

# IGS NEWS



## NEWSLETTER OF THE INTERNATIONAL GEOSYNTHETICS SOCIETY

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

VOLUME 28, NO. 1

2012

## Content

<b>President's Corner:</b> .....	2	Geosynthetics 2013 .....	21
Student and Young Member Initiatives of the IGS .....	2	Call for Paper Abstracts International Symposium on Design and Practice of Geosynthetic-Reinforced Soil Structures .....	21
<b>General Information for IGS Members</b> .....	3	<b>News from the IGS Chapters and the Membership</b> .....	22
IGS student award nominees 2012 .....	3	IGS PERU promoting GeoAmericas 2012 with Several Local Conferences .....	22
Call for Candidates for IGS Council: Term 2012 to 2016 .....	4	Recommendations for the use of geosynthetics: .....	23
News from the Technical Committees of IGS .....	5	"GSI Fellowships for Students" Request for Proposals .....	24
<b>Conference Reports</b> .....	7	Steve Corbet elected chairman of International Standardization Committee – ISO TC 221 .....	24
GEOSYNTHETICS INDIA' 11 .....	7	Daniele Cazzuffi elected Chairman of European Standardization Committee – CEN TC 189 .....	25
2011 ISKGSS - International Symposium on Sustainable Application of Geosynthetics Technology .....	9	12 <sup>th</sup> Baltic Sea Geotechnical Conference "Infrastructure in the Baltic Sea Region" .....	25
CGT 2011 - Conference on Geotechnics in Torino .....	9	The Challenges of Mexican Chapter of IGS .....	26
Torino, Italy, 23-24 November 2011 .....	9	Workshop Dutch Chapter of IGS: Geosynthetics in levee improvement - "An innovation is only an innovation when applied successfully!" .....	26
10 <sup>th</sup> Saxon Construction Textiles Symposium "Bautex 2012 – Building with geosynthetics" .....	11	4 <sup>th</sup> Portuguese Seminar on Geosynthetics University of Aveiro, Portugal, 22 - 23 November 2011 .....	29
150 <sup>th</sup> Anniversary Celebration of Huesker Synthetic GmbH .....	12	List of IGS Chapters .....	30
<b>Announcements of Conferences of IGS</b> .....	13	<b>Calendar of Events</b> .....	31
10 <sup>th</sup> International Conference on Geosynthetics – 10ICG Berlin, Germany, 21 – 25 September 2014 .....	13	<b>Official Journals of the IGS</b> .....	32
<b>Announcements of Regional Conferences of IGS</b> .....	14	Geosynthetics International .....	32
GeoAmericas 2012 .....	14	Geotextiles & Geomembranes .....	34
5 <sup>th</sup> European Geosynthetics Conference .....	15	<b>Corporate Membership</b> .....	35
Geosynthetics Asia 2012 5 <sup>th</sup> Asian Regional Conference on Geosynthetics .....	16	Corporate Members of the IGS .....	35
<b>Announcements of Conferences under the Auspices of IGS</b> .....	17	Corporate Members Present Case Studies .....	38
2 <sup>nd</sup> International Conference on Performance-Based Design in Earthquake Geotechnical Engineering .....	17	Use of biaxial geogrids for an Load Transfer Platform at new Cruise Terminal in Lisbon .....	38
International Symposium on Sustainable Geosynthetics and Green Technology for Climate Change (SGCC 2011) .....	18	Corporate Profile – Sinoma Bauchem Technology Co., Ltd .....	39
2 <sup>nd</sup> International Conference on Transportation Geotechnics (IS-Hokkaido 2012) .....	19	Corporate Profile – Layfield Environmental Systems .....	40
International Conference on Ground Improvement and Ground Control .....	19	Corporate Profile – Nanchang Teamgo New Materials Co., Ltd .....	41
3 <sup>rd</sup> Int. Conference on Geotechnical Engineering (ICGE'13) .....	20		

## President's Corner: Student and Young Member Initiatives of the IGS



**Jorge Zornberg**

Dear Members of the IGS,

During any of the three upcoming IGS Regional Conferences, chances are that you will come across some of the IGS student awardees that, after a careful selection process, have been identified as future leaders of our Society. Please take the time to meet them and congratulate them. They deserve it!

The 2012 cycle of IGS Regional Conferences is the sixth time that the IGS will be sponsoring a Student Awards program that involves sponsoring the participation of one student per IGS Chapter in one of the conferences. Because of the significance of involving our young engineers in the activities of our Society, we are carefully planning the participation of the student

awardees in GeoAmericas 2012 (Lima, Peru, May 01-04), EuroGeo 5 (Valencia, Spain, September 16-19), and Geosynthetics Asia (Bangkok, Thailand, December 13-16).

At the heart of the 2012 Student Initiative is the effort of Council Member Nathalie Touze-Foltz. Dr. Touze-Foltz is masterfully leading a Task Force aimed at supporting chapters in their effort of selecting student award winners, coordinating communications with the student winners, and planning the student activities during the IGS Regional Conferences. Under her careful direction the IGS will count a record number of students selected for the 2012 cycle. Details of the contributions by IGS student winners are provided in the companion paper prepared by Dr. Touze-Foltz (see article in page 3 of this issue of IGSNews).

Student awardees will not only be recognized during the Awards Ceremony at each of the IGS Regional Conferences, but they will also be able to present their contribution in a special session of each event. In addition, student awardees are being invited to participate in a number of social functions, including the IGS Corporate Reception and a breakfast with IGS leadership. We want to take every opportunity to recognize our student awardees and groom them to become the future leaders of our Society.

While the 2012 student program is a key activity, it is only one of the several initiatives that the IGS is taking to engage our young members. A reduced student registration fee is in place at our IGS conferences in order to encourage students' participation in our events. Also, a super-reduced membership fee (a zero membership fee!) is what the IGS charges students to become members of our Society. I should point out that student members have access to all benefits (e.g. journals, members-only section of our website) as our regular members.

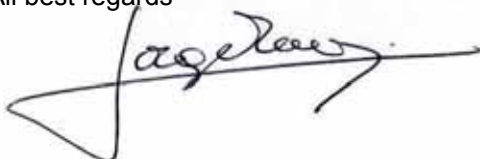
*Leaders of the chapters of the IGS:* We encourage you to pay particular attention to the current roster of student members in your Chapter. Please encourage them to join the IGS, participate in your activities, feed them (this works very well many times), and show them the value of the geosynthetics industry.

*Corporate members of the IGS:* We understand that you are particularly interested in Student initiatives. We would very much appreciate your feedback on how to best work with our younger generation of geosynthetic professionals. Not only students, but also young members are of particular importance for the IGS, so please stay tuned for upcoming efforts in which we will seek your input and support.

*Current (or potential) Students or Young Members of the IGS:* Get involved! We have recently created three Technical Committees (on Barriers, Reinforcement and Filtration). An extremely important objective of these TCs is to offer you (the young IGS member) the opportunity to learn about geosynthetics, express your ideas about geosynthetics, and interact with the giants of our industry. You are most welcome to participate in our conferences and chapter activities. We believe that your energy and thirst for knowledge is the perfect complement to our (i.e. the senior's) experience and eagerness to convey what we have learned.

We look forward to the working with the upcoming generation of geosynthetics professionals.

All best regards



Jorge G. Zornberg, Ph.D., P.E.  
IGS President

tel: +1(512) 232 3595  
e-mail: [zornberg@mail.utexas.edu](mailto:zornberg@mail.utexas.edu)

## IGS student award nominees 2012



**Nathalie  
Touze-  
Foltz**

The success of the IGS Student Award program continues, now with its sixth award period of 2009 to 2012.

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

Each chapter of IGS was invited to nominate an IGS student awards candidate by January 31, 2012 for The American and European Chapters, and by February 29, 2012 for Asian chapters.

All successful candidates were invited to submit a paper to one of the IGS regional conferences in 2012, i.e., GeoAmericas 2012, EuroGeo5 or Geosynthetics Asia 2012. The candidate of the South African Chapter will attend the Eurogeo 5 conference.

The IGS student award consists of US\$1,000 to be used to cover travel expenses of each winner to attend a regional conference. The IGS will transfer US\$1,000 to the student upon validation of the paper quality after revision by the awards Task Force.

Furthermore in recognition of the IGS Student Award winners and to maximize benefits to the students, the organizers of the regional conferences are required to hold a dedicated session in which the student papers will be presented. They must also provide the students with a copy of the proceedings and admission to the sessions and the exhibition. In addition, a comprehensive student program will be organized in each regional conference to maximize their exposure to geosynthetics and the IGS. This includes a recognition ceremony during the conference as well as their participation in corporate receptions, and a meeting with the IGS President and some chapters representatives. The winners will also be invited, depending on the topic of their paper to meet with the IGS Technical Committees on barrier systems, filtration or soil reinforcement.

Five IGS student awards will be given in Lima during the **GeoAmericas conference**. Papers which were received are of very high quality and will give rise to presentations in a dedicated student session:

- *Posibilidades y Desafíos del uso de Geocontenedores en Obras Hidráulicas*  
by A. Ecke (Argentina)
- *Quantification of the impact of the transfer of phenolic compounds through landfill bottom liners*  
by M. Mendes (Brazil) and J. Sousa (Perú)
- *Metodología para el diseño de muros mecánicamente estabilizados con geosintéticos*  
by J.-A. Gómez-Rivera (Mexico)
- *Effect of Temperature on the Service-life of Landfill Liners and Potential Temperature Control Strategies*  
by A. Hoor (NAGS)

Eleven IGS student awards candidates submitted abstracts to the **EuroGeo 5 conference**:

- *Demand and organization of quality assurance education for landfill liner systems*  
by A. Ravaska (Finland)
- *Behavior of antioxidants in the HDPE geomembranes used in municipal solid waste landfills*  
by C. Pons (France)
- *Geosynthetics for reinforcement. Comparison of an analytic and an experimental approach to describe earth pressure on the facing of a geosynthetic reinforced noise protection wall*  
by S. Meshkinghalam (Germany)
- *Interface frictional properties of geosynthetics in landfill cover systems through the inclined plane test*  
by L. Carbone (Italy)
- *The influence of subsoil reaction on the geosynthetic reinforcement in pile embankments*  
by H.-J. Lodder (The Netherlands)
- *Parametric study of the design of a solution of fine soil reinforcement with geosynthetics*  
by D. Carlos (Portugal)
- *Strength evaluation of fiber reinforced sand by triaxial testing*  
by A. Kusnetsova (Russia)
- *Evaluation of Allowable Leakage Rates measured from Liquid impoundments liner systems and Landfill disposal sites in South Africa*  
by I. Nyirenda (South Africa)

- *Research, Innovation and development of geosynthetics applied to reservoirs: a collection of contributions* by M. de los Angeles Crespo (Spain)
- *Factors affecting internal erosion of geosynthetic clay liners tested over perforated base pedestals* by H. Ozhan (Turkey)
- *Hydraulic performance of a landfill cap case study* by K. Zamara (United Kingdom)

At present 8 countries indicated that they would submit candidates who would receive the IGS student award during the **Geosynthetics Asia conference**. The nominated candidates at the time of preparation of this article are:

- *Filtration Opening Size of Woven Geotextiles varied with Tensile Loads* by L. Tang (China)
- *Centrifuge Model Studies on the Performance of Geogrid Reinforced Soil Barriers of Landfill Cover* by S. Rajesh (India)
- *Acceleration Amplified and De-amplified Responses within Geosynthetic-Reinforced Soil Structures* by E. Yusuf Kencana (Indonesia)
- *Case study on a largely-deformed geotextile-reinforced soil retaining wall induced by recent heavy rainfall in Japan* by J. Hur (Japan)
- *Effect of Non-Woven Geotextile Reinforcement on Mechanical Behavior of Sand* by D.-S. Cho (Korea)
- *Evaluation of Various Design Methods for Predicting Reinforcement Loads within Two Geosynthetic-Reinforced Soil Structures with Different Facing Stiffness* by T.-L. Liu (West Pacific IGS chapter)

After the conferences, IGS Student Awards recipients will be required to submit a written report to the IGS on the regional conference and on the IGS-related conference activities. This report should also be provided by the Student Awards winners to their own chapter.

Reported by  
Nathalie Touze-Foltz, Chair of the Awards Task Force

## Call for Candidates for IGS Council: Term 2012 to 2016



**Elizabeth  
Peggs**

The IGS, in accordance with its bylaws, will hold mid-term elections in 2012. IGS Members will have the opportunity to elect eight Council Members. Each of the elected members will serve a four-year term, effective 1 October 2012.

*The IGS encourages any IGS Member who is interested in furthering the IGS Mission and can attend all IGS Council meetings to consider standing for one of the Council positions.* In a typical year, the IGS Council meets once for a two-day period preceding a geosynthetics event. It is the responsibility of the IGS Council member to travel to these meetings and participate in the plenary and committee meetings. The IGS council attempts to host the meetings in equal distribution around the world and based on the most suitable location in any given year.

The IGS Council Members whose term of office expires in 2012 are:

- D.T. Bergado (Thailand)
- A. Bouazza (Australia)
- P. Fantini (Italy)
- H.Y. Jeon (Korea)
- J. Kuwano (Japan)
- M. Sadlier (Australia)
- M. Ziegler (Germany)
- V. Pimentel (Brazil)

The IGS bylaws stipulate that a Council Member may only be elected to two consecutive terms; hence, A. Bouazza, P. Fantini, and M. Sadlier are not eligible for re-election. Each of the other incumbents may stand for re-election.

### Nomination & Election Schedule

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

- Call for Nominees: Now – 30 April 2012  
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 30 April 2012. Biographical notes and photos will be published in the IGS



News, Issue #2, 2012 (June 2012) and on the IGS website.

- **Announcement of Nominees: June 2012**

The IGS will announce the eligible candidates in the 2<sup>nd</sup> Issue of the **IGS News** (June 2012) as well as on the IGS website. All IGS Members will be encouraged to review the candidates' biographies in preparation for the voting period.

- **Voting: 1 August – 30 September 2012**

Voting instructions will be sent to each eligible Individual IGS Member and each designated representative from the IGS Corporate Membership. Each member may vote once.

- **Announcement of Successful Candidates: 1 October 2012**

IGS Members will be made aware of the successful candidates via email and website on 1 October 2012.

- **First Meeting of the New IGS Council: December 2012 – Bangkok**

The first meeting for each of the successful candidates will be held in Bangkok, Thailand immediately preceding the GeoAsia 2012 conference.

If you have any questions or would like any further information on the election process or the responsibilities involved with becoming an IGS Council Member, please contact the IGS Secretary, Elizabeth Peggs ([Elizabeth@geosynthetica.net](mailto:Elizabeth@geosynthetica.net)), SKYPE: elizabeth.peggs, TEL +1.561.768.9487.

*Reported by*

*Elizabeth Peggs, IGS Secretary*

## News from the Technical Committees of IGS

### Technical Committee on Soil Reinforcement – TC-SR

The objective of TC soil reinforcement is to focus on the discussion of current and future of soil reinforcement technique on both research and practice. We would like to enlarge our community by finding younger researchers/engineers from not only current IGS members but also ones from other fields who have interests on soil reinforcement. Our final goal is to establish the benchmark on the soil reinforcement activities and also new community with expanding the issues on the topic of soil reinforcement. The executive committee of the TC is composed of:

Chair: Jun Otani (Japan)

Co-Chair: Richard Bathurst (Canada and as a representative from North and South America) and  
Gerhard Braeu (Germany and representative from Euro and Africa)

Secretary: Yoshihisa Miyata (Japan and as a representative from Asia and Oceania)

Supporting committee: Technical Committee in Japan Chapter of IGS (Chair: Miyata)

The terms of references for the period of 2010 - 2014 are:

#### **1. Digitization of previous proceedings**

Purpose: to make pdf files for all the papers at the previous IGS conferences shown below and to set IGS website in order to enhance IGS activities. Only the papers or sessions related to soil reinforcement are targeted.

#### **2. Activities at any conferences:**

Purpose: to exchange current information on soil reinforcement activities worldwide and also to discuss the current TC-soil reinforcement activities. Following is the list of possible meetings from 2012 to 2014:

1) in 2012:

- GeoAmerica on May 1-4 (meeting in charge by Bathurst and Otani)
- PBD conference Taormina on May (Keynote by Miyata and meeting in charge by Miyata)
- IS Hokkaido on Sept.10-12 (managing sessions by Otani and Miyata)
- EuroGeo on Sept.16-19 (meeting in charge by Braeu and Otani)
- Geosynthetic Asia on Dec.13-16 (meeting and organized session in charge by Otani and Miyata)

2) in 2013:

- ICSMGE (ISSMGE conference) in Paris on Sept.1 - 5 (meeting in charge by Braeu and Otani)

3) in 2014

- 10<sup>th</sup> ICG on Sept.21 - 25 (seminar or pre-symposium, final meeting in charge by Braeu and Otani)

### 3. Activities by TC members:

Since the task on digitization of previous proceedings are undertaken by core members as above, we ask all the TC members for following tasks:

- 1) to join periodical Q&A by e-mail
- 2) to try to attend any of the above meetings and join the discussion
- 3) to produce individual technical report on the soil reinforcement activities

Reported by

*Yoshihisa Miyata, Secretary of IGS TC-SR*

## Technical Committee on Filtration – TC-F

The IGS Technical Committee on Filtration aims to promote and develop the use and knowledge on geosynthetics in filtration. The committee is composed of members of the academia and of the geosynthetic industry and it is currently co-chaired by Prof. Ennio M. Palmeira (University of Brasilia, Brazil), Prof. R. Jonathan Fannin (University of British Columbia, Canada) and Prof. Nicola Moraci (University of Reggio Calabria, Italy). The Secretary of the Committee is Mr. Eric Blond (SAGEOS, Canada). The following activities have been carried out by the committee.

### Collaboration with Geotechnical Societies

Contacts have been made with geotechnical societies (ISSMGE, ICOLD) regarding joint collaboration on the use and specification of geotextile filters).

### Participations in conferences, symposia, etc

The Organizing Committee of GeoAmericas 2012 has agreed to hold a technical session on Drainage and Filtration co-organized by the TC. Jonathan Fannin will be the Keynote Lecturer of this session. A short course on drainage and filtration with geosynthetics will be delivered by Barry Christopher and Ennio Palmeira. Further information can be found at the GeoAmericas 2012 website ([www.geoamericas2012.com](http://www.geoamericas2012.com)). Contacts are also being made with the Organizing Committees of EuroGeo5 and Geosynthetics Asia 2012 for the development of similar actions in these conferences.

