

# ISSMGE Bulletin

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International Society for Soil Mechanics and Geotechnical Engineering

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## INSIDE THIS ISSUE

- 1 Message to ISSMGE Members
- 27 New Zealand Earthquake
- 46 Earthquake in Japan
- 67 Conference News
- 69 **Conference** News
- 70 Book News
- 71 News for future event
- 72 News for future event
- 74 Event Diary
- 78 Corporate Associates
- 80 Foundation Donors

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## Message to ISSMGE Members from Prof. R. Terzariol, The Vice President for South America

Currently the ISSMGE Vice President for South America is Professor Roberto Terzariol. His term will continue until 2013. Roberto E. Terzariol graduated Civil Engineering of National University of Córdoba, Argentine, in 1981. During 1983-1985, he did graduate studies in geotechnical engineering and structures at the University of Rome "La Sapienza". In 2003 he majored university education at the National Technological University of Argentina. He started teaching in 1982 when he was appointed Professor of Geotechnical Engineering at the National University of Cordoba. He was promoted to the position of Academic Secretary for Research and Graduated Studies and then Head of Civil Construction Engineering Department both at the University of Córdoba, and became a member of the Academic Council and Executive Board at the same university. Currently he is Vice Dean of the School of Engineering at the same University. He is also Leading Professor at the National Technological University where he taught Foundation Engineering. He teaches courses of geotechnical engineering for Masters and Doctoral degree from several universities in Argentina. He is a very active member of various state and university scientific agencies, serving as the chairman of evaluation committee for research projects and grants.



## Message to ISSMGE Members (continued)

Professor R. Terzariol

### SOUTH AMERICAN REGION

It is necessary to explain from where we are, who we are, what our significance is in ISSMGE, what our presence is, and what will be the future challenges.

#### WHERE WE ARE :

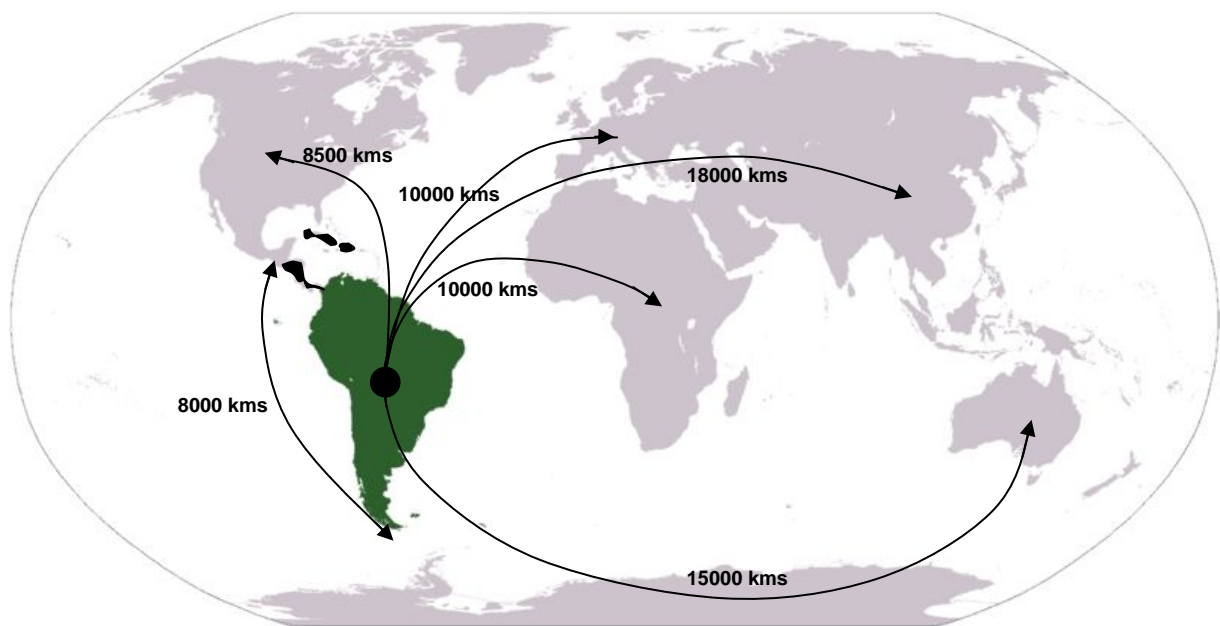


Figure 1 Location of SA and distance to other ISSMGE regions

We are located from the Central to the South part of the American Continent. The region includes countries from Central America, Caribbean and South America, both speaking Spanish or Portuguese.

The distance to the other regions ranges between 8.500 and 18.000 km, and the maximum distance from one end to the other of the region is 8.000 km.

This is the problem that threatens the easy communications and exchanges among the member societies. Our continent is the only that is subdivided into two regions.

#### WHO AND HOW MANY WE ARE:

The region have more than 1300 members in the ISSMGE, and they contribute with the 6% approx. of the ISSMGE's subscriptions in 2009.

Members of the region, from Argentine, Brazil, Chile and Peru, work in more than ten TCs, like "Unsaturated soils", "Laboratory testing", "Underground construction" and others, with a significant involvement in each of them.

The chair of "Megacities" TC is located in the region (Prof. A. Negro of Brazil).

## Message to ISSMGE Members (continued)

Professor R. Terzariol

Prof. Victor De Melo, President of the Brazilian Society and formerly VP for South America, was one of the most representative presidents of the ISSMGE.

