



EUROPEAN ASSOCIATION FOR EARTHQUAKE ENGINEERING

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Audit Committee:

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REPORT OF THE CENTRAL OFFICE ACTIVITIES SEPTEMBER 2006 – SEPTEMBER 2010

GENERAL

These past four years has been challenging and interesting, we were fortunate to be able to achieve most of our objectives. The main activities of the Central Office during the past four year were:

- *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 EAE is officially registered as an international NGO with its Central Office at Boğaziçi 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. This was an important turning point for the progress there after for EAE.*
- *Establishment of the official bank account under the name of European Association for Earthquake Engineering at Garanti Bank at the Boğaziçi University Branch, Instalment of the credit card charging equipment in the Central Office,*
- *The Secretary General contributed to the preparation of the FP7 Project Proposal titled “Seismic Engineering Research Infrastructures for European Synergie” (SERIES) submitted for the call on FP7-INFRASTRUCTURES-2008-1 by the Coordinator M.Fardis. The proposal was reviewed and received a very high grade (14 out of 15) and was supported as FP7 project. EAE is one of the participants under the umbrella of Boğaziçi University, Kandilli Observatory and Earthquake Research Institute. The project is composed of 23 partners mostly universities and research centres from Greece, Italy, France, UK, Germany, Slovenia, Belgium, Romania, Turkey, and Macedonia. The main activity of the EAE Central Office will be the coordination of work package WP4 named as “European Integration - European and international co-operation of research infrastructures”. The objectives in the proposal were summarized as: “The European Association of Earthquake Engineering, established in Turkey as an NGO, and its Secretary General, Prof. A. Ansal will lead NA3 towards its general objectives: (i) outreach to, and integration of, the European S/T community in earthquake engineering, and (ii) co-operation of research infrastructures at the European and international level.”*
- *Establishment of the Prof. Nicholas Ambraseys Distinguished Lecture Award and drafting the Guidelines for the selection of the award recipient.*
- *Drafting the modifications in the EAE Statutes and conducting Postal Balloting for the approval of the changes in the EAE Statutes.*
- *Drafting of the Guidelines for EAE General Assemblies,*
- *Modification of the Ruler EAE Task Groups,*
- *Organisation of the 21st European Regional Earthquake Engineering Seminar on Seismic Assessment and Retrofit of Bridges, during 16-18 June 2010 in Işık University, in Şile Istanbul.*
- *The official meeting on “The Reduction of Earthquake Risks in Europe” with the EU Directorates on 13 March 2008. The participants from EAE besides me were Carlos Oliveira, Mauro Dolce, André Plumier, and Mário Lopez. From the EU Commission the participants were Michel Chapuis DG RTD,*

Georgios Katalagarianakis DG RTD, Christophe Lesniak DG RTD, Bjorn Vangelsten DG RTD, Fiorella Perotto DG ENV, Matthias Martens DG REGIO, Graca Carvalho BEPA, Mateo Bonifacio BEPA, Michel Geradin JRC, and Frederic Sgard OECD. As EAEE participants we made relatively short presentations; (1) History and activities of EAEE (A.Ansal); (2) Seismicity in Europe (C.S.Oliveira); (3) Impact of past and future earthquakes (M.Dolce); (4) Causes of damage and preventive actions (A.Plumier); (5) A Case Study (A.Ansal) that lasted about an hour. The pdf versions of the presentations can be downloaded from www.eaee.org. In the remaining part of the meeting M.Lopez made a brief summary that can be titled as "Proposed tasks for the EU Commission" to initiate the discussion between the participants. The responses received from different DG representatives were in general positive. In summary we were told that Brussels can take a more active role in Earthquake Risk Mitigation but the first initiatives should come from the member states.

