Polytechnic State University – Pomona, in their

maiden attempt, taking third. Defending champion Louisiana State University placed fourth.

As winners, the UM-C team took home the prestigious Atterberg Cup (see photo), awarded by Dr. Amy Cerato, from the University of Oklahoma, at the Awards Luncheon. Dr. Cerato praised the teams, the advisors, and the corporate sponsors for creating an exciting and useful competition. "This GeoCompetition saw the keenest rivalry we've ever seen. The excitement was incredible!" she said. "The GeoCompetition provided excitement, competition and expanded interest in the profession as the students attended the conference".

The event was held as part of the International Foundation Congress and Equipment Expo -09, sponsored by the Association of Drilled Shaft Contractors / Pile Driving Contractors Association.

UM-C Team Captain Daniel Huaco, a four-year participant, was very pleased with the team. "We practiced a lot, to regain the title. We did a lot of work to optimize our design for this year's conditions. Confidence in our practice and design (limited amount of paper reinforcement) were key to our success".

Huaco notes "We will be back to defend our title next year!" UM-C's 2009 victory completes a hat trick for the Tigers.

The competition promoted geotechnical engineering and fostered teamwork in an engineering design. Students prepared design papers and plans in advance, and were invited to compete, head-to-head to build a model reinforced-soil (MSE) retaining wall inside a plywood box, using sand as backfill, poster-paper as the wall facing, and kraft paper strips as soil reinforcement. The design goals are to satisfy MSE wall construction standards in a timely fashion and sustain a 23 kg. (50 lbs)



The Atterberg Cup

surcharge, while minimizing the amount of paper reinforcement. Points were awarded for the amount of paper reinforcement, the design, the speed of construction, and the wall performance. The UM-C winning wall supported 169 pounds.

Details of the rules for competition and judging can be found at <http://content.geoinstitute.org/files/pdf/GeoChallenge2009RulesFinal.pdf>

UM-C takes home the prestigious Atterberg Cup. The winner's name is engraved on the Cup, and ensures bragging rights for a year.

Event sponsors are the International Association of Foundation Drilling,

Carmeuse Industrial Sands, Colbond, Fugro Consultants, Inc., the Geo-Institute, Geosyntec Consultants, Golder Associates, Jean-Louis and Janet Briaud, Langan Engineering, the North American Geosynthetics Society and the students' home universities.

The Geo-Institute promotes the MSE wall competition at regional ASCE student competitions, and helps fund the national competitions. The last competition was at the Geo-Institute 2008 GeoCongress in New Orleans. The national competition is held annually. The 2010 GeoCompetition will be during the February 20-24, 2010

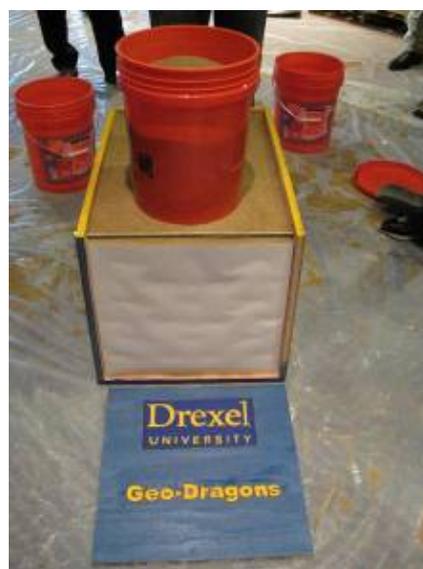
ASCE GeoFlorida 2010 conference in West Palm Beach, Florida, USA.

Dr. Robert Gilbert, of the University of Texas – Austin, headed the Geo-Institute student competition committee consisting of: Amy Cerato, Scott Merry, Dave Elton, Andrew Heydinger, Frank Townsend, Giovanna Biscontin, Paul Cosentino, Manoj Chopra, and Carol Bowers (Geo-Institute).

*reported by
David J. Elton, President of NAGS,
North American Chapter of IGS*



University of Missouri – Columbia winning team (from left) Chelsea Smith, Wyatt Jenkins, Aaron Sides, Daniel Huaco (Captain). Also NAGS President Dr. Elton, Auburn University.



Drexel University entry with 50 lb. load.



Drexel University Geo-Dragons with NAGS President Dr. Elton.



California Polytechnic State University – Pomona team with NAGS President Dr. Elton.

McWatters wins NAGS Student Paper Prize

Rebecca McWatters from Queens University won the 2009 North American Geosynthetic Society student paper competition at the February Geosynthetic 2009 conference in Salt Lake City, UT, USA. Her paper, "Diffusive Transport of VOCs through a Co-Extruded Ge-

omembrane with a Nylon Barrier for use in Landfill Cover and Contaminant Barrier Systems" was judged on the content and her presentation at the conference. She is working for a PhD under the direction of Kerry Rowe at Queens University.



Rebecca McWatters (center) receives the NAGS Student Paper Competition award from David Suits (left) and David Elton

The North American Geosynthetic Society (NAGS) was a conference sponsor. NAGS President David Elton attended the event. "This student paper competition provides a forum for developing members of our profession to participate with professionals. We are pleased to help foster students interest in geosyn-

thetics through the competition".

NAGS Executive Director and Managing Director David Suits was present to assist with the cash award.

Second place went to Ranjan Satyamurthy, a doctoral student working under S. Bhatia at Syracuse University. A. Srikongsri (University of British Columbia), M. Edwards (Drexel University), K. Wong (Drexel University), D. Gaffney (Drexel University) and T. Pullen (Syracuse University) also competed.

The event was held as part of the biennial Geosynthetic conference hosted by the Industrial Fabrics Association International. As part of the conference, NAGS President Elton presented a well-attended short course on Basic Geosynthetic.

reported by

David J. Elton, President of NAGS, North American Chapter of IGS

Jubilee Symposium on Polymer Geogrid Reinforcement 8 September 2009, London, UK



Hosted by the Institution of Civil Engineers and supported by IGS UK Chapter, this symposium will celebrate 25 years of research in polymer geogrid research and development.

The symposium will bring together geotechnical practitioners and academics with the objective of:

- Reviewing the wide body of research that continues to this day
- Formulating the challenges for new research that will deliver further technical advancements, as well as economical and environmental benefits

Since its introduction, the use of geogrids has made quantum leaps but there are still numerous challenges and opportunities lying ahead. For this reason, the Geogrid Jubilee Symposium is an important

opportunity to shape the direction of academic and applications research, and this is where the knowledge of the participants will play a valuable contribution.

By attending, the insight gained will be crucial in keeping you at the forefront of the latest developments and potential innovative solutions in the field of soil reinforcement. This will be highly beneficial to you, your organisation and your clients now and in the future.

At the symposium, you will have the opportunity to network and engage with some of the industry's leading professionals and top academics in the field. Participants are already registered from Cambridge University, Highways Agency, BP Exploration, Imperial College London, AECOM (formerly Faber Maunsell) and Moscow State University of Railway Engineering just to name a few.

Overview of key symposium themes

The symposium will play host to an impressive international speaker line up, which includes leading industry experts and academics who are at the forefront of polymer grid reinforcement.

The following areas will be covered at the Jubilee Symposium on Polymer Geogrid Reinforcement:

- The Birth and Coming of Age of Geogrids
- Geogrids in Unpaved Roads and Hardstandings
- Geogrids in Permanent Roads and Railways
- Geogrids in Walls and Steep Slopes
- Identifying the Direction of Future Research

To view the full programme, please click here:

<http://www.tensar.co.uk/jubilee-symposium/programme.html>

Further information

To register and for more details please visit

www.jubilee-symposium.co.uk

Alternatively contact Michelle Lee at the Organising Committee at: info@jubilee-symposium.co.uk
Tel: +44(0)1254 266 842

reported by
Peter Langley, IGS News Correspondent for IGS-UK

3rd Portuguese Seminar on Geosynthetics

19 - 20 November 2009, University of Coimbra, Portugal



The 3rd Portuguese Seminar on Geosynthetics will be held in the University of Coimbra, Portugal, on 19 - 20 November 2009. This event is organised by the Portuguese Chapter of IGS (IGS-Portugal), the Portuguese Geotechnical Society (SPG) and the University of Coimbra (FCTUC).

The conference is aimed to be of great interest for geotechnical, environmental and civil engineers, project designers, contractors, consultants, manufacturers and installers, facility owners, researchers, professors and students.

Technical and Educational Program

The seminar will start with a half-day course on "Reinforced Structures Design".

The following sessions include 4 keynote lectures and several oral presentations of about 15 minutes each, on the following topics: environment, dams, erosion control, roads and railways.

Keynote lectures

- Nathalie Touze-Foltz
Outstanding issues regarding the use of geosynthetics in landfills
- Krystian Pilarczyk
Geosynthetics and geosystems in coastal engineering – a review
- Manuel Blanco Fernández
Experiencia española en el empleo de geomembranas en la impermeabilización de balsas
- Lurdes Lopes
Utilização de geossintéticos em estruturas associadas a vias férreas

Exhibition

A technical exhibition is going to take place. The number of booths is limited and many of them are already booked.

Important dates

Acceptance of papers:
31 July 2009

Language

Portuguese is the official language of the Seminar.

Registration

For best value register online by 15 September 2009, at:

<http://3spgeossintéticos.dec.uc.pt>

Discounts are available for IGS members, SPG members and students.

For more information

For more information, please contact: 3spgeo@dec.uc.pt

reported by
Madalena Barroso, IGS News Correspondent from Portugal

List of IGS Chapters and their Chairpersons

Argentina

Argentinean Chapter (2009)
President: Prof. Sergio Reyes,
sreyes@reyesasoc.com.ar

Australia and New Zealand

Australasian Chapter (2002)
President: Mr. Mike Sadlier
sadlier@attglobal.net

Belgium

Belgian Chapter (2001),
Chairman: Frans De Meerleer,
frans.texion@skynet.be
toon.deruyver@copro.eu
www.belgian-geosynthetics.be/

Brazil

Brazilian Chapter (1997)
President: Prof. Mauricio Ehrlich
igsbrasil@igsbrasil.org.br
www.igsbrasil.org.br

Chile

Chilean Chapter (2006),
President: Mr. Mauricio Ossa,
mossa@igs-chile.org
<http://igs-chile.org/index.html>

China

Chinese Chapter (1990)
Chairman: Li, Guangxin
postmaster@ccigs.com.cn
www.ccigs.com.cn

Czech Republic

Czech Chapter (2003)
Chairman: Mr. Petr Hubik
igs@igs.cz
www.igs.cz

France

French Chapter (1993)
President: Mr. Jean-Pierre Magnan
Francois.caquel@equipement.gouv.fr

Germany

German Chapter (1993)
Chairman: Prof. Dr.-Ing. Martin Ziegler
service@dggt.de
www.gb.bv.tum.de/fachsektion/index.htm

Greece

HGS, Greek Chapter (2005)
President: Mr. Dimitrios K. Atmatzidis
dac@upatras.gr

India

Indian Chapter (1988)
President: Dr. G.V. Rao
cbip@cbip.org
www.cbip.org

Indonesia

INA-IGS, the Indonesian Chapter (1992)
President: Mr. Gouw Tjie Liong
ina_igs@binus.ac.id

Italy

AGI-IGS, the Italian Chapter (1992)
President: Dr. Ing. Daniele Cazzuffi
agiroma@iol.it
www.associazionegeotecnica.it/~agi/

Japan

Japanese Chapter (1985)
Chairman: Dr. Hiroshi Miki
secret@jicigs.or.jp
wwwsoc.nii.ac.jp/jcigs/

Korea

KC-IGS, The Korean Chapter (1993)
President: Dr. Sam-Deok Cho
yusung@chonbuk.ac.kr
www.kgss.or.kr

Mexico

Mexican Chapter (2006)
President: Giovanni Bellei
IGSmexico@prodigy.net.mx

The Netherlands

Netherlands Chapter (1992)
President: Dr. Ir. A. H. de Bondt
mail@ngo.nl
www.ngo.nl

North America

North American Geosynthetics Society (NAGS) (Canada, USA) (1986)
President: Dr. David Elton
NagsDirector@aol.com
www.nags-igs.org

Norway

Norwegian Chapter of IGS (2008)
Chairman: Arnstein Watn
Arnstein.watn@sintef.no

Peru

Peruvian Chapter (2001)
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1994 M. Tateyama
1994 O. Murata
1994 H. Tarumi
1996 K.-H. Blume
1996 E. Palmeira
1996 R. K. Rowe
1998 R.J. Fannin
1998 H. Miki
1998 R. Bathurst
1998 Z. Cai
1998 T. Ingold
1998 C. Jenner
1998 C. Lawson
1998 B. Myles
1998 R. Wilson-Fahmy
1998 D. Narejo

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2000 D. Cazzuffi
2000 P. Rimoldi
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2002 J. DiMaggio
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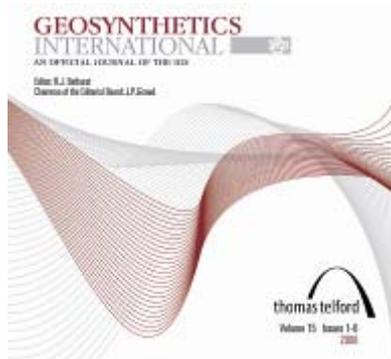
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Pseudo-dynamic analysis of reinforced soil wall subjected to oblique displacement, G. V. Narasimha Reddy, D. Choudhury, M. R. Madhav and E. Saibaba Reddy, [PDF](#) (216K)
Predicted temperatures and service lives of secondary geomembrane landfill liners, R. K. Rowe and A.

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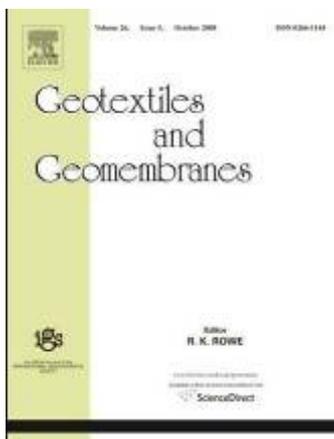
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Content of Volume 27, Issue 3 (June 2009)

[Improvement of soft soils using geogrid encased stone columns](#), Pages 167-175, Joel Gniel, Abdelmalek Bouazza

[Ultimate loads for eccentrically loaded model shallow strip footings on geotextile-reinforced sand](#), Pages 176-182, Erol Sadoglu, Evrim Cure, Berkan Moroglu, Bayram Ali Uzuner

[Compressive load response of geogrid-reinforced fine, medium and coarse sands](#), Pages 183-186, B.R. Phanikumar, Ram Prasad, Abhishek Singh

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[thetics](#), Pages 187-195, A. Virgili, F. Canestrari, A. Grilli, F.A. Santagata

[Fiber reinforcement effects on sand considering a wide cementation range](#), Pages 196-203, Nilo Cesar Consoli, Márcio Antônio Vendruscolo, Anderson Fonini, Francisco Dalla Rosa

[Laboratory performance of unpaved roads reinforced with woven coir geotextiles](#), Pages 204-210, E.A. Subaida, S. Chandrakaran, N. Sankar

[Effectiveness of connectors in geofoam block construction](#), Pages

211-216, Jeffrey C. Barrett, Arun J. Valsangkar

[Bearing capacity of strip footings on sand slopes reinforced with geogrid and grid-anchor](#), Pages 217-226, Saeed Alamshahi, Nader Hataf

[Equivalent diameter of a prefabricated vertical drain](#), Pages 227-231, Hossam Abuel-Naga, Abdelmalek Bouazza

[Contaminant mitigating performance of Chinese standard municipal solid waste landfill liner systems](#), Pages 232-239, Y.-J. Du, S.-L. Shen, S.-Y. Liu, S. Hayashi

Content of Volume 27, Issue 4 (August 2009)

[Displacement and load transfer mechanisms of geogrids under pull-out condition](#), Pages 241-253, Ana Cristina C.F. Sieira, Denise M.S. Gerscovich, Alberto S.F.J. Sayão

[Geotextile fibres retention properties to prevent surface water nonpoint contamination by pesticides in agricultural areas](#), Pages 254-261, O. Boutron, V. Gouy, N. Touze-Foltz, P. Benoit, J.M. Chovelon, C. Margoum

[Pullout behaviour of cellular reinforcements](#), Pages 262-271,

M.S. Khedkar, J.N. Mandal

[3D coupled mechanical and hydraulic modeling of a geosynthetic-reinforced deep mixed column-supported embankment](#), Pages 272-280, Jie Huang, Jie Han

[Bearing capacity of square footings on geosynthetic reinforced sand](#), Pages 281-294, G. Madhavi Latha, Amit Somwanshi

[Long-term behavior of GRS retaining walls with marginal backfill soils](#), Pages 295-307, Huabei Liu, Xiangyu Wang, Erxiang Song

[Influence of constitutive model on numerical simulation of EPS seismic buffer shaking table tests](#), Pages 308-312, Saman Zarnani, Richard J. Bathurst

[Bearing ratio of reinforced fly ash overlying soft soil and deformation modulus of fly ash](#), Pages 313-320, Ambarish Ghosh, Utpal Dey

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Calendar of Events



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GeoAfrica 2009
The First African Regional Conference on Geosynthetics
Cape Town, South Africa
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www.geoafrica2009.org

Jubilee Symposium on Polymer Geogrid Reinforcement
Institution of Civil Engineering, London
8 September 2009

International Symposium on Geoenvironmental Engineering – IGSE 2009
Hangzhou, China
8 – 10 September 2009
Email: isge2009@zju.edu.cn
www.sssgeo.zju.edu.cn

3rd Remediation Technologies Expo RemTech 2009
Ferrara, Italy
23 - 25 September 2009
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4 iYGE'09 – 4th International Young Geotechnical Engineers' Conference
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2 – 6 October 2009
E-mail: iygec2009@hamza.org

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12th International Waste Management and Landfill Symposium
S. Margherita di Pula, Cagliari, Italy
5 - 9 October 2009
Email: info@sardiniasymposium.it
www.sardiniasymposium.it

XVII Int. Conference for Soil Mechanics and Geotechnical Eng.
Alexandria, Egypt
5 - 9 October 2009
www.2009icmge-egypt.org/

XXII Italian Conference on Geosynthetics
Bologna, Italy
28 October 2009
E-mail: agiroma@iol.it

2nd International Conference on Geosynthetics Middle East
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10 - 11 November 2009
E-mail: i.bender@skz.de

3rd Portuguese Seminar on Geosynthetics
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19 - 20 November 2009
Email: 3spgeo@dec.uc.pt
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Int. Symp. on Geotechnical Engineering, Ground Improvement, and Geosynthetics for Sustainable Mitigation and Adaptation to Climate Change including Global Warming
Bangkok, Thailand
3 - 4 December 2009
E-mail: bergado@ait.ac.th
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CPT'10, 2nd International Symposium on CPT
Huntington Beach, California, United States
9 - 11 May 2010
Email: probertson@greggdrilling.com
www.cpt10.com

9th International Conference on Geosynthetics
Guarujá, Brazil
23 – 27 May 2010
E-mail: info@9icg-brazil2010.info
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NUMGE2010
Trondheim, Norway
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Email: numge2010@videre.ntnu.no
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7th International Conference on Physical Modelling in Geotechnics
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28 June - 1 July 2010
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3rd International Symposium on Geosynthetic Clay Liners
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15 -16 September 2010
Email: gbr-c2k10@skz.de

6th International Congress on Environmental Geotechnics
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XIV Asian Regional Conference Soil Mechanics and Geotechnical Engineering, Hong Kong, China
23 - 28 May 2011

XV African Regional Conference on Soil Mechanics and Geotechnical Engineering, Maputo, Mozambique
13 - 16 June 2011

XV European Conference on Soil Mechanics and Geotechnical Engineering Athens, Greece
13 - 19 September 2011

XIV Panamerican Conference on Soil Mechanics and Geotechnical Engineering (October) & V PanAmerican Conference on Learning and Teaching of Geotechnical Engineering, & 64th Canadian Geotechnical Conference
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(1984)

Taiwan R.O.C.
[Seven States Enterprise Co., Ltd.](#)
(2005)
[Ace Geosynthetics](#)
(2003)
[Hui Kwang Corporation](#)
(2000)

The Netherlands
[Cofra BV](#)
(1991)
[Colbond bv.](#)
(1986)

Turkey
[Isbir Sentetik Dokuma Sanayi A.S.](#)
(2008)

Ukraine
[Euroizol Geosynthetics](#)
(2006)

United Arab Emirates
[BMC Gulf Trading & Contracting LLC](#)
(2008)
[Geotech L.L.C.](#)
(2007)

United Kingdom
[ABG Limited](#)
(2001)
[Geofabrics Ltd.](#)
(1995)
[Linear Composites Limited.](#)
(2004)
[NewGrids Limited.](#)
(2004)
[Tensar International](#)
(1989)
[Terram Ltd.](#)
(1988)

USA
[Belton Industries, Inc.](#)
(1989)
[Cetco](#)
(1992)
[Geosynthetic Materials Association \(GMA\)](#)
(1985)
[geosynthetica.net](#)
(2006)
[GSE Lining Technology, Inc.](#)
(1988)
[I-CORP INTERNATIONAL](#)
(2006)
[Poly Flex, Inc.](#)
(1996)
[Presto Geosystems](#)
(1996)
[Propex](#)
(1991)
[Reinforced Earth Company, The](#)
(1989)
[Supertex, Inc.](#)
(2007)
[TenCate Geosynthetics North America](#)
(1998)
[Tensar International Corporation](#)
(1989)
[TRI/Environmental Inc.](#)
(2008)

Venezuela
[Geosintéticos Trical, C.A.](#)
(2007)

Notes:

- A click to the name of the corporate member leads to the corresponding entry at the IGS website. The corporate members are encouraged to check their entry

there!

- Date is earliest year of continuous membership

Celebrating 20 Years of Corporate Membership

On the occasion of the 25th anniversary of the IGS in 2008 the IGS inaugurated a program to recognize companies with a 20 year history of corporate membership. During 2008 at the three regional IGS Conferences in Cancun, Shanghai and Edinburgh, 17 companies were recognized as having attained their 20th anniversary.

In 2009 five additional companies have reached this milestone,

[Belton Industries, Inc. - USA](#)
[Kuraray Co., Ltd. - Japan](#)

[Reinforced Earth Company, The - USA](#)
[Tensar International - United Kingdom](#)
[Tensar International Corporation - USA](#)

The IGS will conduct a recognition ceremony during the IGS event "GeoAfrica 2009" in September 2009 in Cape Town, South Africa. This ceremony will include an announcement of the IGS appreciation for the dedication and support

by the companies to the IGS and the presentation of a memento of appreciation to each company.

In the event a company is unable to be present at GeoAfrica 2009 the IGS will deliver the token of appreciation directly to the corporate headquarters.

*Reported by
Pete Stevenson, IGS Secretary*



BELTON INDUSTRIES INC.

KURARAY CO., LTD.



The Reinforced Earth Company



IGS Corporate Members since 1989



Tensar
INTERNATIONAL



Tensar

Corporate Profile - SOHAMS

IGS Corporate Members 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.

SOHAMS – Your Partner in Infrastructure Development

Sohams formerly known as “Unicon” – propriety firm started with Geotechnical Engineering Services in 1990. In 1995, the company was changed to private limited company as “Sohams Foundation Engg Pvt Ltd”. In this period of about 18 years company has expanded its wings to all Specialized techniques in Geotechnical Engineering as – Investigations, Drilling and Grouting, Rock Anchors, Micropiling, Soil Nailing, Piling, Band Drains almost each division in Geotechnical and Foundation Engineering and Applications of Geosynthetics to construction Industry. SOHAMS with initial team of 5-6 engineers has now expanded to a team of 50+ engineers. The engineering staff is mainly Masters in Geotechnical Engineering and Geology along with the Diploma and Degree Engineers in Civil & Mechanical. The engineering staff, which forms the core strength of the company, is well supported by various machineries – local and imported and some indigenously made to suit the site conditions.



Reinforced Earth Walls (REW):

Sohams REW System comprise of Merex Uni-axial Geogrids as reinforcement with facia as modular concrete block, precast concrete panels or soft facia of geogrid with geotextiles. Sohams supports client to design the



system as per site specific conditions – loading, seismic conditions, material properties, foundation soil properties etc.



Ground Improvement

SOHAMS with the vast experience in this specialised field of Geotechnical Engineering prevail in the various techniques or methods of treatment to weak soils as Use of Band Drains; Sand Piles, Vibro Stone Columns.



Sohams has installed –

- More Than 250 millions of Rmt of PVD
- Stone Columns upto a depth of 25 m
- Sand Piles by Displacement Method



Geotechnical Investigation

- Cross Bore Hole Test
- Seismic Refraction Test
- Cone Penetration Test with Pore Pressure Measurement (CPTU Test)
- Pressure-meter Test (80 Bar / 200 Bar)



SOAHMS FOUNDATION ENGG PVT LTD.,

301, THAPAR COMPLEX, SECTOR 15, CBD BELAPUR, NAVI MUMBAI, INDIA 400614

sohamsfoundation@vsnl.net; www.sohams.com

91-22-27565562 Fax: 91 – 22 – 27564944

Corporate Profile - SOTRAFA

IGS Corporate Members 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.



PLASTICS FOR AGRICULTURE AND CONSTRUCTION



1237-CPF-0802101



SOTRAFA SA belongs to Armando Alvarez Group, the largest one transforming polyethylene in Spain, and situated among the leading European processors. SOTRAFA transforms polyethylene films since 1978, place at El Ejido (Almería), and focussed on the production of plastics for agriculture as well as plastics for building and waterproofing uses.

Our company exports to more than 40 countries around the world, producing with the most advanced technology, being all of our films 3 layers co-extruded, and with a Flat-die extruded system to manufacture Geomembrane made of High Density Polyethylene.



Likewise, we run all our processes under ISO international quality norms. In SOTRAFA, our main purposes are, to participate on agricultural sector development, applying our agricultural films, and to contribute to help and protect environment with our waterproofing Geomembranes, used for a proper control of water and as insulating material for pollutant products and refuses.



HDPE ALVATECH 5002:

Alvatech 5002 is a waterproofing Geomembrane, 97.5% of High Density Polyethylene and 2.5% Carbon Black, together with UV stabilizers, antioxidants, and thermal stabilizers.

Each roll has a Quality Assurance Certificate and a Minimum Warranty of 10 years.

Depending on applications, width is 5.8m or 7.5m, and with a thickness range from 1mm to 2.5mm.

Alvatech 5002 is highly resistant to tearing and puncture, with an excellent chemical resistance to organic and inorganic solvents, being suitable for hydraulic waterproofing works.

SOTRAFA can also advise our customers for every waterproofing technical matter and offer other Geosynthetic products (Geotextiles, Geonets, Geosynthetic Clay Liners, and complement products).

ALVATECH 5002 could be uses for:

- Hydraulic works:
 - Drinking or irrigation water reservoirs
 - Channels
 - Ornamental ponds
 - Water tanks and wells
 - Aquaculture and fish farming
- Environmental works:
 - Urban refuse sites
 - Industrial refuse sites
 - Reservoirs for evaporation
 - Purifying plants
 - Pipelines
 - Mining works
- Civil works:
 - Underground structures
 - Landscaped coverings
 - Roads
 - Tunnels

CONTACT:

SOTRAFA, S.A.
Paraje Cartabona nº12
04710 Santa María del Águila, El Ejido (Almería)
Spain
Phone: + 34 950 40 56 00
Fax: + 34 950 58 02 33
Website: www.sotrafa.com
Email: info@sotrafa.com / geo@sotrafa.com



Corporate Profile - GEOSISTEM

IGS Corporate Members 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.



GEOSISTEM

www.geosistem.co.id

GEOSISTEM was established in 1996 in Surabaya, Indonesia, with a commitment to provide quality services and technology in the scope of geosynthetic applications. In just a few short years, we have established ourselves as a leading name on geosynthetic applications services for civil engineering and environmental in Indonesia.

GEOSISTEM offers a comprehensive range of geosynthetic applications services for civil engineering and environmental which include site investigation, engineering design, presentation, procurement, installation, and supervision. Now, if you think of geosynthetic applications in Indonesia, you think of **GEOSISTEM**.

Woven Geotextile



Vertical Wick Drain



Nonwoven Geotextile



Horizontal Subsoil Drain



HDPE Geomembrane



Geotechnical Instrument



For any further information regarding our services, please call our main office :

PT. TEKNINDO GEOSISTEM UNGGUL

Wisma SIER Building, 1st Floor
Jl. Rungkut Industri Raya No.10 Surabaya 60293 Indonesia
Tel. 62-31-8475062 Fax. 62-31-8475063
Email : info@geosistem.co.id

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N. Dixon (United Kingdom)
N. Freitag (France)
M. Maugeri (Italy)
J. Otani (Japan)
E. Palmeira (Brazil)
E. Peggs (USA)

Co-opted in 2006

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J. Ferreyros (Peru)
P. Legg (South Africa)
P. Stevenson (USA)

Co-opted in 2008

V. Pimentel (Brazil)

Elected in 2008

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IGS Officers

President

Prof. Fumio Tatsuoka
Tokyo University of Science
Dept. of Civil Engineering
2641 Yamazaki, Noda City
Chiba Prefecture 278-8510
JAPAN
Tel: 81/47122 98190
Fax: 81 47123 9766
E-mail: tatsuoka@rs.noda.tus.ac.jp

Vice-President

Jorge G. Zornberg, PhD., P.E.
The University of Texas at Austin
Civil, Architectural & Environmental
Engineering Department
1 Univ. Station C1792 Rm ECJ9,
227G
Austin, Texas 78712-0280 USA
Tel: 1/512 232 3595
Fax: 1/512 471 6548
E-mail: zornberg@mail.utexas.edu

Immediate Past-President

Dr.-Ing. Daniele A. Cazzuffi
CESI SpA
Via Rubattino, 54
I - 20134 Milano
ITALY
Tel: 39/02 2125 5375
Fax: 39/02 2125 5475
E-mail: cazzuffi@cesi.it

Treasurer

Mr. John Cowland
GeoSystems Ltd.
3 Arcadia, 99 Chuk Yeung Road
Sai Kung, N.T.
Hong Kong, China
Tel: 852/9884 8616
Fax: 852/2849 2918
Email: cowland@netvigator.com

Secretary

Mr. Peter E. Stevenson
226 Sitton Rd.
Easley, SC 29642-8393 USA
Tel: 1/864 855 0504
Fax: 1/864 859 1698
E-mail:
IGSPete@geosyntheticssociety.org
igspete@aol.com

IGS News Editor and Chapter Correspondents

Editor

Gerhard Bräu
Technische Universität München–Zentrum Geotechnik
Baumbachstrasse 7, 81245 München, Germany
Tel: +49-89-289-27139, Fax: +49-89-289-27189
Email: g.braeu@bv.tum.de

Chapter Correspondents

Belgium, Frans De Meerleer, frans.texion@skynet.be
Brasil, André Estêvão Silva, tesouraria@igsbrasil.org.br
China, Xiao-Wu Tang, tangxiaowu@zju.edu.cn
Czech Republic, Pavel Mann, mann@igs.cz
France, Nathalie Touze-Foltz,
nathalie.touze@cemagref.fr
Germany, Gerhard Bräu, g.braeu@bv.tum.de
Greece, Anastasios Kollios, akollios@edafomichaniki.gr
India, G. Venkatappa Rao, gvrao.19@gmail.com
Italy, Nicola Moraci, nicola.moraci@unirc.it
Japan, Jun Otani

junotani@kumamoto-u.ac.jp
the Netherlands, Shaun O'Hagan, s.ohagan@planet.nl
North American Geosynthetic Society, L. David Suits,
Nagsdirector@aol.com
Norway, Hanne Louise Moe, hanne.l.moe@sintef.no
Poland, Joanna Borkowska, Joanna@rozenblat.pl
Portugal, Madalena Barroso, mbarroso@lnec.pt
Romania, Loretta Batali, Loretta@hidro.utcb.ro
Russia, Vladimir Kleveko, vlivkl@pochta.ru
South Africa, Shakira Sattar, shakira@kaytech.co.za
South Korea, Myoung-Soo Won,
wondain@kunsan.ac.kr
Spain, Pedro L. Abad, Pedro.Abad@cetco.es
Thailand, Ms. Lynn, igs-thailand@ait.ac.th
Turkey, Orkun Akkol, orkunakkol@orientresearch.com
United Kingdom, Peter Langley,
PLangley@geofabrics.com
West Pacific, San-Shyan Lin,
ssLin@ntou66.ntou.edu.tw

IGS News is published three times per year. Material for publication should be submitted to the Editor by 31 January, 31 May, and 30 September, for possible publication in the March, July, and November issues, respectively.

IGS Clothing

IGS Logo Clothing is now available on-line. Hats, visors and various shirts can be viewed and ordered through the Members Only Section

(www.geosyntheticssociety.org/membersOnly/Login.asp) of the site.

Item Name	Item Number	Available Sizes	Colors	Cost
Visor	840	One size fits all	White, Stone, Aqua, Carrot, Khaki, Dandelion	\$11.00
Cap	810	One size fits all	White, Khaki	\$11.00
T-Shirt	PC61	S, M, L, XL	White, Aqua, Ash, Gold, Daffodil, Light Blue, Lime, Red, Natural, Orange Sherbet, Pink, Sand, Stonewash Green, Stonewash Blue, Spruce, Heather, Colonial Blue,	\$11.00
Gildan Golf Shirt	3800	S, M, L, XL	Ash, Gold, Sport Grey, Cardinal Red, Sand, Carolina Blue, Light Blue, Tangerine, Yellow Haze	\$17.00
Cutter & Buck Golf Shirt	02481	S, M, L, XL	White, Lotus, Putting Green, Red, Black, Sea Blue, Navy Blue	\$35.00
 Short Sleeve Button Down	507	S, M, L, XL	Light Stone, White, Faded Blue	\$28.00
Long Sleeve Button Down	620	S, M, L, XL	Cypress, White, Light Blue, Stone	\$35.00

International Geosynthetic Society
P.O. Box 347
Easley, SC 29641 USA
telephone: +1-864-855-0504

Hints for easy usage of this document

To allow easy and most effective use of this IGS News we tried to incorporate as many links to further information on the internet as possible. This means that moving around with the mouse pointer in the PDF-file allows direct linkage to web-pages of the conferences, documents of IGS, journals, email addresses, IGS Corporate Members

pages and many other things.

Furtheron you can click on the page numbers at the "Content" on the front page to jump directly to the article.

Another useful tool is the "bookmark" function within your PDF-Reader. This functionality shows you on the left part of your screen

the content with the headlines of the articles and on the right part the article itself.

If you have any further ideas to improve the usage of IGS News – please let us know!

Visit the IGS Website:

www.geosyntheticssociety.org

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

IGS News is published by:

International Geosynthetic Society
P.O. Box 347
Easley, SC 29641
USA
Tel: +1-864-855-0504
Fax: +1-864-859-1698
Email: IGSSec@geosyntheticssociety.org
IGSSec@aol.com

For editorial enquiries contact:

Mr. Gerhard Bräu
Technische Universität München –
Zentrum Geotechnik
Baumbachstrasse 7
81245 München
Germany
Tel: +49-89-289-27139
Fax: +49-89-289-27189
Email: g.braeu@bv.tum.de



International Geosynthetic Society

IGS News Readership Questionnaire

The International Geosynthetic Society is undertaking an evaluation of the IGS newsletter, with a view to improving its quality and usefulness. We would appreciate it if you could complete this questionnaire and return it to us, at the address printed below.

Thank you very much.

What best describes your organization?

- | | |
|----------------------------------------------------|------------------------------------------------------------------------|
| <input type="checkbox"/> Manufacturer | <input type="checkbox"/> University |
| <input type="checkbox"/> Distributor | <input type="checkbox"/> Student |
| <input type="checkbox"/> Engineering/Design | <input type="checkbox"/> Other type of organization (please specify): |
| <input type="checkbox"/> Installation/Construction | |
| <input type="checkbox"/> Government Service | <input type="checkbox"/> Media |
| <input type="checkbox"/> Testing | <input type="checkbox"/> Association or Trade Organization |
| <input type="checkbox"/> Research | <input type="checkbox"/> Individual (Not attached to any organization) |
| <input type="checkbox"/> Consulting | |

How would you rank your satisfaction with the IGS News?

	Very High	High	Average	Low	Very low
Presentation/format	<input type="checkbox"/>				
Readability	<input type="checkbox"/>				
Timeliness of information	<input type="checkbox"/>				
Overall usefulness for your work	<input type="checkbox"/>				
Usefulness of:					
Conference Announcements	<input type="checkbox"/>				
Conference Reports	<input type="checkbox"/>				
News from Chapters	<input type="checkbox"/>				
IGS Journals Summaries	<input type="checkbox"/>				
Calendar of Events	<input type="checkbox"/>				
Corporate Membership	<input type="checkbox"/>				
Overall quality	<input type="checkbox"/>				

Do you typically:

- | | |
|----------------------------------------------------|-----------------------------------------------------------|
| <input type="checkbox"/> Read the entire IGS News | <input type="checkbox"/> Read very little of the IGS News |
| <input type="checkbox"/> Read most of the IGS News | <input type="checkbox"/> Disregard the IGS News |

What do you find most useful and/or appealing about the IGS News?

What do you find the least useful and/or appealing about the IGS News?

Suggestions for additional topics of interest for future issues (optional):

Name (optional):

E-mail (optional):

Please return this form by email, mail or fax to:

The IGS Secretariat

IGSsec@geosyntheticssociety.org ~ TEL: | 864-855-0504 FAX: | 864-859-1698

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. Second, to enjoy the benefits.

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.

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;
- free 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 the auspices of the IGS; and
- the possibility of being granted an IGS award.

Please check whether there is a local IGS Chapter in your country (list at page 26)! otherwise please use the online form at <http://www.geosyntheticssociety.org/application.htm> or the following

IGS Membership Application

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.

Write your address below as you wish it to appear in the next *IGS Directory*

Title (circle one): Mr. Ms. Dr. Prof. Other _____ Position _____

First name: _____

Last name: _____

Company name: _____

Address: _____

City: _____ Province/State: _____

Postal code: _____ Country: _____

Telephone: _____

Fax: _____

E-mail: _____

Membership fee schedule: Individual US\$45.00 Corporate US\$1,000.00 Benefactor's contribution (at least US\$200.00)

Send this completed form to:

IGS Secretariat

P.O. Box 347

Easley, SC 29641-0347

USA

Telephone: 1/864 855 0504

Fax: 1/864 859 1698

E-mail: igssec@aol.com

Eligibility (i.e., your connection to geotextiles, geomembranes, related products, and associated technologies):

Mode of payment:

Check enclosed drawn on a US bank

Credit card (circle one): Mastercard Visa American Express

Account number: _____

Expiration date: _____

Name on card: _____

Authorized signature: _____