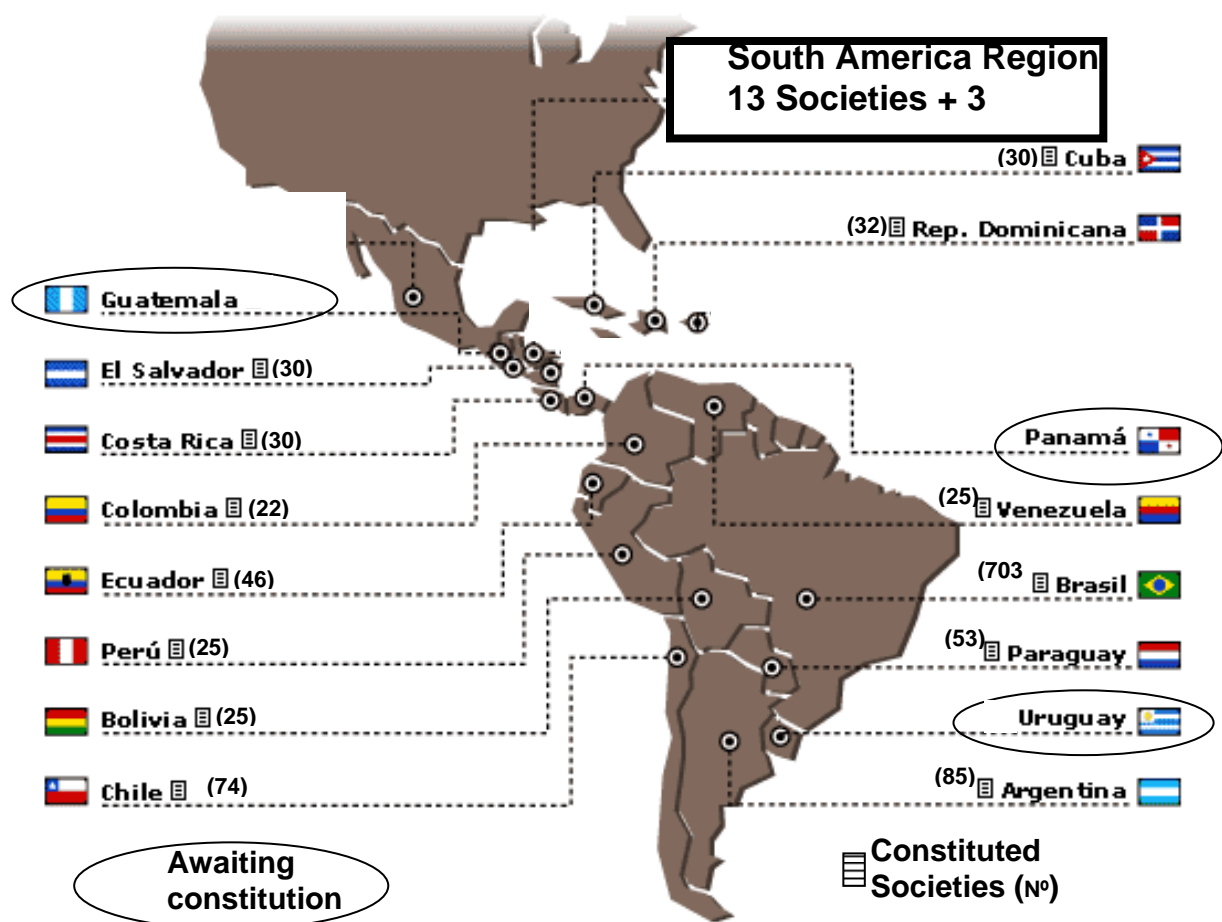


Figure 2 Societies in region and number of member of each one

The region is composed of 13 member Societies representing many countries. Some of them are very old as the Argentine Society which is 62 years old, and others are very recent as Dominican Society was founded just 3 years ago. There are now three countries that have interest in joining the ISSMGE. Guatemala has already completed the paperwork and from next year become a new member. Table 1 shows a list of the constituting Societies, and the presidents of each one.

## Message to ISSMGE Members (continued)

Professor R. Terzariol

Table 1 List of Member Societies of SA Region

Society Denomination	President	Period
Sociedad Argentina de Ing. Geotecnica	P. Torres	2006-2011
Asociación Boliviana de Geotecnia	R. Barrientos	s/d
Asociacao Brasileira de M. dos Solos	J. Militiski - A. Negro	2011-2012
Sociedad Chilena de Geotecnia	R. Verdugo	2006-2011
Sociedad Colombiana de Geotecnia	A. Gonzalez G.	2010-2012
Asociación Costarricense de Geotecnia	M. Jimenez J.	2009-2011
Com. Tec. Nac. de M. de Suelos y Geot. Cuba	R. Armas N.	s/d
Soc. Dominicana de Geotecnia y Mat.	L. Carpio M.	2007-2012
Soc. Ecuat. de M. de Suelos y Rocas	A. Velazco F.	2009-2011
Sociedad Salvadoreña de Geotecnia	L. Pineda	2010-2012
Sociedad Paraguaya de Geotecnia	C. Lopez B.	2009-2011
Sociedad Peruana de Geotecnia	A. Carrillo - C. Torres	2010-2014
Sociedad Venezolana de Geotecnia	J. Amundaray - A. Benarroch	2010-2012

The number of members on their own is not a reliable indicator. In this respect, Figure 3 shows the members of each society per million of inhabitant of each country, and Figure 4 shows the media of members per million of habitants in each region.



Figure 3 Societies and members per millions of habitants

## Message to ISSMGE Members (continued)

Professor R. Terzariol

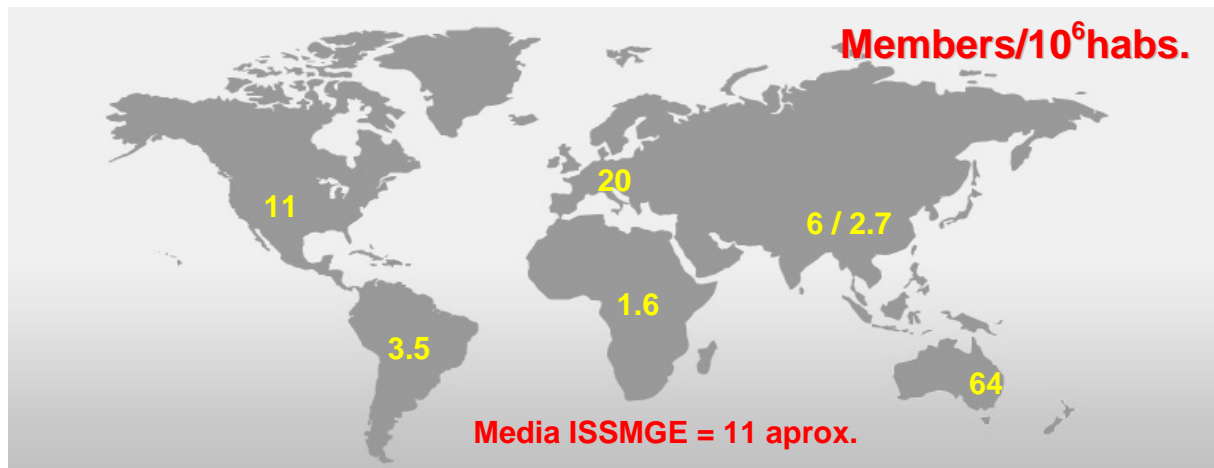


Figure 4 Members per million of habs., media of each region

The media in South America is 3.5 and in the whole ISSMGE is 11 approx. In one sense this index measures the degree of geotechnical engineering development of a particular region, but it needs to be linked to the maximum and minimum of that region to balance the asymmetries between different countries. Table 2 shows the regional averages and maximum and minimum within it.