- Drafting and dissemination of the Minutes of the EAEE General Assembly and Association Council held respectively on September 5 and Sep 7, 2006 in Geneva, Switzerland during 1st ECEES,
- Organising the six Executive Committee Meetings during 2006- 2010 including the Joint ESC-EAEE and on September 7, 2008 in Crete, Greece,
- Drafting and dissemination of the all Minutes of the 6 Executive Committee Meetings,
- Drafting, printing, and dissemination of the EAEE Newsletters for 2007: No.25/1, 25/2, 2008: 26/1, 27/1, 2009: 28/1, 28/2, 2010: 29/1
- The EAEE income and expenditures for 2007, 2008, 2009 were audited in March 2008, 2009, 2010 respectively by an officially approved audit company. The Annual Activity and Audit Reports (in Turkish) for 2007, 2008, 2009 were submitted to the Istanbul Government Authorities. As an NGO EAEE is required to submit Annual Activity and Audit reports each year before the end of April. The Executive Committee the Audit Reports were printed in EAEE Newsletter and circulated to all members of EAEE.
- Preparations for the EAEE booth in the exhibit area during 4ICEGE in Thessaloniki, Greece (2007); COMPDYN, Crete, Greece(2007); MERCEA in Reggio Calabria, Italy (2008); and ESC 2008 in Crete, Greece; 14ECEE in Ohrid (2010)
- Monitoring the EAEE funds and EAEE Bank Accounts in Istanbul,
- Correspondence with EAEE National Delegates and Task Group Coordinators,
- Conducting individual membership campaigns,
- Updating of EAEE 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 2007, 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
- International Conference on Geotechnical Engineering (ICGE08) during March 24 - 26, 2008 in Hammamet, Tunisia.
- Meeting related to the European Earthquake Engineering Protection Initiative in Milan on 29 April 2008.
- 2008 Seismic Engineering International Conference commemorating the 1908 Messina and Reggio Calabria Earthquake (MERCEA'08) during 8-11 July 2008 in Reggio Calabria, Italy.
- IAEPEI General Assembly, Cape Town, South Africa, 10-16 January, 2009
- Balkan Seminar On Earthquake Engineering, 9-10 October 2009, UACEG, Sofia, Bulgaria
- International Conference on Earthquake Engineering, The Banja Luka Earthquake 40 Years of Engineering Experience, Banja Luka, Republic of Srpska, 9 - 10 October 2009
- Second International Seminar On Prediction Of Earthquakes Lisbon, Portugal, 29-30 April, 2009

- *Earthquake Geotechnical Engineering Satellite Conference, TC4 of ISSMGE, Alexandria, Egypt 2-3 October 2009*

to represent EAEE 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 EAEE and about Task Group activities in some of these meetings.

EXECUTIVE COMMITTEE

The Executive Committee had six meetings during the 2006-2010 term. These meetings were held in Geneva on 8 September 2006; Lisbon on 29 September 2007; Crete on 7 September 2008; Istanbul on 21 June 2009; Ohrid on 25 April 2010.

The Secretary General was informed on August 20, 2008 by an e-mail from Martin Juhas son of Prof. Emilia Juhasova that our dear colleague and fellow Executive Committee Member Prof. Emilia Juhasova passed away on July 26, 2008. An Obituary prepared by her son Martin Juhas is printed on the back page of the EAEE Newsletter Vol. 26, No.1 (2008) and was also uploaded to EAEE web pages.

The EAEE Executive Committee conducted a postal balloting among its members and it was decided unanimously to invite Prof. Jakob Eisenberg (Delegate of Russia) to the EAEE Executive Committee as the first Reserve Member. Prof. Eisenberg kindly accepted our invitation and he has been serving as a member of the EAEE Executive Committee since 2008.

Executive Committee approved by postal balloting as an EAEE Executive Committee Decision that Individual and Organisational Members should have paid all their membership fees for the previous consecutive four years in order to participate to the EAEE General Assembly, to vote and to be candidate for any post.

EUROPEAN SEISMOLOGICAL COMMISSION

A joint meeting between EAEE and ESC Executive Committee were held in Crete during the ESC2008 General Assembly. The basic agreements reached during the Joint EAEE-ESC Executive Committee can be summarised as:

- To organise joint conferences every eight years. The proposals to organise joint conferences should be submitted by both EAEE and ESC National Members. Both applications to EAEE and ESC Executive Committees and both presentations to EAEE and ESC General Assemblies should be identical. In the case of more than one application, the selection of the location will be based on the total number of the votes casted in both General Assemblies.
- To organise special sessions that would interest ESC members during EAEE Conferences and vice versa to organise special sessions that would interest earthquake engineers in ESC General Assemblies. It was agreed that these special sessions should be scheduled as a block either at the beginning or at the end and it should be possible to register only to this block of sessions at reduced registration rate.
- In the year of separate conferences (e.g. 2010), the common block of engineering seismology is hosted by the ECEE, and the same subject is a poster only session at the ESC General Assembly. During the years without EAEE conference, the common block is hosted by the ESC General Assembly, and EAEE encourages its members to attend this common block.
- To support and encourage joint activities among EAEE Task Groups and ESC Working Groups. Both ESC and EAEE should inform all their members via web pages and Newsletters about the EAEE-ESC Joint Working groups.
- To establish an interaction between EAEE and ESC to improve and enhance the Strategic Research Agenda and related activities.
- To organise joint Executive Committee Meetings during EAEE conferences and during ESC General Assemblies in between.

- To prepare joint training courses during the ESC General Assemblies.
- To prepare and submit joint training course proposals to FP7 and other funding agencies.

MEMBERSHIP

The Central Office corresponded frequently with National Member Organisations informing them about their membership dues. During these four years most of the National Members forwarded their membership dues on time. As of August 2010, 28 out of 33 of the EAEE National Member Associations have paid all their National membership dues until 2010.

The Central Office have been 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 161 by August 2010. Out of these 161 members 93 (70 electronic and 23 paper copy) have paid for 2010.

BUDGET 1. January . 2007- August 30.2010

PERIOD	INCOMES (EURO)		EXPENDITURES (EURO)		BALANCE (EURO)
1.1-31.12.2007	31.12.2006 Transferred Cash	2367.59	Periodicals Expenditures	3615.00	
	Fee Income for the year of 2007	7070.56	Travel Expenditures	842.00	
			General administration expenditures	3216.43	
			Bank Charges	83.47	
	TOTAL	9438.15	TOTAL	7756.90	1,681.25
1.1-31.12.2008	31.12.2007 Transferred Cash	1681.25	Periodicals Expenditures	2890.00	
	Fee Income for the year of 2008	6890.40	Travel Expenditures	-	
			General administration expenditures	3390.00	
			Bank Charges	64.23	
	TOTAL	8571.65	TOTAL	6344.23	2,227.42
1.1-31.12.2009	31.12.2008 Transferred Cash	2227.42	Periodicals Expenditures	2700.00	
	Fee Income for the year of 2009	6876.46	Travel Expenditures	-	
			General administration expenditures	2019.48	
			Bank Charges	138.73	
	TOTAL	9103.88	TOTAL	4858.21	4,245.67
1.1-26.08.2010	31.12.2009 Transferred Cash	4245.67	Periodicals Expenditures	1560.00	
	Fee Income for the year of 2010	9542.47	Travel Expenditures	-	
			General administration expenditures	2972.40	
			Bank Charges	306.26	
	TOTAL	13788.14	TOTAL	4838.66	8,949.48

TASK GROUPS

During 2006-2010 term most of the Task Groups were not very active. Proposals and reports received from some of the Coordinators are given below. All the Coordinators were invited to forward a more detailed report and their proposals for the new EAAE term (2010-2014), to be discussed during the Second Executive Committee meeting that most likely will take place in June 2011 in Istanbul.

The short reports and proposals submitted by TG Coordinators are given below.

TG2 on "Strong Motion Records for Engineering Applications"

Coordinator: Ragnar Sigbjörnsson Iceland, Iceland, Co-Coordinator: Dr. John Douglas, France

Introduction

The proposed task group on strong-motion records for engineering applications is a direct continuation of the working/task group (WG2/TG2) headed by Prof. N. N. Ambraseys for almost two decades. