# ICS NEWS 18

### NEWSLETTER OF THE INTERNATIONAL GEOSYNTHETICS SOCIETY

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

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# Call for Candidates for the IGS Council Term 2000 to 2004 Deadline for Applications: 31 January 2000

by Professor R.J. Bathurst, IGS President

he bylaws of the IGS prescribe that up to half of the Council be elected every two years. An election, by postal ballot, will therefore be held in May 2000 in order to elect Members to the IGS Council for a four-year term, starting in July 2000.

The eight IGS Council Members, whose term of office expires in June 2000, are:

- Prof. T. Akagi (Japan)
- Dr. B.R. Christopher (USA)
- Dr. H-S. Chung (Korea)
- Mr. C. Lawson (Malaysia)
- Dr. J. Lafleur (Canada)
- Mr. J. Paul (UK)
- Mr. A.M. Scuero (Italy)
- Dr. C.V.J. Varma (India)

Under the IGS bylaws, Prof. R.J. Bathurst and Ing. D.A. Cazzuffi are automatically Council Members in their capacity as President and Vice-President, respectively. They do not stand for re-election in 2000. The IGS bylaws stipulate that a Council Member may serve two consecutive terms. Hence, Dr. Chung, Dr. Lafleur, Mr. Paul, Mr. Scuero, and Dr. Varma are eligible for re-election. Mr. Paul and Dr. Varma have declared their intent to stand for re-election.

There are eight Council Members to be elected. 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. The next IGS Council meeting, following

the election of new Council Members, will be held in conjunction with the Second European Conference on Geosynthetics (EuroGeo2) in Bologna, Italy, 15 to 18 October 2000. At least three additional meetings will be held for those Members whose terms expire in 2004. Typically these meetings are held in Asia, Europe, and North America.

Signed letters of application together with a biographical note (not exceeding 12 lines) should reach the IGS Secretary not later than 31 January 2000. 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. Biographical notes that do not exceed 12 lines will be published in the March 2000 issue of *IGS News*, on the IGS World

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Wide Web home page, and in the postalballot package sent to each IGS Member.

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.

Should you need further information, please contact the IGS Secretary, Mr. P. Stevenson, or the IGS President, Prof. R.J. Bathurst (see addresses on p. 15).

# Dr. David Elton Passes the IGS News Editorship to Ms. Karina Labinaz

GS News is the principal means of communication of the IGS to inform our Members and IGS Corporate Members of the activities of the IGS and its Chapters. Consequently, the IGS News Editor is responsible to gather information, to produce the Newsletter, and to ensure its timely distribution to the Membership three times a year.

Fortunately for the IGS, Dr. David Elton has carried out this task with skill, enthusiasm, and great humour for the last five years. The IGS was also very lucky that Dr. Elton agreed to serve in this capacity for one more year beyond his original term of four years.

The IGS owes Dr. Elton a vote of thanks for his long service to the IGS. However, it would be remiss of me not to recognise the contribution of the entire Elton family to the production

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Dr. Dave Elton, former Editor of IGS News

of the Newsletter. Dr. Elton's wife, Linda, and their delightful family (Adrian, Mark, Jennifer, Chris, and Eric) were enthusiastic typists, business managers, "envelope stuffers", and editor trainees during this time. I fondly recall two occasions when I was invited to the Elton home and participated in detailed discussions of the activities of the IGS by even these youngest members of our IGS fraternity who had clearly read each issue of the Newsletter and were intimately familiar with the workings of our Society! One of them even knew the first four initials of the Immediate Past President. I look forward to recognising the contributions of the entire Elton clan in front of our Members at the IGS-NAGS Chapter meeting to be held in conjunction with Geosynthetics 2001 in Portland, Oregon, USA in February 2001.

It is a great pleasure to introduce our new *IGS News* Editor. The IGS is very fortunate that Ms. Karina Labinaz has agreed to serve as our new Editor for the next four years beginning with this issue. Ms. Labinaz has a degree in Geoenvironmental Engineering from Queen's University in Kingston, Ontario, Canada and has worked with the Geotechnical Research Group at the Royal Military College of Canada on many projects with a geosynthetics component.

Ms. Labinaz is known to many of our IGS Members as the Production

Editor of the IGS journal Geosynthetics International since 1995. She has carried out her duties with the Journal in an exemplary manner. The IGS is indeed fortunate that her geotechnical, editorial, and technical experience is now available to continue the tradition of excellence that all IGS Members expect of the Newsletter.

All members are encouraged to assist Ms. Labinaz in her new position by submitting articles to *IGS News*. Articles on geosynthetics meetings, awards to members, conferences, developments, and case histories are welcome. Photographs are particularly welcome. Please contact Ms. Labinaz at the address on p. 15 of this issue.

reported by Richard J. Bathurst IGS President



Ms. Karina Labinaz, new Editor of IGS News

# Service Award for IGS Members Approved at the April 1999 Council Meeting

urrently, the IGS has two methods of recognising special service to

the IGS: honorary membership; and the IGS plaque.

These awards are seldom given. In the case of honorary membership, the Award is reserved for Members who have served the IGS in an outstanding manner, and the service has to be of overall critical importance to the IGS. The IGS plaque is given to a Member who has played an important role in the Society in general.

A new awards category has been created. Honorary membership and the IGS plaque will remain as the top awards, while, at the same time, other Members can be recognised for their service to the IGS.

The qualification for the Service Award is one of the following:

- long-time service to the IGS as an Officer;
- long-time service to the IGS as an IGS Council Member, while during that time tasks have been performed that are of utmost importance to the IGS; and
- Members who have carried out tasks for the IGS that have been decisive

for the functioning and future of the IGS.

The IGS Council approves the nomination of an individual based on the advice of the IGS Officers.

The IGS Service Award will consist of a gold IGS logo pin, in addition to an award diploma. The pin will be approximately 10 mm wide, consisting of the IGS logo.

reported by Wim Voskamp IGS Treasurer

# Results of IGS Postal Ballot - Society Bylaws

n 23 July 1999, the Secretariat mailed a postal ballot concerning the bylaws of the Society to the Membership. All nine items on the ballot were approved by the Membership. The number of valid ballots received by the 15 September 1999 deadline was 633 or 40% of the Society's Membership.