### Questionnaire on Geotextile Filters

A questionnaire on geotextile filters has been sent to an initial number of about 80 selected professionals in different parts of the world. The idea behind this initiative is to have an initial input on the response to the questionnaire before sending it to a larger number of colleagues. The outcome of this survey is being compiled and its results will be available soon. This outcome will be useful to establish the next steps regarding the use of the questionnaire.

### Planned Meetings

A meeting of the TC members is planned to be held in Lima, Peru, during the 2<sup>nd</sup> Pan-American Conference on Geosynthetics (GeoAmericas 2012). Those who will attend the conference are welcome to attend the meeting and to bring their experiences and suggestions to the committee activities. Information regarding this meeting and on the TC activities in general can be obtained from the TC Secretary, Mr. Eric Blond ([eb blond@gctg.com](mailto:eb blond@gctg.com)).

We are looking forward to meeting you in Lima!

Reported by

*Ennio M. Palmeira, R. Jonathan Fannin and Nicola Moraci, IGS TC on Filtration Co-Chairs*

## Technical Committee on Barrier Systems – TC-B

The TC-B was created to generate and promote activities in the area of Barrier Systems. It follows the general mission and spirit of IGS and is fully dedicated to the scientific and engineering development of geosynthetics and associated technologies. The TC-B aims to provide a forum for active participation by the members of IGS and will promote the dissemination of knowledge, technology, research findings, design and construction methodologies related to geosynthetic barrier systems in geotechnical and geoenvironmental engineering.

The executive committee of the TC is composed of:

- Prof. A. Bouazza (Chair)
- Mr. B. Ramsey (co-Chair)
- Mr. K. von Maubeuge (co-Chair)
- Dr. N. Touze-Foltz (Secretary)

The terms of references for the period of 2010 - 2014 are:

- Assist with technical programs and organise technical sessions of international and regional IGS conferences within the TC subject area (i.e., EuroGeo2012, Geosynthetics Asia 2012, GeoAmericas2012, IGC2014, GeoAfrica)
- Preparation of special issues in the TC subject area in Geosynthetics International and/or Geotextiles and Geomembranes
- Set up a task force to promote interaction with sister learned societies such as ISSMGE, FedIGS, ISWA, and others ; with the view of organising joint publications, workshops, seminars and sessions, establishing collaboration and exchanging information.
- Set up a task force to compile summary of regulations in various countries
- Organise a workshop on installation procedures and quality control
- Set up a task force to collect information from monitored projects & dissemination
- Preparation of white papers on topics relevant to the members of IGS
- Interact with industry working in areas relate to barrier systems

The TC-B has met several times since its creation in May 2010 and has currently 59 members spread through most of the IGS chapters. The TC-B has been very active in organizing dedicated technical sessions on waste containment barrier systems for the upcoming regional conferences which will take place in 2012 in Lima ([http://www.geoamericas2012.com/trabajos\\_eng.html](http://www.geoamericas2012.com/trabajos_eng.html)), Valencia ([http://www.eurogeo5.org/index\\_i.php](http://www.eurogeo5.org/index_i.php)) and Bangkok (<http://geosynthetics-asia2012.com/introduction.htm>), respectively. Sessions will include application in mining engineering and landfills. In addition to these sessions, the TC-B has scheduled 2 specialized workshops on barrier systems to take place in India and Malaysia in 2013. A special issue on geosynthetics in waste containment facilities is also under preparation for publication in the Journal of Geotechnical Engineering of South East Asia Geotechnical Society and is scheduled to appear in September 2012.

If you are interested in contributing to the TC-B activities, please contact Nathalie Touze-Foltz at [nathalie.touze@irstea.fr](mailto:nathalie.touze@irstea.fr)

---

## Conference Reports

---

### GEOSYNTHETICS INDIA' 11 IIT Madras, India, 22 - 24 September 2011

Geosynthetics are now being increasingly used all over the world for every conceivable application in civil engineering, namely, construction of dams, embankments, canals, approach roads, runways, railway embankments, retaining walls, slope protection works, drainage works, river training works, seepage control, Hazardous Waste Management – Landfills and Ash Ponds, etc. due to their inherent qualities. Its use in India though is picking up, is not anywhere close to recognitions. This is due to limited awareness of the utilities of this material and development taking place in its use.

To be abreast with the latest development in the field of Geosynthetics, a Seminar “Geosynthetics India’11” was organised by the Indian Chapter of International Geosynthetics Society and the Central Board of Irrigation & Power (CBIP) at IIT Madras (India).

The Seminar was sponsored by Coir Board, GeoSol Associates, IVRCL Limited, NAUE GmbH & Co. KG and Strata Geosystems (India) Pvt. Ltd.

The co-sponsors for the Seminar were GSE Lining Technology Co. Ltd., Maccaferri Environmental Solutions Pvt. Ltd., National Jute Board, Saivishwa Infra, TechFab (India) Industries Ltd., TenCate Geosynthetics Asia Sdn. Bhd and Z-Tech (India) Private Ltd.

The event was preceded by An Introductory Course on Geosynthetics on 22 September 2011 during which the eminent speakers from the academic/research institutions and the industry shared their experiences about the possible applications of Geosynthetics.

In total 90 attendees took active participation in the Introductory Course.

The Seminar was inaugurated on 23 September 2011 by Dr. G. Narayanan, Principal Chief Engineer, Southern Railway. Prof. V. Idichandy, Director, IIT Madras presided over the Inaugural Session. Prof. Jorge G. Zornberg, President, International Geosynthetics Society and Fluor Centennial Associate Professor, The University of Texas at Austin, USA also addressed the participants during the Inaugural Session.

In total 125 attendees from India, besides from Germany, Israel, Japan, Thailand and USA participated in the Seminar.

12 organisations from India, besides Germany, Israel and Malaysia displayed their products/services in the Exhibition organized during the event.

### Student Paper Award

Indian Chapter invited nominations for the Student Paper Award and were scrutinized by a Committee comprising Dr. K. Rajagopal, Dr. G.V. Rao, Dr. G.V.S. Raju, Mr. Narendra Dalmia and Ms. Minimol Korulla. In total 09 nominations were received, and were reviewed by the Selection Committee.

The following candidates, shortlisted for the award, made the presentations before the Selection Committee on 23 September 2011 at IIT Madras:

- Mr. Rajiv Chauhan, Research Scholar, IIT Roorkee
- Ms. Sefali Biswas, Research Scholar, IIT Roorkee
- Ms. L.S. Somiya, Research Scholar, IIT Delhi
- Ms. Anjana Bhasi, Ph.D. Scholar, IIT Madras
- Dr. S. Rajesh, IIT Bombay

Strata Geosystems (India) Pvt. Ltd. sponsored the Student Paper Award competition.

Dr. S. Rajesh was declared the winner of the Award from India. All the candidates were presented a certificate by Prof. Jorge G. Zornberg, President of the International Geosynthetic Society.



Prof. Jorge G. Zornberg, President of the International Geosynthetic Society, briefing the participants about IGS



Release of the Seminar Proceedings: (L to R): Prof. K. Rajagopal, President, Indian Chapter of IGS; Prof. V. Idichandy, Director, IIT Madras; Dr. G. Narayanan, Principal Chief Engineer, Southern Railway. Prof. Jorge G. Zornberg, Prof. S.R. Gandhi, Head, Department of Civil Engineering, IIT Madras and Mr. V.K. Kanjlia, Member Secretary, Indian Chapter of IGS



Prof. K. Rajagopal addressing the participants



A view of the Exhibition

*Reported by  
A.C. Gupta, IGS Chapter Correspondent of India*



# 2011 ISKGSS - International Symposium on Sustainable Application of Geosynthetics Technology

## Commemoration of 10th Anniversary of Korean Geosynthetics Society Foundation

Seoul, South Korea, 23 - 24 November 2011

"2011 ISKGSS" was held 23 - 24 November in 2011 at Taeyoung E&C Auditorium in Seoul, Korea. The symposium was organized by the Korean Geosynthetics Society (KGSS) under the auspices of IGS in commemoration of 10<sup>th</sup> anniversary of KGSS foundation. Details of the symposium are briefly described hereunder.

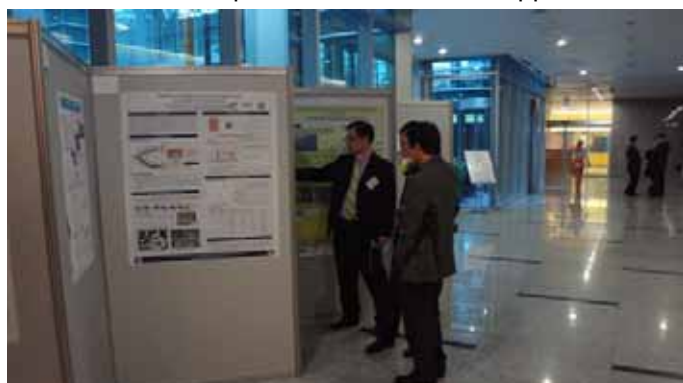
A total of 77 participants from four different countries joined the symposium. The largest participation, of course, came from Korea with 68 participants. A total of 25 papers were presented on a variety of topics in geosynthetics. Immediate past president of IGS, Prof. Fumio Tatsuoka delivered the keynote lecture, titled "Geosynthetic-Reinforced Soil Structures to Mitigate Natural Disasters". In addition, Prof. W. Hsieh and Prof. S.H. Chew delivered invited lectures titled "The manufacturing process effects on the tensile and creep behavior of high strength polyester yarns" and "Geotextile tube and bag for riverbank and beach restoration", respectively.

Prior to the symposium, a half day Technical Site Visit was held on November 23 to visit the Sudokwon Landfill Site in Incheon, which is one of the largest single landfill site in the world, which is currently handling about 20,000 tons of waste per day. Approximately 20 participants joined the Site Visit.

The members of Organizing Committee of 2011 ISKGSS express sincere gratitude to all the participants and the strong support from IGS. The success of 2011 ISKGSS would not have been possible without their support.



Keynote Lecture by Prof. F. Tatsuoka



Poster session

*Reported by*

*Chungsik Yoo, IGS Council Member, Co-Chair of 2011 ISKGSS and Vice-President of KGSS*

## CGT 2011 - Conference on Geotechnics in Torino

### Torino, Italy, 23-24 November 2011

The 23<sup>rd</sup> edition of the CGT (Conference on Geotechnics in Torino) was held in Torino on the 23<sup>rd</sup> and 24<sup>th</sup> of November 2011 under the auspices of IGS and ISSMGE: the conference subject was "Earth retaining structures and slope stabilization: theory, design and applications".

A complete and updated picture of the advances in design and construction technologies of earth retaining structures and slope stabilization methods, from both a theoretical and an applicative point of view, has been provided by the Conference program.

The conference was opened with the addresses by Daniele Cazzuffi (Past President of IGS), Stefano Aversa (President of AGI, Italian Geotechnical Society) and Mario Manassero (Chairman of ISSMGE TC215 and President of the Conference Scientific and Organizing Committees),

The first session of the Conference, chaired by Michele Jamolkowski (Politecnico di Torino), dealt with the theoretical topics concerning the evaluation of earth and pore fluid pressure, under static, dynamic, drained and undrained conditions. Sebastiano Rampello, from the Università degli Studi di Roma La Sapienza, and Lidia Zdravkovic, from the Imperial College of London, gave two lessons on the fundamental geotechnical issues relative to the evaluation of lateral earth pressures on retaining walls and the numerical modelling of the soil-structure interaction of embedded retaining walls.

The following sessions were devoted to applicative topics: design methods for gravity walls, diaphragms, reinforced

earth retaining structures and soil nailing.

In particular, the second session, concerning earth retaining structures, was chaired by Carlo Viggiani (Università degli Studi di Napoli Federico II) and included the presentations of Stefano Aversa (Università degli Studi di Napoli Parthenope) and Luigi Callisto (Università degli Studi di Roma La Sapienza), relative to “Gravity walls design” and “Diaphragms walls for deep excavations in fine-grained soils”, respectively.

The third session, chaired by Giovanni Barla (Politecnico di Torino), was devoted to earth reinforcement and included the presentation of Dov Leshchinsky (University of Delaware) on “Topics in geosynthetic reinforced earth structures” and that of Richard Jewell (Fugro GeoConsulting) and Colin C. Smith (University of Sheffield) on “New tools and developments for the design of soil reinforcement and nailing”.

The fourth session, devoted to slope stabilization, was chaired by Alberto Burghignoli (Università degli Studi di Roma La Sapienza) and included the contributions of Luciano Picarelli (Seconda Università degli Studi di Napoli) and Stefano Urciuoli (Università degli Studi di Napoli Federico II) on “Landfill stabilization” and Mario Manassero, Andrea Dominijanni (Politecnico di Torino), Carmine Terrioti and Luca Buffa (Geotechnical Engineering) on “Stabilization of landfills on slopes”.

The new technologies were the topic of the last session, which dealt with diaphragms, secant pile walls, anchors and drainage systems. The session, chaired by Cesare Trevisani, Vice-President for infrastructures, logistics and mobility of Confindustria, included the presentations of Daniele Vanni (Trevi) on “New technologies for diaphragms and secant pile walls” and Vittorio Manassero (Icotekne) on “New technologies for drainage and anchor systems”.

The first edition of the CGT was organized in 1970 by Michele Jamiolkowski and since 1977 the event has been held every two years. CGT 2011 presented a broad perspective on new technical and scientific developments, with the advantage of combining geotechnical, geosynthetic and geoenvironmental engineering analysis, modeling and design. The conference had 200 participants (including a lot of IGS members) from several private companies, public institutions and international universities.



*Reported by  
Mario Manassero, IGS member*

# 10<sup>th</sup> Saxon Construction Textiles Symposium "Bautex 2012 – Building with geosynthetics" Chemnitz, Germany, 26 January 2012

On January, 26th, 2012, the 10th Saxon Construction Textiles Symposium "BAUTEX 2012" took place in Chemnitz. The organizers of the symposium were the Saxon Textile Research Institute e. V., the University of Applied Sciences Dresden and the Construction Industry Federation Saxony / Saxony-Anhalt e. V.

At the 10th symposium the organizers were able to welcome over 200 participants as soon as 25 exhibitors of Germany and Austria.

The this year's arrangement was inaugurated with a greeting of the president of the Construction Industry Federation Saxony / Saxony-Anhalt e. V., Mr. Hans-Dieter Steinbrücker, who explained the situation of the construction industry in Saxony.

Afterwards the Mayor of the town Chemnitz, Mrs. Barbara Ludwig, spoke about construction measures and research institutes of the town Chemnitz (picture by Romy Naumann, STFI).

The president of the recently founded regional authorities for road building and traffic, Mr. Rainer Förster, gave a lecture about the structure of his new authorities and the regional transport infrastructure plan.

The professional part of this year's jubilee arrangement started with the lecture "Building technique with geosynthetics – development and application areas" (Prof. Lieberenz / Dr. Mägel), in which the development of the building techniques in retrospect as well as its future prospects were described. The authors also explained the impressive history of the application examples, which were presented in the past BAUTEX-Symposiums in their contribution.

The second conference part presented applications in the transport infrastructure construction (lectures: Olschewski, Köhler / Dr. Schwerdt, Großmann).

Mostly young graduates expressed conference part „Examples of the connection of practice, theory and research" and spoke about their working results. The subjects of the lectures were the long time behavior at the example of the reinforced earth (Klügel), the development of a test station for the picture of settings near the reality (Oehmichen) as well as lab tests about the composite material "Geogrid-reinforced soil" (Jacobs) and for the evidence of the serviceability of geosynthetic reinforced supporting systems (Hangen).



Barbara Ludwig, Mayor of the town Chemnitz, during opening session (picture by Romy Naumann, STFI)



Prof. Klaus Lieberenz and Dr. Matthias Mägel in their closing words (picture by Romy Naumann, STFI)

Contributions about the environment protection form the last conference part of the eventful day. The lecturers presented modern noise abatement measures with the use of geosynthetics (Schultheiß / Keitel), applications for revitalization of mining landscape (Werner) and the plantable facing formwork DYNATEX (Prof. Göbel).

The conference and its history were summed up by Prof. Klaus Lieberenz and Dr. Matthias Mägel in their closing words (picture by Romy Naumann, STFI).

With this program "BAUTEX" was able to announce innovations of the geotextile field of the construction industry and to give impulses for future developments.



During the recesses the exhibitors had a lively conversation with the participants and were able to make many contacts.

The conference documents are available in German language in printed or pdf-file (as USB flash drive) version at Dr. Matthias Mägel, matthias.maegel@stfi.de.

The 11<sup>th</sup> Saxon Construction Textiles Symposium „BAUTEX 2014“ was already announced by the organizers for January, 30<sup>th</sup>, 2014.

*Reported by  
Matthias Mägel, IGS member*

## 150<sup>th</sup> Anniversary Celebration of Huesker Synthetic GmbH Düsseldorf, Germany, 19 – 20 January 2012

HUESKER Synthetic GmbH hosted a special conference on 19th and 20th January 2012 in Düsseldorf and welcomed representatives of subsidiaries, numerous national and international business associates and partners of the company, as well as representatives of engineering companies, testing institutes, authorities and universities.

The main focus of the conference was on geotechnical engineering but special attention was also given to engineering solutions using geosynthetics, dealing with issues such as sustainability, future outlook, quality management and eminent projects. Top-class speakers presented their work and views on these challenging subjects.

The event was opened by Professor Jorge G. Zornberg, President of the International Geosynthetics Society (IGS). Prof. Zornberg is the “Fluor Centennial Professor” for the Geotechnical Engineering program at the University of Texas and has received the Presidential Early Career Award for Scientists and Engineers (PECASE) which was presented to him by the President of the USA.



From left to right: Sven Schröer, Dr. Ing. Michael Schmalz, Andreas Elsing, Prof. Jorge G. Zornberg Ph. D., Markus Wilke, Christian Kortboyer, Martin Hawkswood, Prof. Dr. Ing. Tom Schanz, Dr. Ing. Dimiter Alexiew

The conference was highlighted by the 150<sup>th</sup> anniversary celebration of HUESKER Synthetic GmbH. In his welcome speech, Dr. Ing. Dimiter Alexiew, Technical Director of HUESKER Synthetic GmbH, not only addressed the development of the company: he also referred to several milestone projects in the development of geotechnical engineering using geosynthetics as well as to the submission of the IGS Award in 2010.

“Founded on 27th December 1861, HUESKER Synthetic GmbH employees can look back on one and a half centuries of service to customers and partners”, Dr. Alexiew summed up. Continual investment in research and technology has enabled HUESKER to become a world leader.

HUESKER Synthetic GmbH invited its guests to join in the special celebration at the “Classic Remise Meilenwerk” in Düsseldorf.

In addition to the numerous culinary delicacies served at the event the guests enjoyed a fascinating journey through time between the years 1861 and 2011. The exciting and entertaining film sequences were staged in a lively manner with variety acts artistically representing the different decades.





The costumes and hats especially tailor-made for this anniversary event are really special: these clothes are made with HUESKER products and reflect the fashion styles of various decades. The clothes were presented on stage to suit the relevant era.

The 150 event produced a fine mix of knowledge transfer and entertainment. Huesker are now concentrating on the same high level of quality in our manufacturing, engineering and service for the next 150 years!

*Reported by*

*Pia Möllers, IGS Corporate member*

---

## Announcements of Conferences of IGS

---

### 10<sup>th</sup> International Conference on Geosynthetics – 10ICG Berlin, Germany, 21 – 25 September 2014



The German Geotechnical Society (DGGT) and the International Geosynthetics Society (IGS) German Chapter, as a special group within the DGGT, cordially invite you to participate in the 10<sup>th</sup> International Conference on Geosynthetics (10ICG) in 2014 in Berlin, Germany.

The conference will be held from 21 to 25 September 2014 in direct connection with the 33<sup>rd</sup> Baugrundtagung (German Soil Mechanics Conference) of DGGT (23 to 26 September 2014).

As the Baugrundtagung expects 1200 participants, great synergy and interaction is expected between these events, especially in the co-organized, co-located exhibition.

The overlapping of lectures from both events will also attract many additional experts from the geotechnique and geosynthetics professions.

#### **Venue**

The 10ICG will be held in the south-eastern part of Berlin at the ESTREL convention centre, just 15 minutes from the new international airport Berlin-Schönefeld.

ESTREL offers about 50 rooms for lectures and meetings in different sizes, integrated exhibition halls (approx. 5000 m<sup>2</sup>) and a 4-star hotel (1125 rooms).

Travelling time from there to the centre of Berlin is about 20 minutes.

#### **Language**

The official language of 10ICG will be English.

#### **Exhibition**

The 5000 m<sup>2</sup> technical exhibition space is directly connected to the conference rooms and is half-way between the hotel and the lecture rooms inside the centre.

The exhibition space will be used both by 10ICG and the Baugrundtagung event.

#### **Berlin**

Berlin is the capital city of Germany and offers a tremendous number of interesting cultural events, museums and sightseeing attractions directly in the city and its surrounding area.

Berlin is the "gateway" to the eastern part of Europe. The city is easily reachable and the site of many significant political milestones not only in the history of Germany but of Europe and the world.

More than 6.5 million visitors per year experience Berlin. The 10ICG programme for accompanying persons will cover guided city tours, visits to museums and galleries - such as the Museumsinsel (a "World Cultural Heritage" site of UNESCO since 1999) and the Brandenburg Gate – as well as special offers for individual trips and visits to the surrounding area (e.g., Spreewald, Potsdam, Mecklenburg Lakes).

#### **10ICG Conference Themes**

- Green Engineering, Sustainability and Durability with Geosynthetics
- Use of Geosynthetics for Renewable Energy
- Mining, Waste Management, Contaminated Sites and Environmental Protection
- Roads, Railways and Other Transportation Applications
- Reinforcement in Walls, Slopes, Embankments and Base Courses
- Flood Control, Levee and Canals, Dams, Reservoirs and Other Hydraulic Applications

- Drainage and Filtration Properties of Geosynthetics
- Geomembrane and Geosynthetic Clay Liner Barrier Systems
- Case Histories and Innovative Uses of Geosynthetics
- Quality Control, Quality Assurance and Accreditation
- On-site Installation Technologies and Monitoring Programs
- Soil-Geosynthetic Interaction and Large-Scale Performance Testing
- Design Approaches
- Regulations and Recommendations
- Looking to the Future with New Geosynthetic Products

**For more information**

Please visit the website that will be updated in due time: [www.10icg-berlin.com](http://www.10icg-berlin.com)

For further information please contact:

Gerhard Bräu ([Gerhard.Braeu@bv.tum.de](mailto:Gerhard.Braeu@bv.tum.de))

Dr. Kirsten Laackmann ([service@dggt.de](mailto:service@dggt.de))

---

## Announcements of Regional Conferences of IGS

---

### GeoAmericas 2012 II Pan-American Congress on Geosynthetics Lima, Perú, 1 – 4 May 2012



The II Pan-American congress will take place from 1 - 4 May 2012, and will bring together researchers, consultants, environmental engineers, contractors, geosynthetic courses and exhibitors. It will be held at the modern Westin Hotel in Lima, Peru. Lima is the capital city of Peru, which is the fifth-most populous and the third-largest country in South America. Geoamericas 2012 will be organized by the IGS Perú under the auspices of the IGS.

**Technical Program**

The congress will highlight the main topics in the geosynthetics industry and application. Keynote lectures and selected papers will be presented on the main themes:

- |   |  |
|---|--|
| • Geosynthetics in Environmental Applications | • Geosynthetics in Highways Applications |
| • Geosynthetics in Dynamic Applications       | • Geosynthetics in Sanitary Applications |
| • Geosynthetics in Hydraulic Applications     | • Case Histories                         |
| • Geosynthetics in Mining Applications        | • New Geosynthetics Products             |

Preliminary to the opening of the congress there will be held a number of short courses and one long course on the 1<sup>st</sup> of May 2012.

**Keynote Lectures**

- Dov Leshchinsky “Lesson Learned from Failed MSE Walls”
- J.P Giroud “Conceptual Design of Geosynthetic Liner Systems”
- Jonnatan Fannin “Geotextile filters: the principles of design”
- Imad Al-Qadi “Proper Use of Geosynthetics in Pavements: Testing and Advanced Modeling”
- Richard Bathurst “Recent Developments in Static and Seismic Design of Geosynthetic Reinforced Soil Walls”
- Ennio Palmeira “Use of Geosynthetics in Combination with Alternative Construction Materials”

**Exhibition**

During the Geoamericas 2012 an exhibition will be available to all interested companies and organizations that are willing to present latest technologies, innovations and services to delegates and visitors. The conference venue offers exhibition facilities with 1340 m<sup>2</sup>. of available space for consultants, contractors, suppliers, installers, agencies, project offices, and all organizations interested in the geosynthetic community.

## Language

English and Spanish will be the official languages of the congress. The abstracts can be submitted on both.

## For more information

More information will be available in the congress web site may be found in [www.geoamericas2012.com](http://www.geoamericas2012.com)

# 5<sup>th</sup> European Geosynthetics Conference

## Valencia, Spain, 16 - 19 September 2012



The next European Geosynthetics Conference "EuroGeo 5" will be held on 16 – 19 September, 2012 at the Convention & Exhibition Center (Centro de Eventos) in Valencia, Spain under the auspices of the IGS.

The event will be organized by the Spanish IGS Chapter in cooperation with European and national associations of producers and with scientific

and engineering organizations.

The main objective is that the experts, manufactures, applicators and end users can exchange their experiences related to Geosynthetics.

A group of experts will be present in the event and will describe the most recent developments in these fields. The aim of the discussions is to establish an open dialogue which will enable to enhance the participants' knowledge.

The EuroGeo5 will appeal to all participants in the field of Geosynthetics whether in a practical or scientific sense: project authorities, designers, technicians, manufacturers, applicators, inspectors, researchers, regulators, experts, users, consultants, laboratories and other persons who, due to their professional activities, are interested in this field of technology.

## Main Subjects of the Conference

The conference will provide an overall look at the multiple applications of

- Transport (roads, railways, tunnels, airports)
- Hydraulic structures (dams, reservoirs, 'canals)
- Erosion control and coastal works
- Waste landfills
- Soil improvement and reinforcement
- Mining
- Environmental applications
- Agriculture and aquaculture
- Building construction
- Remediation technologies

All aspects of the use of Geosynthetics will be dealt with, drawing on experience gained from case histories as well as research and development into new products and uses:

- Testing and properties
- Specifications and certifications
- Long term experiences and durability
- Design concepts and calculation methods
- Installation and pathology.

## Keynote Lectures

- Jean Pierre Giroud "Geosynthetics: a remarkable discipline with great achievements in the past and exciting challenges for a bright future "
- Nathalie Touze-Foltz "Performance of geosynthetics for environmental protection in landfills"
- Manuel Blanco and Ángel Leiro "Spanish experience in Geomembranes in hidraulic applications"

## Educational Sessions

- Philippe Delmas "Geosynthetics in environmental engineering: applications and design methods"
- Krystian W. Pilarczyk and Adam Bezuijen "Geosynthetics in hydraulic and coastal engineering"
- Martin Ziegler and Gerhard Bräu "Geosynthetics in reinforced soil structures"
- Russell Jones "An introduction to geosynthetics: descriptions and applications"

Additionally there will be held two different short courses on the afternoon of 16th September 2012, preliminary to the congress

## Technical Exhibition

Exhibitors will present the latest technological innovations and associated services to the conference delegates and visitors.

The technical exhibition is open to all interested companies and organizations. Information and a registration file will be available on the conference website.

### Languages

The official languages will be English and Spanish. Simultaneous translation will be provided. All written communications will be presented in English and/or Spanish.

### For more Information

For more information please visit the Conference website [www.eurogeo5.org](http://www.eurogeo5.org) or contact the Conference Secretariat: E-mail [info@eurogeo5.org](mailto:info@eurogeo5.org)

## Geosynthetics Asia 2012 5<sup>th</sup> Asian Regional Conference on Geosynthetics Bangkok, Thailand, 13 - 16 December 2012



The Fifth Asian Regional Conference on Geosynthetics (GA2012) will be held in Bangkok, Thailand from 13 to 16 December 2012. GA2012 will be hosted by the Asian Center for Soil Improvement and Geosynthetics (ACSIG) in the Geotechnical and Earth Resources Engineering (GTE) Program under the School of Engineering and Technology (SET) at the Asian Institute of Technology (AIT). The theme of this Conference is "Geosynthetics for Sustainable Adaptation

of Climate Change". The Conference theme includes the following:

### Keynote Lectures

- Keynote 1: Embankments on Soft Ground and Ground Improvement
- Keynote 2: Riverbank and Coastal Protection
- Keynote 3: Geosynthetics for Environmental Protection
- Keynote 4: Reinforced Earth Structures
- Keynote 5: Geosynthetics Innovation for Sustainable Engineering

### Conference Theme Lectures

- Geosynthetics for Climate Change due to Global Warming (Reinforced Slopes, Reinforced Embankment/Walls, Erosion Control)
- Sustainable Infrastructure including Limited Life Geosynthetics (LLGS) (Green Geosynthetics, Bioplastics, Natural Fibers, Renewable, Durability)
- Geosynthetics for Human Security (Flood Controls, Roads and Railways, Dams, Levees and Canals)
- Geosynthetics for Food and Agriculture (Irrigation Canals, Aquaculture Ponds)
- Geosynthetics for Water Conservation (Lining Systems, Geocontainer, Reservoirs)
- Geosynthetics for Leisure Activities and Sports (Artificial Lakes, Golf Courses, Race Tracks)
- Geosynthetics for Waste Disposal and Mining Activities (Geomembranes, Geosynthetic Clay Liners, Interface Shear Strengths)
- Geosynthetics for Coastal and Riverbank Protection (Drainage, Filtration, Geotubes, Geobags)
- Geosynthetics for Soft Ground Improvement (Prefabricated Vertical Drains, Vacuum/Electro-Osmotic/Heat Pre-loading)
- Case Histories and Innovations (Geosynthetics Interaction, Seismic Resistance, Futuristic, Innovative)

### Language

The official language of this conference will be English

### Important Dates

Deadline of Paper Submission: 30 April 2012  
Notification of Paper Acceptance: 30 June 2012  
Deadline for Author Registration: 30 June 2012  
Deadline for Early Bird Registration: 30 April 2012

### For more information

For further information, please contact: GA2012 Secretariat

Email: [igs-thailand@ait.ac](mailto:igs-thailand@ait.ac) or [bergado@ait.ac.th](mailto:bergado@ait.ac.th)

Website: <http://www.geosynthetics-asia2012.com/>

Phone: +66-2 524 5500/5523

Fax: +66-2 524 6050



## 2<sup>nd</sup> International Conference on Performance-Based Design in Earthquake Geotechnical Engineering Taormina, Italy, 28 – 30 May, 2012

The ISSMGE Technical Committee of Geotechnical Earthquake Engineering and Associated Problems (TC203), the European Technical Committee ERTC-12 on Application of Eurocode 8 and the Italian Geotechnical Society, under the auspices of ISSMGE and IGS, will be hosting the Second International Conference on Performance-Based Design in Earthquake Geotechnical Engineering.

The Conference will be held on May 28 - 30, 2012 at the Conference Center in the beautiful city of Taormina.

It will be aimed to the Performance Based Design of Geotechnical works in seismic areas, following the First International Conference held at the Tsukuba International Congress Center in Tsukuba, Japan, on June 15 – 17, 2009.

Pseudo-static analysis is still the most used methodology for assessing the stability of geotechnical systems subjected to earthquake loadings. However, this methodology did not give any information on the deformations and permanent displacements induced by seismic actions. Moreover, the peak ground acceleration increased from 0.2 - 0.3 g in the seventies to 0.6 - 0.8 g at the present time. It is needed to shift from pseudo-static approach to performance-based analysis.

### Conference Themes

The main conference topics and sessions are:

1. Case histories on ground motion and site effects
2. Soil investigation with field and laboratory testing
3. Dynamic Characterisation and modeling
4. Methodologies for PBD and codes
5. Physical modeling by Shaking table test and centrifuge test
6. Liquefaction
7. Numerical analyses for PBD
8. Slopes
9. Embankments, landfills and dams
10. Shallow foundations
11. Pile foundations
12. Soil-structure interaction
13. Retaining wall and wharf structures
14. Earth reinforced retaining wall
15. Underground structures

Session 14 is devoted to the earth reinforced retaining wall, which are able to withstand the severe accelerations recorded during recent earthquakes, such as the 2011 New Zealand Earthquake and the 2011 Tōhoku Earthquake and Tsunami, to which special sessions are devoted.

Reinforcement types are geogrid, woven geotextile and polyester strap. The local stability of the backfill at the front of the wall is assured by attaching the reinforcement to facing units constructed with polymeric, timber, concrete or metallic wire basket materials comprised of a variety of shapes. The seismic design of the geosynthetic-reinforced retaining structures can be performed using the displacement-based approach in the light of the performance-based design.

### Keynote Lecture

Keynote Lecture 14 will be presented by the secretary of the Technical Committee on Soil Reinforcement Y. Miyata, related to the *Performance of Reinforced Soil Walls during the Recent Great Earthquakes in Japan and Geo-Risk based Design*.

The conference will be hosting a meeting of the Technical Committee on soil reinforcement chaired by J. Otani.

### Language

The official language is English.

A reduction fee for early registration will be given.



## Further Information

For further information and for submission of the abstracts and final papers please contact the Chairman of the Organizing Committee at the following address:

Prof. Michele Maugeri, E-mail: [mmaugeri@dica.unict.it](mailto:mmaugeri@dica.unict.it)

Or visit the webpage: <http://www.2pbd-taormina.org/>

# International Symposium on Sustainable Geosynthetics and Green Technology for Climate Change (SGCC 2011) Retirement Symposium for Prof. D.T. Bergado Bangkok, Thailand, 20 and 21 June 2012

We would like to inform you that the International Symposium on Sustainable Geosynthetics and Green Technology for Climate Change (SGCC2011), which also serves as the Retirement Symposium of Prof. Dennes T. Bergado, will be rescheduled on 20 and 21 June 2012 instead of 7 and 8 December 2011 due to difficulties of the current flood calamity in Bangkok.

The International Symposium on Sustainable Geosynthetics and Green Technology for Climate Change (SGCC2011) will be held from 20 to 21 June 2012 at the Grand Centara Convention Hotel, Bangkok, Thailand. This symposium is hosted by the Asian Center for Soil Improvement and Geosynthetics (ACSIG) in the Geotechnical and Earth Resources Engineering Program (GTE) under the School of Engineering and Technology (SET) at the Asian Institute of Technology (AIT), the Southeast Asian Geotechnical Society (SEAGS), the International Geosynthetics Society-Thailand Chapter (IGS-Thailand), and Suranaree University of Technology (SUT), under the auspices of the International Geosynthetics Society (IGS). SGCC2011 will also serve as the Retirement Symposium of Prof. Dennes T. Bergado.

The Symposium will cover a wide range of topics including:

- Roads/Railways/Transport Applications
- Flood Control/Reservoirs/Hydraulic Applications
- Mining/Waste Containment/Environmental Protection
- Ground Improvement/Remediation/Case Studies
- Reinforced Slopes/Walls and Geohazard Mitigations
- Geosynthetic for Renewable Energy
- Geo-Containers and Geotubes
- Behavior of Unsaturated Soils/Rain-Triggered Landslides
- Earthquake Engineering/Geophysics
- Foundation Engineering/Retaining Walls
- Laboratory/Field Tests/Durability of Geosynthetics
- Sustainable Limited Life Geosynthetics (LLGs)
- Case Histories and Geosynthetics Innovations
- Sustainable Geosynthetics Engineering/Applications

## Keynote Guests and invited Lectures

The Keynote Guests and Invited Lectures will be mainly represented by the professional colleagues and friends, as well as the successful former students of Prof. D.T. Bergado. Other interested presenters are very much welcome.

## Language

English will be the official language of this symposium.

## For more information

For further information please contact: SGCC2011 Secretariat c/o Asian Center for Soil Improvement and Geosynthetics (ACSIG), GTE/SET, Asian Institute of Technology, P.O. Box 4, Klong Luang, Pathumthani 12120 Thailand

Tel No.: +66-2 524 5500/5523,

Email: [climatechange@ait.ac.th](mailto:climatechange@ait.ac.th) or [igs-thailand@ait.ac.th](mailto:igs-thailand@ait.ac.th)

Fax No.: +66-2 524 6050

[www.set.ait.ac.th/acsig/sgcc2011/](http://www.set.ait.ac.th/acsig/sgcc2011/)

# 2<sup>nd</sup> International Conference on Transportation Geotechnics (IS-Hokkaido 2012)

Sapporo, Hokkaido, Japan, 10 - 12 September 2012



The 2<sup>nd</sup> International Conference on Transportation Geotechnics (2<sup>nd</sup> ICTG) will be hosted by the Hokkaido Branch and TC202 (Transportation Geotechnics) Japanese Domestic Committee of Japanese Geotechnical Society (JGS). It will offer an excellent opportunity to discuss some issues essential for further development in transportation geotechnics. This conference will comprise parallel sessions over a 3-day period, including keynote lectures, oral presentations, discussion and exhibition. Several workshops, relating to intelligent compaction technologies and

geotechnical challenges for transportation geotechnics in extreme climates and in rail track and its transitional zones, are also planned on the previous day. All the accepted papers are included in the proceedings. Furthermore, the limited number of selected papers can be considered for publications in the special issue of Soils & Foundations, subjected to the usual peer-reviewing process set out by the JGS editorial committee, and the relevant authors will be notified at an appropriate time.

## Main Subjects of the Conference

- Geotechnics for Pavement, Rail Track and Airfield
- Geomaterial, including Nontraditional Materials
- Asphalt Mixtures and Hydraulically-bound Materials
- Earthworks for Transportation Facilities
- Application of Geosynthetics
- Laboratory Testing and In-situ Testing
- Modeling and Numerical Simulations, etc.

## Language

English is the official language of the conference

## Important date

Notification of final paper acceptance: 30 April 2012

## For more information

More information may be found at the Conference website: <http://congress.coop.hokudai.ac.jp/tc3conference>

Please contact and send abstracts or enquiries to email: [tc3conference@eng.hokudai.ac.jp](mailto:tc3conference@eng.hokudai.ac.jp)

# International Conference on Ground Improvement and Ground Control

## Transport Infrastructure Development and Natural Hazards Mitigation

Wollongong, Australia, 30 October – 2 November 2012

The Centre for Geomechanics and Railway Engineering, University of Wollongong, Australia and the Australian Geomechanics Society (AGS) under the auspices of ISSMGE will be hosting the International Conference on Ground Improvement and Ground Control: Transport Infrastructure Development and Natural Hazards Mitigation. The Conference is also supported by the International Geosynthetics Society (IGS) and the Southeast Asian Geotechnical Society.

The Conference will be held at the Innovation Campus of University of Wollongong, Australia, during October 30 - November 2, 2012. It will be aimed at promoting the latest ground improvement concepts and applications predominantly in the fields of transportation and natural hazards management. Following the earlier successful conference in Singapore, this Conference will act as a platform for disseminating the most recent research developments and field advances to the geotechnical community around the globe. It is expected to be the biggest Ground Improvement conference to be held in this region.

The Conference will consider papers in, but not limited to, the following themes:

- Soft Soil Consolidation
- Sand and Gravel Piles, Stone Columns and Rigid Inclusions
- Geosynthetics Reinforcement

- Compaction and Vibroflotation
- Grouting and Chemical Stabilization
- Electro-kinetic, Electro-osmotic, Bio-engineering, Thermal and Explosion-based Techniques
- Methods of Preventing Soil Erosion, Scour and Internal Piping
- Ground Control in Underground and Surface Mine Excavations
- Methods of Stabilisation of Landslides and Mass Movement
- Surface and Sub-surface Drainage
- Stabilisation of Fractured and Jointed Rockmass

We cordially invite all to attend the conference in Wollongong in 2012.

#### For further information

Please visit the following conference website for more details: <http://www.icgiwollongong.com>

Please contact the ICGI Conference Secretariat:

Dr Jayan S. Vinod, Faculty of Engineering, University of Wollongong, Wollongong City, NSW 2522, Australia

Phone: 02 4221 4089

Fax: 02 4221 3238

Email: [icgi\\_2012@uow.edu.au](mailto:icgi_2012@uow.edu.au)

## 3<sup>rd</sup> Int. Conference on Geotechnical Engineering (ICGE'13) Hammamet, Tunisia, February 21 - 23, 2013



The Geotechnical Engineering Research Team (Unité de Recherche Ingénierie Géotechnique- URIG) has the pleasure to invite you for the participation in the third International Conference on Geotechnical Engineering (ICGE'13) to be held at Hammamet (Tunisia) February 21 - 23, 2013.

The ICGE'13 provides a forum for exchange ideas and discussions on topics related to Geotechnical Engineering. Senior and young researchers, scientists and engineers from overseas are invited to attend this conference, to share and to exchange their knowledge.

ICGE'13, also, includes three workshops:

<http://www.icge13.com/fs/workshop/6iy3u-workshop2.png> 1. Workshop on "Sustainable Construction",

2. Workshop on "Geosynthetics",

3. Workshop on "micromechanical Experimentation and Modeling of Granular Soils".

#### Aims and Scopes

The objectives of the ICGE'13 are to promote good relationship and cooperation between geotechnical researchers and engineers. Such an international event also provides an opportunity for the exchange of experiences and information about theoretical, practical and technical aspects related to Geotechnical Engineering. The conference is also an occasion to look at the developments, advances and innovation achievements in soil mechanics, rock mechanics and applied geophysics. ICGE'13 represents a world forum for the presentation and the publication of theoretical contributions, numerical computations and experimental investigations in the field of Geotechnical Engineering.

#### Main Topics

- Soil behavior
- Soil improvement
- Foundations and underground constructions
- Analysis and management of seismic risk
- Rock mechanics and slope stability
- Environmental geotechnics
- Unsaturated soils
- Hydraulic works

#### Important Dates

Abstract Due	10 April 2012 (30 April 2012 for IGS members)
Notification of Abstract Acceptation	10 May 2012
Reception of Papers for Review	30 September 2012
Notification of Paper Acceptation	30 November 2012
Reception of Ready Papers	31 December 2012



**Languages**

English is the official language of the conference.

Nevertheless a limited number of papers written in French may be accepted.

Simultaneous translation to French is affordable during the main sessions of ICGE'13.

**For more Information**

Further information can be found at: <http://www.icge13.com>

## Geosynthetics 2013

### Long Beach, California, USA, 01 – 04 April 2013



The theme of Geosynthetics 2013 is Water & Energy Challenges. The conference will feature four days of technical programming, including short courses, panel discussions and papers.

**Call for Abstracts**

This Call for Abstracts is issued to create a comprehensive, varied, and exciting Technical Paper Program. Submit your 200 - 300 word abstract by April 30 and become part of Geosynthetics 2013. Special consideration is given to abstracts that fall under the show theme, however all non-commercial submissions are welcome that are relevant to the geosynthetics/geotechnical industry. Please click <http://www.geosynthetics2013.com/pdf/sessions.pdf> or the current topic list.

All submissions will be peer reviewed at each step including the abstract, first draft and final paper submissions. At least one author from each accepted final paper must register and present the paper during the conference.

**Commercialism**

All commercialism must be avoided. Abstracts may not include any promotion for products, services, or companies. Company logos shall not appear anywhere in the abstract. Authors shall not use brand names or company names in the abstract/paper titles. When a brand name must be used in an abstract, the brand name may appear only once in the text and then be referred to thereafter by a generic description. Any violation of these rules will result in automatic rejection of the abstract.

**Important Date**

Abstracts due: 30 April 2012

**For more Information**

For further information please contact:

Technical Program Co-Chairs: Shobha Bhatia Syracuse University, [skbhatia@syr.edu](mailto:skbhatia@syr.edu)

Stan Boyle Shannon & Wilson, [srb@shanwil.com](mailto:srb@shanwil.com)

Technical Program Manager: Barbara Connett, [bjconnett@ifai.com](mailto:bjconnett@ifai.com)

## Call for Paper Abstracts

### International Symposium on Design and Practice of Geosynthetic-Reinforced Soil Structures

#### Bologna, Italy, 14 - 16 October, 2013

This symposium is held to honor the research achievement of Prof. Dov Leshchinsky. He is a world-renown researcher and educator on reinforced soils and has been a professor of geotechnical engineering at the University of Delaware for more than 30 years.

The symposium will be held under the auspices of:

- the International Geosynthetics Society
- the Italian Geotechnical Association
- TC 101 & TC 305 of the International Society of Soil Mechanics and Geotechnical Engineering
- Department of Civil, Environmental and Materials Engineering (DICAM), University of Bologna
- Japanese research institutes (Public Works Research Institute, Railway Technical Research Institute and National Institute for Rural Engineering).

### Symposium topics

- Geosynthetic-reinforced soil retaining walls
- Geosynthetic-reinforced soil slopes
- Construction of reinforced embankments over soft soil
- Geotextile tubes
- Geosynthetic-reinforced soil structures for railways and highways
- Properties of backfill soils, geosynthetics, and soil-geosynthetic interaction

### Special and keynote lectures

- Leshchinsky, D. (USA): Design approaches to geosynthetic-reinforced walls and slopes
- Cazzuffi, D. (Italy); Geosynthetics engineering
- DiMaggio, J.D. (USA): Geosynthetic-reinforced soil walls and slopes: Best practices in design and construction and reality: Why they differ
- Koseki, J. (Japan) & Shibuya, S. (Japan): Mitigation of disasters by earthquakes and rains/floods by means of geosynthetic-reinforced soil retaining walls
- Nicola Moraci (Italy): Soil-geosynthetic interaction: Design parameters from experimental and theoretical analysis
- Tatsuoka, F. (Japan): Laboratory stress-strain tests for developments in geotechnical engineering research and practice (Bishop Lecture revised for Geosynthetics Engineering)

Abstracts should be submitted online with further instructions available at <http://www.civil.columbia.edu/bologna2013>

The deadline of abstract submission: 31 May 2012.

### Organizing Committee

- Fumio Tatsuoka, Tokyo University of Science, Japan
- Guido Gottardi, University of Bologna, Italy
- Hoe I. Ling, Columbia University, USA
- Jie Han, University of Kansas, USA

---

## News from the IGS Chapters and the Membership

---

### IGS PERU promoting GeoAmericas 2012 with Several Local Conferences

Continuing with the promotion of GEOAMERICAS 2012, IGS PERU has organized a series of courses from January 2012 to March 2012. These courses have been carried out by members of IGS PERU who in this way are contributing to the promotion of our congress.

The content of these courses permit the attendees to know general information regarding geosynthetics topics. The courses that have been organized are:

Conference	Speaker	Position in IGS Chapter	Date
Geosynthetics in Mining	Eng Miguel De la Torre	Past President	6-1-2012
Geotextiles in Civil Works	Eng Nestor Sifuentes	Treasurer	2-2-2012
Geosynthetics in environmental applications	Eng Cesar Oviedo	Member IGSPERU	30-3-2012

These courses took place at the local of the Peruvian Association of Engineers, and attracted the participation of engineers from different areas of experience including: civil, hydraulic, transportation, mining and environment. The participants ranged from young to experienced engineers, all of whom are interested in recent technologies to protect the environment and technologies that help to optimize the cost and durability in structures, pavements, dams.

Each of the conferences that took place had the participation of 150 participants, who after the conferences stayed very happy to have current information related to geosynthetics.

After this cycle of conferences we believe that GEOAMERICAS 2012 will be completely successful with the participation of people interested in geosynthetics from all around the world, it will have the participation of experienced and prestigious professionals including: Jean Pierre (J.P.) Giroud, Jorge Zornberg, Ennio Palmeira, Sam Allen, Robert Holtz, Richard Bathurst, Braja M Das and many others.

In that way we invite you to participate attending the congress or the short courses, please visit [www.geoamericas2012.com](http://www.geoamericas2012.com), and find all what GEOAMERICAS 2012 and Peru can offer you.

See photos below of the conferences carried out.

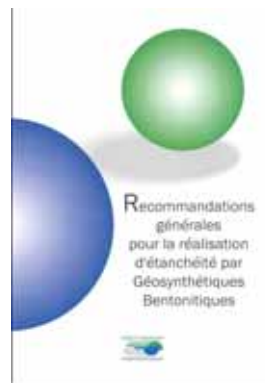


IGS PERU conferences promoting GeoAmericas 2012

Reported by  
Boris Castillo, IGS Member and Secretary General of GeoAmericas 2012

## Recommendations for the use of geosynthetics: Feedback on the working groups of the French chapter

The Comité Français des Géosynthétiques (CFG) has edited along years guides regarding the presentation of geosynthetics and recommendations for the use of geosynthetics in various applications. The most recent guides which are still up to date, are available for free on the CFG web site (<http://www.cfg.asso.fr/>).



The various guides were prepared in working groups which are opened to all members of the CFG but also to people from outside of the CFG, like end users, who can bring an insight in the problems they meet using geosynthetics. This invitation of members from the outside gave rise to new memberships along time.

The available guides are related to the use of geotextiles for reinforcement in soils, geomembranes (under revision), geosynthetic clay liners, use of geosynthetics in landfills, leak detection methods and erosion control.

Some years ago the wish was expressed by practitioners to get a specific guide for the use of GCLs in landfills, taking into account the recent developments and findings especially as regards the durability of GCLs in landfill covers. A document was thus prepared, mixing a literature review and feedback from laboratory testing and in situ observations not only at the national level but also including information from abroad. It contains an insight in regulations as regards the use of GCLs in landfills in France and deals with the notion of equivalence. Then a description of GCLs is given, followed by a definition of appropriate features for the supporting and cover layers. Afterwards recommendations are given regarding design for the bottom of landfill, the slopes and the cover specifically for the case of the use of a GCL. An insight is given in puncture protection. Shrinkage and chemical compatibility are also addressed. Recommendations are given as regards the tests to perform on GCLs to evaluate their ability to maintain their lining function on the long term. The next section is dedicated to recommendations regarding storage, handling and installation of GCLs. Finally controls are addressed. This guide, like the previous ones, has been elaborated trying to address as many questions as possible from practitioners. It is thus thought that it is a very useful tool to improve the knowledge on the use of GCLs and the performance of those materials in landfills, following the state-of-the-art of practice.

Further guides are on the way in active working groups regarding drainage and filtration with geosynthetics, geomembranes (update) and puncture protection of geomembranes.

*Reported by*

*Nathalie Touze-Foltz, IGS-Chapter Correspondent of France*

## “GSI Fellowships for Students” Request for Proposals



The Geosynthetic Institute (GSI) is delighted to announce a worldwide call for requests-for-proposals (RFPs) focusing on innovative geosynthetics research and development projects. There will be multiple awards made, each for \$10,000 for the first year, and they are renewable for a second and third year up to a total amount of \$20,000 per student. It is important to note that students must have completed their candidacy examinations leading to a doctoral degree in engineering or science to be eligible. The proposals must be submitted in the following four page format (with no exceptions).

- Page 1 – Letter of recommendation from student’s department head or advisor
- Page 2 – Title and detailed abstract of project
- Page 3 – Student’s resume
- Page 4 – Documentation of completed candidacy examination

The RFPs for the 2012 - 2013 academic year must be submitted to both the undersigned by e-mail by June 15, 2012 and awards will be announced on, or before, July 15, 2012. Review of the proposals is by the nine-person Board of Directors of GSI. For information on the Geosynthetic Institute and past recipients, visit us at the following website: [www.geosynthetic-institute.org/gusifellows.htm](http://www.geosynthetic-institute.org/gusifellows.htm)

*Reported by*

*Robert M. Koerner, Jamie R. Koerner, IGS members*

## Steve Corbet elected chairman of International Standardization Committee – ISO TC 221



Steve Corbet (AECOM UK Ltd, Chelmsford, UK and past IGS Council Member) has been elected as the Chairman of the International Standards Organization for the Standardization of Geosynthetics (ISO TC 221) for a period of six years 2012 to 2018. The voting took place between December 2011 and February 2012 20 of the 28 P member countries cast votes in the on-line ballot.

Steve is the third chairman of this committee following Andre Rollin (Canada) and David Suits (USA) which became a full TC in its own right after splitting from ISO TC38 in 2000.

The ISO committee TC 221 works in parallel with CEN TC189, a large number of the standards published as ISO standards were first developed by experts working in CEN TC189 and



some of the EN Standards were developed in the ISO TC. Following the Vienna Agreement the TCs work together with standards being maintained by opposite TC, therefore ISO TC221 and CEN TC189 need to work together to ensure that standards are developed and maintained for the International and European communities. Plans for future work are being formulated and suggestions for new work, testing standard or possibly design standards, are welcomed from any member country. There is no date set for a plenary meeting of TC221 but the working groups are holding regular meetings.

## Daniele Cazzuffi elected Chairman of European Standardization Committee – CEN TC 189



Daniele Cazzuffi (CESI SpA - Milano, Italy and also IGS Past President) was unanimously elected as Chairman of the European Committee for Standardization on Geosynthetics (CEN TC 189) for a period of three years 2012 - 2014: the vote was held during January 2012 as postal ballot among all standardization bodies of the 27 countries belonging to CEN.

The CEN Technical Committee 189 was founded in 1989 and since then all Chairmen were either from Belgium or the Netherlands. The Committee is organised in six Working Groups and Dr. Cazzuffi was the convenor of WG 3, especially devoted to the development of methods for mechanical tests. The mandate of CEN TC 189 is to develop standardised test methods for the overall characterisation of geosynthetics and mainly to elaborate the harmonised European standards for the various fields of geosynthetics applications (landfills, contaminated sites, dams and reservoirs, canals and waterways, tunnels and underground structures, road and railway infrastructures, landslide stabilisation, drainage systems, erosion control) These harmonised European standards shall be accepted as national standards in all countries belonging to CEN.

The first European meeting with Dr. Cazzuffi as CEN TC 189 Chairman will be at UNI in Milano from 23 to 25 May 2012.

## 12<sup>th</sup> Baltic Sea Geotechnical Conference “Infrastructure in the Baltic Sea Region” Rostock, Germany, 31 May – 2 June 2012



On behalf of the ISSMGE, the German Geotechnical Society (DGGT) and the University of Rostock warmly invite you to participate in the 12<sup>th</sup> Baltic Sea Geotechnical Conference being held in Rostock, from 31 May to 2 June 2012. This conference will be organized also under the auspices of the German IGS Chapter.

The main aim for all countries around the Baltic Sea and of the 12<sup>th</sup> Baltic Sea Geotechnical Conference is to provide a forum for an intensive transfer of ideas and experiences with other engineering and research groups. Significant contributions from industry are encouraged and hence the ultimate aim is to bring together state-of-the-art research in Geotechnics in maritime engineering with current industrial experiences. The conference is not limited only to the countries of the Baltic Sea area and participants from other regions are also warmly welcomed. The Baltic Sea area is a booming region with a lot of related problems with regards to infrastructure development. Sustainable development has to reflect on a balance of interest between industrial and

touristic use and protection of nature. Additionally consequences of climate change and sustainability strategies regarding the population's need of protection and of future development are to be considered.

### Conference Topics

The sessions of the conference related to global change and sustainability needs are as follows:

- Traffic infrastructure
- Research and development projects
- Constructions in soft subsoil
- Harbour construction
- Coast protection
- Foundations for offshore wind energy plants

### TC-Meetings

Two meetings of ISSMGE Technical Committees ("Dykes and Levees" on 31<sup>st</sup> May 2012 and "Soil Structure" on 1st June) will take place during the conference.

### **Mercer Lecture**

The conference will start with the Mercer Lecture already on **30<sup>th</sup> May 2012** at 4 p.m. and will be followed by the welcome reception. The Mercer lecture for the period 2012/2013 will be presented in Europe at the 12th Baltic Sea Geotechnical Conference by Dr.-Ing. Michael Heibaum, BAW (Federal Waterways Engineering and Research Institute), Karlsruhe, Germany. The title is: **“Geosynthetics for waterways and flood protection structures – controlling the interaction of water and soil”**

The Mercer Lecture is one of several geosynthetic highlights at the 12<sup>th</sup> Baltic Sea Geotechnical Conference.

### **Exhibition**

An exhibition will be held in the Foyer of the Stadthalle Rostock, offering an opportunity for companies and organizations to present their products and services. If you are interested in the exhibition, please send an e-mail to [12bsgc@interplan.de](mailto:12bsgc@interplan.de) to make sure that you will receive all information. Organizer of the exhibition is INTERPLAN AG, Hamburg.

### **Technical visit**

A technical visit will be organized on the last day of the conference, Saturday, 2<sup>nd</sup> June:

- Sea port of Rostock – extension by seaside land reclamation on the example of the maritime trade territory III

### **Language**

The conference language is English.

### **For more information**

For more information, please contact: [www.12bsgc.de](http://www.12bsgc.de)

## **The Challenges of Mexican Chapter of IGS**

The niches for the use of Geosynthetics in México looks great on paper, as the national development plan 2000 – 2030 includes major public-private investments in sectors like environmental protection, with much emphasis on industrial, hospital and municipal waste, land routes, ports, airports, subways, commuter trains, tourist developments, mining industry and the national water plan that includes flood protection in several cities, erosion control, storm and sea, beach reclamation, waste water management in the valley of México, not to mention areas such as agriculture, sanitary sewer pipes, and others.

However the annualized daily work coming from the guild, suggest that after several decades of being the first arrived in Geosynthetics technologies, the progress made with great efforts of many colleagues, been extremely slow and tortuous as well that at present time we are still unable to establish a collective representation with solvency engineering enough, in the eyes of policy makers and official and private specifications makers for the massive Mexican construction industry.

It is not hard to see why, despite many efforts, have been successful works constructed across the country with Geosynthetics, who have not, however, the necessary recognition and influence in the authorities, because all these studies, designs, documents, reports and photographic memories are scattered and have never been collectivized.

Thus, the main challenges of the Mexican Chapter of the IGS is to seek together the local expertise to meet and document it thoroughly and harmonize with the overall experience of IGS to create our own bitter to convince the authorities and consultants of construction industry, while disclose it through Conferences, short courses, workshops and our information tools such as the bimonthly technical Bulletin and our Web site.

*Reported by*

*Ignacio Narezo Larios, President of the Mexican Chapter of IGS*

## **Workshop Dutch Chapter of IGS: Geosynthetics in levee improvement - “An innovation is only an innovation when applied successfully!” Netherlands, 7 February 2012**

“The Netherlands have nearly 4000 km primary levees. If we can improve 80 km levee per year, with a guaranteed service life of 50 years, it will take us 50 years to have the system up to standard. Eighty km levee improvement costs around 1 billion euros. The Netherlands can handle this, but it is necessary to upgrade levee quality to meet

the required 50 year life span. This asks for a smarter design, only developing more sophisticated levee testing methods won't be enough". So far speaker Martin van der Meer of Fugro, at the 'workshop' about the use of geosynthetics in levees, organized by the Dutch Chapter of IGS on 7<sup>th</sup> February 2012.

Smart design of levee improvement is possible with geosynthetics. In practice, however, geosynthetics are only applied in emergencies. In the beginning of 2012, this was illustrated again. High river discharges combined with a high sea water level created a dangerous situation for some Dutch inland waterway levees. For example the stability of the Eemsdijk in Woltersum in the North-East of the Netherlands was in danger. Geosynthetics had to be used as emergency measure (Figure 1).

"And after the emergency situation, everything is cleared away again and the levee is restored into its original deplorable condition" said Martin van der Meer. "Why do we not or nearly not apply geosynthetics in levees?"

Forty participants, coming from Water Board Authorities, the Dutch Ministry of Public Works, contractors, designers and other experts brainstormed on levee improvement during this workshop. Chairman Wim Voskamp remembered the high water periods in the Netherlands in 1993 and 1995. It was necessary to evacuate thousands of people. After that, the Dutch CUR/IGS Chapter published a guideline for the use of geosynthetics in levee improvement. This did not result in a marked increase of the number of



Figure 1. After the emergency, we remove the geosynthetics again and restore the levee into its original deplorable condition. Source Photo: Fugro

geosynthetics applications.

Derk-Jan Sluiter introduced two cases of Groot Salland Water Board, situated in the East of the Netherlands. The participants generated several solutions for these 2 actual cases.

**Case 1: complex levee improvement close to Genemuiden**

The First case was a levee improvement close to Genemuiden. This levee combines several problems. It is a narrow, high levee that meanders nicely through a landscape with small lakes, and is surrounded by houses. The combination of high discharges of the Vecht and storm at the IJssel Lake results in a high required design water table. The critical failure mechanisms are macro instability of the inside slope and piping (sand boils).

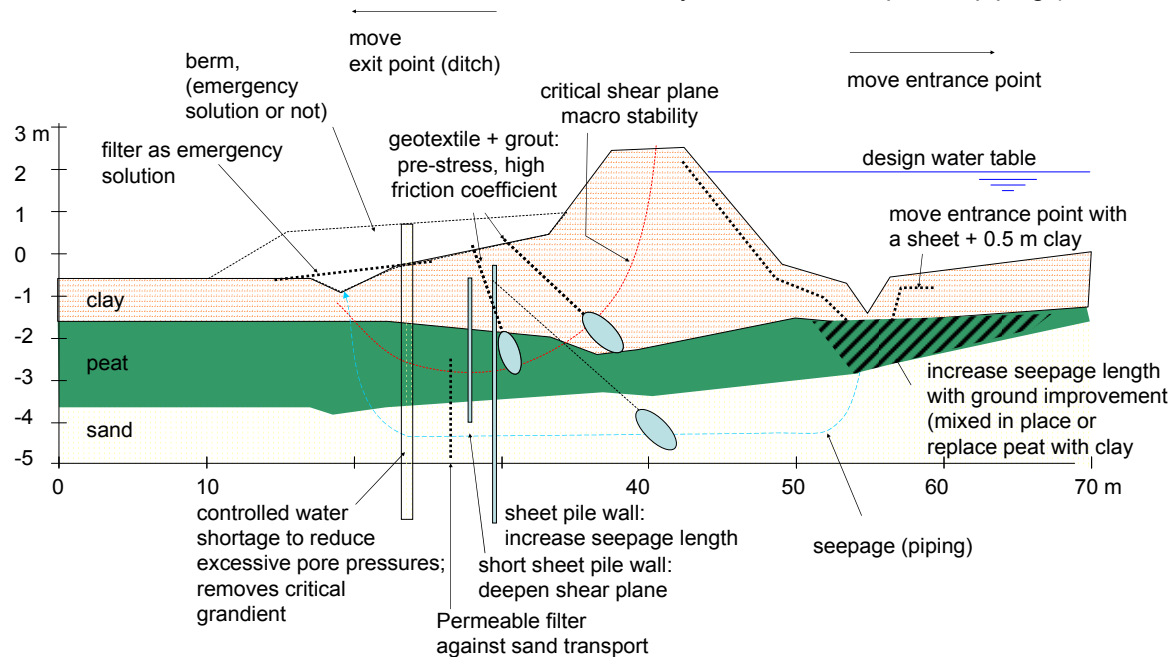


Figure 2. Case 1: levee improvement close to Genemuiden; In this drawing all possible solutions which were generated in a brainstorm for stability, piping and landscape problems are shown together.



Increasing seepage length, decreasing hydrostatic pressure differences, preventing sand transport by installing filters will all decrease the piping risk. Figure 2 shows several variations of these principles. Fixing the exit point by installing a drainage coffin with a water-permeable geotextile (a relieve filter) has already been applied in several countries, but not in the Netherlands. The figure also shows several solutions to improve the stability of the levee. These solutions have been drawn in the same figure, but should not all be applied together!

Acceptance by Waterboard Authorities of geosynthetics in levees may be possible after clarifying some issues such as the possibilities to test, inspect, repair and adapt the levee to changes in boundary conditions or requirements. It was concluded in C186 (1996) that this can satisfactorily be solved.

### Case 2: Constructing a new levee in 2 years, close to Kampen

The second case is a new levee for the future bypass close to Kampen, see figures 3 and 4. This levee must be constructed on a weak subsoil with low permeability within 2 years. The Water Board Authority cannot accept expensive ground improvement. Therefore, construction with an overheight is planned to compensate for future settlements. It is obviously impossible to construct this levee within 2 years without special measures to prevent stability problems in the subsoil during the construction.

Many water board authorities hesitate to apply vertical drainage in levees. They want to prevent a short-cut between the deep, water bearing layers and (in this case) the sand of the levee. In practice, vertical drainage is applied in exceptional cases, because it is a relative cheap method to decrease the period of consolidation. In these cases, the drains are not installed into the deep water bearing layer, but until 1.0 or 1.5 above that level. After some discussion, the Groot Salland Water Board agreed to change their requirement 'no vertical drainage' into 'no short-cut between water bearing layer and levee' for use at the IGS-workshop.

Several groups of participants indeed suggest applying vertical drainage. It is an option to consider applying biodrains. They will decay and loose their function within a few years. Another possibility is applying forced drainage in combination with a watertight sheet.

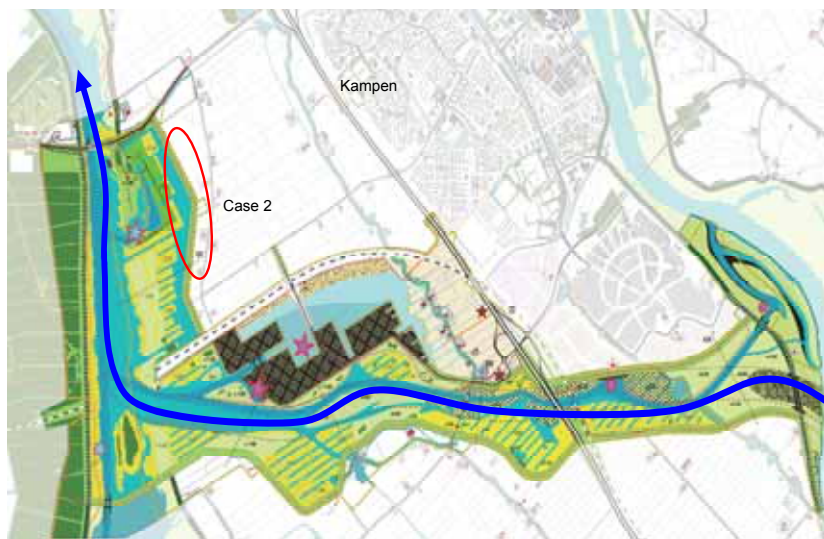


Figure 3. Case 2: Planned bypass South from Kampen, a new dike is planned with the red circle. Source: Groot Salland Water Board

Other possibilities are applying a single reinforcement layer with the strength direction perpendicular to the levee or with a reinforced cell mattress, filled with broken recycled construction material or soil. This results in a rather stiff plate that improves the stability, and reduces the differential settlements during the construction. Installing piles below the base reinforcement results in a piled embankment. For example geosynthetic encased sand columns can be applied. The stiffness of the piles or columns has to be relatively low, to prevent the occurrence of a gap below the mattress. A clay or concrete plug, or biogROUT, can make the column watertight.

The levee core can also be replaced by alternatives, for example geotubes

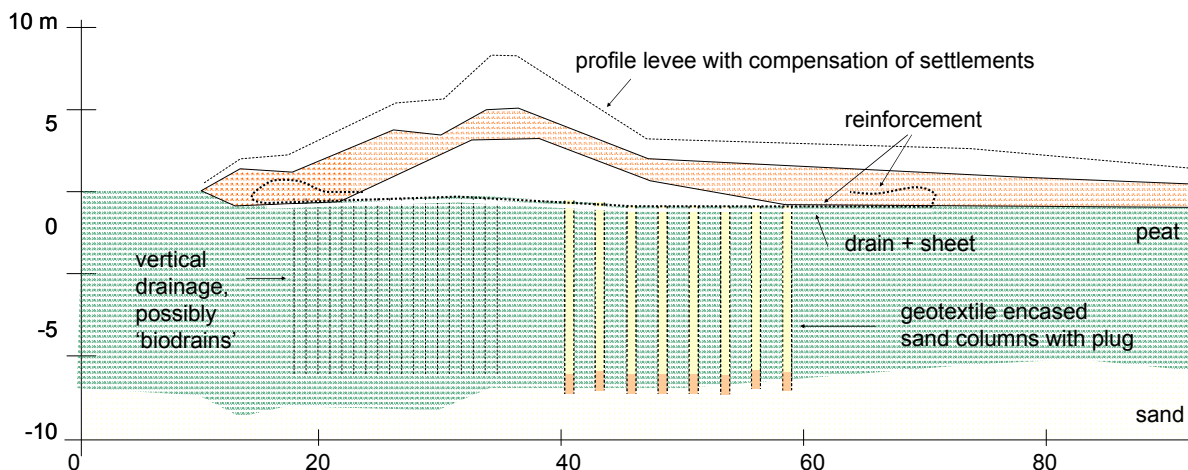


Figure 4. Case 2: New levee close to the bypass of Kampen: short construction time and a thick soft soil layer. Excessive pore pressures will occur in the subsoil and several meters of extra height is necessary to compensate for settlements. Results from the brainstorm (All possible solutions are shown together in this drawing).



or geocontainers on a geogrid. Reinforced slopes or retaining walls can be a good solution in other cases than this one. Another possibility is partly replacing the peat. The trench can be lined with a geotextile to prevent squeezing out during the construction. Figure 4 summarises several solutions. These solutions have been drawn in the same figure, but should not all be applied together!

#### Follow-up

An innovation is only an innovation after successful application. Fortunately, some water board Authorities are currently initiating applying geosynthetics in their future levee improvement projects. On 29<sup>th</sup> November 2012, Rivier-enland Water Board will present its geosynthetic projects that are currently under preparation. It is concluded that it



Figure 5. The participants from water board authorities, the Dutch Ministry of Public Works, contractors, designers and other experts brainstormed on levee improvement during this workshop of the Dutch Chapter of IGS

is possible to create less expensive and more sustainable solutions with geosynthetics, but it needs courage from the water board authorities to take the step from earth structures with granular filter-layers to structures with geosynthetics.

#### References

CUR/NGO (Dutch Chapter of IGS), 1996, C186, Geokunststoffen en rivierdijkverbetering (geosynthetics and levee improvement), ISBN 90 376 0072 7, in Dutch

Reported by

Suzanne van Eekelen, Chair of Dutch IGS Committee Innovation and Knowledge Transfer

## 4<sup>th</sup> Portuguese Seminar on Geosynthetics University of Aveiro, Portugal, 22 - 23 November 2011



This event was organised by the Portuguese Chapter of IGS (IGS-Portugal), the Portuguese Geotechnical Society (SPG) and the University of Aveiro (UA). 69 attendees, 7 exhibitors and 2 supporting companies participated in the seminar.

The seminar included 4 Keynote lectures and several oral presentations, on the following topics: coastal and hydraulic engineering, environmental engineering, soil reinforced structures and transportation engineering.

The keynote lectures were:

- Madalena Barroso (LNEC, Portugal) – “Geosynthetics in Environmental Engineering: recent developments in the materials and the applications” - Environmental engineering;
- Adam Bezuijen (Deltares, Netherlands) – “The use of geotextiles in coastal and hydraulic engineering, re-vetments and sand filled structures” - Coastal and hydraulic engineering;
- Jörg Klompaker (BBG Bauberatung Geokunststoffe, Germany) – “Geogrid reinforced steep Slopes and Base Courses – Prediction and Field Monitoring of Geogrid-Strains and Earth Pressure Distribution” - Transportation engineering;
- Neil Dixon (University of Loughborough, United Kingdom) – “Variability of soil-geosynthetic interface shear strength: Implications for design” - Soil reinforced structures.

The short-course “Filtration and drainage with geosynthetics” was held on 22 November 2011 and was visited by 46 attendees.

Reported by

Maria de Lurdes Lopes and Margarida Pinho-Lopes, IGS members

# List of IGS Chapters

## Argentina

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

## Australia and New Zealand

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

## Belgium

Belgian Chapter (2001),  
Chairman: Frans De Meerleer  
[frans.texion@skynet.be](mailto:frans.texion@skynet.be)  
[www.belgian-geosynthetics.be](http://www.belgian-geosynthetics.be)

## Brazil

Brazilian Chapter (1997)  
President: Eng. Lavoisier Machado  
[igsbrasil@igsbrasil.org.br](mailto:igsbrasil@igsbrasil.org.br)  
[www.igsbrasil.org.br](http://www.igsbrasil.org.br)

## Chile

Chilean Chapter (2006),  
President: Luis Paredes  
[lparedes@vectorchile.cl](mailto:lparedes@vectorchile.cl)  
<http://igs-chile.org/index.html>

## China

Chinese Chapter (1990)  
Chairman: Li, Guangxin  
[postmaster@ccigs.com.cn](mailto:postmaster@ccigs.com.cn)  
[www.ccigs.com.cn](http://www.ccigs.com.cn)

## Czech Republic

Czech Chapter (2003)  
Chairman: Mr. Petr Hubik  
[igs@igs.cz](mailto:igs@igs.cz)  
[www.igs.cz](http://www.igs.cz)

## Finland

Finish Chapter (2011)  
President: Minna Leppänen  
[igsfin.secretary@gmail.com](mailto:igsfin.secretary@gmail.com)

## France

French Chapter (1993)  
President: Mr. Jean-Pierre Magnan  
[francois.caguel@developpement-durable-gouv.fr](mailto:francois.caguel@developpement-durable-gouv.fr)

## Germany

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

## Greece

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

## India

Indian Chapter (1988)  
President: Prof. K. Rajagopal  
[cbip@cbip.org](mailto:cbip@cbip.org)  
[www.cbip.org](http://www.cbip.org)

## Indonesia

INA-IGS, the Indonesian Chapter (1992)  
President: Mr. Gouw Tjie Liong  
[ina\\_igs@binus.ac.id](mailto:ina_igs@binus.ac.id)

## Italy

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

## Japan

Japanese Chapter (1985)  
Chairman: Dr. Hiroshi Miki  
[miki-egri@nifty.com](mailto:miki-egri@nifty.com)  
[wwwsoc.nii.ac.jp/jcigs/](http://wwwsoc.nii.ac.jp/jcigs/)

## Korea

KC-IGS, The Korean Chapter (1993)  
President: Prof. Eun-Chul Shin  
[kgss-adm@kgss.or.kr](mailto:kgss-adm@kgss.or.kr)  
[www.kgss.or.kr](http://www.kgss.or.kr)

## Mexico

Mexican Chapter (2006)  
President: Giovanni Bellei  
[Giovanni.bellei@maccaferri.com.mx](mailto:Giovanni.bellei@maccaferri.com.mx)

## The Netherlands

Netherlands Chapter (1992)  
President: Dr. Ir. A. H. de Bondt  
[mail@ngo.nl](mailto:mail@ngo.nl)  
[www.ngo.nl](http://www.ngo.nl)

## North America

North American Geosynthetics Society (NAGS) (Canada, USA) (1986)  
President: Dean Sandri  
[NagsDirector@aol.com](mailto:NagsDirector@aol.com)  
[www.nags-igs.org](http://www.nags-igs.org)

## Norway

Norwegian Chapter of IGS (2008)  
President: Jan Vaslestad  
[jan.vaslestad@vegvesen.no](mailto:jan.vaslestad@vegvesen.no)

## Pakistan

Pakistanian Chapter of IGS (2011)  
President: Tariq Ikram  
[mr.tariq.ikram@gmail.com](mailto:mr.tariq.ikram@gmail.com)

## Peru

Peruvian Chapter (2001)  
President: Boris Castillo  
[boris.castillo@geoserviceing.com.pe](mailto:boris.castillo@geoserviceing.com.pe)  
[www.igsperu.org](http://www.igsperu.org)

## Philippines

Philippine Chapter (2007)  
President: Thomas Wintermahr  
[thomas@maccaferri.com.ph](mailto:thomas@maccaferri.com.ph) or  
[igs\\_philippines@yahoo.com](mailto:igs_philippines@yahoo.com)  
[www.igsphilippines.com](http://www.igsphilippines.com)

## Poland

Polish Chapter (2008)  
Chairman: Prof. Adam Bolt  
[abolt@pg.gda.pl](mailto:abolt@pg.gda.pl)

## Portugal

Portuguese Chapter (2003)  
President: Maria de Lurdes Lopes  
[Lcosta@fe.up.pt](mailto:Lcosta@fe.up.pt)  
[www.spgeotecnia.pt](http://www.spgeotecnia.pt)

## Romania

Romanian Chapter (1996)  
President: Christina Feodorov  
[christina.feodorov@iridexgroup.com](mailto:christina.feodorov@iridexgroup.com) or  
[adiol@utcb.ro](mailto:adiol@utcb.ro)

## Russia

Russian Chapter of IGS (RCIGS, 2008)  
President: Prof. Andrey Ponomaryov  
[ofrikhter@mail.ru](mailto:ofrikhter@mail.ru)

## Slovakia

Slovakian Chapter of IGS (2011)  
President: Dr. Radovan Baslik  
[baslik@tecgeo.sk](mailto:baslik@tecgeo.sk)

## South Africa

South African Chapter (1995)  
President: Anton Bain  
[bain@jaws.co.za](mailto:bain@jaws.co.za) or [joan-nes@englining.co.za](mailto:joan-nes@englining.co.za)  
[www.giqsa.org](http://www.giqsa.org)

## Spain

Spanish Chapter (1999)  
President: Mr. Angel Leiro  
[pabad@cetco.es](mailto:pabad@cetco.es)  
[www.igs-espana.com](http://www.igs-espana.com)

## Thailand

Thai Chapter (2002)  
President: Prof. Dennes T. Bergado  
[bergado@ait.ac.th](mailto:bergado@ait.ac.th)  
[www.set.ait.ac.th/acsig/igs-thailand](http://www.set.ait.ac.th/acsig/igs-thailand)

## Turkey

Turkish Chapter (2001)  
President: Dr. Fazli Erol Guler  
[eguler@boun.edu.tr](mailto:eguler@boun.edu.tr)

## United Kingdom

U.K. Chapter (1987)  
Chairman: Neil Dixon  
[n.dixon@lboro.ac.uk](mailto:n.dixon@lboro.ac.uk)  
[www.igs-uk.org](http://www.igs-uk.org)

## West Pacific Regional Chapter

West Pacific Regional Chapter (1997)  
President: Dr. Dave Ta-The Chang  
[ttateh@cyu.edu.tw](mailto:ttateh@cyu.edu.tw)

## Note:

- If you find your information is incorrect please contact your chapter secretary or if you are not affiliated with a chapter contact the IGS secretary. Please also advise the IGS News editor

**Conferences**  
**Symposia**  
**Workshops**

**Calendar of Events**

**Short Courses**  
**Expositions**  
**Trade Shows**

2<sup>nd</sup> Eurofuge conference on Physical Modelling in Geotechnics with TU Delft  
23 - 24 April 2012  
[www.eurofuge2012.nl](http://www.eurofuge2012.nl)

**GeoAmericas 2012**  
**II. Pan-American Congress on Geosynthetics**  
Lima, Peru  
1 - 4 May 2012  
[www.igsperu.org](http://www.igsperu.org)

**Second International Conference on Performance-Based Design in Earthquake Geotechnical Engineering**  
Taormina, Italy  
28 - 30 May 2012  
E-mail: [aqiroma@iol.it](mailto:aqiroma@iol.it)  
<http://www.2pbd-taormina.org/>

TC 211 International Symposium & Short Courses "Recent Research, Advances & Execution Aspects of GROUND IMPROVEMENT WORKS"  
Brussels, Belgium  
30 May - 1 June 2012  
E-mail: [carine.godard@bbri.be](mailto:carine.godard@bbri.be)  
[www.bbri.be/go/IS-GI-2012](http://www.bbri.be/go/IS-GI-2012)

**12<sup>th</sup> Baltic Sea Geotechnical Conference**  
Rostock, Germany  
31 May - 02 June 2012  
E-mail: On scientific issues: [service@dggt.de](mailto:service@dggt.de)  
On organizational issues: [12bsgc@interplan.de](mailto:12bsgc@interplan.de)  
[www.12bsgc.de](http://www.12bsgc.de)

**International Symposium on Sustainable Geosynthetics and Green Technology for Climate Change (SGCC2011)**  
Retirement Symposium for Prof. D.T. Bergado)  
Bangkok, Thailand  
20 - 21 June 2012 (rescheduled due to flood catastrophe!)  
Email: [igs-thailand@ait.ac.th](mailto:igs-thailand@ait.ac.th) or [climatechange@ait.ac.th](mailto:climatechange@ait.ac.th)  
[www.set.ait.ac.th/acsig/sgcc2011](http://www.set.ait.ac.th/acsig/sgcc2011)

Shaking the Foundation of Geotechnical Engineering Education (SFGE) 2012  
Galway, Ireland  
4 - 6 July 2012  
E-mail: [bryan.mccabe@nuigalway.ie](mailto:bryan.mccabe@nuigalway.ie)  
[www.sfge2012.com](http://www.sfge2012.com)

11<sup>th</sup> ANZ 2012 Geomechanics Conference  
Melbourne, Australia

15 - 18 July 2012  
E-mail: [nicole@leishman-associates.com.au](mailto:nicole@leishman-associates.com.au)  
[www.anz2012.com.au](http://www.anz2012.com.au)

Symposium on EXPERIMENTAL STUDIES WITH GEOSYNTHETICS in Conjunction with 15<sup>th</sup> International Conference on Experimental Mechanics (ICEM15)  
Porto, Portugal  
22 - 27 July 2012  
Email: [cvieira@fe.up.pt](mailto:cvieira@fe.up.pt)  
[www.paginas.fe.up.pt/clme/icem15/symposia.htm#SYMPOSIUM N° 4](http://www.paginas.fe.up.pt/clme/icem15/symposia.htm#SYMPOSIUM_Nº_4)

22<sup>nd</sup> European Young Geotechnical Engineers Conference 2012  
Gothenburg, Sweden  
26 - 29 August 2012  
E-mail: [eygec2012@sgf.net](mailto:eygec2012@sgf.net)  
[www.sgf.net](http://www.sgf.net)

6ICSE - 6<sup>th</sup> International Conference on Scour and Erosion  
Paris, France  
27 - 31 August 2012  
E-mail: [contact@icse-6-2012.com](mailto:contact@icse-6-2012.com)  
[www.icse-6.com](http://www.icse-6.com)

**IS-Hokkaido 2012 - 2<sup>nd</sup> International Conference on Transportation Geotechnics**  
Sapporo, Hokkaido, Japan  
10 - 12 September 2012.  
E-mail: [tc3conference@eng.hokudai.ac.jp](mailto:tc3conference@eng.hokudai.ac.jp)  
[www.congress.coop.hokudai.ac.jp/tc3conference](http://www.congress.coop.hokudai.ac.jp/tc3conference)

7<sup>th</sup> International Conference in Offshore Site Investigation and Geotechnics: Integrated Geotechnologies, Present and Future  
London, United Kingdom  
12 - 14 September 2012  
E-mail: [peter.allan@geomarine.co.uk](mailto:peter.allan@geomarine.co.uk); [zenon@tamu.edu](mailto:zenon@tamu.edu)

The Seventh Asian Young Geotechnical Engineers Conference (7AYGEC)  
Tokushima, Japan  
12 - 14 September 2012  
E-mail: [uzuoka@ce.tokushima-u.ac.jp](mailto:uzuoka@ce.tokushima-u.ac.jp)  
[www.sites.google.com/site/7aygec/](http://www.sites.google.com/site/7aygec/)

**EUROGEO5 - 5<sup>th</sup> European Geosynthetics Conference**  
Valencia, Spain  
16 - 19 September 2012  
E-mail: [info@eurogeo5.org](mailto:info@eurogeo5.org)  
[www.eurogeo5.org](http://www.eurogeo5.org)

ISC'4 - 4<sup>th</sup> International Conference on Geotechnical and Geophysical Site Characterization

Pernambuco, Brazil  
18 - 21 September 2012  
E-mail: [isc-4@factos.com.br](mailto:isc-4@factos.com.br)  
[www.isc-4.com/index.php](http://www.isc-4.com/index.php)

**32. Baugrundtagung with Exhibition „Geotechnik“**  
Mainz, Germany  
26 - 29 September 2012  
[www.dggt.de](http://www.dggt.de)

**International Conference on Ground Improvement and Ground Control: Transport Infrastructure Development and Natural Hazards Mitigation**  
Wollongong, New SouthWales, Australia  
30 October - 2 November 2012  
E-mail: [icqi\\_2012@uow.edu.au](mailto:icqi_2012@uow.edu.au)  
[www.icgiwollongong.com](http://www.icgiwollongong.com)

Third African Young Geotechnical Engineering Conference (3AYGEC'12)  
Cairo, Egypt  
16 - 18 November 2012  
E-mail: [aygec3@yahoo.com](mailto:aygec3@yahoo.com)

**GEOSYNTHETICS ASIA 2012 (GA2012)**  
5<sup>th</sup> Asian Regional Conference on Geosynthetics  
Bangkok, Thailand  
13 - 16 December 2012  
[www.set.ait.ac.th/acsig/igs-thailand](http://www.set.ait.ac.th/acsig/igs-thailand)

4<sup>th</sup> International Seminar on Forensic Geotechnical Engineering  
Bangalore, Karnataka, India  
10 - 12 January 2013  
E-mail: [gl@civil.iisc.ernet.in](mailto:gl@civil.iisc.ernet.in)

First Pan-American Conference on Unsaturated Soils (Pam-Am UNSAT 2013)  
Cartagena de Indias, Colombia  
20 - 22 February 2013  
E-mail: [pana-munsat2013@uniandes.edu.co](mailto:pana-munsat2013@uniandes.edu.co)  
[www.panamun-sat2013.uniandes.edu.co](http://www.panamun-sat2013.uniandes.edu.co)

**3<sup>rd</sup> Int. Conference on Geotechnical Engineering (ICGE'13)**  
Hammamet, Tunisia,  
21 - 23 February 2013  
<http://www.icge13.com>

**Geosynthetics 2013**  
Long Beach, California, USA,  
01 - 04 April 2013  
[www.geosynthetics2013.com](http://www.geosynthetics2013.com)

**9th Rencontres Géosynthétiques  
20th Anniversary of Rencontres Géosynthétiques**  
Dijon, France  
9 - 11 April 2013  
[www.rencontresgeosynthetiques.org](http://www.rencontresgeosynthetiques.org)

Second International Symposium on Geotechnical Engineering for the Preservation of Monuments and Historic Sites

Napoli, Italy  
30 - 31 May 2013  
E-mail: [secretariat@tc301-napoli.org](mailto:secretariat@tc301-napoli.org)  
[www.tc301-napoli.org](http://www.tc301-napoli.org)

5<sup>th</sup> International Symposium on Geotechnical Engineering, Disaster Prevention and Reduction, and Environmentally Sustainable Development  
Incheon, South Korea  
May 15-17 May 2013  
E-mail: [ecshin@incheon.ac.kr](mailto:ecshin@incheon.ac.kr)

18<sup>th</sup> International Conference for Soil Mechanics and Geotechnical Engineering  
Paris, France

1 - 5 September 2013  
E-mail: [vgauthier@lepublicsysteme.fr](mailto:vgauthier@lepublicsysteme.fr)  
[www.issmge2013.org](http://www.issmge2013.org)

**International Symposium on Design and Practice of Geosynthetic-Reinforced Soil Structures**  
Bologna, Italy  
14 - 16 October 2013  
<http://www.civil.columbia.edu/bologna2013>

8<sup>th</sup> European Conference on Numerical Methods in Geotechnical Engineering (NUMGE14)  
Delft, Netherlands, The  
18 - 20 June 2014  
E-mail: [info@numge2014.org](mailto:info@numge2014.org)  
[www.numge2014.org](http://www.numge2014.org)

**10<sup>th</sup> International Conference on Geosynthetics**  
Berlin, Germany  
21 - 25 September 2014  
E-mail: [g.braeu@bv.tum.de](mailto:g.braeu@bv.tum.de)  
[www.10icg-berlin.com](http://www.10icg-berlin.com)

**33<sup>rd</sup> Baugrundtagung with Exhibition „Geotechnik“**  
Berlin, Germany  
23 - 26 September 2014  
[www.dgggt.de](http://www.dgggt.de)

Note:  
The conference announcements are shown with different graphics due to their priority for IGS:

**IGS Conference**

**Conference organized under the auspices of the IGS**

**Conference under the auspices or with the support of an IGS Chapter**

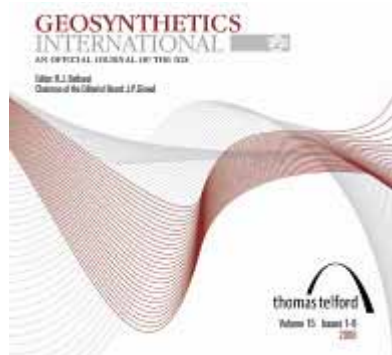
---

## Official Journals of the IGS

---

### Electronic Journals Free to IGS Members

## Geosynthetics International



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

*Geosynthetics International* is only published electronically starting Volume 10 (2003) by Thomas Telford and is free to IGS Members. All others, e.g., corporations, companies, and university libraries, can subscribe at a rate of £ 421 / US\$ 870. An individual rate for those non-members whose organization subscribes, but would like an additional personal subscription (including the update CD) will be available for £ 60 / US\$ 108.

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

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

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

Professor R.J. Bathurst, Editor *Geosynthetics International*  
Department of Civil Engineering Royal Military College of Canada  
P.O. Box 17000, STN Forces Kingston, Ontario K7K 7B4, Canada  
Tel: 1/613 541 6000, Ext. 6479, Fax: 1/613 541 6218  
E-mail: [bathurst-r@rmc.ca](mailto:bathurst-r@rmc.ca)

For subscription details visit the Journal's web site at:  
[www.thomastelford.com](http://www.thomastelford.com) or contact:

Maria Davis, Thomas Telford Ltd  
1 Heron Quay, London E14 4JD, UK  
Tel: 44/20 7665 2460, Fax: 44/20 7538 9620  
[maria.davis@thomastelford.com](mailto:maria.davis@thomastelford.com)

Dr. J.P. Giroud, Chair *Geosynthetics International*  
J.P. Giroud, IC.  
5837 North Ocean Boulevard Ocean Ridge, Florida  
33435, USA  
Tel: 1/561 737 1642, Fax: 1/561 733 2809  
E-mail: [jpg@jpgiroud.com](mailto:jpg@jpgiroud.com)



## Content of Volume: 18, Issue: 5 (October 2011)

Best Geosynthetics International Paper for 2010, pp. 206 - 206 (1)

Use of geocomposite drain against rapid-drawdown loading for roller-compacted concrete (RCC) armored earth dam, pp. 207 - 220 (14), A.T. Özer; L.G. Bromwell

Seismic reliability assessment of internal stability of reinforced soil walls using the pseudo-dynamic method, pp. 221 - 241 (21), B.M. Basha; G.L.S. Babu

Creep behavior of geosynthetics using confined-accelerated tests, pp. 242 - 254 (13), F.A.N. França; B.S. Bueno

Influence of randomly distributed geofibers on the integrity of clay-based landfill covers: a centrifuge study, pp. 255 - 271 (17), Authors: B.V.S. Viswanadham; S. Rajesh; P.V. Divya; J.P. Gourc

Geomembrane damage due to static and cyclic shearing over compacted gravelly sand, pp. 272 - 279 (8), P.J. Fox; J.D. Ross; J.M. Sura; R.S. Thiel

A full-scale trial embankment construction with soil reinforced with short randomly distributed polypropylene microfibrils, pp. 280 - 288 (9), I.M.C.F.G. Falorca; L.M.F. Gomes; M.I.M. Pinto

Numerical modelling of thermally induced desiccation of geosynthetic clay liners observed in laboratory experiments, pp. 289 - 303 (15), J.M. Southen; R.K. Rowe

Modification of K-stiffness method for MSE structures on soft ground, pp. 304 - 321 (18), N. Tin; D.T. Bergado; P. Voottipruex; T. Tanchaisawat

Quantification of the adsorption of phenolic compounds on the geotextile and bentonite components of four geosynthetic clay liners, pp. 322 - 331 (10), M. Ahari; N. Touze-Foltz; L. Mazéas; A. Guenne

Vertical earth pressure increments due to vibratory roller on geogrid-reinforced embankments, pp. 332 - 338 (7), S.-S. Jeon

Please find the download of the articles at:

<http://www.icevirtuallibrary.com/content/issue/gein/18/5>

For the IGS members to have FREE access to the papers they MUST log in through the IGS website.

## Content of Volume: 18, Issue: 6 (October 2011)

Foreword, pp. 339 - 339 (1), R.J. Bathurst

Geosynthetics applications for the mitigation of natural disasters and for environmental protection, pp. 340 - 390 (51), H. Brandl

Systems engineering: the design and operation of municipal solid waste landfills to minimize contamination of groundwater, pp. 391 - 404 (14), R.K. Rowe

Note of appreciation to paper reviewers, pp. 405 - 405 (1)

Please find the download of the articles at:

<http://www.icevirtuallibrary.com/content/issue/gein/18/6>

For the IGS members to have FREE access to the papers they MUST log in through the IGS website.

## Content of Volume: 19, Issue: 1 (February 2012)

Choice of allowable long-term strains for reinforced embankments on a rate-sensitive foundation, pp. 1 - 10 (10), C. Taechakumthorn; R.K. Rowe

Dynamic stability of geosynthetic-reinforced soil integral bridge, pp. 11 - 38 (28), H. Munoz; F. Tatsuoka; D. Hirakawa; H. Nishikiori; R. Soma; M. Tateyama; K. Watanabe

Interpretation of laboratory creep testing for reliability-based analysis and load and resistance factor design (LRFD) calibration, pp. 39 - 53 (15), R.J. Bathurst; B.-Q. Huang; T.M. Allen

Numerical simulation of shaking-table tests on soil-stabilized, geosynthetic-reinforced quay-wall structures, pp. 54 - 61 (8), B. Ye; G.L. Ye; J. Nagaya; T. Sugano

Stress distribution and development within geosynthetic-reinforced soil slopes, pp. 62 - 78 (17), K.-H. Yang; J.G. Zornberg; C.-N. Liu; H.-D. Lin

Effect of polypropylene fibers on the uplift behavior of model footings embedded in sand, pp. 79 - 84 (6), N.C. Consoli; C.A. Ruver; V. Girardello; L. Festugato; A. Thomé

Behavior of cement-stabilized clay reinforced with nylon fiber, pp. 85 - 92 (8), A.R. Estabragh; P. Namdar; A.A. Javadi

Please find the download of the articles at:

<http://www.icevirtuallibrary.com/content/issue/gein/19/1>

For the IGS members to have FREE access to the papers they MUST log in through the IGS website.

## Geotextiles & Geomembranes



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

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

Papers should be submitted electronically as a Microsoft Word or pdf file to: [kerry@civil.queensu.ca](mailto:kerry@civil.queensu.ca)

Please ensure the text is double spaced, there is an abstract with keywords included, and tables and figures are at the end following the text. Please check the Journal's instructions for authors for additional information regarding submissions. The Journal strives to provide the authors with quick, constructive reviews, and we appreciate the author's hard work in addressing these comments and quick return

of revised papers.

*Geotextiles and Geomembranes* is now available free in electronic format to IGS Members. To activate free access and to create your personal account, you will need your IGS Membership Number. If you do not know your Membership Number, please contact the IGS Secretariat at [IGSSec@geosyntheticssociety.org](mailto:IGSSec@geosyntheticssociety.org)

For instructions on how to activate access and create your personal account, go the web site provided below.

A hardcopy of *Geotextiles and Geomembranes* is available at a reduced subscription rate to individual and Corporate Members of the IGS. Individual IGS Members may subscribe at an 84% discount: US\$170 for six issues. IGS Corporate Members may subscribe at a 64% discount: US\$396 for six issues. Please indicate that you are an IGS Member when requesting the special price.

For editorial enquiries contact:

Dr. R. Kerry Rowe, Editor *Geotextiles and Geomembranes*  
Dept. of Civil Engineering Ellis Hall, Queens University Kingston,  
Ontario K7L 3N6 CANADA  
Fax: 1/613 533 6934  
E-mail: [kerry@civil.queensu.ca](mailto:kerry@civil.queensu.ca)

For more information on obtaining electronic and hard copy subscriptions to *Geotextiles and Geomembranes* please go to the following IGS web site: [www.geosyntheticssociety.org/](http://www.geosyntheticssociety.org/)

For direct connection to the home page of the journal with the possibility to download PDF-files of the full papers (IGS members and abonents only) please follow the link at the end of the following content listing.

### Content of Volume 31 (April 2012)

Editorial Board/Aims & Scope, Page IFC

A new publishing model, Page iii, Noel Blatchford

Geotextiles and geomembranes: Best papers in 2010, Page iv, R. Kerry Rowe

Sagging and filtration behaviour of nonwoven geotextiles overlying different bedding materials, Pages 1 - 14, Ennio M. Palmeira, Janaina Tatto, Gregorio L.S. Araujo

Comparison of batch and double compartment tests for measuring voc transport parameters in geomembranes, Pages 15 - 30, Min-Gyun Park, Craig H. Benson, Tuncer B. Edil

Laboratory investigation of GCL hydration from clayey sand subsoil, Pages 31 - 38, R. Anderson, M.T. Rayhani, R.K. Rowe

Geotextile tube dewatering of contaminated sediments, Tianjin Eco-City, China, Pages 39 - 50, T.W. Yee, C.R. Lawson, Z.Y. Wang, L. Ding, Y. Liu

A model for filter cake formation on geotextiles: Theory, Pages 51 - 61, J. Richard Weggel, Nicholas Dudley Ward

A model for filter cake formation on geotextiles: Experiments, Pages 62 - 68, J. Richard Weggel, Jacob Dortch

Discussion of "Bearing capacity of geocell reinforcement in embankment engineering" by Ling Zhang, Minghua Zhao, Caijun Shi and Heng Zhao 2010,28; 475 - 482, Page 69, Ayhan Gurbuz

Reply to the discussion by Ayhan Gurbuz on "Bearing capacity of geocell reinforcement in embankment engineering" Geotextiles and Geomembranes 28(5), 2010, pp. 475 - 482, Pages 70 - 71, Ling Zhang, Minghua Zhao, Caijun Shi, Heng Zhao

Technical Note

FE simulation of viscous behavior of geogrid-reinforced sand under laboratory-scale plane-strain-compression testing, Pages 72 - 80, Fu-Lin Li, Fang-Le Peng, Yong Tan, W. Kongkitkul, M.S.A. Siddiquee

## Content of Volume 32 (June 2012)

Editorial Board/Aims & Scope, Pages IFC-

Design curves of prefabricated vertical drains including smear and transition zones effects, Pages 1 - 9, Hossam M. Abuel-Naga, Michael J. Pender, Dennes T. Bergado

Consolidation of composite foundation improved by geosynthetic-encased stone columns, Pages 10 - 17, Yiping Zhang, Dave Chan, Yang Wang

Long-term lateral displacement of geosynthetic-reinforced soil segmental retaining walls, Pages 18-27, Huabei Liu  
Numerical analysis of bearing reinforcement earth (BRE) wall, Pages 28 - 37, Cherdasak Suksiripattanapong, Avirut Chinkulkijniwat, Suksun Horpibulsuk, Cholachat Rujikiatkamjorn, Theerasak Tanhsutthinon

Analysis of geotextile tubes containing slurry and consolidated material with frictional interface, Pages 38 - 43, Raymond H. Plaut, Thomas C. Stephens

Visualization of soil arching on reinforced embankment with rigid pile foundation using X-ray CT, Pages 44 - 54, T. Eskisar, J. Otani, J. Hironaka

A comparison of static and cyclic loading responses of foundations on geocell-reinforced sand, Pages 55 - 68, S.N. Moghaddas Tafreshi, A.R. Dawson

Model experiments on piled embankments. Part I, Pages 69 - 81, S.J.M. van Eekelen, A. Bezuijen, H.J. Lodder, A.F. van Tol

Model experiments on piled embankments. Part II, Pages 82 - 94, S.J.M. van Eekelen, A. Bezuijen, H.J. Lodder, A.F. van Tol

Technical Notes

Accelerated pavement testing of unpaved roads with geocell-reinforced sand bases, Pages 95 - 103, Xiaoming Yang, Jie Han, Sanat K. Pokharel, Chandra Manandhar, Robert L. Parsons, Dov Leshchinsky, Izhar Halahmi

Deformative behaviour of different geogrids embedded in a granular soil under monotonic and cyclic pullout loads, Pages 104 - 110, Nicola Moraci, Giuseppe Cardile

Effect of polypropylene fiber-reinforcement on the mechanical behavior of silty clay, Pages 111 - 116, O. Plé, T.N.H. Lê

Please find the download of the articles at:

<http://www.sciencedirect.com/science/journal/02661144>

For IGS members to have FREE access to the G&G journal articles they MUST log in through the IGS website.

---

## Corporate Membership

---

### Corporate Members of the IGS (Sorted by COMPANY NAME)

**ABG Limited**

*(United Kingdom, 2001)*

**Ace Geosynthetics**

*(Taiwan (R.O.C.), 2003)*

**Agro Kunststofftechnik GmbH**

*(Austria, 1996)*

**Alyaf Industrial Company Ltd**

*(Saudi Arabia, 2008)*

**Andex del Norte S.A.**

*(Peru, 2011)*

**Aquaterra Consulting Ltd.**

*(Hong-Kong, China, 2009)*

**Asahi Kasei Geotechnologies Co., Ltd.**

*(Japan, 1984)*

**Ashimori Industry Co., Ltd.**

*(Japan, 2003)*

**Association of RRR Construction System, The**

*(Japan, 1998)*

**Atarfil S.L.**

*(Spain, 1999)*

**AXTER COLETANCHE INC.**  
(Canada, 2009)

**Beaulieu Technical Textiles**  
(Belgium, 1998)

**Beijing Gaoneng Lining Engineering Co., Ltd.**  
(China (People's Republic), 2006)

**Beijing Sinoma Bauchem Technology Co., Ltd.**  
(China (People's Republic), 2011)

**Belton Industries, Inc.**  
(USA, 1989)

**BMC Gulf Trading & Contracting LLC**  
(United Arab Emirates, 2008)

**Bombay Textile Research Association, The**  
(India, 2009)

**Bonar Technical Fabrics N.V.**  
(Belgium, 1985)

**Celesur Sistemas de Impermeabilizacion, S.L.**  
(Spain, 2011)

**Cetco Lining Technologies**  
(USA, 1992)

**Cidelsa**  
(Peru, 2010)

**CINAT S.L.**  
(Spain, 2011)

**Cofra BV**  
(The Netherlands, 1991)

**Colas Group, The**  
(France, 1996)

**Colbond bv.**  
(The Netherlands, 1986)

**Copro**  
(Belgium, 2005)

**Coripa S.A.**  
(Argentina, 2008)

**Dae Han Industrial Material Co., Ltd.**  
(Korea, 1994)

**Dinagrid Geosynthetics S.L.**  
(Spain, 2005)

**Du Pont de Nemours (Luxembourg) S.A.**  
(Luxembourg, 1984)

**EAST COAST EROSION BLANKETS**  
(USA, 2009)

**Edilfloor SpA**  
(Italy, 2002)

**Euroizol Geosynthetics**  
(Ukraine, 2006)

**F.L.I. Environmental**  
(Ireland, 2002)

**Fiberweb Geosynthetics**  
(United Kingdom, 1988)

**Field Lining Services**  
(Republic of Panama, 1998)

**Firestone Specialty Products Company LLC**  
(USA, 2010)

**FITI Testing and Research Institute**  
(Korea, 1997)

**Fontana International GMBH**  
(Austria, 2008)

**Fritz Landolt AG**  
(Switzerland, 1985)

**Garware-Wall Ropes, Ltd.**  
(India, 2006)

**GAST INTERNATIONAL SA PTY LTD**  
(South Africa, 2012)

**GEOFABRICS AUSTRALASIAN PTY Ltd.**  
(Australia, 2009)

**Geofabrics Ltd.**  
(United Kingdom, 1995)

**Geofelt GmbH**  
(Austria, 1996)

**GEOPOLIMEROS SAS**  
(Colombia, 2011)

**Geosinteticos Trical, C.A.**  
(Venezuela, 2007)

**Geosynthetic Materials Association (GMA)**  
(USA, 1985)

**Geosynthetics Technologies Co., Ltd.**  
(Saudi Arabia, 2007)

**Geosystem Co. Ltd.**  
(Japan, 2000)

**Geotexan**  
(Spain, 2009)

**Geo-Tiptex Ltd.**  
(Hungary, 2010)

**Gidrokor Construction Company Ltd.**  
(Russia, 2004)

**Golden Pow Co., Ltd.**  
(Korea, 2009)

**Granite Environmental, Inc.**  
(USA, 2011)

**GSE Lining Technology GmbH**  
(Germany, 2004)

**GSE Lining Technology, Inc.**  
(USA, 1988)

**High Stiffness Polyethylene Pipes Association**  
(Japan, 2005)

**Huesker Synthetic GmbH & Co.**  
(Germany, 1987)

**Hui Kwang Corporation**  
(Taiwan (R.O.C.), 2000)

**Imgeocosta Sas**  
(Colombia, 2011)

**Integrated Geotechnology Institute Limited**  
(Japan, 1998)

**Intermas Nets S.A.**  
(Spain, 2008)

**Istanbul Teknik Insaat**  
(Turkey, 2012)



**Japan Spunbond -- Toray Corp.**  
(Japan, 1984)

**JetSJ-Geotecnia, LDA**  
(Portugal, 2010)

**JOFO Zhaoqing Webforma Co., Ltd.**  
(China, 2012)

**Kajima Corporation**  
(Japan, 1985)

**Kaytech Engineered Fabrics**  
(South Africa, 2008)

**Kuraray Co., Ltd.**  
(Japan, 1989)

**Laborcontrol**  
(Spain, 2010)

**Layfield Environmental Systems**  
(Canada, 2011)

**Maccaferri de Argentinan S.A.**  
(Argentina, 2010)

**Maccaferri De Centroamerica**  
(Costa Rica, 2010)

**Maccaferri de Mexico**  
(Mexico, 2010)

**Maccaferri do Brasil Ltda**  
(Brazil, 1998)

**Maccaferri - Indonesia**  
(Indonesia, 2012)

**Maeda Kosen Co. Ltd.**  
(Japan, 1992)

**Manifattura Fontana S.p.A.**  
(Italy, 2008)

**Mattex Geosynthetics**  
(United Arab Emirates, 2011)

**Mekamore Co., Ltd**  
(Korea, 2008)

**Mitsubishi Plastics, Inc.**  
(Japan, 1992)

**Mitsui Chemicals Industrial Products, Inc.**  
(Japan, 1992)

**Nanchang Teamgo New Materials Co.**  
(China (People's Republic), 2010)

**Narvin Gostar Parsian Co.**  
(Iran, 2010)

**NAUE GmbH & Co. KG**  
(Germany, 1987)

**NewGrids Limited.**  
(United Kingdom, 2004)

**Obayashi Corporation**  
(Japan, 1988)

**Officine Maccaferri S.P.A.**  
(Italy, 1997)

**OJSC "494 UNR"**  
(Russia, 2003)

**Okasan Livic Co. Ltd.**  
(Japan, 1984)

**Permathene, Ltd.**  
(New Zealand, 2003)

**Plastextil SAS**  
(Colombia, 2011)

**Polytex S.A.**  
(Peru, 2010)

**Prati Armati S.r.l.**  
(Italy, 2011)

**Presto Geosystems**  
(USA, 1996)

**Propex**  
(USA, 1991)

**PT Multibangun Rekatama Patria**  
(Indonesia, 2012)

**PT Tetrasa Geosinindo**  
(Indonesia, 2010)

**Ramalho Comercial Ltda**  
(Brazil, 2008)

**Reinforced Earth Company, The**  
(USA, 1989)

**Sageos**  
(CTT Group - Canada, 2012)

**Samyang Corporation**  
(Korea, 2003)

**Servicios de Ingenieria Geosintetica S.A. (SIGSA)**  
(Costa Rica, 2008)

**Seven States Enterprise Co., Ltd.**  
(Taiwan (R.O.C.), 2005)

**Shenzhen Sheng Yi Environmental Co., Ltd.**  
(China (People's Republic), 2002)

**Siver Une-104**  
(Spain, 2011)

**Solmax International, Inc.**  
(Canada, 1997)

**Sotrafa, S.A.**  
(Spain, 2009)

**STEKLONiT Management, LLC**  
(Russia, 2011)

**Supertex, Inc.**  
(USA, 2007)

**Swiss Association for Geosynthetics SVG**  
(Switzerland, 1984)

**Taiyo Kogyo Corporation (SUN)**  
(Japan, 1991)

**TechFab India Industries Ltd.**  
(India, 2008)

**Tecnologia de Materials S. A.**  
(Peru, 2010)

**Teknindo Geosistem Unggul, PT**  
(Indonesia, 2009)

**Tekpro**  
(Russia, 2008)

**Tele Textiles AS**  
(Norway, 1995)

**TeMa Technologies and Materials Srl**  
(Italy, 2006)

**Tenax S.p.A.**  
(Italy, 1991)

**TenCate Geosynthetics Europe GmbH**  
(Austria, 1984)

**TenCate Geosynthetics North America**  
(USA, 1998)

**Tenox Corporation**  
(Japan, 1998)

**Tensar Geosynthetics (China) Ltd.**  
(China (People's Republic), 2003)

**Tensar International Limited**  
(United Kingdom, 1989)

**Tensar International Corporation**  
(USA, 1989)

**Terre Armeé International**  
(France, 2002)

**TESSILBRENTA SRL**  
(Italy, 2012)

**Texinov**  
(France, 2007)

**Thrace Nonwovens & Geosynthetics**  
(Greece, 2010)

**Tokyo Ink Co., Ltd.**  
(Japan, 2005)

**Tokyu Construction Co. Ltd.**  
(Japan, 1984)

**TRI/Environmental Inc.**  
(USA, 2008)

**ViaCon Production LLC**  
(Russia, 2012)

**Viganò Pavitex S.P.A.**  
(Italy, 2006)

**Yixing Shenzhou Earth Working Material Co., Ltd.**  
(China (People's Republic), 2011)

Notes:

- The corporate members are encouraged to check their entry there!
- Date is earliest year of continuous membership

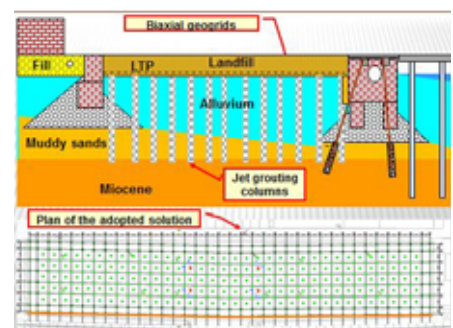
## Corporate Members Present Case Studies

### Use of biaxial geogrids for an Load Transfer Platform at new Cruise Terminal in Lisbon



The “Terreiro do Trigo” dockyard, at the “Jardim do Tabaco”, was filled in order to allow the construction of the new “Santa Apolónia” Cruise Terminal in Lisbon, at the Tagus River right bank. A load transfer platform (LTP), formed by two biaxial geogrids, founded over jet grouting columns, allowed the construction of a 4,2m height embankment, with an area of about 290 x 56 m<sup>2</sup>, placed over a soft muddy alluvium layer (undrained shear stress lesser than 20 kPa) with about 20 m of average thickness (figures right).

Taking into account the existent conditions, mainly the complex working area, as well as the works overall schedule (24 months), as already stated, the landfill was built over a LTP, formed by two layers of biaxial geogrids, located over jet grouting Ø1,5 m columns on a 5,7 x 5,7 m<sup>2</sup> mesh, used as both ground improvement and foundation solution. The LTP was formed by two layers of biaxial polypropylene geogrids (20 and 30 kN/m of tension resistance) located under two layers of granular material. Due to the LTP level, below the high tide water level at the Tagus River, the jet grouting and geogrids installation works were performed only during low tide water level. The solution good overall performance was confirmed through a complete monitoring and survey plan, including the installation of rod extensometers at the geogrids (figures below).



For further details kindly contact:

**[www.jetsj.pt](http://www.jetsj.pt)**

# Corporate Profile – Sinoma Bauchem Technology Co., Ltd

IGS Corporate Members are encouraged to publish a Corporate Profile in 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.



## Sinoma Bauchem Technology Co., Ltd

Beijing Sinoma Bauchem Technology Co., Ltd. (Sinoma Bauchem) is a high-tech enterprise which is mainly engaged in R&D, manufacture, distribution and construction of geosynthetics.

Sinoma Bauchem is a holding subsidiary of China Non-metallic Minerals Industrial Corporation, member unit of China Sinoma Group, Chief editorial unit of "Sodium Bentonite Geosynthetic Clay Liner Technical Standard of PRC" (JG/T 193-2006). The company has the certifications of ISO 9001, ISO 14001, GB/T28001-2001 (occupational health safety management system) and CE etc.

Bauchem® GCL is a new blanket shape needle-punched anti-seepage material, consisting of a layer of sodium bentonite encapsulated between non-woven and woven geotextiles. Bauchem® GCL has excellent anti-seepage performance, environmentally-sound, easy construction, special self-healing ability, strong deformation resistance and cost effective.



The company has successfully contracted and completed a variety of seepage prevention projects, such as domestic waste/industrial waste landfill, sewage handling, Alumina red mud storage, thermal power generation ashery, Copper Zinc gangue storage (Saudi Arabia), China Olympic project, Three Gorge dam project, south to north water diversion project, etc.



The company endeavor in being one of the world-class integrated service providers of material engineering system.

- Water Environment Treatment
- Petroleum, chemical industry, Electricity, coal gasifying
- Water conservancy projects
- Domestic waste landfill
- Mining industry, environmental protection

**PLEASE CONTACT US BY [BAUCHEM@SINA.COM](mailto:BAUCHEM@SINA.COM)**

Elsa Lu, Market Manager

17th Floor, A Building Yuhui Mansion

No. 73 Fucheng Road, Haidian District, Beijing 100142

CHINA (PEOPLE'S REPUBLIC)

Phone: + 86 10 68709005

Fax: + 86 10 68709005

<mailto:bauchem@sina.com>



# Corporate Profile – Layfield Environmental Systems

IGS Corporate Members are encouraged to publish a Corporate Profile in 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.



*Environmental Solutions with Geosynthetics*

Layfield Environmental Systems is a vertically integrated ISO 9001 registered geosynthetics and environmental containment company. Layfield specializes in the engineering, design, construction, and installation of geosynthetic products and services. Upon recently surpassing 33 years in business, our company is currently operating to service North America and on an international level, with offices located in Toronto, Edmonton, Calgary, Vancouver, San Diego, and Seattle. [www.LayfieldEnvironmental.com](http://www.LayfieldEnvironmental.com)

## Manufacturing

Layfield is a major North American manufacturer of geomembranes; our manufacturing plant is located in Vancouver, British Columbia. All manufacturing operations are ruled by a quality management system that is compliant with ISO-9001:2008 standard.



## Fabrication

Layfield's production facilities are designed for converting geomembranes, geosynthetics, and industrial fabrics using new state of the art welding and sewing technologies. The products produced are used in a variety of environmental containment and construction applications by the oil & gas, mining, water treatment, agriculture, and waste management sectors throughout North America. Layfield has three fabrication and conversion hubs located in Toronto, Edmonton, and San Diego.



10,000 Pound Fabricated Enviro Liner

## Construction Services

Layfield provides design, installation, and maintenance services of geosynthetics. Our company also follows documented safety procedures at all locations and job sites.

## Areas of Expertise:

### Geomembrane Containment Systems

Layfield manufactures, fabricates, and installs the largest selection of high performance flexible geomembranes in the industry. Layfield provides geomembrane containment systems for all applications including primary and secondary containment. These high performance geomembranes range from our popular

Enviro Liner series to our potable grade GeoFlex and our secondary containment Hazgard brand.

## Feature Product:

### Enviro Liner 6000<sup>HD</sup>

Enviro Liner® 6000<sup>HD</sup> is a premier grade formulation geomembrane that combines the best properties of flexible polyolefin alloys and High Density Polyethylene (HDPE) in one technically advanced formulation. Enviro Liner® 6000<sup>HD</sup> is defined as a fortified geomembrane and it has numerous unique advantages that include superior tensile strength, elongation, and puncture resistance. Enviro Liner 6000<sup>HD</sup> has an advanced Ultra Violet/Anti Oxidant (UV/AO) package that provides exceptional UV resistance. It is designed for long term exposed applications and is certified by the U.S National Sanitization Foundation for drinking water systems components (NSF 61).



Enviro Liner 6000<sup>HD</sup>

## Water Containment

Layfield regularly engineers and installs geomembrane containment systems and floating cover technology for both potable water and waste water applications. While supplying our own branded line of REVOC Floating Cover technology, Layfield has serviced containment systems used in various municipal and industrial applications across North America.

## Soil Reinforcement

Layfield load support systems are specially engineered to provide reinforcement of soil and increase soil stability over weak subgrades. Geosynthetic products such as high strength geotextiles and the Geoweb system provide cost effective methods for load support requirements.

## Main Layfield Industries

- Oil and Gas
- Water and Waste Water
- Mining
- Agriculture
- Power Generation
- Civil Construction



# Corporate Profile – Nanchang Teamgo New Materials Co., Ltd.

IGS Corporate Members are encouraged to publish a Corporate Profile in 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.



## Nanchang Teamgo New Materials Co., Ltd.

Nanchang Teamgo New Materials Co., Ltd. covers an area of 68,000 square metres as its production base, with registered capital of USD15 million while possessing permanent assets of USD45million, specialized in R&D, production and sales of uniaxial, biaxial PP geogrids, geomembrane and their application softwares.

The company has participated as drafter in making national standard of GB/T 17689-2004 “geosynthetics and plastic geogrid”, and drafter for traffic industrial standard JT/T 525-2004 “Road construction materials, concrete, cement, fiber, PP fiber, PE fiber, etc”, for JT/T 534-2004 standard “Tar surface fiber compound”.

### Main products: Geomembrane and Geogrids

#### Geomembrane: Smooth Geomembrane, Single Sided Textured Geomembrane, Double Sided Textured Geomembrane

We use German technology “4 layer coextrusion blow film” to GM13 standard anti seepage Geomembrane.

Specifications, thickness 0.5 mm – 3 mm, width 8 m

Excellent chemical stability and aging resistance,

Superior mechanical strength and anti puncture

Convenient for construction, low cost, high efficiency, need not to repeat sewing.

Good welding effect, seam strength is better than base material.

Our geomembrane achieved or surpassed American standard of GM-13 and GM-17 standard (GRI) and Chinese national standard of CJ/234-2006, GB/T 7643-1998.

#### Geogrids: Uniaxial Geogrids, Biaxial Geogrids

Tensile strength of uniaxial geogrids could be 300 kN/m, width is 2.5 m

Tensile strength of biaxial geogrids could be 50 kN/m, width is 2.5 – 6 m

Teamgo geogrids are of high strength, low elongation, big width and complete in specifications.

High tensile strength, anti-wriggling stability and chemical stability.

High performance of anti-mechanical breakage and durability, high friction coefficient with gravel.

Uniaxial geogrids are applied widely on embankment, tunnel, ports, roads, railways and other construction.

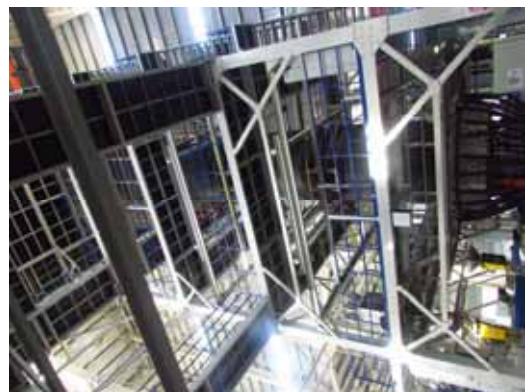
Biaxial geogrids are applied on the strengthening of embankments and roadbeds, slopes and retaining walls, foundation strengthening for large airports, parking lots and port yards.

### Nanchang Teamgo New Materials Co., Ltd.

[www.ncteamgo.cn](http://www.ncteamgo.cn)

Teamgo Industrial Park, Yuping West Avenue  
Economic and Technological Development Zone  
Nanchang, Jiangxi Province, CHINA (PEOPLE'S REPUBLIC)  
Phone: 86 791 86690233 Fax: 86 791 86690255

[Bernard@ncteamgo.com](mailto:Bernard@ncteamgo.com)



# IGS News Publisher, Editor and Chapter Correspondents

## IGS News is published by:

International Geosynthetics Society

Office of the Secretariat:  
The International Geosynthetics Society  
1934 Commerce Lane, Suite #4  
Jupiter, FL 33458  
USA  
TEL: +1.561.768.9489 FAX: +1.561.828.7618  
Email: [IGSsec@geosyntheticssociety.org](mailto:IGSsec@geosyntheticssociety.org)

## IGS News 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](mailto:g.braeu@bv.tum.de)

## Editorial Board

Russell Jones, Chairman of IGS Communication  
Committee  
Elizabeth Peggs, IGS Secretary  
Jorge Zornberg, IGS President

## IGS Chapter Correspondents

Argentina	Verónica Rocío Moratto	<a href="mailto:rocio.moratto@uns.edu.ar">rocio.moratto@uns.edu.ar</a>
Australia and New Zealand	Not yet fixed	
Belgium	Frans De Meerleer	<a href="mailto:frans.texion@skynet.be">frans.texion@skynet.be</a>
Brazil	André Estêvão Silva	<a href="mailto:tesouraria@igsbrasil.org.br">tesouraria@igsbrasil.org.br</a>
Chile	Not yet fixed	
China	Xiao-Wu Tang	<a href="mailto:tangxiaowu@zju.edu.cn">tangxiaowu@zju.edu.cn</a>
Czech Republic	Pavel Mann	<a href="mailto:mann@igs.cz">mann@igs.cz</a>
Finland	Minna Leppänen	<a href="mailto:minna.leppanen@tut.fi">minna.leppanen@tut.fi</a>
France	Nathalie Touze-Foltz	<a href="mailto:nathalie.touze@cemagref.fr">nathalie.touze@cemagref.fr</a>
Germany	Gerhard Bräu	<a href="mailto:g.braeu@bv.tum.de">g.braeu@bv.tum.de</a>
Greece	Anastasios Kollios	<a href="mailto:akollios@edafomichaniki.gr">akollios@edafomichaniki.gr</a>
India	A.C. Gupta	<a href="mailto:acgupta@cbip.org">acgupta@cbip.org</a>
Indonesia	Not yet fixed	
Italy	Nicola Moraci	<a href="mailto:nicola.moraci@unirc.it">nicola.moraci@unirc.it</a>
Japan	Jun Otani	<a href="mailto:junotani@kumamoto-u.ac.jp">junotani@kumamoto-u.ac.jp</a>
Korea	Myoung-Soo Won	<a href="mailto:wondain@kunsan.ac.kr">wondain@kunsan.ac.kr</a>
Mexico	Not yet fixed	
the Netherlands	Shaun O'Hagan	<a href="mailto:s.ohagan@planet.nl">s.ohagan@planet.nl</a>
North America	L. David Suits	<a href="mailto:Nagsdirector@aol.com">Nagsdirector@aol.com</a>
Norway	Hanne Louise Moe	<a href="mailto:hanne.l.moe@sintef.no">hanne.l.moe@sintef.no</a>
Pakistan	Syeda Faiza Jamil	<a href="mailto:phaixa_jamil@yahoo.com">phaixa_jamil@yahoo.com</a>
Peru	Not yet fixed	
Philippines	Not yet fixed	
Poland	Joanna Borkowska	<a href="mailto:Joanna@rozenblat.pl">Joanna@rozenblat.pl</a>
Portugal	Madalena Barroso	<a href="mailto:mbarroso@lnec.pt">mbarroso@lnec.pt</a>
Romania	Andrei Olteanu	<a href="mailto:adiol@utcb.ro">adiol@utcb.ro</a> / <a href="mailto:olteanu.andrei@gmail.com">olteanu.andrei@gmail.com</a>
Russia	Vladimir Kleveko	<a href="mailto:vlivkl@pochta.ru">vlivkl@pochta.ru</a>
Slovakia	Rado Baslik	<a href="mailto:baslik@tecgeo.sk">baslik@tecgeo.sk</a>
South Africa	Peter Davies	<a href="mailto:peter@kaytech.co.za">peter@kaytech.co.za</a>
Spain	Pedro L. Abad	<a href="mailto:Pedro.Abad@cetco.es">Pedro.Abad@cetco.es</a>
Thailand	Ms. Lynn	<a href="mailto:igs-thailand@ait.ac.th">igs-thailand@ait.ac.th</a>
Turkey	Orkun Akkol	<a href="mailto:orkunakkol@orientresearch.com">orkunakkol@orientresearch.com</a>
United Kingdom	Peter Langley	<a href="mailto:plangley@fiberweb.com">plangley@fiberweb.com</a>
West Pacific	Daniel Hung-Chia Hou	<a href="mailto:hau.danie@gmail.com">hou.danie@gmail.com</a>

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 Council

## Elected in 2008

D.T. Bergado (Thailand)  
A. Bouazza (Australia)  
P. Fantini (Italy)  
H.Y. Jeon (Korea)  
R. Jones (United Kingdom)  
J. Kuwano (Japan)  
M. Sadlier (Australia)  
M. Ziegler (Germany)

## Co-opted in 2008

V. Pimentel (Brazil)

## Co-opted in 2010

P. Abad (Spain)  
K. Rajagopal (India)  
X. Tang (China)  
C. Yoo (Korea)

## Co-opted in 2011

J. C. Rivera (Peru)

## Elected in 2010

S. Allen (USA)  
E. Blond (Canada)  
J. Cowland (Hong Kong, China)  
N. Dixon (UK)  
P. Legg (South Africa)  
J. Otani (Japan)  
E. Peggs (USA)  
N. Touze-Foltz (France)

# IGS Officers

## 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  
Email: [zornberg@mail.utexas.edu](mailto:zornberg@mail.utexas.edu)

## Vice-President

Dr. Russell Jones  
Golder Associates (UK) Limited  
Attenborough House,  
Browns Lane Business Park,  
Stanton-on-the-Wolds, Notting-  
hamshire, NG12 5BL  
UNITED KINGDOM  
Tel: 44 115 937 1111  
Fax: 44 115 937 1100  
Email: [rjones@golder.com](mailto:rjones@golder.com)

## Immediate Past-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  
Email: [tatsuoka@rs.noda.tus.ac.jp](mailto:tatsuoka@rs.noda.tus.ac.jp)

## Treasurer

Peter Legg  
Consulting Principal,  
Geo-Environmental Engineers  
28 8th Avenue  
Northmead  
Benoni, 1501  
SOUTH AFRICA  
Tel: 27 (0)11 425 1197  
Fax: 27 (0)11 425 1197  
Email: [peterlegg@telkomsa.net](mailto:peterlegg@telkomsa.net)

## Secretary

Elizabeth Peggs  
[geosynthetic.net](http://geosynthetic.net)  
1934 Commerce Lane, Suite 4  
Jupiter, Florida, USA 33458  
Tel +1 561 768-9487  
Fax +1 561 828 7618  
Email: [elizabeth@geosynthetic.net](mailto:elizabeth@geosynthetic.net)

**Visit the IGS Website:**

[www.geosyntheticssociety.org](http://www.geosyntheticssociety.org)

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



The International Geosynthetics Society was formed with the following objectives:

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

### WHY BECOME A MEMBER OF THE IGS?

#### First, to contribute to the development of our profession.

By becoming an IGS Member you can:

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

#### Second, to enjoy the benefits.

The following benefits are now available to all IGS Members:

- the online IGS Membership Directory, updated in real time;
- the newsletter, IGS News, published three times per year;
- free electronic issues of Geosynthetics International and Geotextiles & Geomembranes;
- 19 IGS Mini Lecture Series are available online;
- 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 23)! otherwise please use the online form at <http://www.geosyntheticssociety.org> or the following

## IGS Membership Application

Membership of the Society 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 Individual Members and (US) \$1000 for Corporate Members. Individuals or Corporations who voluntarily contribute a minimum of (US) \$200 annually to the Society, in excess of their membership dues, will be mentioned in the IGS Membership Directory in a separate list as benefactors.

Send this completed form to:

The International Geosynthetics Society, 1934 Commerce Lane, Suite #4, Jupiter, FL 33458, USA

TEL: +1.561.768.9489 FAX: +1.561.828.7618

Email: [IGSsec@geosyntheticssociety.org](mailto:IGSsec@geosyntheticssociety.org)

Attach your business card or fill in your address (print or type if possible), as you wish it to appear in the next IGS Membership Directory.

Title (circle one): Mr. Ms. Dr. Prof. Other: \_\_\_\_\_

First Name: \_\_\_\_\_ Last Name: \_\_\_\_\_

Company, Division, Function (if applicable): \_\_\_\_\_

Position/Title: \_\_\_\_\_

Address (Street or Postal Box): \_\_\_\_\_

City: \_\_\_\_\_ Province/State: \_\_\_\_\_

Postal Code: \_\_\_\_\_ Country: \_\_\_\_\_

Telephone: \_\_\_\_\_ Fax: \_\_\_\_\_

Email: \_\_\_\_\_

Eligibility (connection with geotextiles, geomembranes, related products or associated technologies): \_\_\_\_\_

Keyword (up to 25): \_\_\_\_\_

Membership fee: Individual (US) \$ 45, Corporate (US) \$1000, Benefactor (minimum (US) \$ 200