



## EUROPEAN ASSOCIATION FOR EARTHQUAKE ENGINEERING

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Audic Committee: Philippe Bisch, France; Panayotis Carydis, Greece

## REPORT OF THE CENTRAL OFFICE ACTIVITIES SEPTEMBER 2006 – SEPTEMBER 2007

### GENERAL

The Central Office was informed on June 20, 2007 and later received the official approval documents from the Office of the NGO Directorate in Istanbul that EAAE is officially registered as an international NGO with its Central Office at Bogazici University, Kandilli Observatory and Earthquake Research Institute by the official approval of the Turkish Cabinet of Ministers in their meeting held on April 17, 2007.

The main activities of the Central Office during the past year were:

- *Drafting and dissemination of the Minutes of the EAAE General Assembly and Association Council held respectively on September 5 and Sep 7, 2006 in Geneva, Switzerland during 1st ECEES,*
- *Drafting and dissemination of the Minutes of the Executive Committee Meetings,*
- *Organising the Executive Committee Meeting for 2007,*
- *Drafting, printing, and dissemination of the EAAE Newsletters for 2007 No.25/1 and 25/2,*
- *Correspondence with members, monitoring and updating membership records,*
- *Establishment of the official bank account under the name of European Association for Earthquake Engineering at Garanti Bank at the Bogazici University Branch,*
- *Instalment of the credit card charging equipment in the Central Office,*
- *Monitoring the EAAE funds and EAAE Bank Accounts in Istanbul,*
- *Preparations for the EAAE booth in the exhibit area during 4ICEGE in Thessaloniki, Greece,*
- *Preparations for the EAAE posters in the exhibit area during COMPDYN, Crete, Greece,*
- *Correspondence with EAAE National Delegates and Task Group Coordinators,*
- *Conducting individual membership campaigns,*
- *Updating of EAAE Internet web pages.*

The Secretary General participated to:

- *Madrid Workshop of the European Technical Committee-12 of ISSMGE on Geotechnical Evaluation and Application of the Seismic Eurocode-EC8, 25 September, 2007, Madrid, Spain*
- *FP6 Project LessLoss Final Workshop, 19-20 July, 2007, Belgirate, Italy*
- *Fourth Int. Conf. on Earthquake Geotechnical Engineering, 22-26 June 2006, Thessaloniki, Greece*
- *The ECCOMAS Thematic Conference "Computational Methods in Structural Dynamics and Earthquake Engineering (COMPDYN 2007)" 13-16 June 2006, Rethymno, Crete, Greece*
- *Fourth International Conference on Urban Earthquake Engineering, 5-6 March 2007, Tokyo, Japan*

to represent EAAE and to attend Task Group meetings and technical sessions and to promote special issues for BEE and new books for the GGE book series. He made brief presentations about the EAAE and about Task Group activities in some of these meetings.

**EXECUTIVE COMMITTEE**

The Central Office organised or helped in the organisation of:

- *the First Executive Committee Meeting on September 8, 2002 in Geneva, Switzerland, during the 1<sup>st</sup> ECEES;*
- *the Second Executive Committee Meeting on September 29, 2007 in Lisbon, Portugal*

The minutes of the first meetings were prepared and forwarded to all the Executive Committee Members, National Delegates, Honorary Members, the representatives of ESC. They were also inserted in EAEE web pages and were printed in the EAEE Newsletter No. 25/1.

**EUROPEAN SEISMOLOGICAL COMMISSION**

Communications with the ESC Secretary General and Executive Committee on different issue concerning the organisation changes according to the new Statutes of ESC

**MEMBERSHIP**

The Central Office sent out e-mail letters to Member Organisations almost every six months informing them about their membership dues. Eighteen of the EAEE National Member Associations have paid their National membership dues for 2007 and fifteen have not.

The Central Office have been continuously making efforts to increase the number of individual membership by sending invitation letters via e-mail to the participants of recently held conferences and to the members of EAEE National Associations and by distribution of EAEE Newsletter with the membership form in the conferences and meetings. The number of individual membership has increased to 128 by the 25th of September 2007. Out of these 128 members 73 (55 electronic and 18 paper copy) have paid for 2007.

**BUDGET Sep. 2006- Sep.2007**

	<b>INCOME</b>	<b>EXPENDITURE</b>
<b>BALANCE FROM SEPTEMBER 2006</b>	5,677.09 €	
<b>Membership fees from</b>		
<i>National Members</i>	2,716.16 €	
<i>Corporate Members</i>	182.00 €	
<i>Individual Members - Electronic Subs.</i>	1,830.30 €	
<i>Individual Members - Paper Copy Subs.</i>	757.00 €	
<b>Secretary of the Central Office</b>		3,250.00 €
<b>Support to Ex.Com Members for the Workshop in Brussels</b>		
<i>Carlos Oliveria</i>		460.00 €
<i>Robin Spence</i>		382.00 €
<b>Office Expences</b>		
<i>Rate for bank account and Interest</i>		85.10 €
<i>Newsletter Printing</i>		545.44 €
<i>UPS</i>		420.99 €
<b>SPRINGER</b>		
<i>Electronic (2006)+Hard Copy(2006+2007)</i>		4,338.00 €
<i>Electronic (2007)</i>		750.00 €
<b>SUM</b>	<b>11,162.55 €</b>	<b>10,231.53 €</b>
<b>DIFFERENCE</b>		<b>931.02 €</b>
<b>SPRINGER DEBT</b>		<b>304.00 €</b>

## TASK GROUPS

During 2006-2007 term most of the Task Groups were not very active. The only Task Group activity was organisation of the Special Session during COMPDYN conference by the Coordinator of TG11 A.Kappos.

Proposals and reports received from some of the Coordinators are given below. All the Coordinators were invited to forward a proposal for the new EAEE term (2006-2010), the reports received by Central Office are given below.

### TG1 on "Performance-Based Design"

*Co-Coordinator Paolo Negro, Italy and Nuray Aydınoğlu, Turkey*

#### **Summary Report by Paolo Negro and Nuray Aydınoğlu**

Following the decision of the Executive Committee Meeting held in Geneva in November 2003, the TG1, "Performance based design" was activated in June 2004 as a side event of the Workshop "Bled-04 - International Workshop on Performance-Based Seismic Design Concepts and Implementation", organized in Bled, Slovenia, by P. Fajfar and H. Krawinkler".

On that occasion the co-coordinators invited the European participants to the Workshop for a meeting. The discussion was constructive and continued by email. The group also tackled the organization of a special issue of the Bulletin on the topic; however, the effort was discontinued.

The following conclusions can be drawn:

- In spite of Eurocode 8 having somehow pioneered in enforcing performance based concepts in design, a fully performance based approach ("a la Cornell") is possibly not in the European agenda.
- Even though many valuable research actions are related to the topic (e.g., Lessloss, SPEAR, NATO Project 977231), the interest for a formal definition of a performance based framework is not being tackled in Europe.
- The appropriate forum for sharing information on performance based design should be fully international, and the series of workshops being organized by P. Fajfar and H. Krawinkler is the best means.

**For these reasons no continuation of the TG is requested.**

### TG2 on "Strong Motion Records for Engineering Applications"

*Coordinator: Prof. N.N. Ambraseys, UK*

#### **Summary Report by N.N. Ambraseys**

*"Active Members of Working Group: Berge-Thierry C. (France); Douglas J (UK); Margaris B. (Greece); Rinaldis D. (Italy); Sigbjornson R (Iceland); Smit P. (Switzerland); Suhadolc P (Italy)*

#### **European strong-motion database,**

*Earthquake resistant design of structures requires a large readily accessible body of high quality ground-motion data generated during earthquakes.*

*This research was supported by contingency funds contributed by each partner and provided for the first time uniformly processed design input data from European and Middleeastern earthquakes in two CD ROMS that can be used for research and for the design of engineered structures.*

*The two CD ROM provide 1,386 corrected acceleration, velocity and displacement time-histories generated by earthquakes in Europe and the Middle East. These records produce linear elastic response spectra, elastoplastic-constant-strength spectra and inelastic constant ductility spectra. The associated waveform parameters are also present on the CD ROM so that full use of the data can be made in design.*

### **Dissemination of European Strong-Motion data**

The establishment and running of a Web Sites in the Department of Civil Engineering at Imperial College with mirror sites in Paris, Reykjavik and Thessaloniki, are the first in Europe to provide on line engineers with design input data, today widely used by the profession in the UK and overseas. This work was supported again by funds contributed by the partners.

Earthquake design load data can be viewed and analyzed using the Strong-Motion Datascape Navigator (SMDN) software written specially for this which allows export the time-histories, spectra in a standard format. SMDN can also be used to view and analyze data downloaded from the Internet Site for European Strong-motion Data at Imperial College ([www.isesd.cv.ic.ac.uk](http://www.isesd.cv.ic.ac.uk)).

### **TG3 on “Structural Vulnerability and Earthquake Scenario”**

Coordinator: Prof. Mauro Dolce, Italy

#### **Summary Report by M.Dolce**

**Summary of Activities:** “Recent earthquakes all over the world remind us that most of schools, hospitals and facilities, which play fundamental roles for Civil Protection or hosting high value social and economical content are highly vulnerable to earthquakes. A strong need for their vulnerability and risk assessment is now evident. Due to their awful number and the need of focusing on individual rather than class of structures and infrastructures, new methods for vulnerability assessment are required, that operate at a definition level higher than current methods for dwelling buildings. In the meanwhile, modelling and analysing methods, such as the ones required by seismic regulations, cannot be used to evaluate all the structures of public interest, at least in a first evaluation phase. In the period 2002-2006, the objective of Task Group 3 has, therefore, been re-addressed towards problems of structural vulnerability assessment of individual structures and of seismic hazard evaluation and local effect prediction in individual sites. Special attention has been devoted to methods and procedure that, though implying in situ inspections, tests and measurements, do not require large amount of money, take account of all structural (and non structural) features affecting the actual seismic behaviour of a structure and all the important hazard and amplification parameters affecting the shaking intensity and frequency content, use simplified up-to-date models, provide a satisfactory level of damage prediction for different earthquake intensities. A state of practice on the above problems and procedures has been carried out by TG3. A questionnaire (see Annex 1) has been sent to the European researchers potentially dealing with the different procedures applied in Europe. The attention has been focused on procedures that have been actually applied, not just research proposals. The results of the enquiry are being presented at the 1st ECEES (see Annex 2) and provide general information of the actual trend in Europe. Interesting considerations can be made on the data base of the procedures for seismic vulnerability and risk assessment utilised all over Europe. The data base is still incomplete, due to the increasing trend of the interest towards vulnerability and risk assessment studies, and its usefulness would increase sensibly if more contributions become available.

Within the ETCEE2 proposal, the training course TC4 is dedicated to Earthquake Damage and Loss Assessment. The training course would be organized in Potenza (Italy) under the coordination of Prof. Mauro Dolce, Prof. Robin Spence, and Prof. Mustafa Erdik. The main objectives are to increase the scientific and technological knowledge and capacity in the field of urban earthquake loss assessment, to contribute to the European harmonization of techniques for the assessment of urban earthquake loss and development of new techniques for the next generation of technical means as it is foreseen in the EU Global Monitoring for Environment and Security program, to permeate advanced knowledge on urban earthquake loss assessment within the European scientific community and regulation bodies.

**Outline of future activities:** It is clear that the vulnerability and risk assessment of constructions is a theme that is rapidly developing, by improving existing methods and implementing new ones, as well as by complementing different methods, according to the available types of information. Several practical studies have been and are being made all over Europe. Lacking specific funds to be dedicated to make case studies, the role of Task Group 3 for the new 4-years period could be that of improving the database of used procedures for vulnerability and risk assessment studies of different kinds of structures, by asking for more numerous and thorough contributions. A sort of “EAE handbook” for seismic and vulnerability assessment based on

*the current state of the art and practice could be the result of next TG3, if a more active cooperation is obtained from the contributors.*

*A strong impulse towards this achievement could come from the approval and the activation of a new ETCEE proposal including a specific Training Course, or from a new network proposal."*

#### TG4 on "Effects of Earthquake Vertical Component"

*Coordinator: Prof. Panayotis Carydis, Greece*

##### **Summary Report by P.Carydis**

*"The Task Group 4, under the title "Effects of Earthquake Vertical Component", was established during the Second Meeting of the Executive Committee, held in Geneva on November 22, 2003.*

*During these three (3) years, the following activities have been carried out and are planned for the near future:*

##### **Activities up to now:**

- 1. A small local task group was established, in order to investigate what the current situation of the subject around the world is. The work is in its final stage and the results will be published in a coming newsletter, in brief.*
- 2. A research work is under edition on the effects of the vertical earthquake component and the means for comforting it are going to be presented. The paper is going to be sent for publication in BEE very shortly.*

##### **Future activities:**

- 1. A small local task group has been established, in order to discriminate the effects of the vertical earthquake component from various earthquake study cases.  
The work, which has just started, will last for about six (6) months, and will include:
  - a) Identification of damage cases, in which the effects of the vertical earthquake component are obvious.*
  - b) Scanning of these pictures (most of which are in classical form).*
  - c) Comments.*
  - d) Publication.**

*A web site will be established, including all this piece of information. We will try, after the positive opinion of the Ex. Com. of EAEE, the contact with this web site to be done through the existing one of the EAEE.*

#### TG5 on "Seismic Isolation of Structures"

*Coordinator: Prof. Alessandro Martelli, Italy*

##### **Summary Report by A.Martelli**

*"In November 2002 the most active members of EAEE-TG5 who had participated in the "7th International Seminar on Seismic Isolation, Energy Dissipation and Active Control of Vibrations of Structures" held at Assisi in October 2001 (which was co-organized by EAEE-TG5), funded the Anti-Seismic Systems International Society (ASSISi), together with experts of several non-European countries.*

*ASSISi was founded in Bologna, Italy, according to the decisions taken in the Closing Panel Session of the Assisi Seminar. Its first and present President is the EAEE-TG5 Coordinator, who will keep this role to the end of May 2007. ASSISi has now 104 individual or corporate members from 30 countries, in addition to the European Commission; these memberships include all active members of EAEE-TG5.*

*One of the 8 corporate members of ASSISi is the Italian Working Group on Seismic Isolation (GLIS), which has, at present, over 290 individual members and is chaired by the EAEE-TG5 Coordinator. In 2004, GLIS promoted the foundation of the Italian Territorial Section of ASSISi; members of this Section are GLIS itself (which has the role of Section Coordinator) and all the Italian GLIS members who are, at the same time, ASSISi members.*

*In October 2003 ASSISi co-organized the "8th World Seminar on Seismic Isolation, Energy Dissipation and Active Vibrations Control of Structures", which was held in Yerevan (Armenia) and was co-chaired by the ASSISi and EAEE member M. Melkumyan and the ASSISi President and EAEE-TG5 Coordinator. In June 2005 ASSISi co-organized the "9th World Seminar on Seismic Isolation, Energy Dissipation and Active Vibrations Control of Structures", which was held in Kobe (Japan) and was co-chaired by the ASSISi President and EAEE-TG5 Coordinator. In June 2006 ASSISi co-organized the "International Workshop on Base Isolated High Rise Buildings", which, again, was held in Yerevan (Armenia) and co-chaired by the ASSISi and EAEE member M. Melkumyan and the ASSISi President and EAEE-TG5 Coordinator. At present ASSISi is organizing (as main organizer) the "10th World Conference on Seismic Isolation, Energy Dissipation and Active Vibrations Control of Structures", which will be held in Istanbul (Turkey) in May 2007 and will be co-chaired by the ASSISi and EAEE member M. Erdik and the ASSISi President and EAEE-TG5 Coordinator.*

*Finally, European members of ASSISi, who are also EAEE-TG5 active members, are planning to found the European Territorial Section of the Society: it is suggested by the EAEE-TG5 Coordinator that the EAEE and ASSISi agree on a joint action in this respect."*

#### TG6 on "Earthquake Geotechnical Engineering"

*Coordinator: Prof. Kyriasiz Pitilakis (Greece)*

#### **PROPOSED PROGRAM FOR 2007-2009 by Prof. Kyriasiz Pitilakis**

*SCOPE: Towards a European manual and guidelines for microzonation*

*Seismic microzonation studies are more and more required especially for risk analysis and management. In Europe there is still a lack of a well established and widely accepted methodology for current microzonation studies while there is a well defined European expertise (see numerous European and national research projects). Administration and structural engineers are still sometimes sceptic about the importance and the usefulness of microzoning studies, especially when they are combined with the use of seismic codes. One of the reasons of this position is that quite often the microzonation studies do not meet the minimum requirements for an "engineering oriented" set of deliverables (i.e. design response spectra etc) and their results are mainly qualitative. No doubt that the role of seismologists, geophysicists and geologists is important, but the coordination and the definition of the methodology and the deliverables must be left to geotechnical earthquake engineers.*

#### Proposed tasks

*Task 1 Collection of representative microzonation studies in Europe*

*Task 2 Review of the available microzonation guidelines in Europe and worldwide*

*Task 3 Preparation of European manual-guidelines*

*Task 4 Set up of a dissemination structure basically sponsored by EU and national entities like civil protection etc. The dissemination may comprise the creation of web page, the edition of the manual, establishment of good contacts with the administration and local authorities, the organization of seminars, etc)*

*A working group will be established composed by high level experts representing different European countries assisted by young engineers*

*Milestones: Task 1 end of 2008; Task 2 end of 2008; Task 3 mid 2009; Task 4 Sep. 2010*

#### TG7 on " Development of Shaking Table and Reaction Wall Testing Techniques"

*Coordinator: Prof. Roy T. Severn, UK*

#### **Summary Report by Prof. Severn**

*"You will recall that through EC-funding I have coordinated European activity concerned with TG7 since 1991, and that I summarised the developments made until 2002 in a paper at the London Conference of the EAEE. Since that date there has been continuing progress on the same themes, which will be presented at the Geneva Conference in Special Technical Session STS7 on Monday afternoon, 4 Sept 06, by myself and colleagues who have been responsible for the research. There will be 5 papers presented which crystallise*

different aspects of the 15-year period of research, and these 5 papers, taken together, could constitute my report. However, I think it will be more useful if I direct those interested to 8 reports which have been produced by the same partners within another EC-contract having the title "Cooperative Advancements in Seismic and Dynamic Experiments". From the TG7 viewpoint the most important of these reports is No.6 - "Directory of European Facilities For Seismic And Dynamic Tests In Support Of Industry", the title of which explains its contents. Because the compilers of this Directory are Georgio Franchioni and Fabio Taucer from ISMES (now CESI), I believe that it includes all major facilities operating at the time it was compiled.

I would also like to draw attention to a 'deliverable' from the third, and last, of our EC-funded contracts NEFOREEE (New Fields of Research in Earthquake Engineering Experimentation). It carries the title "Reliability Of Qualification Tests By Using Shaking Tables". The research for this was carried out at ISMES by Franchioni and colleagues, and although specifically directed at Industry, it is of great importance for all of us who make use of shaking table results. At Geneva it will be presented as Paper 795 during the STS7 session mentioned above.

Regarding the future of TG7, I first point out that in the EC Framework6 our group made proposals on two separate occasions but both failed. The kernel of our proposals was real-time substructuring, the development of new sensors and creation of a European NEES (Network for Earthquake Engineering Simulation) to parallel the US NEES programme. However, although I consider that the existing group of laboratories, augmented by a few additions, is a good way to carry these researches forward, I know that individual European laboratories will make their own progress in these areas. From the EAEE perspective therefore, TG7 activities should continue so that the progress made can become generally available."

#### TG8 on "Seismic Behaviour of Irregular and Complex Structures"

Coordinator: Prof. Victor Rutenberg, Israel

##### **Summary Report by Prof. A. Rutenberg**

"The main activities of TG8 during this period were the organization of two workshops, as reported subsequently.

The 3rd European Workshop on the Seismic Behaviour of Irregular and Complex Structures was held in Florence, Italy, from 17 to 18 September 2002.

This was the third in a series of successful workshops held under the auspices of the EAEE TG 8, and was organized by the Department of Construction of the University of Florence with the support of the University. Prof. Mario De Stefano chaired the International Scientific Committee and the Organizing Committee.

In the 2002 Workshop special emphasis was placed on the nonlinear behaviour of irregular single- and multi-storey structures, the assessment of code specifications and on results from experimental studies. About 35 specialists in the field, including Prof. Luis Estevea, President of the International Association for Earthquake Engineering, gathered from eight Countries: Canada, Israel, Italy, Mexico, New Zealand, Poland, Slovenia and Turkey.

The CD-ROM Proceedings, co-edited by Prof. Mario De Stefano and Prof. A. Rutenberg (EAEE TG 8 Coordinator) comprise 24 papers, grouped into six Sessions:

- Asymmetric one-storey buildings (7 papers),
- Asymmetric multi-storey buildings (5 papers),
- Irregular buildings in elevation (3 papers),
- Tests and experimental techniques (3 papers),
- Code specifications for irregular buildings (2 papers),
- Special cases of irregularity (4 papers).

The proceedings also include the two Keynote lectures, providing insight into some of the most important research advances.

*At the end of the second day, a Panel Session on 'Research needs in the field of seismic behaviour of irregular structures and future activities of Task Group 8 (Moderators: Prof. P. Fajfar and Prof. A. Rutenberg) was organized, and it provided the participants with the opportunity for discussion and exchange of information.*

*The 4th European Workshop on the Seismic Behaviour of Irregular and Complex Structures was held in Thessaloniki, Greece, from 26 to 27 August 2005.*

*This was the fourth in a series of successful workshops organised by the EAEE TG 8 (the third one was in Florence in 2002), and was held under the auspices of EAEE, the HSAE (Hellenic Society of Earthquake Engineering), and the Department of Civil Engineering of the Aristotle University of Thessaloniki. The International Scientific Committee was co-chaired by Prof. Andreas Kappos of the Aristotle University and Prof. Avigdor Rutenberg from the Technion – Israel institute of Technology (EAEE TG 8 Coordinator). Prof. Kappos also chaired to Organizing Committee (full member lists of the two committees that included several well-known experts in Earthquake Engineering) can be found at the Workshop website <http://taz.civil.auth.gr/4ewics>.*

*A total of 115 participants registered for the Workshop, which far exceeded the attendance in previous such events. They came from a total of 15 different countries, mostly European (Greece and Italy being the two most represented ones), but also from non-European countries such as the US, Canada, Mexico, New Zealand, Israel, and Iran.*

*The Workshop was organised in a number of technical sessions each focussing on a specific topic (within the general theme of irregular and complex structures), as follows:*

- Asymmetric one-storey buildings (5 presentations)*
- Asymmetric multistorey buildings (9 presentations)*
- Vertically irregular structures – Setback multistorey buildings (15 presentations)*
- Irregular and/or complex bridge structures (11 presentations)*
- Particular cases of irregularity/complexity in structures (5 presentations)*
- Seismically isolated and controlled asymmetric structures (4 presentations)*

*At the end of the second day, a panel session (with M. De Stefano, P. Fajfar, A. Kappos, A. Reinhorn, A. Rutenberg, W. K. Tso, as panelists) was organised, and gave the workshop participants the opportunity to discuss a number of issues regarding the seismic analysis and assessment of irregular and/or complex structures and, notably, their treatment in seismic codes (which still remains a critical issue).*

*TG8 members also participated in the preparation of proposals to the EU for European Training Courses on Earthquake Engineering.*

*Administrative: Professor Roberto Ramasco, who was one of the founders of TG 8, resigned from the position of Co-convenor earlier this year.*

*Professor Ramasco: we thank you for your important contributions to the Task Group throughout the years. We have no doubt that you will continue to contribute to the areas of your choice for many years to come.*

*Professor Mario De Stefano is the new Co-convenor.*

*TG8 is planning to have the 5th Workshop in Sept 2008 probably in Catania."*

**TG10 on "Seismic Aspects of Historical Monument Preservations"**

*Coordinator: Prof. Costas Syrmakizis*

### **Summary Report by C. Syrmakizis**

*"The Coordinator of the TG10 participated, on behalf of the group, to the Marie Curie proposal entitled 'European Training courses on Earthquake Engineering', submitted twice (2005 and 2006) to the European Commission. The TG10 contribution was the part TC9 entitled 'Earthquake Protection of Cultural Heritage'.*

*An extended group (five days) meeting has been organized in Crete, on November 2003. Within the frame of that meeting, special visits have been organized, as well as a workshop, where new trends on the subject have been presented."*

## TG11: Seismic Design, Assessment, and Retrofit of Bridges

*Coordinator: Prof. Andreas Kappos*

### **Proposal by A.Kappos**

*The idea for setting up a new EAEE task group dealing with seismic aspects of bridge design, assessment, and retrofit, originated following the success of the special session on this topic organised by A. Kappos (Greece), with K. Kawashima (Japan) as co-convenor, at the 13th ECEE in Geneva (Sep. 2006). This session brought together researchers from all over the world working in the important international group fib TG7.4 (Seismic design and assessment procedures for Bridges) and the ongoing programme ASProGe (Seismic Protection of Bridges) in Greece, along with other groups such as the American one working on Caltrans bridges. The idea of the new group was welcomed by both the newly elected Ex. Committee of the Association and by the people that attended the special session and the conference.*

*The choice of the TG title is quite topical, since bridges that are the most critical (from the seismic point of view) component of transport systems, are not covered by existing EAEE task groups. It is noted that within the European Union, the motorway network expanded from 39200 km in 1990 to 49200 km in 1999, and the figure keeps increasing at a fast rate. As an example, in Greece the most significant expenditure on road infrastructure is conducted through the Trans-European Network, which accounted for €13.6 billion; a large number of bridges have been constructed in Greece during the last decade, the majority of which was along the 680 km Egnatia Motorway that includes 646 bridges. Meanwhile, assessment of seismic performance of existing bridges, some of which clearly fail to satisfy the requirements of modern codes, has been the focus of substantial research efforts worldwide, particularly during the last few years. As a result of such concerns, programmes for retrofitting seismically deficient bridges have originated in several European countries, notably in Italy, and similar efforts are underway in the US and Japan.*

*Topics to be covered by the new group include:*

- *Performance-based design of bridges (concrete and steel bridges).*
- *Calibration of code procedures for seismic design of bridges - Comparative assessment of European (Eurocode 8 - Part 2) and international (US, Japan, other) standards and design practice for bridges; calibration studies might be analytically and/or experimentally oriented.*
- *Improved analytical procedures for assessment of seismic performance of bridges, with emphasis on pushover methods accounting for higher mode effects.*
- *Fragility curves for bridges (methodologies and case studies).*
- *Application of passive systems (seismic isolation and energy dissipation devices) to existing bridges - development and application of new technologies.*
- *Seismic retrofit of bridge columns and foundations - Innovative retrofit methods.*
- *Analytical and experimental investigation of critical bridge components (with a view to improved design or effective retrofit).*
- *Instrumentation of bridges and structural health monitoring (with emphasis on seismic aspects); assessment of bridges based on instrumentation data.*
- *Displacement-based and performance-based assessment methods; deterministic and probabilistic approaches.*
- *Improved procedures for the optimal selection of earthquake loading (also including the effects of spatial variation of ground motion), and analysis of soil - structure interaction effects.*

*The membership of the new TG is mainly drawn from the European academic and professional groups active in the field, but some distinguished researchers from other countries (not members of the EAEE) are also included either as full members (if they can attend meetings in Europe) or as corresponding members. The*

membership of the TG has a strong international flavour as (practically) all European countries active in research on seismic assessment, design, and retrofit of bridges are represented, along with some leading academics from the US (with strong links with Europe).

In addition to meetings, the foreseen activities of the TG are (in a non-exclusive way):

- Dissemination of the research results produced by the TG members among them, as well as among the engineering community at large (a key point in this respect would be the launching of a web site with ability to upload and download material from it)
- Organization (every 2-3 years) of a workshop bearing essentially the same title as the TG, with oral presentations, round table discussions and other similar activities; CD ROM proceedings of the workshops will be available at their beginning
- Compilation of state of the art reports on topics falling within the scope of the TG, preferably in the form of special issues of the *Bulletin of Earthquake Engineering* (the official EAAE journal). Production of design-oriented documents (such as comparison of bridges designed to different code procedures) is also envisaged.
- Promotion of closer relationships and strong international outreach to US programmes on bridges such as that at the PEER Centre and the emerging US-Japan programme on bridge research.

### **BULLETIN OF EARTHQUAKE ENGINEERING (BEE)**

I was informed on November 4, 2006 by Springer that BEE has been picked up by ISI as of the first issue of 2007. BEE is included in SCIE and CC/Engineering, Computing, and Technology. It will get an impact factor with JCR 2008 in 2009. If you look at the SCI under earthquake engineering BEE is one of the five journals under this topic.

Since Bryan Skipp retired being SECED Delegate Robin Spence was invited to be a member of the Editorial Board. Later Julian Bommer resigned from the Editorial Board and John Douglas was invited to replace him. Due to increase in the submitted manuscripts, Rui Pinho and Roger Musson were asked to join the BEE Editorial Board starting as of 2008.

Until the end of 2006, during the first four years, including 3 Special Issues, 141 manuscripts were submitted to BEE. Out of these 141 manuscripts; 66 were published in the already printed 13 issues, 15 are inline for printing. 17 are under review, 39 were declined and 4 were withdrawn by the authors. In the first 9 months of 2007, 37 manuscripts were received.

In Volume 5, 27 manuscripts were published in comparison to 25 manuscripts in Volume 4.

There were five new Special Issue proposals during the past year.

- 11<sup>th</sup> Mallet Milne Lecture by Robin Spence Guest Editor: Paul Greening Vol.5 No.2 published
- The H/V technique : capabilities and limitations based on the results of the SESAME project; Guest Editor: Pierre-Yves Bard to be published as Vol.6 No.1
- BoB-CoDE Project, Bonifro Building -- Comparison of Damage Estimates; Guest Editors: Mauro Dolce and Agostino Goretti
- Seismic Eurocode EC8 : Future Changes and Related Issues; Guest Editors: George Gazetas and Alain Pecker
- Integrated approach to fault rupture- and soil-foundation interaction; Guest Editors: Alain Pecker and George Gazetas
- Earthquake Protection of Bridges; Guest Editor: Andreas Kappos

### **BOOK SERIES ON GEOTECHNICAL, GEOLOGICAL AND EARTHQUAKE ENGINEERING**

The third volume of the book series "*Earthquake Geotechnical Engineering*" Editor: Kyriasiz Pitilakis composed of the Second Ishihara Lecture by I.M.Idriss, keynote and theme lectures is published.

Even though this activity is established independent of EAEE, in the long run it can be an official book series of EAEE to publish the conference proceedings as well books that may come out of TGs. There is a pending proposal to publish some of the keynote and theme lectures from 1ECCES. Springer offers 20% to EAEE Individual Members for this book series.

#### **NEWSLETTER**

The Central Office drafted two issues of the EAEE Newsletter. The first issue for 2007 V25/1 was an electronic newsletter, it was forwarded to all EAEE members and earthquake related organisations. The second issue V25/2 was also an electronic newsletter but was also published as 1000 copies to be distributed to all participants of COMPDYNE, 4ICEGE, and LessLoss Workshop participants. The second issue contained information concerning the past and present activities of EAEE.

#### **INTERNET - WEB**

The Internet-EAEE web Pages that were created in 1995 were updated continuously. The format of the web was last revised in March 2006. The web page is modified in early 2007 to enable the EAEE Individual Members with electronic subscription to download all the published issues of the Bulletin of Earthquake Engineering via secure connection procedure using special ID and passwords specified by the Central office. The present address of the EAEE Web Pages still is: <http://www.eaee.org>. The web pages was registered in USA through Godady.com, starting 2007 the yearly charge of 9.20 USD will be paid from the EAEE funds.

Atila Ansal  
Secretary General