In general, the ballot addressed several bylaw problems that required correction for the proper operation of the Society. For example, it has been in-

creasingly difficult to establish a quorum at the General Assemblies. The ballot reduced the requirement for a quorum from 40% of the Membership to 25%. This will reduce the need to close a General Assembly for the lack of a quorum and the immediate calling of a Special General Assembly to conduct the Society's business.

Another resolved issue was the approval of the relocation of the seat of the IGS from Switzerland to the USA. The

Secretariat of the Society is located in the USA and the registration of the Society in the USA will simplify administration and management of the Society's finances.

The third major item approved was the establishment of postal ballots as the approved method to amend the bylaws of the Society in the future.

> reported by Peter E. Stevenson IGS Secretary

# **IGS European Activity Committee (EAC)**

#### EuroGeo2 and EuroGeo3 Venues

#### EuroGeo2 in 2000

The preparations for the *EuroGeo2* conference in Bologna, Italy are making good progress.

#### EuroGeo3 in 2004

According to the provisions of the IGS, the European IGS Chapters were invited (in June 1999) to submit a bid to host *EuroGeo3* in the year 2004. *EuroGeo3* may also be held in a European country where a Chapter does not yet exist, but which would be willing to organise the Conference in cooperation with the IGS. For those countries that would like to

submit a bid, contact the IGS Secretary, Mr. P.E. Stevenson (226 Sitton Road, Easley, South Carolina, 29642-8393, USA) and request an information package, containing all of the information required to prepare a successful bid. Bid packages are to be submitted by 29 February 2000. The location of *EuroGeo3* will be announced in Bologna, Italy, during *EuroGeo2* in October 2000.

The German Chapter has expressed an interest in hosting *EuroGeo3* in 2004 and will prepare a bid package. Munich will be proposed as the Conference location and has already been approved by the German Society for Geotechnics,

which has also agreed to support this event.

#### **EAC Meeting**

After the IGS Council Meeting in Boston, an EAC meeting was scheduled for 9 June 1999 in Brussels. The meeting had to be cancelled due to lack of participants. We will try to establish a new date, if possible, in combination with future CEN meetings.

reported by Georg Heerten Chair, IGS EAC, September 1999

# **IGS Education Committee – Report of Activities**

#### **FHWA Course Notes**

The FHWA course notes have been copied and mailed to each IGS Chapter outside of North America. IGS Chapters have been informed that additional copies can be made available to educators in their country if the request comes from the Chapter.

#### **FHWA Slides**

Mr. Jim Paul, Chair of the IGS Education Committee, currently has one copy of the entire FHWA slide series (approximately 1,000).

As expected, the slides are not particularly useful as an accompaniment to the printed notes, unless the user is very familiar with the subject and has information on the many featured case histories. However, although quality is rather patchy, they will form an extremely useful resource for Members who want a particular type of slide. It is hoped that the slides will also be useful for illustrating the mini-lectures discussed below. It has been made clear to all authors of mini-lectures that the IGS can help find slides or other images to complete the lectures.

In addition, it will be attempted to devise an appropriate cataloging system.

#### **Mini-Lectures**

Currently, a number of documents are passing through the review process, and it is hoped to be able to start collecting finished versions within the next month.

The transfer to CD-Rom will take place immediately in order to test the

technology and to find the most efficient method of working.

The realistic launch date is now May 2000, rather than the original date of December 1999.

#### Thanks

A special thank you to J.P. Gourc for all of his personal efforts on his second CD-Rom lecture, "Retaining Structures with Geosynthetics", which is now available.

It is proposed to make copies available free of charge to the Chapters, but also have them available for sale.

reported by Jim Paul Chair, IGS Education Committee

For more information on the FHWA course notes and slides, and the mini-lecture series, please see the March 1999 IGS News issue.

# 8<sup>th</sup> International Conference on Geosynthetics in 2006 Conference Sponsors Sought

he IGS invites Chapters and interested organisations to express their interest in organising and hosting the 8th International Conference on Geosynthetics, which will be held in 2006. The history of the international conferences is as follows:

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

- Third IGC, Vienna, Austria, 1986
- Fourth IGC, The Hague, The Netherlands, 1990
- Fifth IGC, Singapore, 1994
- Sixth IGC, Atlanta, USA, 1998
- Seventh IGC, Nice, France, 2002
- Eighth IGC, ??, ??, 2006

The IGS Secretary will provide prospective hosts with a detailed information package that informs and instructs interested parties on the proper procedure to prepare a bid to host the Conference. Interested Chapters and organisations should contact the IGS Secretary, P.O. Box 347, Easley, South Carolina 29641, USA, Fax: 1/864-859-1698, e-mail: igssec@aol.com.

## **IGS Chapter Reports**

#### **UK Chapter**

Summer is gone and, with the new season of meetings and associated activities upon us, the United Kingdom (UK) Chapter is active and healthy. As usual each meeting will be held at a different location around the country; a wide range of subjects will be covered by the meetings. The first meeting of the new session is 7 October at the University of Oxford; the speaker is Bob Barrett from

the USA, and the title of his talk is *Reinforced Soil - An Independent Practitioners View*. The full programme of meetings is given below.

The UK Chapter is growing (slowly); currently, we have approximately 100 Individual Members and 30 Corporate Sponsors. Interest in the Society, from individuals and industry, is markedly higher than it was a few years ago, which bodes well for the future. Financially, the UK Chapter remains on a healthy footing with a surplus of income over expenditure. Different methods of using the money to the best advantage of the Society, Members, and Sponsors are being investigated, with particular consideration being given to education.

Last year, for the first time, the Chapter held a UK Corporate Sponsors Evening. This took the form of a discussion session in an informal setting, with some light refreshments provided. The event was a great success. Much useful feedback was obtained regarding the position of the Chapter and the way forward. The next Sponsors Evening is due to be held 23 September, at Old Trafford cricket ground in Manchester.

With regard to publicity, the UK Chapter's magazine *Down to Earth* is flourishing and providing useful information to our Members in an easy to read format; but, as always, we are looking for more input from our Members, particularly articles, case studies, and other items of interest. The web page on the internet continues to draw attention to the IGS.

Education is an important area that is expanding in the UK Chapter, albeit slowly. There is no doubt that more people are becoming aware of the importance of geosynthetics to construction industry. To help develop interest and a better general understanding of geosynthetics, the Chapter, in conjunction with a practising consulting engineer, is preparing a touring lecture designed to whet the appetite of the audience by briefly summarising the main aspects of geosynthetics from their manufacture, physical form, principles for design, and their installation in the ground.