Table 2 Media, maximum and minimum in each region

REGION	COUNT.	Members per million habitants				
		Media	Minimum		Maximum	
AUSTRALASIA	2	64	Australia	40	New Zealand	88
EUROPA	32	20	Russia	2.2	Iceland	77
NORTH AMERICA	3	11	Mexico	2.5	Canada	21
SOUTH AMERICA	13	3,5	Peru	0.9	Paraguay	9.5
ASIA (** Without Singapore and Hong Kong)	22	6,0 *	China	0.26	Singapore	42
		2.7 **			Japan	10.6
AFRICA	11	1,6	Nigeria	0.26	Tunisia	4.0

This table shows that Mexico and Russia in NA and Europe regions are similar to the South American countries, and Canada in NA is similar to the European countries. On the other hand, countries with low population, like Iceland, Singapore or Paraguay, have great influence on the media values. With all these considerations SA is located in an area between highly developed countries and the most delayed ones, and has a large asymmetry with its neighbor of NA.

### CHALLENGES FOR THE NEXT 3 YEARS

Table 3 summarizes the situations, issues and challenges in SA Region.

## Message to ISSMGE Members (continued)

Professor R. Terzariol

Table 3 Summary of situations in SA Region

Situation	Issues	To do
2011 Pan Am Conference (the only Regional Conf. with 2 regions)	Low participants from the non host region. Economic asymmetries	Work together. PanAm Committee Meeting in August 2010
Poor interaction between Societies of the region	Overlay of Conferences. Not optimized itinerant seminars and courses	Build up a calendar of events. Improve personal contact. Regional events & TC's. (with SAIG)
Lack of communication between authorities	Misunderstanding and wariness among societies	Meetings of Presidents of South American Societies
No official web page	Poor interaction between VP and member societies	Web page, with information, calendar of events, reports of TC members, etc.
Unbalanced participation in TC's Committees	Some Societies are not aware of these activities	Promote societies. Publish reports of TC's members
Countries not members ISSMGE	Many Geotechnical Engineers not integrated	Promote the creation of local societies (SGG-SUG-CPG)

### REGIONAL ACTIVITIES

During 2010 and the first months of 2011, the main following activities were undertaken in the region:

- 4 National Conferences (Argentina, Brazil, Colombia, Venezuela)
- 2 International Conferences (Brazil, Chile)
- 8 International Seminars and Courses (Argentina, Brazil, Chile, Colombia, Ecuador, Perú, Sto. Domingo)
- More than 20 National Seminars and Courses (Argentina, Brazil, Chile, Colombia, Ecuador, Sto. Domingo)
- 2 Chile's Earthquake Report (SoChiGeo-GREE / CICCba-SAIG Argentina)
- 1 International Publication (Soils & Rocks in English and Portugues) + 8 Local Publications (hard copy and electr. in Spanish) (Argentina, Brazil, Colombia, Costa Rica, Ecuador, Perú, Venezuela)
- Annual Meeting of the Panamerican Committee (Brazil)
- First Meeting of Societies from South America (Brazil)

All this shows the strength and the maturity of the geotechnical engineering in the region and the efforts of each member society.

To be especially mentioned is the meeting of SA's societies to be held in August of 2010. It is the first time that all the representatives of the member societies can discuss issues, and find the solutions together. The meeting of the Pan Am Committee will be held at the same time and place as the SA meeting.



## Message to ISSMGE Members (continued)

Professor R. Terzariol

### ACTIVITY OF VICE PRESIDENT

#### *MEETING OF THE PRESIDENTS OF NATIONAL SOCIETIES OF SOUTH AMERICAN REGION*



Figure 5 Participants of the Societies Meeting, Brazil, August, 18 - 2010

In August 18 of 2010 in Gramado (RS) in the South of Brazil, 12 countries over 13 that make up our region participated in the meeting of representatives from the geotechnical member societies. This meeting began as an idea of the former Vice President, Jorge Bonifazzi (Argentine), during the International Conference in Alexandria, Egypt, and was conducted during the present term.

Together with the ISSMGE Vice President Roberto Terzariol (Argentine), the following representatives participated; Pablo Torres (Argentine), Jaime Bustillo (Bolivia), Jarbas Militiski & Arsenio Negro (Brazil), Luis Valenzuela (Chile), Alvaro Gonzalez (Colombia), Marlon Jiménez (Costa Rica), Rolando Armas Novoa (Cuba), Luis Marin (Ecuador), Carmen Rico (El Salvador), Cesar Lopez Bossio (Paraguay), Alvaro Carrillo Gil (Perú), and Jose Amundaray (Venezuela). Unfortunately, Luis Carpio (Dominican Republic) had an accident which made it impossible for him to travel to Brazil for this meeting. Additionally the presence of Alvaro Gutierrez (Uruguay) was included as an observer from a future member society.

The meeting was held in Serrano Hotel that previously hosted the XV Brazilian National Conference on Geotechnical Engineering. The Brazilian Society made a very big effort in order to support all the participants during their stay in Gramado. Prof. Roberto Terzariol opened the meeting by welcoming all delegates. He acknowledged the COBRAMSEG2010 Organizing Committee, and Prof. Jarbas Milititsky, President of ABMS, host of this meeting.

Each representative talked about the history, number of members, local issues and events to be held during 2010-2011 in each country. The performance of each society was different, but in general all are preparing national conferences, seminars and courses with local and international characters.

The journals and bulletins of each society are crystallized in a manner to establish itself as a means of communicating news and research articles. As a result in all the regional societies, with few exceptions, activities are developing which, through the participation of its members, shows the strength of geotechnics in the different countries. After all the meeting agenda was prepared.

## Message to ISSMGE Members (continued)

Professor R. Terzariol

### *MEETING OF THE PANAMERICAN COMMITTEE*

On August, 20, 2010, also in Gramado (RS) of Brazil, during the XV Brazilian Conference of Geotechnical Engineering, Prof. Jean Louis Briaud, President of the ISSMGE, Prof. Pedro Seco e Pinto, the immediate past President of the ISSMGE, the Vice President for South America, 12 representatives of South American Societies, 3 representatives of Mexico (Walter Paniagua), United States (Robert Holz), and Canada (Giovanni Cascante), and the Vice President from North America, Gabriel Auvinet, participated in Pan American Committee.



Figure 6 Members of the Pan American Committee Meeting with Prof. J. L. Briaud and P. Seco e Pinto

Prof. Roberto Terzariol opened the meeting by welcoming all delegates. He acknowledged the presence of Dr. Jean-Louis Briaud, Prof. Seco e Pinto, and Prof. Jarbas Milititsky, President of ABMS, who was the host of this meeting. An informal introduction of all delegates was made, emphasizing the fact that most countries of the continent were represented.

Dr. Gabriel Auvinet presented a brief report concerning the North American Region, which includes three countries. Highlights in conferences, seminars and other events were mentioned. Prof. Roberto Terzariol briefly discussed the importance of SA Societies within the ISSMGE, with 13 active countries and 2 more in formation (Uruguay and Guatemala).

After that the participants prepared the agenda; particularly the organization of the next Pan American Conference and the By Laws of the Committee.

### ACTIVITIES IN EACH NATIONAL SOCIETY

For the better understanding, the activity in each country is described separately.



## Message to ISSMGE Members (continued)

### Professor R. Terzariol

#### *ARGENTINE SOCIETY FOR GEOTECHNICAL ENGINEERING - SOCIEDAD ARGENTINA DE INGENIERIA GEOTECNICA (SAIG):*

The Argentine Society is the oldest in the region, and has more than 80 members. There were 5 main events in Argentina during 2010. Its president is Pablo Torres whose term will be completed this year.

The Argentine Society of Geotechnical Engineering (SAIG), in partnership with Argentine Society of Structural Engineers (AIE), organized a seminar on "Pile Design for Building and Infrastructure" on August 2, 2010, at the Borges Cultural Center in Buenos Aires. There were 3 lectures, the first given by Prof. Eduardo Nunez, on "Design of drilled piles, driven piles and piled raft foundations", the second about "Control of deep foundation construction" given by Juan Fernandez Vincent and the third by Tomas Van Cauwelaert on "Design and Construction of CFA Piles". More than 200 people participate in these events.

On August 25 to 27, 2010, the "International Symposium on Landslides and Associated Risks" took place in the Auditorium of Civil Engineers Council of Cordoba. This event was organized jointly by SAIG and the Argentine Association for Engineering Geology and Environment (ASAGAIA). This symposium had 3 main lectures given by Prof. Pedro Seco e Pinto, Dr. Raul Sarra Pistone (Portugal) and Prof. Roberto Terzariol (Argentina). The event received more than 70 participants, 15 paper presentations, and Prof. Pablo Torres President of SAIG and Jorge Bejerman Secretary of ASAGAIA attended. All the participants joined a technical tour to the mountain road named "El Cuadrado" under construction, where they saw problems associated with landslides and new construction techniques applied in that project.



Figure 7 Prof. P. Seco e Pinto, Dr. Sarra Pistone, Eng. Pablo Torres, Prof. Terzariol, and Geol Jorge Bejerman. Dr. Zeballos during Seminar on Landslides

During October 6 to 9 of 2010, in Auditorium A. Bustillo (Convention and Expositions Center) of Mendoza, SAIG together with the National and Technological Universities organized the "XX National Conference on Soil Mechanics and Geotechnical Engineering - CAMSIG2010". This Conference received more than 270 participants, 140 scientific and technical papers, and 5 international lectures given by Carlos Santamarina (Georgia Tech - USA), Carlos Costa (Univ. of San Luis, Argentina), Luis Ortuño (Polytechnic University of Madrid, Spain), Pedro Ortigosa (Chile) and Oscar Varde (Argentina). After the meeting the participants attended technical visits to Potrerillos Dam. This is a concrete-face rock fill dam, 140 meters high, placed in a very high seismic zone on the Andes Mountains near the international road that link Argentina and Chile.

## Message to ISSMGE Members (continued)

Professor R. Terzariol



Figure 8 Professors Fabri, Rocca, Zeballos, Terzariol, Santamarina and Redolfi

The “International Course on Advanced Numerical Geomechanics - PLAXIS” was held in Buenos Aires between October 25 to 29, 2010 with more than 40 participants from Argentina, Bolivia, Brazil, Chile, Colombia, Peru and Venezuela. There were 2 main lectures given by Dr. Esteban Hormazabal (SRK Consulting) and Dr. Raul Bertero (Buenos Aires University). The teachers were Cesar Sagaseta Millán (University of Cantabria, Spain), Juan Pestana Nascimento (University of California, Berkeley), Alejo Sfriso, Juan Fernandez Vincent and Jorge Laiún (University of Buenos Aires), and Dennis Waterman & Alfonso Alvarez Manilla (PLAXIS VB).

Finally on November 30 in the Borges Cultural Center of Buenos Aires, the “Seminar on Excavations, Braced Cuts, and Underpinning” was organized jointly by SAIG and the Association of Structural Engineers. This seminar hosted more than 450 attendants including professionals and students. In the event various recognized professionals shared their experiences, recommendations and possible solutions to a variety of risks existing in excavation, underpinning and building of basements. The first lecture was given by Prof. Alejo Sfriso, SAIG Secretary, who spoke about the problem of “Excavations and Support Methods”.

During 2011, the Argentine Society for Geotechnical Engineering (SAIG) plans the organization, among other events, of the “Symposium on Geotechnical Problems in the Design and Construction of Mountain Roads” in Tucumán, together with the Association for Engineering Geology (ASAGAIA). In Córdoba, SAIG together with the locals Councils of Engineers and Architects will organize two courses regarding geotechnical implications in construction management.

Additionally the Argentine Society continues, as it did in 2010, participating in developing the Argentine standards in geotechnical tests (IRAM) and for the civil construction (CIRSOC).

Also during April 2011, SAIG elects its news authorities for the next 2 years.

## Message to ISSMGE Members (continued)

Professor R. Terzariol

### *BRAZILIAN ASSOCIATION FOR SOIL MECHANICS AND GEOTECHNICAL ENGINEERING - ASOCIACAO BRASILEIRA DE MECANICA DOS SOLOS E ENGENHARIA GEOTECNICA (ABMS)*

The Brazilian Society is one of the most active societies in the region with more than 700 members, divided in Regional Chapters for different states in the country, and has a continuous participation in the ISSMGE's Technical Committees and Conferences. A distinguished member of ABMS, Prof. V. De Melo, was the president of ISSMGE between 1981 and 1985.

From 12 to 14 April, 2010, the Conference "Ecos da Sardenha" on urban solid waste treatment and deposition took place in Sao Paulo in association with the Faculty of Public Health of University of Sao Paulo.

In Sao Paulo on April 16, the Engineering Institute held the tribute to Professor Milton Vargas, an emeritus member of ABMS and its past president. Authorities of ABMS presented in that occasion a document about Natural Disasters in Brazil.

During April 21-23, 2010, in Foz do Iguacu (PR), the Regional Conference "GEOSUL2010" was organized by the Regional Chapter of Paraná/Santa Catarina with more than 350 attendants and featured national lecturers.

Between March and June of 2010, the Chapter Center and West of ABMS together with the Federal Net of Technical and Professional Education held a course for bore hole operators, and qualified 29 of them. The same chapter organized in Guarujá (SP) the "Symposium on Soft Soils" on May 21-.23, 2010.

From May 23 to 27, 2010, ABMS organized the 9th International Conference on Geosynthetics. This conference took place in Guarujá and was organized together with the International Geosynthetics Society (IGS). This conference had 800 participants and more than 75 booths of exhibition. This conference had 7 keynotes and special lectures. Lecturers were Professors S. Sandroni (Brazil), J. Giroud (USA), R. Holtz (USA), H. Brandl (Austria), D. Cazzuffi (Italy), S. Perkins (USA) and A. Fourie (Australia). Also Dr. Jorge Zornberg, President of IGS, and members of ISSMGE attended this occasion.



Figure 9 Professor Jorge Zornberg, IGS President and ISSMGE member

In Cuiabá, from October 30, 2010, Professor Roberto Quental Coutinho gave the 6th Conference on "Management of Urban Landslides Risks, together with the Regional Chapters of ABMS from Cuiabá, Salvador, Minas Gerais, Sao Paulo, Paraná-Santa Catarina, Rio Grande do Sul, Rio do Janeiro and Nordeste, with more than 600 of participants from all the locations.



## Message to ISSMGE Members (continued)

Professor R. Terzariol

In Gramado (RS), from October 17 to 22, 2010, the XV Brazilian Conference on Soil Mechanics and Geotechnical Engineering - COBRAMSEG2010 was held. During COBRAMSEG2010, the Luso-Brazilian Symposium and the Geojovem took place as well. The former was organized jointly with the Portuguese Geotechnical Society and the latter was directed for young geotechnical engineers and students with a participation of more than 450 people. COBRAMSEG2010 had an attendance of more than 1000 specialists from many parts of the country and the world. Jean Louis Briaud, ISSMGE President and Prof. Pedro Seco e Pinto, the immediate past president, attended the Conference together with Roberto Terzariol and Gabriel Auvinet, ISSMGE Vice Presidents for South and North America, respectively.



Figure 10 Attendants, Chairpersons, Professors J.L. Briaud and G. Auvinet during COBRAMSEG 2010

The event held the “Victor de Melo Lecture”, that was delivered by Professor Harry Poulos of Australia after the introduction of Professor John Burland (UK). During COBRAMSEG2010, ABMS elected new authorities (Prof. A. Negro was elected as president) and meetings were organized between the executive secretary of the Deep Foundation Institute and the Brazilian Association of Foundation Engineering. A special tribute to all the past presidents of ABMS was performed.

The Nordeste Chapter of ABMS organized in Recife (PE) during November, 10-11 of 2010, the 1st North East Symposium on Geotechnics with a participation of more than 230 attendants.

During the month of January of 2011, ABMS presented the “Soils and Rocks Prize”, in a ceremony which had the participation of Dr. Laura Caldeira, President of the Portuguese Geotechnical Society (SPG), Prof. Arsenio Negro, President of ABMS, Prof. Henio Palmeira from International Geosynthetics Society (IGS), and Dr. Heloisa Frasca, a past president of the Brazilian Association for Engineering Geology and Environment ABGEE.

## Message to ISSMGE Members (continued)

Professor R. Terzariol



Figure 11 Professors A. Negro, H. Palmeira, F. Masad, and L. Caldeira

In February, the second course for bore hole operators started and qualified 40 technicians, in association with the National Secretary of Education which supervises qualifying courses. For the rest of the year ABMS had scheduled the following events:

Date	EVENT	Place	Kind
07 to 09/04/2011	II Geocentro / VI INFOGEO / Solos Tropicais (Tropical Soils)	Brasília	Conference
02 to 03/06/2011	GEORS 2011	Passo Fundo	Seminar
29 to 31/08/2011	N-SAT2011 - Simpósio Brasileiro de Solos Não Saturados (Unsaturated soils)	Pirenópolis	Symposium
21 to 24/11/2011	REGEO 2011 - VII Congresso Brasileiro de Geotecnia Ambiental	Belo Horizonte	Conference
03 to 04/11/2011	GeoNordeste	Natal, RN	Seminar
21 to 24/11/2011	Geossintéticos 2011 - VI Simpósio Brasileiro de Geossintéticos	Belo Horizonte	Symposium

### *CHILEAN GEOTECHNICAL SOCIETY - SOCIEDAD CHILENA DE INGENIERIA GEOTECNICA (SOCHIGE)*

The Chilean Society is an important society in the region especially on issues of geotechnical earthquake engineering and mining geotechnics, with more than 70 members. Professor Ramón Verdugo is the president of SOCHIGE and also a member of the ISSMGE Technical Committee 203 on Earthquake Geotechnical Engineering.

During January, 10-13, 2010, the city of Santiago de Chile held the 5th International Conference on Earthquake Geotechnical Engineering, presided by Professor Ramón Verdugo and organized between the SOCHIGE and the National University of Chile, sponsored by the TC203 of ISSMGE. About 500 participants came to this occasion from all over the world and exhibited deep interests in this field of study.

## Message to ISSMGE Members (continued)

### Professor R. Terzariol

Prof. Jean Louis Briaud, the President of the ISSMGE, Prof. Pedro Seco e Pinto, the past immediate president, and Prof. Roberto Terzariol, currently ISSMGE Vice President for South America, attended this conference. Additionally the following people were attended this conference; Professors Kiriakis Pitilakis (Greece) president of the 4th ICEGE, Kenji Ishihara (Japan) ISSMGE past president, I.M. Idriss (USA), G. Gazetas (Greece), E. Faccioli (Italy), W.D. Liam Finn (Chairman of Steering Committee), Luis Valenzuela (Chile), Ikuo Towhata (Japan), T. Kokusho (Japan) and Atila Ansal (Turkey), co-chairmen of the advisory committee.

## 5<sup>th</sup> ICEGE

5th International Conference on Earthquake Engineering  
January 2011, 10-13 Santiago, Chile

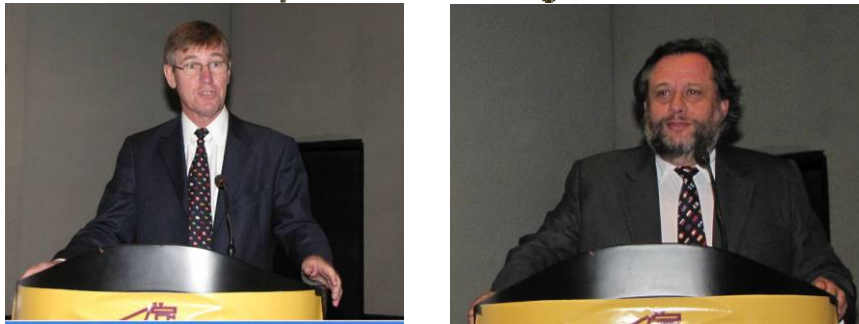


Figure 12 Professors Jean Louis Briaud and Roberto Terzariol, ISSMGE President and Vice President for SA, respectively, starting the conference

During the conference Professor Ricardo Dobry (Rensselaer Polytechnic Institute) was honored with the Ishihara Lecture, who gave an interesting lecture about the “in situ” methods for liquefaction prediction”, concerning specially the traditional procedures.

There were:

- 10 special sessions led by F. Leyton, J. Bray, C. Ledezma, D. Frost, S. Yasuda, R. Verdugo, B. Bradley, M. Cubrinovski and R. Saragoni.
- 7 state-of-the-art sessions, coordinated by Ikuo Towhata, An-Bin Huang, F. Chavez, R. Boulanger, S. Kramer, P. Seco e Pinto and G. Gazetas.
- 12 theme lectures given by J. Bray, P. Ortigosa, L. Valenzuela, K. Pilitakis, R. Villagra, M. Cubrinovski, R. Verdugo, A. Elgamal, E. Ovando Shelley, J. Kuwano, S. Yasuda and K. Stokoe.
- 3 workshops led by Professors Jorge Troncoso, Takaji Kokusho and Atila Ansal, respectively.

A post-conference technical visit was a guided trip to the areas of Concepción and Arauco in the south region of Chile, where major geotechnical damages were observed after the earthquake of February, 27, 2010.



## Message to ISSMGE Members (continued)

Professor R. Terzariol



Figure 13 Views of damages during the post-conference technical visit

During the year of 2011, SOCHIGE has intention to organize the Chilean National Conference on Geotechnical Engineering, and for 2012 there is an agreement with the chair of the TC305 - Megacities to organize in Santiago and Valparaiso the next International Conference about the matter.

### *COLOMBIAN GEOTECHNICAL SOCIETY - SOCIEDAD COLOMBIANA DE GEOTECNIA (SCG)*

In this year the SCG celebrates the 40th year since its establishment. It is a strong society that includes the Societies for Engineering Geology and Rock Mechanics. Prof. Alvaro Gonzalez is the president of the SCG and also ISRM Vice President for South America.

During September of 2010, in Manizales the SCG associated with National University of Colombia organized the XIII Colombian Geotechnical Conference and the VII Colombian Seminar on Geotechnics; the latter being on mining geology.



Figure 14 Lecturers: Celestino, Perri, Salcedo, Wesley, Montero and Samaniego

## Message to ISSMGE Members (continued)

### Professor R. Terzariol

These events occurred simultaneously, having the presentation of 77 papers and 12 main lectures. The lectures were offered by Laurence Wesley (New Zealand), Daniel Salcedo (Venezuela), Tarsicio Celestino (Brazil), Antonio Samaniego (Peru), Gianfranco Perri (Venezuela) and Jaime Suárez, Juan Montero and Alvaro Correa from Colombia.

There were in total 301 attendants who could additionally make a post-conference technical visit in the vicinity of Manizales.

On November 18-19, 2010, SCG organized with INGEOMINAS, the “International Seminar-Course on Petrologic and Climatic Aspects in the Behavior of Aggregates”. The lecturers were Antonio Gomes Correia (Portugal-ISSMGE), Chris Rogers (Canada), Dar Hao Chen (USA) and Juan Montero, Sandra Campagnoli, Octavio Coronado and Diego Sánchez de Guzmán from Colombia. The Seminar had 77 participants from all over the country.

Bogotá held the “V Academic Seminar on Rock Engineering - Theoretical and Applied Rock Mechanics for Tunnels and Slopes”, in November, 18-20, 2010. The event was organized together with the Research Group on Rock Engineering from the National University of Colombia, with the support of the SCG’s Rock Engineering Commission.

The next activities include the organization of the “VIII Colombian Geotechnical Seminar and the International Geotechnical Seminar on Urban Geotechnics” in September 2011, and the participation in “GeoHuman International Conference June 9-11, 2011” organized by Professor Dar Hao Chen, in Changsha, China. For these events, Professors Juan Montero, Mario Camilo Torres and José Vicente Amórtégui in the name of SCG sent papers to be presented, and will represent SCG.

#### *COSTA RICA GEOTECHNICAL ASSOCIATION - ASOCIACION COSTARRICENSE DE GEOTECNIA (ACG)*

The ACG is 30 years old and is very active in the region. Professor Marlon Jimenez is the president of ACG is pro-active and recognized in Central América and Caribbean geotechnical community.

On April, 8, 2010, in the University Auditorium, Professors Luis González de Vallejo and Mercedes Ferrer, from Spain, gave a lecture on “Geotechnical Risks and Impact in Civil Facilities and Environment”, with 83 attendants.



Figure 15 Professors Gonzales de Vallejo, Marlon Jimenez and Mercedes Ferrer

In October, 2010, the ACG held the “Strategic Workshop of ACG’s Technical Committees.” This event treated the following issues:

- Geotechnical Engineering Teaching
- Rock Mechanics
- Foundations Standards
- Landslides

## Message to ISSMGE Members (continued)

Professor R. Terzariol



Figure 16 Participants in the Strategical Workshop

The 2nd Geotechnical Colloquium about “Geotechnical Characterization of Material from a Cut” was given by Eng. Alejandra Morice during the annual Assembly of ACG in November, 2010.



Figure 17 ACG Annual Assembly and Eng. Morice's Lecture

On March 16-19, 2011, Professor Nick Barton (Norway) gave the Regional Geotechnical Course “Latest techniques and experiences in the design and stabilization of excavations in rock for civil works in complex geology”, organized by the ACG in the Hotel San José Palace. This event was successful with a participation of more than 160 people (40 from Central America, and 15 from the rest of Latin America).

## Message to ISSMGE Members (continued)

Professor R. Terzariol



Figure 18 Professor Nick Barton during the Regional Course

Also the ACG in collaboration with the National Emergency Committee, the Justice Secretary, the President of the Republics and the CFIA, all of Costa Rica, makes inspections and assistance in many civil facilities and projects, like the road San José-Caldera and a slope in the Women Penitentiary “Buen Pastor” of San José.

The Society is interested in active participation in international conferences like 5 ICGE held in Chile last January, and in the next Pan American Conference to be held in Toronto, Canada.

### *CUBAN NATIONAL COMMITTEE OF SOIL MECHANICS AND GEOTECHNICS - COMITÉ TÉCNICO NACIONAL DE MECÁNICA DE SUELOS Y GEOTECNIA DE CUBA (CTNMSG)*

The Cuban Society is under the direction of Professor Rolando Armas Novoa from the National University of Cuba “José Antonio Echevarría” and is a part of the National Union of Architects and Engineers of Cuba (UNAICC).

The CTNMSG in association with the University of Las Villas, organized the “9<sup>o</sup> Symposium on Structures, Geotechnics and Materials” during November 23-26, 2010, in Santa Clara, Cuba. In addition to Cuban professionals, colleagues from Colombia, Mexico, Spain and Brazil participated in this symposium.

The CTNMSG presented 15 papers, and 5 of which were selected to be sent to the next Pan American Conference in Toronto, Canada.

Professor Rolando Armas Novoa gave the main lecture entitled “Causes of catastrophic failure in earth dams: Priority and Sequences”.

In the same symposium the CTNMSG had its assembly where Professor R. Armas Novoa gave information to all members about the meetings held in Gramado in August of 2010.



## Message to ISSMGE Members (continued)

Professor R. Terzariol



Figure 19 Professors Rolando Armas Novoa (Cuba) and Marlon Jimenez (Costa Rica) during the meeting in Gramado, Brazil

### *DOMINICAN SOCIETY FOR GEOTECHNICS, FOUNDATIONS AND MATERIALS - SOCIEDAD DOMINICANA DE GEOTECNIA, FUNDACIONES Y MATERIALES (SODGYM)*

The SODGYM is presided by Professor Luis Carpio and is one of the newest societies in the region; being only 3 years old. Nevertheless Professor Carpio has imposed a very particular dynamism to the society.

This society is working in the elaboration of the Handbook titled “Behavior of Citizens under Earthquakes”, and the translation of the “Soils Laboratory Handbook” from Professor Braja M. Das (USA). They expect to publish these works in 2011.

In April, 2010, SODGYM organized together the ISSMGE a series of technical tours, seminars and courses.

On April, 11, 2010, Professor Carpio organized a trip to Puerto Principe, Haiti, with Professors Briaud and Seco e Pinto, ISSMGE president and a past president respectively, and Prof. B. M. Das, in order to observe the damages generated by the Haiti Earthquake in January, 2010, which caused hundreds of thousands of victims and destroyed the city of Puerto Principe.



Figure 20 Professors, Carpio, Briaud and Seco e Pinto taking a plane to visit Haiti

## Message to ISSMGE Members (continued)

Professor R. Terzariol

This trip was prior to the seminar on Earthquake Geotechnical Engineering held on April 12, 2010, in Santo Domingo. The Seminar was a part of the touring lectures sponsored by the ISSMGE and had a very important number of attendants.



Figure 21 Professors B. Das, Carpio (SODGYM), J.L. Briaud (Pres. ISSMGE), Seco e Pinto (past pres. ISSMGE), among other speakers and participants in the Seminar

On April, 14, Professor Braja M. Das gave a lecture titled “Poverty does not justify mediocrity” in the auditorium of the Autonomous University of Santo Domingo, Santo Domingo, Dominican Republic.



Figure 22 Professor Braja M. Das with two participants in his lecture

Finally on June 5, 2010, SODGYM organized the “Presentation of the conclusions of the “1st. International Seminar on Earthquake Geotechnical Engineering and related problems in the Caribbean Dominican Republic”.



## Message to ISSMGE Members (continued)

### Professor R. Terzariol

Professor Carpio unfortunately could not attend the meetings in Gramado because of a personal accident, but he is interested in the final reports of both meetings and will participate in the subsequent communications.

#### *ECUATORIAN SOCIETY OF SOIL MECHANICS AND ROCKS - SOCIEDAD ECUATORIANA DE MECANICA DE SUELOS Y ROCAS (SEMSIR)*

The SEMSIR is presided by Alejandro Velazco Fili, from Guayaquil. This society was founded on May 10, 1961. It is a scientific society that is nonprofit and nongovernmental, being dedicated to the promotion of science and technology in earth sciences and linked to civil engineering, geology and environment.

Its mission is to disseminate among engineers and university students of Ecuador the scientific advances in geotechnical and environmental engineering, for the welfare of the people.

SEMSIR organizes a series of lectures on "Landslide and Slope Stability" in 26-28 May, 2010. The lecturers were:

- Mr. Stalin Benitez: Landslides in the city of Guayaquil.
- Mr. Xavier Vera G.: Analysis and geotechnical designs for mitigation in unstable banks of Via Sabanetilla and Zaruma sector.
- Mr. Miguel Chávez: Sliding hillside slopes, and soft soils/rocks of Ecuadorian coast.

Other series of lectures addressed "Introduction to Flexible Pavements" held on June 23, 24, and 25, 2010. At this time the lecturers were:

- Mr. Alejandro Velasco Fili: Features, quality control and failure modes.
- Mr. Victor Nuques: Design of the asphalt pavement structure.

The third lecture series concerned "Earthquake and its Impact on Guayaquil" during 8, 9, 10 September 2010. Lectures were given by:

- Mr. Stalin Benítez: Geology and Seismicity in Guayaquil.
- Mr. Xavier Vera Grunauer: Performance and dynamic response of subsurface in the city of Guayaquil.
- Mr. Alex Villacrés Sanchez: Structural vulnerability in the city of Guayaquil.

On October 21, 2010, the seminar on "Dynamic Methods for Testing and Analysis of Deep Foundations", was realized and the speaker was Mr. Camilo A Álvarez.

The last series of lectures on "Geotechnical Aspects and Construction Processes on Bridges and Roads. " was developed on December, 1,2 and 3, 2010, and given by the following colleagues:

- Mr. Nelson Caicedo Aspinall (CPR) and Mr. Victor Bastidas Serra (CPR): Foundations: Evaluation results regarding the design procedure by dynamic test results on-site application in the San Vicente Bridge.
- Mayor Fausto Erazo (CIE): Bridges System and Roads in Esmeraldas.
- Mr. Marcelo Romo and Colonel Pedro Mosquera Burbano (ICE): Project on Chone River estuary, San Vicente Bay Bridge.

The upcoming activities for year 2011 will be the followings:

- Solemn Session in the auditorium of the University of Guayaquil, in tribute to 50 SEMSIR and 75 anniversary of the ISSMGE. May 10, 2011.

## Message to ISSMGE Members (continued)

### Professor R. Terzariol

- Second Conference of Geotechnical and Environmental Engineering Students and Young Engineers and V Ecuadorian Congress of Soil Mechanics. Quito and Guayaquil, November, 16-18, 2011.

#### *SALVADOR GEOTECHNICAL SOCIETY - SOCIEDAD SALVADOREÑA DE GEOTECNIA (SSG)*

Profesor Luis Pineda is the president of SSG and Carmen Rico is her Secretary. Carmen Rico participates in the Pan American and South American Representative Meetings, developed in Gramado, Brazil, during august, 2010.



Figure 23 Professors Roberto Terzariol VP for South America, Carmen Rico (El Salvador) and Rolando Armas Novoa (Cuba) during Gramado Meetings, 2010.

SSG's activities for this year will be as what follows:

- Colloquium about OPAMSS changes to the regulations of Slope Stability, in May, 2011.
- Supporting the Ministry of Public Works for post-graduate course on slope stability.
- Symposium on "Security Recommendations for Excavations", in June, 2011.
- Course on "Slope Stability in Soils and Rocks" held by the Salvadorian Association of Engineers and Architects, in August, 2011.
- Roundtable: "Recommendations for the Regulation of Foundations and Slope Stability in El Salvador", during October, 2011
- Lecture series on geotechnical engineering experiences in the 2009-2011 period, in December, 2011.

#### *PARAGUAYAN GEOTECHNICAL SOCIETY - SOCIEDAD PARAGUAYA DE GEOTECNIA (SPG)*

The Paraguayan Geotechnical Society (SPG) is immersed in an important internal change. First, it is making a depuration of it list of members and is working hard with the new generations of geotechnical engineers in order to transmit to them the governance of the SPG, which will change the authorities in next December.

## Message to ISSMGE Members (continued)

### Professor R. Terzariol

SPG had a significant history in the ISSMGE South American Region. It organized the Pan-American Conference in Foz de Iguacu, together with Argentine and Brazil, and held the First Meeting of Presidents of Geotechnical Societies of Mercosur, in 2003 in Asunción. SPG has organized many conferences and seminars in the Sub Region, and Professor Bosio Ciancio was the ISSMGE Vice President for South America for the period of 2001-2005. Currently the president is Cesar Lopez Bosio who participated actively in the meetings in Gramado.



Figure 24 Professors Jean Louis Briaud, President of ISSMGE, and Cesar Lopez Bosio, President of SPG, during the meetings in Gramado, August, 2010

Through a series of lectures the SPG take advantage of the start of construction of “Waterfront Avenue” in Asuncion, and present to the entire engineering community the newest technology that is being used.

During the next month, continued with the lectures, addressing topics such as, among others:

- "The Formation of Asuncion Bay"
- "Dispersive Soils"
- "Occurrence of soft rock in the Metropolitan Area of Asunción"
- "Waterfront Avenue in Asuncion"

Geotechnical Society of Paraguay is working closely with the National Secretary for Emergencies, looking technical responses to floods in coastal cities along the Paraguay River.

The SPG prepares a Handbook of Procedures for the Conservation of Retaining Walls of these coastal cities.

The SPG are in tratatives with the local Committee on Large Dams and the Paraguayan Association of Structures, in order to organize together Symposia, Courses and Seminars. The first meeting is scheduled after Easter recess.

Through its newsletter and website the Society keep up all, partners and the Paraguayan community of engineers, from the advances in geotechnical engineering.

## Message to ISSMGE Members (continued)

Professor R. Terzariol

### *PERUVIAN GEOTECHNICAL SOCIETY - SOCIEDAD PERUANA DE GEOTECNIA (SPG)*

The SPG was historically a very active society, hosting the Pan-American Conference on Geotechnical Engineering, in the year 1979, but in the recent years it has been some stagnated in activities.

At the end of 2010 the inevitable generational change in our societies brought about a new Directive Committee for the years of 2011-2012. Currently the SPG is presided by Cesar Torres Chung, with the vice-presidency of Professor Arnaldo Carrillo Gil and Patricia de los Rios as a secretary.

The first activity of this new committee was the organization of the ISSMGE touring lecture in Lima, Perú. On 6 and 7 January the "International Seminar on Earthquake Geotechnical Engineering and Unsaturated Soils" was held.



Figure 25 Speakers and Peruvian Society Authorities during the Seminar in Lima, Perú, January, 2011

The event was organized by the ISSMGE (International Society for Soil Mechanics and Geotechnical Engineering) and SPG (Peruvian Geotechnical Society). The agenda was as what follows:

Unsaturated Soils - January, 06, 2011.

- Jean Louis Briaud (USA) - President ISSMGE: "UNSATURATED SOILS: SOME FUNDAMENTALS AND SOME APPLICATIONS"
- Victor Rinaldi (Argentina) : "EFFECT OF THE STRUCTURE AND PARTIAL SATURATION IN THE DEFORMATIONAL BEHAVIOR OF SOILS"
- Nasser Khalifi, (Australia): "APPLICATION OF EFFECTIVE STRESS PRINCIPLE TO MECHANICS OF UNSATURATED SOILS"



## Message to ISSMGE Members (continued)

### Professor R. Terzariol

Earthquake Geotechnics: - January, 07, 2011.

- Roberto Terzariol (Argentina) - V.P South America ISSMGE: “ASPECTS OF EARTHQUAKE RESISTANCE OF SHALLOW AND DEEP FOUNDATIONS, AND RETAINING WALLS - NEW CRITERIA AND STANDARDS IN ARGENTINE 2010”.
- Jorge E. Alva Hurtado (Perú) & Zenon Aguilar Bardales (Perú): “ADVANCES IN THE GEOTECHNICAL EARTHQUAKE ENGINEERING STUDY OF THE 2007 PERUVIAN EARTHQUAKE”
- Susumu Yasuda (Japan): “DAMAGE TO STRUCTURES DUE TO SOIL LIQUEFACTION”
- Pedro Seco e Pinto (Portugal) - Past President ISSMGE: “EUROCODE 8 - DESIGN OF STRUCTURES FOR EARTHQUAKES RESISTANCE-GEOTECHNICAL ASPECTS”



Figure 26 Participants in the Seminar, Authorities and Speakers

The Peruvian Society of Geotechnics has the support of companies which are part of its corporate members. Among them, the followings are highlighted:

- Maccaferri of Peru S.A.C
- Geofundaciones of Peru
- DSI
- Techdilling
- Geo-Instrument

Among the most important outreach activities developed by the society in Peru are the so-called “Geotechnical Thursdays”, held at the Council of Engineers of Peru. That activity has been developed by recognized technical consultants, which are active members of the society and discuss various topics of interest for the public.

## Message to ISSMGE Members (continued)

Professor R. Terzariol

### *VENEZUELA GEOTECHNICAL SOCIETY - SOCIEDAD VENEZOLANA DE GEOTECNIA (SVG)*

The SVG is an historic society in our region. This society held the Pan American Conference twice; once in Caracas (1967) and the second in Isla Margarita (2007), and provided one of the Vice President of the region (Prof. Hiedra Lopez).

In March, 2011 SVG changed its authorities. The new president is Prof. Abraham Benarroch, who replaced Prof. Jose Amundaray. In 2010, Jose Amundaray was the representative of SVG to the regional meeting held in Gramado, Brazil.

The Venezuelan Society inaugurated its new headquarters bigger and more comfortable than the previous one, with a new library, and improved the web page of the society.

SVG is involved in a series of courses for the associated engineers in general in order to improve the industry in geotechnical issues.

Caracas hosted the XIX Venezuelan Seminar on Geotechnics, in October, 28-30, 2010. The seminar's central issue was the study and solutions of practical cases.



Figure 27 Attendants to the XIX Venezuelan Seminar

The event had 210 attendants with 25 papers and 2 main lectures in honor to Gustavo Perez Guerra and Juan Francisco Lupini, given by Prof. N. Rodriguez and I. Contreras both from Venezuela.

In 2011 SVG has an intention to organize, in September, the XX Venezuelan Geotechnical Seminar, and schedule the new geotechnical courses for engineers.

The society is in tratatives with the Universities, municipalities, mayors and governors in order to advise them on geotechnical problems and create committees to deal with natural disasters all over the country.