

NEWSLETTER OF THE INTERNATIONAL GEOSYNTHETICS SOCIETY

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

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IGS Officer Meeting Minutes Washington, DC, USA, 16 January 2007

he meeting was called to order at 0830. Officers present were President F. Tatsuoka, Vice President J. Zornberg, Past President D. Cazzuffi, Treasurer J. Cowland and Secretary P. Stevenson. Also present was IGS Secretariat Manager R. Stevenson.

Selection Process for the Giroud Lecture

The Giroud Lecture is presented at international IGS conferences. The lecturer is selected by the IGS Council. Nominations are accepted from the Officers, the Council, and the Membership at large. The selection process will consist of consecutive ballots until a majority is accorded to the winning candidate. In the event of multiple candidacies in the first round and no candidate achieving a majority of ballots cast, the two candidates receiving the highest number of votes in the first round survive to the second round. This policy will be recorded as part of the IGS Handbook.

New and Forming Chapters

New chapters are forming in Vietnam and Russia. The Philippines have successfully completed the process in March 2007 and have become the 28th IGS chapter.

Member's-Only Webpage

The member's-only page was announced by a mass e-mail and was officially activated on 28 January 2007. Archives of Journals, IGS videos, IGS mini lectures, Training Courses, etc. will be accessible through the member's-only page. The *IGS News* will remain a public document.

IGS Handbook

The complete IGS Handbook will be posted on the member's-only webpages and reformatted to fit electronic posting on the website. Portions of the Handbook are currently available on the web site.

International and Regional Conferences

It is time for the membership to begin thinking about candidates and preferred venues for the 10th *ICG* in 2014. The regional committees will be publishing calls for candidacies for organizers of regional conferences for 2012. Selected venues for 2012 will be announced at the three regional conferences scheduled in 2008: *GeoAmericas 2008, Geosynthetics Asia 2008,* and *EuroGeo 4.*

IGS Treasurer's Report

The Treasurer reported that he visited the IGS Secretariat in Easley,

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

South Carolina, on his way to the Officer's Meeting. He inspected the Secretariat Manager's accounting systems and found them to be in order. He visited the IGS Auditor, Upton and Upton, in Greenville, South Carolina, and found that the Auditor has a good understanding of the IGS accounts. The Auditor was also able to provide satisfactory answers to questions.

Journal-IGS Contract Renewals

Renewal of the IGS contracts with Thomas Telford and Elsevier for the IGS journals *Geosynthetics International* and *Geotextiles & Geomembranes*, respectively, were discussed at length and the process of renewal is underway.

Guidelines to Committees

The following Guidelines to Committees are to be included as a page in Part 5 of the Handbook:

- 1. Membership on open committees is open to any IGS member in good standing.
- Membership in closed committees is restricted to appointed IGS members: by the President with agreement by the Council.
- Voting rights on regional committees are restricted to IGS council members from the region. In the event there is no council member representing a chapter, the chapter can be represented by one nominated representative.
- Chairs (or the secretary at the direction of the chair) must prepare written reports on committee activities (at a minimum, one report before each Officer and Council meeting)
- Chairs must prepare written budget estimates (including quotes and other details) at a minimum frequency of once

before each Officers and Council meeting.

- Committees are authorized to explore, investigate and consider issues and ideas.
- 7. Committees can evaluate and conduct polls of the committee membership to determine the committee's position.
- 8. Committees are not authorized to commit the IGS to a course of action.
- Committees are authorized to recommend detailed proposals on courses of action to the council which is the decision making body of the IGS.

Training Courses

IGS Training courses will be held in Mexico and Vietnam. The IGS supports the conduct of training courses, and it is expected that the conduct of the IGS Training Course will generate interest in the IGS, geosynthetic engineering, and the use of geosynthetics. The Officers and Council recognize that the IGS has limited financial resources, however, the IGS can and will provide certain financial support to the conduct of training courses under the following conditions:

- The training course will assist the formation or the establishment of a new chapter.
- The organizers of the training course can prepare a viable financial plan for the event.
- A competent partner is found to contribute to the organization of the event.
- The IGS expense is in compliance with the budgeted funds for the period (year) the course will be conducted.

In the preparation of the financial plan for the event, the organizers (e.g. chapter) are encouraged to consider an application for an IGS loan. An IGS loan can provide seed money to facilitate the organization of the event and establish a financial base for the event.

The IGS will support the traveling expense for one IGS lecturer provided there is a competent partner to organize the event. The IGS is responsible for and retains responsibility for the content of the training course. The competent partner is typically a corporate member (or team of corporate members) of the IGS or an established academic institution with faculty that are IGS members. The organizers are required to supply meeting room(s), organize the presentation and publication of advertising and promotional materials, and publish the information and proceedings in either CD-ROM or printed form, or both. IGS member(s) are to make the presentation.

The Education Committee will establish criteria for selection of the lecturer(s). The Education Committee (under the guidance of the Council) is charged with the creation of the course and controls the content of the course. In the event of additional lecturers, the other lecturers shall agree to comply with the IGS presentation guidelines.

In the event of an established organization conducting regional and international conferences, the IGS will make the materials available and encourage the use of the IGS course. However, there will be no financial exposure of the IGS, no financial contribution by the IGS, and no responsibility of the IGS for the financial results of the event.

Next Meetings: Sardinia 2007

Officers: 30 September 2007

Committees: 1 October 2007

Council: 2 October 2007

reported by Peter Stevenson, Secretary IGS

Call for Candidates for IGS Council: Term 2008 to 2012

Nominations due 31 January 2008

he IGS bylaws prescribe that up to half of the Council be elected every two years. IGS Members will have the opportunity to elect eight Members to the IGS Council for a four-year term, starting in July 2008.

The IGS Council Members, whose term of office expires in June 2008, are:

- A. Bouazza (Australia)
- P. Fantini (Italy)
- M. Kamon (Japan)
- · B. Myles (UK)
- M. Sadlier (Australia)

The IGS bylaws stipulate that a Council Member may be elected to two consecutive terms; hence, A. Bouazza, P. Fantini, and M. Sadlier are eligible for re-election. They will have completed one, four-year term as Council Members by June 2008.

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

Information/Instructions for All Candidates

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

A signed letter of application together with a biographical note (not exceeding 12 lines) and a photograph should reach the IGS Secretary no later than **31 January 2008**. Candidates must strictly adhere to the 12 line limit to ensure equal presentation space for all candidates. In their letter to the IGS Secretary, candidates must clearly identify their country of residence and position for which they are seeking election.

Biographical notes and photos will be published in the March 2008 issue of *IGS News*.

The newly formed IGS Council will meet at least four times (typically in Asia, the Americas, or Europe) and, when possible, in conjunction with a major industry event. At least three additional meetings will be held for those Members whose terms expire in 2010.

One ballot for the election of the eight Council Members will be posted electronically in spring 2008.

Should you need further information, please contact the IGS Secretary Peter Stevenson (see contact information on p. 20).

> reported by Karina McInnis IGS News Editor

IGS Awards: Call for Nominations 2004 to 2007 Nominations due 31 January 2008

GS Awards will be granted in 2008 to individuals or groups of individuals who have made an outstanding contribution to the development and use of geotextiles, geomembranes, related products, or associated technologies through their scientific and technological achievements.

The Awards recognize the achievements completed and/or the validity of which has been demonstrated during a four-year period preceding the year of the Award (i.e., 2004 through 2007 inclusive).

The winning entries will be publicized in *IGS News*, in a special press release on the IGS web site, and in other publications.

Timeline and Deadlines

Nominations must be received by the IGS Secretary no later than **31** January 2008.

The deadline for receipt of award candidate presentation packages is 31 March 2008. Presentations will be forwarded by the Secretariat to the Award Committee by 15 April 2008, and the Committee will meet in Shanghai, China, in June 2008 to finalize their decisions, draft citations, and report by 30 June 2008. Awards will be presented in Edinburgh, Scotland, in September 2008 at *EuroGeo4*.

The Two IGS Awards

The Young IGS Member Award

This Award is for IGS Members who are less than 36 years of age on 31 December 2007.

The IGS Award

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

Candidates

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

In the case of a group submis-

sion to the Young IGS Member Award, all members of the group must satisfy the age requirement. Any individual or group that is a candidate for the Young IGS Member Award is automatically considered for both award categories (unless requested otherwise by the candidate). However, a candidate may only receive one award for the 2004 to 2007 period.

Nominations

Candidate nominations must be typed in English on plain paper (i.e., not letterhead paper) and submitted to the IGS Secretariat (see address on page 20). The nomination should include:

a clear statement of the considered candidate's contribution

 (e.g., if the contribution is a product, provide a clear definition of the product; if it is a paper(s), book, and/or report, provide a full reference for each; if it is a construction method, provide a clear

description of the method and any references, etc.) and;

 a statement indicating the originality and significance of the candidate's contribution to the discipline (i.e., in the field of geotextiles, geomembranes, related products and/or associated technologies).

Nominations may be made by any IGS Member except for Members of the Awards Committee. Under the IGS Awards rules, any IGS Member can nominate himself/ herself for any award. The Publications Committee, Education Committee, Corporate Members Committee, and IGS Chapters are invited to make nominations.

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

IGS Awards Committee

The Awards Committee will be formed in October 2007 at the *Sar-dinia 2007* conference.

The Awards Committee comprises five IGS Members; one of whom serves as Chair. The Committee is appointed by the Council. The Members are selected so as to represent a broad cross section of geosynthetic-related technologies and experience. The IGS Secretary will attend all meetings of the Awards Committee as an observer and coordinator.

Additional Information

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

> reported by Karina McInnis IGS News Editor

IGS Student Awards: 2007 to 2008

he IGS Student Awards will continue its success with the sixth award period of 2007 to 2008. The Awards will be assigned in the year 2008, and all successful candidates will attend one of the IGS regional conferences in 2008, i.e., *GeoAmericas* 2008, *EuroGeo4* or *Geosynthetics Asia 2008*.

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

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

An IGS Student Award will be assigned to only one student per

Chapter; the selected student should be an undergraduate, M.Sc., or Ph.D. student. Students must be no older than 35 in the year the award is granted.

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

- Chapters must hold a contest or conduct a nomination process to select the student candidate to represent them.
- Chapters must notify the IGS of the name of the student selected by **31 January 2008**.

The IGS will transfer US\$750 to the student immediately upon receipt of chapter notification. IGS Student Awards recipients will be asked to submit a written report to the IGS on the regional conference and on the IGS-related conference activities. Upon receipt of the report, which is due 30 days after the conference, the remaining US\$250 will be transferred to the student.

In recognition of the IGS Student Award winners and to ensure the maximum benefit to the students, the organizers of the regional conferences are required to hold a recognition ceremony as part of the Conference program; must provide the student with a copy of the proceedings and admission to the sessions; must provide award winners with access to the technical sessions, the exhibition, and to some social events; and assist the students in locating affordable lodging near the Conference venue.

Please address questions about the Student Award Program to the IGS Secretary, Peter Stevenson.

> reported by Karina McInnis IGS News Editor

11th International Conference on Geosynthetics in 2014 Conference Organizers Sought

he IGS invites Chapters and interested organizations to express their interest in organizing and hosting the 10th International Conference on Geosynthetics (10ICG), which will be held in 2014. The following is the history of the International Conferences on Geosynthetics (ICGs):

• First ICG, Paris, France, 1977

- Second ICG, Las Vegas, USA, 1982
- Third ICG, Vienna, Austria, 1986
- Fourth ICG, The Hague, The Netherlands, 1990
- Fifth ICG, Singapore, 1994
- Sixth ICG, Atlanta, USA, 1998
- Seventh ICG, Nice, France, 2002
- Eighth ICG, Yokohama, Japan, 2006

• Ninth ICG, Brazil, 2010

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

NEW: Philippines IGS Chapter

he IGS is pleased to announce and welcome its newest chapter – the Philippine IGS Chapter, which was officially ratified in this month.

On 21 October 2006, before becoming an official IGS chapter and during the Special Course on Geosynthetics held at the Angeles University Foundation (AUF), Angeles City, Philippines, the participants

through the leadership of the Dean of the AUF College of Engineering, Dr. Lilia R. Austriaco, and the IGS-Thailand President, Dr. Dennes T. Bergado, formed the IGS Philippines. A total of 28 participants applied for membership.

The executive members of the IGS Philippines chapter are:

- President: Engr. Emilio Morales, President /Principal EM²A Partners & Co.
- Vice President for Academe: Dr. Lilia R. Austriaco, Dean AUF College of Engineering

- Vice President for Industry: Mr. Thomas C. Wintermahr, General Manager, Maccaferri Philippine
- **Secretary/Treasurer:** Engr. Paul N. Javier, College of Engineering, Angeles University Foundation
- *Director for Luzon (Industry):* Mr. Constantino Munoz
- *Director for NCR (Industry):* Mr. Peter S. Heilveil

- Director for Visayas: Engr. Michael Saga
- Director for Visayas: Engr. Arnold Gonzales
- *Director for NCR (Academe):* Dr. Roberto Soriano

reported by Lilia R. Austriaco Vice President (Academe) IGS Philippines



Seating from left to right: Dr. Lilia R. Austriaco, VP for Academe; Engr. Emilio Morales, President; Dr. Dennes T. Bergado, President IGS-Thailand and resource person; Mr. John Cowland, IGS Treasurer and resource person; Mr. Chris Lawson, Managing Director, Ten Cate Geosynthetics Asia-Pacific, Malaysia and resource person; Mr. Thomas C. Wintermahr, General Manager, Maccaferri Philippine, VP for Industry; and Engr. Paul N. Javier, Secretary/Treasurer.

XIX Italian National Conference on Geosynthetics

Held in Bologna, Italy, 25 October 2006

he XIX Italian National Conference on Geosynthetics was held on 25 October 2006 in Bologna. The conference was jointly organized by the Italian Chapter of the IGS (AGI-IGS) and the Bologna Engineers and Architects Association (ASSIABO) on behalf of ANIAI (Italian Engineers and Architects Association) with the participation of AIPIN (Italian Association for Bio-Engineering), of CTD (Italian Technical Committee on Landfills) and IWWG (International Waste Working Group) under the auspices of the Italian Environmental Ministry and Bologna University.

More than 150 participants attended the Conference, which was divided in two different sessions. The first session was chaired by Daniele Cazzuffi (IGS Past President) and focused on the use of geosynthetics in erosion control. One keynote lecture and four papers were presented.

The keynote, presented by Armando Brath (University of Bologna), emphasized the theoretical and design aspects related to erosion control. In particular, the different applications of geosynthetics in erosion control were analysed.

The four papers presented details on the design and construction problems related to some of these applications. In particular, the papers focused on laboratory and in situ investigations, on design criteria and on Italian case histories in which a wide range of geosynthetics were used mainly with erosion control function, including the spectacular case history of the Venice lagoon inlets.

The second session was chaired by Michele Maugeri (AGI-IGS President) and focused on the use of geosynthetics in land-

fills. One keynote lecture and five papers were presented.

The keynote, presented by Paolo Carrubba (University of Padova), addressed the evolution of technical regulations in Italy for the design of barrier systems in waste disposal facilities.

The five presented papers covered the topics of non-conventional barrier systems, design criteria for capping systems in seismic areas, and Italian case histories.

At the end of each session, a fruitful and interesting discussion on the different topics took place.

During the Conference, the IGS Achievement Award was given to Leonardo Sarti, for the development of innovative methods of placing



Some of the Italian Conference participants and organizers (from left to right): Pierpaolo Fantini, Michele Maugeri, Daniele Cazzuffi, Paolo Carrubba, and Raffaello Cossu.

geosynthetic filter mattresses in underwater applications, with particular reference to the system recently applied in the Venice area. The award also recognized his contributions as a Board member of the AGI-IGS, the Italian IGS Chapter, and member of the Organizing Committee of the very successful EuroGeo 2 conference in Bologna, where he played an important role in organizing the technical visit to the inland waterways in Ferrara province.

The next Italian National Conference on Geosynthetics will be held in October 2007, in Bologna.

> reported by Nicola Moraci IGS Italian Chapter Secretary

Recent IGS Activities in India

Seminar: Geosynthetics in India -Present and Future

On the completion of two decades of its services to the Indian engineering community in the field of geosynthetics, the Indian IGS Chapter organized an international seminar, Geosynthetics in India -Present and Future, in New Delhi, from 8-10 November 2006. The Seminar was held under the auspices of the IGS. To mark the occasion, a commemorative volume on the history, development, and use of geosynthetics with contributions from academia, practicing engineers, consultants, contractors, and manufacturers was published and distributed. In keeping with the development of geosynthetics around the world, contributions from 25 experts from India and abroad with extensive geosynthetic technology experience are included in the volume.

Approximately 125 delegates from India and other countries such as Hong Kong, UK, USA, Switzerland and Thailand participated in the event. The seminar was well supported by the Indian geosynthetics industry.

Past and present IGS India officers and other individuals, who have contributed to the development and promotion of geosynthetics in India, were honored for their leadership and service to the Indian IGS Chapter.

Invited presentations

The following individuals were invited and gave presentations to the seminar attendees:

- Mr. Chris Jenner, Tensar International Ltd. U.K.
- Mr. H.B. Ng, GSE Lining Technology Co. Ltd., Thailand
- Dr. Ian D. Peggs, I-Corp International, USA
- Mr. A.M. Scuero, Director, CARPI Tech S.A., Switzerland
- Mr. Dave Woods, VSL Singapore
- Prof. P.K. Banerjee, IIT Delhi
- Mr. P.L. Bongirwar, Larsen & Tubro
- Mr. Sudhir Mathur, Central Road Research Institute
- Dr. K. Rajagopal, IIT Madras
- Prof. G.V. Rao, President, Indian Chapter of IGS
- Mr. T. Sanyal, Jute Manuf. Development Council
- · Dr. U.S. Sarma, Coir Board
- Dr. Sheo Gopal, TenCate Geosynthetics, etc.
- Mr. M. Venkataraman, Garware-Wall Ropes Ltd.

Geosynthetics Course

On 8 November 2006, preceding the Seminar, an introductory course on geosynthetics was held at the CBIP Conference Hall, New Delhi, in which 90 delegates participated. During the introductory course, the following presentations were made:

- Geosynthetics Types & Manufacturing Methods: Dr. G.V. Rao, President, Indian IGS Chapter, and Professor, Civil Engineering Department, IIT Delhi
- Pavement Applications with Geosynthetics: Dr. Sharad Mhaiskar, Principal and Professor, Department of Civil Engineering, Sardar Patel College of Engineering, Mumbai, India
- Landfill Applications: Mr. M. Venkataraman, Advisor, Geosynthetics Division, Garware-Wall Ropes Ltd., India
- Erosion Control Applications: Dr. U.S. Sarma, Director, Central Coir Research Institute, India
- Erosion Control Applications: Mr. T. Sanyal, Geotechnical Advisor, Jute Manufactures Development Council, India
- Testing and Evaluation of Geomembranes: Dr. Ian D. Peggs, I-Corp International, Inc., USA

Workshop on Retaining Structures with Geosynthetics

The Indian IGS Chapter and the Indian Geotechnical Society, Chennai (Madras) Chapter, organized a workshop on "Retaining Structures with Geosynthetics" on 13 December 2006 at IIT Madras, India, on the eve of Indian Geotechnical Conference 2006 (*IGC-2006*) on "Geotechnical Engineering - Indian Experience". *IGC-2006* was held from 14-16 December 2006 at IIT Madras. The Workshop, which was sponsored by several geosynthetics companies, focused on design and construction aspects of retaining structures by drawing on international experiences and the limited Indian experience on the subject.

Fifty delegates participated in the workshop at which the individuals delivered talks:

- Dr. Richard J. Bathurst, IGS Past President, Professor, Department of Civil Engineering, Royal Military College of Canada
- Prof. F. Tatsuoka, IGS President, Professor, Tokyo University of Science, Japan
- Dr. G.V. Rao, Indian IGS Chapter President, Professor, Civil Engineering Department, IIT Delhi
- Dr. K. Rajagopal, Professor, Department of Civil Engineering, IIT Madras
- Mr. M. Venkataraman, Advisor, Garware-Wall Ropes Ltd., Geosynthetics Division
- Mr. Prashant J. Navalakha, Sargon Geosynthetics Ltd.
- Mr. Dave Woods, VSL India Pvt. Ltd.

reported by Mr. G.N. Mathur, Secretary, Indian IGS Chapter

First International Conference on New Developments in Geoenvironmental and Geotechnical Engineering Held on 9 to 11 November 2006, Incheon, Korea

ETEC-2006, the *First International Conference on New Developments in Geoenvironmental and Geotechnical Engineering* was held on 9 to 11 November 2006 in Incheon, Korea, under the auspices of the IGS, which was officially represented by IGS Treasurer John Cowland. A total of 224 individuals from 15 dif-

ferent countries participated in the Conference.

The Conference was jointly organized by the University of Incheon and the Incheon Regional Environmental Technology Development Center (IETEC), and supported by the Korean Geosynthetics Society (KGSS), Korea Geosynthetic Research Institute (KGRI), and Incheon Metropolitan City. IGS Council Member, Prof. E.C. Shin was the Conference Chair. The President of ISSMGE, Pedro S. Sêco e Pinto from the Lisbon University, Portugal was the International Promotion Committee Chair. Seven keynote sessions, comprising four technical themed sessions (Geosynthetics, Geoenvironmental



Opening ceremony (from left to right): Eun Chul Shin (Conference Chair, IGS Council Member), John W. Cowland (IGS Treasurer), Soo-Sam Kim (Vice President of Hanyang University), Braja M. Das (Dean Emeritus, California State University, USA), Young Su Chae (President, Korean Geosynthetics Society).

engineering, Geotechnical engineering, and Infrastructure), a dedicated poster exhibition, technical visiting of three construction sites were held throughout the three days of conference. The four geosynthetic-related keynote lectures and 14 technical papers were presented in the sessions. The keynote and technical sessions were well organized and well attended and were each followed by lively discussion periods.

Keynote Lectures

Seismic Design of Solid Waste Landfills and Lining System: Prof. Pedro Sêco e Pinto

Geotechnical Engineering Beyond Mechanics View: Prof. Madhira



IETEC-2006 delegates and their spouses.

Madhav (Vice President Asia of ISSMGE, India) State-of-the-Art of Analysis of Pile Groups Subjected to Lateral Loads:

Prof. Sanjeev Kumar (Southern Illinois University, Carbondale, USA) Case Histories of Geotextile Tube Construction Project in Korea Prof. Eun Chul Shin, (University of Incheon, Incheon, Republic of Korea)

Elastic Settlement of Shallow Foundations on Granular Soil-An Overview: Prof. Braja M. Das (California State University, Sacramento, USA) Innovative Techniques of Thermal and Electro-Osmotic Consolidation of Soft Bangkok Clay with PVD: Prof. Dennes T. Bergado (Asian Institute of Technology, Pathumtani, Thailand)

Geotechnical Construction of Mega Projects on Problematical Soil Ground of Kazakhstan: Askar Zhusupbekov (Eurasian National University, Astana, Kazakhstan)

In Closing

IETEC-2006 was a successful Conference that brought together representatives from all over the world to exchange knowledge and discuss the new developments in the field of geoenvironmental and geotechnical engineering practice. To quote the closing address by Pedro Sêco e Pinto:

"So first, we are all happy because this has been a very successful conference. We have very successful lectures and presentation and discussion. We have sadness because this is coming to the end of a very invaluable 2 days. We can see this by the excellent volume of proceedings and also by the technical sessions and the social program...."

> reported by Eun Chul Shin, IGS Council Member

Hellenic Chapter Seminar, Athens, Greece

Held on 11 January 2007

n 11 January 2007, the Technical Chamber of Greece and the Hellenic Geosynthetics Society held a seminar on "Geosynthetics Applications in Projects" in Athens, Greece.

More than 350 individuals participated in the Seminar, representing civil engineering and geological professionals from universities, public organizations, private consulting companies, contractors, manufacturers, and commercial suppliers.

The seminar included nine general presentations on the main functions and design of geosynthetics (separation, filtration and drainage, waterproofing, erosion protection, reinforcement, environmental and landfill design, geofoam EPS, and reflective cracking in pavements), as well as 15 selected presentations on specific topics, such as comparison of various national specifications for reinforced embankments and walls and their impact on cost, dynamic and seismic analysis of various applications on reinforced soil, design applications for the protection of archaeological ruins, geotubes, geomembrane protection, and rehabilitation of failures and embankments on soft soils.

The main conclusions of the seminar was the immediate need for the publication of a Greek geosynthetics glossary (i.e., geosynthetics terminology on geosynthetic properties and functions) to be issued by Hellenic Chapter, as well as the preparation of a national preliminary document on the principles and methods of design of reinforced embankments and walls.

reported by Anastasios Kollios, Hellenic Chapter Vice President

Geosynthetics 2007

Geo Solutions for the Environment, Transportation and Homeland Security Held on 16-19 January 2006, Washington, DC, USA

he Geosynthetics 2007 conference and trade show was held 16 to 19 January 2006 in Washington, DC, under the auspices of the Industrial Fabrics Association International (IFAI), the Geosynthetic Materials Association, the North American Geosynthetics Society, Geosynthetics Institute, and the IGS.

There were more than 1,000 participants and 76 exhibits, more than 60 papers and presentations, 9 short courses, 4 special sessions, 3 keynotes, and 2 panels – all in just 4 days.

The event marked a high point on the geosynthetics community's calendar. The conference was billed as a "3-in-1" event, with two days devoted to an Environmental Conference, two days devoted to a Transportation Conference, plus a unique GRI 20th Anniversary Conference with a focus on homeland security.

The Conference launched on 16 January with all-day short courses on the environment. The courses were followed by a Plenary Session/J.P.Giroud Lecture presented by Chris Lawson: "Geotextile Containment for Hydraulic and Environmental Engineering" and chaired by Daniele Cazzuffi, IGS Past President.

The Trade Show Welcome Party on the evening of 16 January featured a presentation by former congressman, HUD secretary, and vice presidential candidate, Jack Kemp. His company, Kemp Partners, along with the firm of Whitmer and Wor-



Keynote Lecturer: David Daniel (University of Texas, Dallas), "Engineering Lessons Learned from Levee Failures in New Orleans." (Photo courtesy of geosynthetica.net)

rall, are leading the government relations efforts for the Geosynthetic Materials Association (GMA).

The Environment Conference continued on 17 January with a kickoff keynote by David Daniel: "Engineering Lessons Learned from Levee Failures in New Orleans."

A full day of technical sessions followed, capped by an afternoon panel discussion led by Dr. Daniel: "Uncertainties Applied to Real World Geosynthetic Design."

The Geosynthetics Research Institute's 20th Anniversary Conference on 18 January ran concurrently with the first day of the twoday Transportation Conference. The GRI event featured the presentation of 18 papers plus a noontime luncheon and Technology Café organized by geosynthetica.net.

Day 1 of the Transportation Conference included four short courses and the day concluded with a Fiesta Cancún reception to showcase *GeoAmericas 2008.* The first Pan American Geosynthetics Conference and Exhibition will be held 2 to 5 March 2008, at the Hilton Cancún Beach & Golf Resort.

Day 2 of the Transportation Conference on January 19 started with a keynote address from Richard Capka, Administrator of the Federal Highway Administration: "The Future of Geosynthetics in Transportation." A 90-minute panel discussion followed, moderated by Corey Bobba of the FHWA.

Morning and afternoon Transportation Conference technical sessions proceeded throughout Friday, 19 January. A closing wine and cheese reception concluded the week for *Geosynthetics 2007*.

NAGS Student Paper Winners

Effect of Wet-Dry Cycles on Capillary Break Formation in Geosynthetic Drainage Layers *John McCartney, Doctoral Candidate, University of Texas at Austin* Development of Low Altitude Aerial Photometry Techniques to Quantify Geomembrane Wrinkles *Melissa Chappel, Graduate Student, R.W.I. Brachman and W.A. Take, GeoEngineering Centre at Queen's-RMC*

Assessment of Geotextile Filament Properties and Size Variation During Interface Shearing Duhwan Kim, Graduate Research Assistant, Georgia Institute of Technology

reported by Ron Bygness, Editor, Geosynthetics

Czech Republic IGS Chapter Seminar Held on 30 and 31 January 2007, Prague and Brno

he theme of the seminar was "New Trends in Geosynthetics Applications" and took place on 30 January 2007 in the Novodvorska Centre in Prague and on 31 January 2007 at the Faculty of Civil Engineering VUT in Brno.