#### Committee of the UK IGS Chapter

- Chairman: Guy Watts (Transport Research Laboratory)
- Vice Chairman: Chris Jenner (Tensar International)
- Secretary: Graham Thomson (Huesker (UK) Ltd)
- Membership: Paul "Mario" Sharley (Terram Ltd)
- Treasurer: Robin Guild (Don and Low Ltd)
- Education: John Greenwood (Nottingham Trent University)
- Activities: Derek Smith (Edge Consultants Ltd)

 Publicity: Clarissa Austin (BTTG) and Russel Jones (Golder Associates Ltd.)

#### 1999/2000 Activities

- 9 November 1999: "Strengthening Works at Tinny Bank, M6", presented ed by Liliana Spasicgril of Gibb Limited. Joint meeting with The Scottish Geotechnical Group in Edinburgh.
- 8 December 1999: Annual general meeting followed by "Mechanical Damage to Geosynthetics", presented by Guy Watts, outgoing UK IGS Chapter Chairman. Joint meeting with British Geotechnical Society at the Institution of Civil Engineers, 1 Great George Street, Westminster.
- 12 January 2000: "The Revised Highways Agency Y2K HA68 Design Guidance for Reinforced Slopes", presented by Ken Brady of TRL. Joint meeting with the ICE East Anglian Association at Anglia Polytechnic University, Chelmsford.
- 9 February 2000: "Geomembrane Liner CQA in the Millennium", presented by Dr. Ian Peggs of I-Corp International, USA. Joint meeting with the North West Geotechnical Group at Renold Building, UMIST, Manchester.
- 8 March 2000: "The Use of Geosynthetics in Gas Protection Measures to Structures", presented by Paul Culleton of The Environmental Protection Group. Joint meeting with ICE SW Association at University of Exeter.
- 11 April 2000: "Case Studies: The
  Use of Geosynthetics in Civil Engineering for Reinforcement, Drainage, Erosion protection, and
  Filtration", presented by Peter
  Whyley of EDGE Consultants UK
  Limited and Alan Bamforth of ABG
  Ltd. Joint meeting with the Northern
  Geotechnical Group at Newcastle.
- 10 May 2000: Student paper competition. Joint meeting with East Midlands Geotechnical Group at Nottingham Trent University.

#### **Brazil Chapter**

This is a report on the activities of the Brazil IGS Chapter (IGS-Brasil) for April to August 1999.

#### Introduction

The Chapter is continuing to promote activities related to geosynthetic applications in civil engineering in Brazil. Efforts have concentrated on organising the 3rd Brazilian Symposium on Geosynthetics (Geossintéticos'99) / 1st South American Symposium on Geosynthetics, which was held in Rio de Janeiro, 20 to 22 October 1999. Short courses on geosynthetics have also been given on a regular basis, as well as the IGS-Brasil Bulletin. Below is a summary of the Chapter activities, as well as forthcoming events.

#### Chapter Activities

The following activities were organised and/or supported by the Chapter over the past several months:

Short Course on Geosynthetics in Porto Alegre - 15 to 16 April 1999 The fourth short course on geosynthetics, promoted by IGS-Brasil, was held in Porto Alegre, capital of the state of Rio Grande do Sul, close to the southern border with Argentina, Uruguay, and Paraguay. The Organising Committee, chaired by Mr. E. Azambuja, comprised the following institutions: IGS-Brasil, Commission on Geosynthetics of the Brazilian Geotechnical Society, Regional Section of the Brazilian Society of Geotechnical Engineering, Regional Section of the Brazilian Sanitary and Environmental Society, and the Brazilian Paving Association. The course was held at the Catholic University of Rio Grande do Sul and the following professionals delivered lectures: E. Azambuja (Azambuja Engineering), A. Bica (Federal University of Rio Grande do Sul), L.G. de Mello (Vector Engineering), E.M. Palmeira (University of Brasilia), and Delma Vidal (Aeronautics Technological Institute). The course comprised the following topics: Reinforced Retaining Wall, Embankments on Soft Soil, Drainage and

Filtration, and Impermeabilisation. The following institutions or manufacturers sponsored the course: Bidim-BBA Nonwovens, Engepol, Huesker, Lusa, Maccaferri, Motormac, Ober, Sansuy, and UniVias. The sponsors also presented practical examples of geosynthetics applications in geotechnical engineering.

 Short Course on Geosynthetics in Florianopolis - 24 to 25 June 1999

The fifth short course on geosynthetics was held in Florianopolis, the capital of the state of Santa Catarina, in Brazil. The course was promoted by the IGS-Brasil, Commission on Geosynthetics of the Brazilian Geotechnical Society, Regional Section of the Brazilian Society of Geotechnical Engineering, and the Federal University of Santa Catarina. The Brazilian Sanitary and Environmental Society and the Brazilian Paving Association helped organising the short course. The following professionals delivered lectures: E. Azambuja, M. Maccarini (Federal University of Santa Catarina), G.T. Santos (Federal University of Santa Catarina), L.G. de Mello (Vector Engineering), E.M. Palmeira (University of Brasilia), and Delma Vidal (Aeronautics Technological Institute). The event was sponsored by the following geosynthetic manufacturers, who also presented examples of practical geosynthetic applications in geotechnical engineering: Amoco, Bidim-BBA, Engepol, Huesker, Maccaferri, Motormac, and Ober.

#### • IGS-Brasil Bulletin

The Brazil IGS Chapter sends all of its Members a quarterly bulletin with news and general information on geosynthetics. The Bulletin also contains technical or research abstracts related to geosynthetics. The first and second bulletins of 1999 have been sent to Chapter Members, and the third bulletin is in progress.

Section on Geosynthetics in Engineering and Construction

The Brazil IGS Chapter will have feature sections in the magazine Engineering and Construction (Brazil) to promote the Chapter activities and geosynthetics applicageotechnical in geo-environmental engineering. Engineering and Construction is issued monthly and reports general Brazilian civil engineering news, focusing on the southern states. The feature sections will comprise two pages of each issue, one for IGS-Brasil and the other for geosynthetic manufacturers, who will sponsor this initiative.

#### Forthcoming Events/Activities

 Forthcoming Short Courses on Geosynthetics

The next short course on geosynthetics under the auspices of the Brazil Chapter will be held in Rio de Janeiro, during the 3rd Brazilian Symposium on Geosynthetics (Geossintéticos'99) / 1st South American Symposium on Geosynthetics, on 20 October 1999. Lectures will be delivered by Dr. Ennio M. Palmeira (University of Brasilia), Dr. Mauricio Abramento (IPT -São Paulo Technological Research Institute), and Prof. Robert M. Koerner (Drexel University), who is one of the invited keynote speakers for the symposia. Information on the short course can be obtained from Dr. Maurício Ehrlich (Coppe/UFRJ, C.P. 68506, 21945-970 Rio de Janeiro, RJ, Brazil, e-mail: me@geotec.coppe. ufrj.br.

 3rd Brazilian Symposium on Geosynthetics (Geossintéticos'99) / 1st South American Symposium on Geosynthetics

The symposia were held in Rio de Janeiro, 20 to 22 October 1999, at the Copacabana Othon Palace Hotel. The following speakers and keynote lectures were given: Mr. Laerte G. Maroni (BBA-Geosynthetics, Brazil), "The Development of Geosynthetics In South America"; Prof. R.J. Bathurst (Royal Military College of Canada), "Recent Full-Scale Testing

of Reinforced Segmental Retaining Walls"; Prof. R. Koerner (Drexel University, USA), "Failure of Domestic and Industrial Landfills"; Mr. A. Toscarelli (Argentina), "Geosynthetics in Pavements"; Dr. Mauricio Ehrlich (Federal University of Rio de Janeiro, Brazil), "Analysis of Reinforced Soil Structures"; Dr. Ennio M. Palmeira (University of Brasilia, Brazil), "Experimental Techniques for Geosynthetics"; Dr. L.M. Costa Filho (Consulting Engineer, Brazil), "Geosynthetics in Mining Engineering"; Dr. D. Vidal (Aeronautics Technological Institute, Brazil), "The Design of Geosynthetic Drains and Filters"; and Prof. A. Lopez (Argentina), "Practical Cases of Geosynthetic Utilization".

#### Final Remarks

In spite of the difficult economic situation in Brazil, which started in 1998, the country has been slowly recovering during the past several months. Interest in the Brazil IGS Chapter is increasing and so are its activities. This increase in interest has not yet yielded a substantial increase in the number of Members, mainly due to the country's economic situation and of civil engineering works in general. The Chapter Officers believe that when the IGS Chapter fee becomes payable in Brazilian currency, a greater number of professionals will join. The payment procedure is expected to begin within the next few months. Nevertheless, the Chapter has recently attracted its second Corporate Member.

Brazil IGS Chapter Officers (Term 1997 to 1999):

- Dr. Ennio M. Palmeira (President)
- Dr. Delma Vidal and Dr. Mauricio Ehrlich (Vice-Presidents)
- Mr. Demetrius Guimaraes (General-Secretary)
- Dr. Mauricio Abramento (Treasurer)

reported by Dr. Ennio M. Palmeira President, Brazil IGS Chapter E-mail: palmeira@unb.br

#### Japan Chapter

The following is the Japan IGS Chapter activities report for 1998 to 1999.

#### General

The Japan Chapter is growing in Membership and in the number of yearly activities, albeit slowly. This is due to tremendous efforts made by the core Chapter Members, who have had to cope with the serious effects of the economic recession in Japan.

The Japan Chapter periodic journal has been renewed, and the size and extent of the annual symposium has expanded markedly.

#### Membership

Currently, there are 245 Individual Members, 24 Corporate Members, and 71 Student Members.

#### **Publications**

- Three issues of the Japan IGS Chapter journal, *Geosynthetic Technical Information*
- Proceedings of the Annual Domestic Symposium on Geosynthetics
- JC-IGS Membership Directory

#### Symposia and Seminars

- Annual Domestic Symposium on Geosynthetics (two days, December 1998)
- Short course lectures (September 1998 and June 1999)

#### Award

The JC-IGS Awards was established for the best scientific and technological contributions to the development and use of geosynthetics (starting 1999).

#### WWW Site

Visit the new home page of the Japan Chapter:

http://wwwsoc.nacsis.ac.jp/index.html

#### Technical Committee Activities

- Technical Committee on Geotextiles:
   A state-of-the-art report on the development and use of geosynthetics, especially on reinforcement, drainage, and testing of geosynthetics has been prepared.
- Technical Committee on Geomembranes: A state-of-the-art report on the development and use of geosynthetics, particularly geomembranes as liquid barriers, was completed and is scheduled for publication.

reported by Fumio Tatsuoka President, Japan IGS Chapter

#### Romania Chapter

The following is the Romania IGS Chapter report for 1999.

#### Activities

1. The General Assembly of the Romanian Association for Geosynthetics (RAG) was held on 28 January 1999. The past activities of 1998, the future activities of 1999, and problems related to the Association's name and Council were discussed. The Association's name was changed from "Romanian Association for Geotextiles and Geomembranes" to "Romanian Association for Geosynthetics". The new address of the Association is:

Bd. Lacul Tei 124, sect.2 Bucharest, Romania P.O. Box 38 - 162 Bucharest, Romania The new Council Members are:

- President: Dr. Ing. Valentin Feodorov
- Vice Presidents: Prof. Dr. Ing. Ramiro Sofronie and Prof. Dr. Ing. Sanda Manea
- Secretary: Assist. Prof. Dr. Ing. Loretta Batali
- Treasurer: Mrs. Mariana Oiteanu
- The seminar New Materials Modern Technologies. Geomembranes and Geosynthetic Clay Liners in Engineering Works was held 15 to 16 March 1999. In addition to IGS Members, approximately 40 specialists from universities, design institutes, and construction companies were invited.
- 3. RAG organised the seminar, *The Use of Nonwoven Geotextiles for Special Projects in Civil Engineering*, which took place 15 June 1999.
- 4. The seminar *Nonwoven Thermo-bonded Geotextiles* was held 17 August 1999.
- 5. During Construct Expo 99 (a specialised exhibition for construction materials and technologies), discussions between IGS Members and exhibitors and visitors on geosynthetics and their use in civil engineering applications were organised.
- 6. RAG organised a visit on 9 July 1999 to the Sighisoara Town Domestic Waste Landfill, which is under construction, in order to assist in the installation of geosynthetic materials, i.e. part of the lining system and the drainage system.

reported by Dr. Ing. Loretta Batali Secretary, Romania IGS Chapter

# Geosynthetics 2001 Call for Papers

**Abstract Submission Date Extended to 21 January 2000** 

rom the original filter fabrics to today's full range of products, geosynthetic materials offer innovative, economical, and technical solutions to

complex geotechnical engineering problems, along with improved construction techniques. The technical validity of geosynthetics is documented in thousands of case histories. The *Geosynthetics 2000 Conference*, is an opportunity to emphasise their performance and economic benefits.

# **GEOSYNTHETICS CONFERENCE 2001** Portland, Oregon USA Economics, Performance & Constructibility • February 12-14, 2001

Designers today must consider economics, performance, and constructability when designing engineering projects. Therefore, authors are invited to submit papers that demonstrate innovation, detail how geosynthetics provided the solution to complex problems, establish the "value added" or "cost/benefit" of the use of geosynthetics, and show the improved constructability that resulted from their use. Each paper does not have to demonstrate each aspect, but this is the overall theme of Geosynthetics 2001.

The range of materials may include geotextiles, geomembranes, geogrids, geonets, geocomposites, geosynthetic clay liners, erosion-control materials, etc., as used in all geosynthetics applications.

Abstracts are invited for papers that can be presented in either a conference session, or in a workshop session format that will provide an opportunity for participation by the audience.

The conference will run in conjunction with the world's largest exhibition of geosynthetic products and services, pre-conference short courses, tours, and special invited presentations related to performance and economics.

We look forward to your participation in Geosynthetics 2001.

L. David Suits Geosynthetics 2001 Technical Chairman Geotechnical Engineering Bureau NYSDOT

#### **Submittal Guidelines**

- Abstracts must be clearly typed on one page.
- Abstracts should be a minimum of 150 and a maximum of 350 words.
- Abstracts should not contain tables, figures, structural formulas, or bibliographic references.

- A maximum of one additional page of supporting data or figures is allowed if it assists in evaluating the abstract.
- Abstracts should include the paper title, the primary author name, and the address, telephone, e-mail address, and facsimile number for each author.
- Abstracts that suggest commercialism, either through writing style or trade names, will be rejected.
- The substance of the abstract must not have been previously presented or published.

#### **Abstract Topics**

- Erosion Control
- Filtration and Drainage
- Foundations
- Materials Science and Durability
- Materials Testing
- Military Applications
- Mining
- Pavement and Rail Systems
- Seismic Issues
- Walls, Slopes, and Embankments
- Waste and Liquid Containment

#### **Judging Procedures**

All abstracts will be reviewed by a Technical Review Committee specially selected to represent a wide range of industry segments, products, and experiences. Authors are asked to submit papers that demonstrate innovation, detail how geosynthetics provided the solution to complex problems, establish the "value added" or "cost/benefit" of the use of geosynthetics, and show the improved

constructability that resulted from their use. Papers do not have to demonstrate each aspect, but this is the overall theme of Geosynthetics 2001.

Abstracts will be reviewed based on the originality of the concept or application, definition of the objective, quality of the project execution, clarity of writing, presentation of supporting evidence, contributions to the advancement of the industry, and level of interest to practitioners and users in the industry. Papers related to the call for papers must be noncommercial.

Final papers will be peer-reviewed by industry specialists selected by the Technical Review Committee. Accepted papers will be presented at the Geosynthetics 2001 conference either in technical sessions, poster sessions, or workshops, and will be published in the proceedings.

#### **Deadlines**

- Abstract submission deadline has been extended to 21 January 2000.
- Authors will be notified of acceptance or rejection by 8 March 2000.
- The full text of the papers, written in accordance with conference guidelines, will be due no later than 31 July 2000.

#### **Return Abstract to:**

Geosynthetics 2001 Technical Review Committee Attention: Janet Schneider **IFAI** 1801 County Road B West Roseville, MN 55113-4061 USA

#### Awards of Excellence Program

All papers accepted for publication in the conference proceedings will be considered as entries in the North American Geosynthetics Society (NAGS) Awards of Excellence (A/E) Program. The Awards recognise innovation, creativity, and outstanding contributions in geo-environmental applications, state of the practice, and the research and development of geosynthetics.

The A/E Program also promotes research by providing NAGS Awards of Excellence Research Grants to universities and research organisations designated by A/E winners. The grants are used to carry out research that will advance the use of geosynthetics and their applications in geotechnical and environmental engineering works. The award winners are selected by an independent Technical Committee of NAGS Members.

#### **Conference Organisers**

Industrial Fabrics Association International (IFAI)

- North American Geosynthetics Society (NAGS)
- International Geosynthetics Society (IGS)
- Geosynthetic Materials Association (GMA, a division of IFAI)

#### **Cooperating Organisations**

- Geosynthetic Institute (GSI)
- Civil Engineering Research Foundation (CERF)
- Geo-Institute (G-I)
- New York State Department of Transportation (NYSDOT)
- National Council for Geo-Engineering and Construction (GeoCouncil)
- International Association of Foundation Drilling (ADSC)
- ASFE
- Deep Foundations Institute

- Canadian Geotechnical Society (CGS)
- International Erosion Control Association (IECA)
- Institute for International Cooperative Environmental Research (IICER)
- U.S. Environmental Protection Agency (USEPA)
- International Association of Geosynthetics Installers (IAGI)
- U.S. Department of Energy Office of Science and Technology (OST)

#### Questions?

For more information contact:

Danette R. Fettig or Janet Schneider

Tel: 1/651-225-6959 Fax: 1/978-945-2654 or 1/651-631-9334

E-mail: drfettig@ifai.com jmschneider@ifai.com

# Geosynthetics Asia 2000 (GA2000)

n keeping with the highly professional quality of IGS regional conferences, the organising committee of the GA2000 Conference expects a wide range of high-quality Scientific and Technical papers of international and regional significance and promises a great forum for professional engineers, researchers, academics, developers and manufacturers of geosynthetics, in roads, railways, slopes, dams, coastal, foundation, and other civil engineering applications.

#### **Conference Date and Venue**

The Conference will be held at the Palace of The Golden Horses on 29 to 31 May 2000, in Selangor Darul Ehsan, Malaysia.

#### **Paper Topics**

- Soil reinforcements, Roads, Railways, Foundations
- Drainage, Filtration, Dams, Canals, Coastal and Riverbank Protection

- Waste Containment and Environmental Applications
- Design Standards, Installation, Innovative Solutions and Case Histories
- Geosynthetics Testing and Quality Control

#### Official Language

The Conference will be conducted in English and all papers will be written in English.

#### **Exhibition**

A technical exhibition will be organised as an integral part of the Conference. Project experience, product solutions, new applications, and state-of-the art information will be highlighted.

#### **Technical Visits**

Several technical visits will be arranged for the Conference participants.

#### **Conference Organisers**

The Conference is jointly organised by:

- The Institution of Engineers, Malaysia (IEM)
- International Geosynthetics Society, Southeast Asia Chapter (SEAG-IGS)

#### Contact

All correspondence or questions related to the Conference should be addressed to:

IEM Secretariat
The Institution of Engineers, Malaysia
Lots 60/62, Jalan 52/4
P.O. Box 223, Jalan Sultan
46720 Petaling Jaya
Selangor Darul Ehsan

Tel.: 60/3 7684001 Fax: 60/3 7577678

Malaysia

E-mail: sec@iem.po.my, or aziah.budin@usa.net

# 4th International Conference on Ground Improvement Geosystems (4th GIGS 2000)

### Grouting, Soil Improvement and Geosystems Including Reinforcement

#### **Conference Date and Venue**

The Conference will be held at the Helsinki Fair Centre in Helsinki, Finland, 7 to 9 June 2000.

#### **Conference Theme and Topics**

The general theme of the Conference is *Grouting, Soil Improvement and Geosystems Including Reinforcement*, and it will form the guiding topic for the keynote lectures. The following technical sessions will be held:

- Ground Improvement for Earth Constructions: Technology and Innovations
- Grouting / Ground Improvement Practice for Road and Railway Structures
- Grouting Practice for Water Constructions (Canals, Reservoirs, ...)
- Grouting and Stabilisation for Environmental Protection (Liners, Leakage Barriers, ...)

- Durability Aspects (Aging, Creep, Chemical Resistance, ...)
- Material Properties (Testing, Quality Assurance, Nondestructive Testing, Standardisation)
- New Materials, Composites, Degradable Components
- Soil Reinforcement Practice
- Geosynthetics for Ground Improvement
- Case Histories and Work Performance (Quality Assurance, Protection)
- Legal Aspects and Environmental Issues

#### **Conference Language**

The official language of the Conference will be English.

#### **Conference Program**

Keynote lectures will be presented in Plenary sessions, selected papers in parallel running discussion sessions from Wednesday, 7 June to Friday, 9 June 2000. Technical visits to major geotechnical/construction works in the Helsinki area will be organised on one afternoon. A technical tour to St. Petersburg is planned for the day after the conference.

#### **Conference Organisers/Spnsors**

The Conference is organised by the Finnish Geotechnical Society (FGS/SGY) under the auspices of the International Society for Soil Mechanics and Geotechnical Engineering (ISSMGE), TC-17 Ground Improvement and The International Geosynthetics Society (IGS).

#### **Contact**

Secretary General 4th ICGIGS 2000 H. Rathmayer VTT-Technical Research Centre Communities and Infrastructure Box 1901, FIN-02044 VTT, Finland

Tel.: 358/9 4561 Fax: 358/9 456 7077

# I-Corp International, Inc. Launches WWW Site

n 1 October 1999, I-Corp International launched "Geosynthetica", www.geosynthetica.net, a web site containing practical technical documents and information necessary in the construction of geosynthetic lining systems for waste containment, liquid impoundments, wastewater treatment lagoons, dams, canals, tunnels, reservoirs, and ground water protection.

Geosynthetica provides engineers with off-the-shelf material specifications, seam specifications, installation

project specifications, construction quality assurance plans, and standard test methods (ASTM, ISO, CEN, DIN, AFNOR, etc.) for all of the common geomembrane, geotextile, and geosynthetic clay liner materials, for downloading at no or minimal cost. Also available are technical papers, specially prepared technical articles, conference details, and abstracts of technical papers on geosynthetics and their lining systems, be they bottom liners, caps, floating covers, tunnel liners, or vertical cut-off walls.

This information is intended to help reduce the number of problems that frequently occur during liner construction and to help assure the long-term durability of installed lining systems, to the benefit of engineers, installers, owners, and the environment. Geosynthetica will grow rapidly and expand into other geosynthetic applications area.

Contact: Ian D. Peggs info@geosynthetica.net, 1/561 369 0795, or check the progress of the site development at www.geosynthetica.net



## Geosynthetics International

#### An Official Journal of the IGS

eosynthetics International 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, behavior, performance analysis, testing, design, construction methods, case histories, and field experience.

The Editor of Geosynthetics International (Prof. T.S. Ingold), Co-Editor (Prof. R.J. Bathurst), and Chair of the Editorial Board (Dr. J.P. Giroud) have more than 30 years of combined experience with the publication of technical journals. They are assisted by a first-rate Editorial Board composed of international experts that are appointed to four-year terms and who represent a broad range of geosynthetics expertise.

Rapid publication of papers provides subscribers with current papers covering geosynthetics research, design, construction methods, and important case studies. Only papers peer-reviewed by experts are published.

Special issues devoted to specific,

state-of-the-art topics have included "Design of Geomembrane Applications", "Liquid Migration Control Using Geosynthetic Liner Systems", and "Geosynthetics in Earthquake Engineering".

Geosynthetics International 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. Geosynthetics International offers a reduced subscription rate to Individual IGS Members. Individual IGS Members can subscribe for US\$135 per 6 issues. Geosynthetics International is offered to university and college libraries at US\$145 per 6 issues. The standard rate of US\$236 applies to all others.

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

Dr. T.S. Ingold, Editor Geosynthetics International Mulberry Lodge, St. Peters Close St. Albans, AL1 3ES United Kingdom Tel.: 44/1727-842433 Fax: 44/1727-845266

Professor R. J. Bathurst, Co-Editor *Geosynthetics International* (see p. 15 for complete address)

Dr. J.P. Giroud, Chairman Geosynthetics International GeoSyntec Consultants 621 N.W. 53rd Street Suite 650

Boca Raton, Florida 33487, USA

Tel.: 1/561-995-0900 Fax: 1/561-995-0925

For subscriptions, contact:

Ms. Susan Smeed

Geosynthetics International
Assistant Circulation Manager
Industrial Fabrics Association International
1801 County Road B West
Roseville, MN 55113, USA

Tel.: 1/612 222-2508 Fax: 1/612 631-9334

Visit the Geosynthetics International WWW site at http://geo.rmc.ca/gi

# Geotextiles and Geomembranes An Official Journal of the IGS

eotextiles and Geomembranes is ahead of schedule with the posting of Volume 17 (1999), Nos. 5 & 6 (a special issue on filtration with Dr. Jean Lafleur as Special Editor) in August 1999. Preparation is well underway for Volume 18 (2000), which will include a special issue on GCLs with Dr. Malek Bouazza as Special Editor.