More than 120 participants attended in Prague and 100 participants in Brno. Seven professional geosynthetics firms took part in the concurrent exhibition.

The seminar program and technical content (including translation services) were at a high level and there was enthusiastic participation by all attendees. All participants received a CD containing the seminar lectures and the technical journal *Geotechnika* (Issue 1, 2007), which focuses on geosynthetics.

Seminar Programme

- Opening: Roman Korolevyč (Juta, a.s., Czech Republic)
- Natural noise-barriers from reinforced soils: Jürgen Gruber (Ten-Cate Geosynthetics Austria GmbH, Austria)
- Application of geotextiles and geogrids with very low strain and with improved resistance: Martin

Vaníček (Geosyntetika, s.r.o., Czech Republic)

- Creep features and long term design strength of geogrids: N.E. Wrigley (Newgrid Ltd., Great Britain)
- Foreign experiences from measurements of deformation in reinforced soil structures: Lumír Míča (VUT Brno, Czech Republic)
- Soil reinforcement progressive projects with geosynthetics: Sven Schröer (Huesker GmbH, Germany)
- Geosynthetics behaving in road bases: Petr Hubík (Geomat s.r.o., Czech Republic)
- Design and experiences with geosynthetics reinforcements over piles: Jürgen Gruber (TenCate



Seminar speakers and executive committee of the Czech IGS Chapter. Back (from left): Jürgen Gruber, Martin Vaníček, Sven Schröer, Petr Komárek (Chair Czech IGS), N.E. Wrigley, Jiří Pečenka, Roman Korolevyč, Lumír Míča, Petr Hubík (Vice Chair Czech IGS). Front (from left): Jiří Vaníček, Dalibor Grepl.

Geosynthetics Austria GmbH, Austria)

- Verification and diagnostic of geosynthetics efficiency: Dalibor Grepl (Kordárna, a.s., Czech Republic)
- Closing speech: Jiří Pečenka, Seminar Chair, Czech IGS Chapter, Polyfelt Geosynthetics

reported by Radovan Chvíla

10th German Conference on Geosynthetics, FS-KGEO 2007 Held on 15 February 2007, Munich, Germany

he German special section of the German Geotechnical Society (DGGT) and the German IGS Chapter organized the 10th German Conference on Geosynthetics (FS-KGEO 2007) on 15 February 2007 at the Technical University of Munich. It was the first time that this conference was held under the auspices of IGS, which is a reflection of the event being an international conference for all german-speaking countries.

Immediate Past President of the IGS, Dr. Daniele Cazzuffi, was

present and opened *FS-KGEO* 2007 on behalf of the IGS. Daniele presented the IGS Service Award to Prof. Rudolf Floss for his outstanding contribution to the IGS. Prof. Floss initiated the founding of the special section "Kunststoffe in der Geotechnik" within DGGT in 1988 and the German IGS Chapter in 1993. He was an IGS Council member from 1986 to 1994 and was IGS Vice President from 1990 to 1994. In addition to organising the biannual national geosynthetics conferences, he organized *EuroGeo3* in Munich in 2006. It was a moving award presentation and resulted in a standing ovation in honour of Prof. Floss.

Also present at the Conference were the German winner of the IGS Achievement Award, Dr. Hartmut Schröder, and the German winner of the IGS Students Award, Dr. Florian Bussert, who were both presented with their award at the 8th *ICG* in Yokohama, Japan.

In total, there were 250 conference attendees from Germany, Switzerland, Austria, Italy, Hungary,



From left to right: Dr. Schröder (IGS Achievement Award), Prof. Heerten (Vice Chair of the German IGS Chapter), Dr. Bussert (IGS Student Award recipient), DI Gerhard Bräu (Vice Chair of the German IGS Chapter), Dr. Cazzuffi (Past President of IGS), Prof. Floss (IGS Service Award recipient), Prof. Ziegler (Chair of the German IGS Chapter).

Czech Republic, and Romania. The Conference program featured geosynthetics regulations as well as results of research works and practical applications. The main Conference topics were the behaviour of geosynthetics under dynamic loadings, reinforced embankments over piles, and the measurement of reinforced steep slopes. The program which will be available in May 2007 — the availability of which will be announced on the webpage.

the presenta-

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proceedings,

tions will be

The Conference was accompanied by a technical exhibition, which was well attended, partly due to the conference *Geotechnik-Tag 2007* (a geotechnical conference organized by Prof. Vogt, head of TU München



Prof. Floss (left) receives the IGS Service Award from Dr. Cazzuffi.

- Zentrum Geotechnik), which was being held at the same time and attracted more than 500 participants most of them new to the geosynthetics field.

The next German geosynthetics conference will be FS-KGEO 2009.

reported by Gerhard Bräu IGS Council Member

Past Editor of *G&G* and Current Editor of *GI* Terry S. Ingold, is Retiring

by J.P. Giroud, Chairman of the Editorial Board of GI

here are institutions that seem to be made to last forever. Terry Ingold editing a leading international journal on geosynthetics has been an integral part of the landscape of the geosynthetics discipline for more than two decades. It was, therefore, quite a shock for me, in the summer of 2006, when Terry indicated that, as part of a planned reduction of his activities, he had decided to retire from Editor of *Geosynthetics International*.

Terry Ingold has been Editor of Geotextiles & Geomembranes from 1984 to 1994 and Editor of Geosynthetics International from 1994 to 2006. These 22 years of dedication to the leading journals on geosynthetics are probably a rare event in any discipline. Under Terry's editorship, more than 600 papers were published in *Geotextiles* & *Geomembranes* (1984-1994) and *Geosynthetics International* (1994-2006). As a result, a common denominator of those interested in the highest level of geosynthetics engineering is that all have read papers edited by Terry Ingold or under his responsibility.

Not only was Terry the Editor of the two journals mentioned above, but he also participated in the creation of these journals, which required a considerable amount of work. The two journals are official journals of the International Geosynthetics Society (IGS) and Terry's action has been remarkably consistent with the first mission of the IGS, which is the dissemination of information. Therefore, he more than deserved the prestigious IGS Plaque for eminent service to our discipline that was awarded to him in 1994. It should be noted that, in 23 years of IGS history, the IGS Plaque has



been given only five times, and Terry was the second to be awarded the Plague.

One could think that Terry had no time left for other professional activities. In fact, his dedication to our discipline is such that he found the time and energy to participate in the work of numerous committees: Ground Engineering Group Board of the British Institution of Civil Engineers; PIANC Geotextiles in Flexible Armoured Revetments; British Standards Institution TCM/35 Testing of Geotextiles; British Standards Institution CSB/56 Reinforced Soil; RILEM TC/47 Testing of Geotextiles; RILEM TC/103 MHG Testing of Geomembranes; and RILEM TC/ 97 GCR Geotextiles for Crack Prevention in Roads. Furthermore, he currently chairs the working group of CEN TC/288 preparing the European Standard for the construction of reinforced soil structures.

It would take another article to present Terry's professional career. Here I will just mention a few milestones: masters degree and the Diploma of Imperial College in London; eleven years with the John Laing Group where he was Chief Engineer of Ground Engineering Limited; PhD awarded by the University of Surrey for his research on reinforced soil; Visiting Professor of Civil Engineering at Queens University Belfast; and Honorary Professor of Geotechnical Engineering of The University of Birmingham. His work includes the publication of three books and over one hundred technical papers mainly relating to geosynthetics and reinforced soil. He was awarded the Henry Adams Diploma of the British Institution of Structural Engineers, in 1982 and 1983, and in 1998 he was co-recipient of the IGS Award for the development of BS 8006, the British Standard code for reinforced soil.

Terry would not have retired from the editorship of *Geosynthetics International* if he believed that the Journal would suffer from his retirement. Richard Bathurst has worked closely with Terry Ingold, as Co-Editor, then Editor, for 10 years. In the past two years, as Terry was progressively reducing his activities, Richard has progressively taken over. He is now fully in charge, and I can say that, with Richard at the helm, *Geosynthetics International* is in very good hands. The backlog is excellent and new papers are submitted on a regular basis. The good health of *Geosynthetics International* was evident at the excellent Editorial Board meeting held in Yokohama, Japan, in September 2006.

All members of the geosynthetics discipline are indebted to Terry. The best way to express our gratitude is to continue Terry's legacy by working together — authors, reviewers, readers, the Editor and the members of the Editorial Board, and the publisher — to make sure that *Geosynthetics International* will continue to attract and publish the best papers in the field of geosynthetics engineering.

Thank you Terry, and you can count on us to continue your good work.

Geo-Environmental Engineering 2007 22-24 May 2007, Grenoble, France

eo-Environmental Engineering 2007 (7th Japan-Korea-France Joint Seminar on Geo-Environmental Engineering) will take place from 22 to 24 May 2007 at the Laboratoire d'étude des Transferts en Hydrologie et Environnement (LTHE), Grenoble University, France.

The Conference is being organized by University Joseph Fourier (France), Kyoto University (Japan), and Seoul National University and Korea Institute of Construction Technology (Korea) and held under the auspices of the ISSMGE (TC5) and the IGS, with the support of the Region Rhône-Alpes, Japanese Geotechnical Society (JGS,) and the Society of Materials and Science (SMSJ).

The Conference provides an international forum to discuss problems of waste management, remediation of contaminated lands, and related topics. Involving actors from the public and private sectors, it aims at providing an overview of these fields of interest both from the scientific and the engineering point of view. The main goal is to bring together experience and research from Asia and Europe.

Conference Topics

Waste management

- Landfill liner and cover
- Geotechnical reuse of solid waste
- Environmental assessment

Risk assessment and management

Monitoring of contaminated sites

Cleanup technologies and ground improvement

Lessons from the field and case studies

Important Dates

1 April 2007: Abstract due 30 April 2007: Full paper due

Conference papers will be peer reviewed by geo-environmental

engineering experts. Selected papers will be published in the conference proceedings and will be available to delegates at the time of registration. A selection of outstanding contributions will be edited afterward by an international publisher.

Registration and Contact

The online registration tool is available at: www.floralis.fr/congres/ ?congres=15&I=EN

Contact: Jean-Pierre Gourc, gourc@ujf-grenoble.fr

Chairpersons of Organizing Committee

Masashi Kamon, Kyoto University, Japan

Junboum Park, Seoul National University, Korea

Ha-lk Chung, Korea Institute of Construction Technology, Korea

Jean-Pierre Gourc, University of Grenoble, France

Sardinia 2007

11th International Waste Management & Landfill Symposium 1-5 October 2007, S. Margherita di Pula, Cagliari, Italy

ardinia 2007 is being held in S. Margherita di Pula, Cagliari, Italy, 1 to 5 October 2007. The Conference is being organized by the International Waste Working Group and the Environmental Sanitary Engineering Centre and is being held under the auspices of the IGS.

For Information - Contact

www.sardiniasymposium.it/ SARDINIA_eng/index_eng.html

General Manager: eurowaste@tin.it

General Info: info@sardiniasymposium.it



IS Kyushu '07 5th International Symposium on Earth Reinforcement Fukuoka, Japan, 14-16 November 2007

he *5th IS Kyushu* will be held in Fukuoka, Japan, on 14 to 16 November 2007 under the auspices of the IGS.

Topics

Reinforcing Materials

- Geosynthetics
- Steel materials
- New materials
- Natural materials
- · Composite materials and others

Contents

Testing methods

- Model tests (1g and centrifuge) and full scale tests
- Numerical analyses
- Design methods (performance based design and others)
- Construction technologies
- · Case histories and others

Recent and New Topics

- Disaster prevention technologies (for earthquake, heavy rain and other hazards)
- Geo-environmental technologies (reinforcing landfill structure, recycling geomaterials and others)



- Combined technologies (standard reinforcing methods with other methods)
- New and classical technologies and others

Contact

Jun Otani, Chair

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International Symposium on Geotechnical Engineering, Ground Improvement & Geosynthetics for Human Security & Environmental Preservation Bangkok, Thailand, 6-7 December 2007

he International Symposium on Geotechnical Engineering, Ground Improvement & Geosynthetics for Human Security and Environmental Preservation will be held in Bangkok, Thailand on 6 to 7 December 2007. The Symposium is being held under the auspices of the IGS and is co-sponsored by TC39 (Geotechnical Engineering for Coastal Disaster Mitigation and Rehabilitation) and TC4 (Earthquake Geotechnical Engineering and Associated Problems).

The Symposium will cover topics in human security as related to the use of geosynthetics for mitigation and rehabilitation of natural hazards such as landslides, earthquake liquefaction, tsunamis, and typhoons.

Contact Information

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- Sonny Montalbo, Manager, acsig@ait.ac.th
- Cheryl Esin, Program Assistant, esin@ait.ac.th
- Orfa Kidweng, Research Assistant, igs-thailand@ait.ac.th

GeoAmericas 2008 Update First Pan American Geosynthetics Conference & Exhibition 2-5 March 2008, Cancún, Mexico

eoAmericas 2008 will be the first regional conference organized by the IGS and the Industrial Fabrics Association (IFAI).

The Conference continues to gather steam. The call for abstracts closed at the end of January 2007 — more than 300 abstracts were received. These, combined with the 80+ Session and Training Lecture Proposals received last fall, are leading to an outstanding Conference program! Among the event's highlights:

- 13 accepted 1.5 hr training lectures will be conducted in English
- 10 accepted 1.5 hr training lectures will be conducted in Spanish
- 8 full-day short courses offering training at introductory, experienced and veteran levels
- 3 days of Technical Sessions
- Invited paper sessions including Life's Work Sessions and Journal Sessions

- Student paper session
- GRI 21 Hot Topics in Geosynthetics: Geosynthetics in Agriculture and Aquaculture

For more information

Visit the Conference Web site: *www.geoamericas.info*

17-20

June '08

Important Dates to Remember

Abstracts due: 31 May 2007

Geosynthetics Asia 2008 — Abstracts Due 4th Asian Regional Conference on Geosynthetics 17-20 June 2008, Shanghai, China

he 4th Asian Regional Conference on Geosynthetics (Geosynthetics Asia 2008) will be held from 17 to 20June 2008 at the Shanghai Exhibition Center, Shanghai, China. The Conference theme is Geosynthetics in Civil and Environmental Engineering.

The Conference is being organized by the Chinese IGS Chapter, the Chinese Technical Association on Geosynthetics under the auspices of the IGS, the Chinese Hydraulic Engineering Society and is supported by the Shanghai Investigation Design & Research Institute and Zhejiang University.

Contact

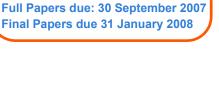
E-mail: ccigs@4acg-2008sh.com Web site: www.4acg-2008sh.com

EuroGeo4 — Abstracts Due 4th European Geosynthetics Conference Edinburgh, Scotland, 7-10 September 2008

he 4th European Geosynthetics Conference, EuroGeo4, will be held at the Edinburgh Conference Centre, Heriot-Watt University, Scotland from 7 to 10 September 2008. The Conference is being organized by the UK IGS Chapter under the auspices of the IGS and is supported by the British Geotechnical Association, Scottish Geotechnical Group, Ground Forum and the Engineering Group of the Geological Society.

Conference Format

- *Technical Sessions:* There will be three themed keynote lectures, with three parallel sessions held over 3 days, together with a prestige lecture on geosynthetics. Poster sessions will be held during the conference where authors will be available to answer questions and discuss particular issues related to their papers.
- Training Course: A separate training course will be held in parallel



GEOSYNTHETICS

ASIA 2008



with the conference to provide education on the use of and design with geosynthetics in civil engineering applications.

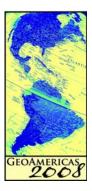
• Exhibition

Contact

Web site: www.eurogeo4.org

Important Dates to Remember

Abstracts due: 30 August 2007 Full Papers due: 30 April 2008



Shanghai China

Geotextiles and Geomembranes: Best Papers in 2005

eotextiles and Geomembranes is an Official Journal of the IGS, and IGS members have free access to papers published in the journal since 1995. It is one of the two primary archival outlets for papers published on geosynthetics and enjoys and excellent flow of high quality papers being submitted to Geotextiles and Geomembranes.

Following the Editorial Board meeting held in Yokohama, Japan, in September 2006 it was decided that it would be desirable to recognize some of the best papers published in Geotextiles and Geomembranes. We decided to start with Volume 23. The Editorial Board was charged with selecting what they considered to be the "Best Paper" published in Geotextiles and Geomembranes in 2005. Papers were considered for their contribution to the discipline in terms of providing significant new insights and/or of being of high



potential impact on the discipline. All Technical Articles except those co-authored by the Editor were eligible. Following a rigorous review of the papers I am pleased to announce the Best Paper for 2005 was judged to be:

"Reinforcement loads in geosynthetic walls and the case for a new working stress design method" by Richard J. Bathurst, Tony M. Allen and Dave L. Walters, *Geotextiles and Geomembranes*, Vol. 23, No. 4, 287-322. Two papers were tied for runnerup and deserve Honourable Mention as being judged to be one of the three best papers published in *Geotextiles and Geomembranes* in 2005. They were:

"Landfill lining stability and integrity: the role of waste settlement" by D.R.V. Jones and Neil Dixon, *Geotextiles and Geomembranes*, Vol. 23, No. 1, 27-53.

and

"Strength reduction factors due to installation damage of reinforcing geosynthetics" by Rudolf Hufiness, Rudolf Rüegger, Daniel Flum and Ivo J. Sterba, *Geotextiles and Geomembranes*, Vol. 23, No. 5, 401-424.

Congratulations to all of the authors for their very significant contribution to the geosynthetics discipline.

reported by R. Kerry Rowe, Editor, Geotextiles and Geomembranes

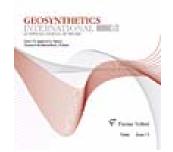
Geosynthetics International: Best Papers in 2005

eosynthetics International is an official journal of the IGS and serves the mandate of the society to disseminate important technical developments to its members.

At the Editorial Board meeting held on 21 September 2006 in Yokohama, Japan, it was decided to select the best paper published in *Geosynthetics International* in each year starting with Volume 12 (2005). The decision was also made that this selection would be made by the members of the Editorial Board serving at the time of the award year.

We are delighted to announce that the "Best *Geosynthetics International* Paper for 2005" is:

"Evaluation of base-reinforced pavements using a heavy vehicle simulator" by Steve W. Perkins and Edel R. Cortez, *Geosynthetics International*, Vol. 12, No. 2, 86-98.



The voting by the members of the Editorial Board resulted in two other outstanding papers tied for second choice. Hence, we decided that these papers deserve to be recognized as "one of the three best papers published in *Geosynthetics International* in 2005". They are:

"Large-scale tests for leachate flow through composite liner due to geomembrane defects" by J.-C Chai, N. Miura, and Shigenori Hayashi, *Geosynthetics International*, Vol. 12, No. 3, 134-144. "Dilatant stresses at the interface of granular fills and geogrid strip reinforcements" by Marolo C. Alfaro and Yadav P. Pathak, *Geosynthetics International*, Vol. 12, No. 5, 239-252.

We thank the members of the Editorial Board for participating in the best paper selection process and congratulate the authors of these excellent papers. Each paper reflects the high standards of the Journal and is an important contribution to our geosynthetics discipline.

All IGS members have free access to these papers and all other papers published in *Geosynthetics International* as a benefit of membership.

reported by R.J. Bathurst, Editor, T.S. Ingold, Editor (1994-2006), and J.P. Giroud, Chairman of the Editorial Board, Geosynthetics International

Geosynthetics International

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

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

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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**

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Geotextiles & Geomembranes An Official Journal of the IGS: Electronic Journal Free to IGS Members

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

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

Papers should be submitted electronically as a Microsoft Word or pdf file to: kerry@civil.queensu.ca. Please ensure the text is double spaced, there is an abstract with keywords included, and tables and figures are at the end following the text. Please check the Journal's instructions for authors for additional information regarding submissions. The Journal strives to provide the authors with quick, constructive reviews, and we appreciate the author's hard work in addressing these comments and quick return of revised papers.

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

For instructions on how to activate access and create your personal account, go the 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\$162 for six issues. IGS Corporate Members may subscribe at a 63% discount: US\$377 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

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/Journals_GG.htm

CORPORATE PROFILE

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

GARWARE-WALL ROPES LTD, INDIA



Garware-Wall Ropes Ltd was established in 1976 and is one of the largest manufacturers of synthetic cordage and netting in the world with sales of 52 million USD. We are an ISO 9001:2000 certified organization renowned for the quality of our products. Approximately 45% of our products are exported to over 50 countries including USA and Europe.

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Geosynthetics Division

The Geosynthetics Division of Garware-Wall Ropes Ltd. was established in 1998 and within a short span has emerged as a leading manufacturer and supplier of geosynthetics in India with a wide product range. We are an engineered solution provider using geosynthetics products.

We operate in following application areas: Roads, Landfill Systems, Ground Improvement, Coastal Protections, Railways, and Surface Erosion Control.

We manufacture a range of products including Polymer Rope Gabions and Mattresses, Polymer Rope Boulder Nets, Steel Wire Rope Boulder Nets, Woven Geotextiles, Erosion Control Mats (Garmat), and Anco Drains.

We are one of India's leading manufacturers of high-strength woven geotextiles (5 m width) and we are continuously developing geotextiles for new applications. Products such as Polymer Rope Gabions and Steel Wire Boulder nets have been developed in house and have proven to be an effective solution in their respective application areas.

We also source and distribute geogrids, nonwoven geotextiles, geomembranes, geosynthetic clay liners, geo-composites, etc., from leading manufacturers in the USA, Germany, and so on. We are the exclusive distributors in India for non-woven geotextiles from Synthetic Industries, USA; Carbofol HDPE geomembrane, Bentofix GCLs, and Secudrain drainage nets from Naue Gmbh, Germany; and geogrids from Tensar International UK.

Garware-Wall Ropes Ltd Geosynthetics Division has qualified civil engineers with vast experience in the field of geosynthetics. Our design wing has the competence to carryout detailed engineering for a wide range of applications.



We also have a team of highly skilled supervisors and technicians to supervise installations. We have the necessary resources to offer complete solutions to problems in diverse areas such as coastal protection, river training, landfills, soil and rock slope stabilization, reinforced soil walls and slopes, ground improvement, land reclamation, roads, and rail trackbed stabilization. In some areas, such as landfills and rock-fall protection, we are fully equipped to execute projects on a turnkey basis.

For More information

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Garware-Wall Ropes has been a Corporate Member of the IGS since 2006.



CONFERENCES SYMPOSIA WORKSHOPS

3rd Asian Conference on Unsaturated Soils Nanjing, China 21-23 April 2007 Contact: Dr Abraham C.F. Chiu E-mail: geotech2@hhu.edu.cn www.geohohai.com/english/unsat.htm

16th Southeast Asian Geotechnical Conference Subang Jaya, Selangor Darul Ehsan 8-11 May 2007 Contact: Conference Secretariat E-mail: 16seagc@iem.org.my www.16seagc.com

4th Int. Conference on Sustainable Water Resources Management Kos, Greece 21-23 May 2007 Contact: Zoey Bluff E-mail: zbluff@wessex.ac.uk www.wessex.ac.uk/conferences/2007/ waterresources07/index.html

Seventh GeoEnvironmental Engineering Seminar Grenoble, France 22-23 May 2007 Contact: Jean-Pierre Gourc E-mail: gourc@ujf-grenoble.fr www.floralis.fr/congres/ ?congres=15&J=EN

1st Middle European Conference on Landfill Technology Budapest, Hungary 31 May - 1 June 2007 E-mail: ISSMGE@ymmfk.szie.hu

WasteTech 2007 Moscow, Russia 29 May-1 June 2007 Contact: Sergey Malygin E-mail: s.malygin@sibico.com w2007.sibico.com/

18th European Young Geotechnical Engineers Conference Ancona, Italy 17-20 June 2007 E-mail: e.fratalocchi@univpm.it

Second Portuguese Seminar on Geosynthetics Lisbon, Portugal 19-20 June 2007 Contact: Madalena Barroso E-mail: mbarroso@Inec.pt

IV International Conference on Earthquake Geotechnical Engineering Thessaloniki, Greece 25-28 June 2007 Contact: Prof. Kyriazis Pitilakis E-mail: kpitilaki@civil.auth.gr www.4icege.org

13th Panamerican Conference on Soil Mechanics and Geotechnical



Engineering Porlamar, Nueva Esparta, Venezuela 16-20 July 2007 E-mail: svdg@telcel.net.ve svdg.org.ve

First Sri Lankan Geotechnical Society (SLGS) International Conference on Soil and Rock Engineering Galadari Hotel, Colombo, Sri Lanka 7-11 August 2007 Contact: Pinnaduwa H.S.W. Kulatilake E-mail: kulatila@u.arizona.edu www.slgssr2007.org

14th European Conference on Soil Mechanics and Geotechnical Engineering Madrid, Spain 24-27 September 2007 Contact: secretary@ecsmge2007.org www.ecsmge2007.org

Sardinia 2007 11th International Waste Management & Landfill Symposium S. Margherita di Pula, Cagliari, Italy 1-5 October 2007 Email: info@sardiniasymposium.it www.sardiniasymposium.it

10th Australia-New Zealand Conference on Geomechanics Brisbane, Queensland, Australia 21-24 October 2007 E-mail: anzgeo2007@ccm.com.au www.anzgeo2007.com

60th Canadian/8th CGS_IAH Conference Ottawa, Ontario, Canada 21-24 October 2007 Contact: Dr. Sai Vanapalli E-mail: vanapall@eng.uottawa.ca www.genie.uottawa.ca/~vanapall/ conference/index.html

IS Kyushu '07 : 5th International Symposium on Earth Reinforcement Fukuoka, Japan 14-17 November 2007 Contact: Jun Otani E-mail: junotani@gpo.kumamoto-u.ac.jp

14th African Regional Conference on Soil Mechanics and Geotechnical Engineering Yaoundé, Cameroon 26-30 November 2007 www.CRA-YDE-2007.org.cm

Int. Symposium on Geotechnical Engineering, Ground Improvement & Geosynthetics for Human Security & Environmental Preservation Bangkok, Thailand 6-7 December 2007 Contact: Prof. Dennes Bergado E-mail: bergado@ait.ac.th

SHORT COURSES EXPOSITIONS TRADE SHOWS

13th Asian Regional Conference on Soil Mechanics and Geotechnical Engineering Kolkata,India 10-14 December 2007 Contact: Dr. N. Som E-mail: nitin_som@vsnl.com www.13arc2007.com/

GeoAmericas 2008

First Pan American Geosynthetics Conference and Exhibition Cancun, Mexico 2-5 March 2008 E-mail: jmrutledge@ifai.com www.geoamericas.info

2nd International Conference on Geotechnical Engineering for Disaster Mitigation and Rehabilitation Nanjing, China 16-19 May 2008 Contact person: Dr. An Deng E-mail: gedmar08@hhu.edu.cn

Geosynthetics Asia 2008 4th Asian Regional Conference on Geosynthetics Shanghai, China 17-20 June 2008 E-mail: ccigs@4acg-2008sh.com www.4acg-2008sh.com

6th International Conference on Case Histories in Geotechnical Engineering Washington, D.C., USA 11-16 August 2008 Contact: Shamsher Prakash E-mail: prakash@umr.edu www.6icchge2008.org

Global Waste Management Symposium Copper, Colorado, USA 7-9 September 2007 Contact: Rita Ugianskis E-mail: rita.ugianskis@penton.com www.wastesymposium.com

EuroGeo4 The Fourth European Geosynthetics Conference Edinburgh, Scotland, UK 17-19 September 2008 E-mail: eurogeo4@eurogeo4.org www.eurogeo4.org/

XVII International Conference for Soil Mechanics and Geotechnical Engineering Alexandria, Egypt 5-9 October 2009 www.2009icsmge-egypt.org/

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The International Geosynthetics Society



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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.

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