Dr. Jean-Pierre Gourc is planning to prepare a Special Issue on Erosion. If you are interested in contributing to this special issue, please contact Dr. Gourc at the address on p. 15, or by e-mail: gourc@ujf-grenoble.fr

The Editorial Board Members and reviewers have worked very hard over the past year to provide detailed, constructive reviews in a very timely manner. The average review period is less than three months. Papers come from a wide range of countries with approximately a third of the papers coming from the Americas, Europe, and the rest of the world. The rejection rate is 44%. The Journal's Editor and Board Members are extremely appreciative of the authors' hard work in addressing the reviewers' comments and the quick return of revised papers.

All technical contributions and inquiries should be directed to:

Professor R. Kerry Rowe, Editor
Geotextiles and Geomembranes
Department of Civil and Environmental
Engineering
The University of Western Ontario
London, Ontario, N6A 5B9
Canada
Fax: 1/519-661-3942
E-mail: r.k.rowe@uwo.ca

Authors should submit four copies of any paper for review by at least two reviewers. No original figures should initially be included.

# CONFERENCES SYMPOSIA WORKSHOPS

# CALENDAR OF EVENTS

# SHORT COURSES EXPOSITIONS TRADE SHOWS

GRI-13 Conference on
"Geosynthetics in the Next Millennium"
Hilton Airport Hotel
Philadelphia, PA, USA
14-15 December 1999
Contact: Ms. Marilyn Ashley
Geosynthetic Institute

475 Kedron Avenue

Folsom, PA 19033-1028, USA

Tel.: 1/610-522-8440 Fax: 1/610-522-8441

Fax: 1 (613) 993-7250

E-mail:marilyn.ashley@coe.drexel.edu

Fourth International RILEM
Conference, Ottawa, Ontario, Canada
26-30 March 2000
Contact: Pierre Lamoureax
Conference Services
National Research Council Bldg. M-19
Ottawa, Ontario, Canada K1A 0R6
Tel.: 1 (613) 993-9628

International Symposium on Physical Modeling & Testing in Environmental Geotechnics, La Baule, France 15-17 May 2000

E-mail: pierre.lamoureaux@nrc.ca



Contact: Dr. Sepr. J. Garnier LCPC, Centre de Nantes Route de Bouaye BP 19 44340 Bouguenais, France Fax: 33/2-4084-5997 E-mail: Necer@lcpc.fr http://www.lcpc.fr/~necer/symp2000.htm

Geosynthetics Asia 2000 (GA2000) Selangor Darul Ehsan, Malaysia 29-31 May 2000

Contact: IEM Secretariat

The Institution of Engineers Malaysia, Lots 60/62, Jalan 52/4 P.O. Box 223, Jalan Sultan 46720 Petaling Jaya Selangor Darul Ehsan, Malaysia

Tel.: 603/7684001/17 Fax: 603/7577678 E-mail: sec@iem.po.my

http://www.jaring.my/iem/geotech/

GA2000.html

Geofilters 2000
Warsaw, Poland
5-7 June 2000
Contact: Prof. W. Wolski
Chairman for Geofilters 2000
Department of Geotechnics
Warsaw Agricultural University
ul Nowoursynowska 166
02-787 Warszawa, Poland
Tel.: 48/22 847 00 13 or 48/22 645 95 18
Fax: 48/22 847 00 13 or 48/22 645 95 18
E-mail: qf2000(@alpha.sggw.waw.pl/
konferencje/gf2000

#### 4th International Conference on Ground Improvement Geosystems (4th ICGIGS 2000)

7-9 June 2000 Contact: Secretary General NGM 2000 Hans Rathmayer VTT-Technical Research Centre Communities and Infrastructure Box 19031, FIN-02044 VTT, Finland Tel: 358/9 4561

Fax: 358/9 4561

Helsinki, Finland

E-mail: Hans.Rathmayer@vtt.fi

http://www.sgy.fi

6th Canadian Environmental Specialty Conference London, Ontario, Canada 8-10 June 2000 Contact: Dr. R.K. Rowe



E-mail: r.k.rowe@uwo.ca http://www.engga.uwo.ca/civil/ csce.htm#6th Environmental

Terr@A International Conference New Trends in Water and Environmental Engineering for Safety and Life: Eco-compatible Solutions for Aquatic Environments

Napoli, Italy 3-7 July 2000

Contact: Dr. Ing. Rosella Monti Centro Studi Idraulici per L'Ambiente D.I.I.A.R. Politecnico di Milano Piazza Leonardo da Vinci 32

20133 Milano, Italy Tel.: 39/2 2399 6293 Fax: 39/2 2399 6298

E-mail: monti@marina.iar.polimi.it Abstract submission deadline extended to: 21 January 2000

GeoDenver 2000

Boulder, Colorado, USA 3-8 August 2000



#### Contact:

E-mail: conf@asce.org http://www.asce.org/conferences/ geo2000

Prague 2000 - Fifth International Symposium and Exhibition on Environmental Contamination Prague, Czech Republic 12-14 September 2000 Contact: Prague 2000 Florida State University

2035 East Paul Dirac Drive, 226 HMB Tallahassee, 32310-3700 Florida, USA

Tel.: 1/850 644 5524 Fax: 1/850 574 6704

E-mail: Prague2000@mailer.fsu.edu

#### EuroGeo2

Bologna, Italy 15-18 October 2000

Piazza Bologna 22

Contact: Susanna Antonielli AGI-IGS

I - 00162 Roma, Italy Tel.: 39/06 4424 9272 Fax: 39/06 4424 9274 E-mail: agiroma@ioe.it

MONTREAL 2000 53rd Canadian Geotechnical Conference Montreal, Quebec, Canada 15-18 October 2000



Contact: Conference Secretariat 53rd Canadian Geotechnical Conference Ecole de technologie superieure University of Quebec

Department of Construction Engineering 1100, Notre-Dame Street West Montreal, Quebec, Canada, H3C IK3

Fax: 1/514 396 8584 E-mail: cgs2000@ctn.etsmtl.ca http://www.etsmtl.ca/CGS2000

#### GeoEng 2000

Melbourne, Australia 19-24 November 2000



Contact: Secretariat: c/o ICMS Pty Ltd.

84 Queensbridge St.

Southbank, Victoria 3006, Australia

Tel.: 61/3 9682 0244 Fax: 61/3 9682 0288

E-mail: geoeng2000@icms.com.au http://www.icms.com.au/geoeng2000

#### Geosynthetics 2001

Portland, Oregon, USA 12-14 February 2001

Contact: Danette Fettig, IFAI 1801 County Road B West Roseville, MN 55113-4061 USA

Tel.: 1/612 222 2508 Fax: 1/612 222 8215

E-mail: dfettig@northernet.com

Abstract submission deadline extended to:

21 January 2000

International Symposium on Earth Reinforcement (IS Kyushu 2001) Fukuoka, Kyushu, Japan 14-16 November 2001 Contact: Prof. Hidetoshi Ochiai Department of Civil Engineering Kyushu University, 6-10-1 Hakozaki Higashi, Fukuoka 812-8581, Japan Tel. and Fax: 81/92 642 3285 E-mail: iskyushu@civil.kyushu-u.ac.jp

4th International Congress on Environmental Geotechnics Rio de Janeiro, Brazil 12-16 August 2002 Contact: Secretariat, 4ICEG-RIO 2002 c/o Dr. M. C. Barbosa Programa de Engenharia Civil COPPE-UFRJ Cidade Universitaria Ilha do Fundao P.O. Box 68506, Zip: 21945-970 Rio de Janeiro, RJ Brazil

E-mail: 4iceg@pec.coppe.ufrj.br

#### 7<sup>th</sup> International Conference on Geosynthetics

Nice, France

22-27 September 2002 Contact: 7th IC IGS

Fax: 55/21 280 9545

BP 100, 95873 Bezons Cedex, France

Tel.: 33/0 1 34 23 57 92 Fax: 33/0 1 34 23 53 64

Note: Items in bold print are organised under the auspices of the IGS or with the support of the IGS. LEHRSTUHL UND PRÜFAMT FÜR GRUNDBAU,

Technische Universität München



# BODENMECHANIK UND FELSMECHANIK FROM THE NEW EDITOR

As the new Editor of IGS News, I would like to take this opportunity to extend a "hello" to all IGS Members.

It is a pleasure and honour to be the new Editor of IGS News. I see the Newsletter as a vehicle to provide up-to-date, informative and interesting news on the Society's activities, geosynthetics-related upcoming and past events, innovainstitutional tive university

geosynthetics research programs/activities, interesting geosynthetic applications, corporate profiles, and honourable mentions.

You have had the opportunity to hear all about me on page 2 and, now, I would like to hear from you, the readership.

I invite you to get involved in the Newsletter by way of contacting me by e-mail, fax, or mail and letting me know

Außenstelle Pasing Baumbachstraße in the Newsletter. Of course, I cannot guarantee that all of your suggestions will be used, but they will be seriously considered - I will do my best to accommodate your interests and deliver a quality and timely publication that meets the needs of the Society and its Members.

Karina Labinaz, Editor, IGS News

### **Corporate Members of the IGS**

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Ipetex, S.A. Portugal (1999)

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Nittoc Construction Co., Ltd. *Japan (1994)* 

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

Okasan Livic Co., Ltd. Japan (1984)

Pavco S.A. Colombia (1991)

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Poly-Flex, Inc. USA (1996)

Presto Products Company Geosystems Division USA (1996)

The Reinforced Earth Co. *USA* (1989)

Reliance Industries, Ltd. *India* (1998)

Sewon Geosyntech Co., Ltd. *Korea* (1997)

Shimizu Corporation Japan (1990)

Solmax International, Inc. *Canada (1997)* 

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SAGP (Swiss Association of Geotextile Professionals)
Switzerland (1984)

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**Taiyo Kogyo Corporation (Sun)** *Japan (1991)* 

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**Tensar International** *UK (1989)* 

Terram Ltd. UK (1988)

Thai Nam Plastic Public Co., Ltd. *Thailand* (1994)

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

Werkos Croatia (1999)

Note: date is earliest year of continuous membership.

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The IGS Council includes the five IGS Officers serving for the period 1998 to 2002

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Tel: 33/76 51 49 46 Fax: 33/76 51 49 00

E-mail: gourc@ujf-grenoble.fr

# The International Geosynthetics Society



#### **OBJECTIVES OF THE IGS**

The International Geosynthetics Society was formed with the following objectives:

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

#### WHY BECOME A MEMBER OF THE IGS?

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

By becoming a Member of the IGS 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 associated technologies; and
- participate in a forum for designers, manufacturers, and users, where new ideas can be exchanged and contacts improved.

The following benefits are now available to all IGS Members:

- a directory of Members, the IGS Directory, published every year, with addresses, telephone, e-mail, and fax numbers;
- the newsletter, IGS News, published three times a year;
- a reduced purchase price on all documents published by the IGS;
- a reduced registration fee and preferential treatment at all conferences organized under the auspices of the IGS;
- · a reduced subscription fee for IGS-endorsed journals; and
- the possibility of being granted an IGS award.

IGS	MEMBERSHIP	APPL	ICATIO	ON

Membership of the International Geosynthetics Society (IGS) is open to individuals or corporations "... engaged in, or associated with, the research, development, teaching, design, manufacture or use of geotextiles, geomembranes, and related products or systems and their applications, or otherwise interested in such matters.", The annual fee

Write your address below as you wish it to appear in the next <i>IGS Directory</i> Title (circle one): Mr. Ms. Dr. Prof. Other Position  First name: Last name:		•	Send this completed form to: IGS Secretariat			
			226 Sitton Road	Teleph	Telephone: 1/864-855-0504	
			Easley, SC 29642	Fax:	Fax: 1/864-859-1698	
			U.S.A.	E-mail:	igssec@aol.com	
Company name:			<ul> <li>Eligibility (i.e. connection with geotextiles, geomembranes, related products, and associated technologies):</li> </ul>			
City:	Province/State:					
	Country:					
Telephone:						
Fax:						
E-mail:	Telex:					
Membership fee sch	edule: 🗆 Individual US\$45.00	☐ Corporate	US\$1000.00	factor's contribution	n (at least US\$200.00)	
Mode of payment:			AND TO THE STATE OF THE STATE O			
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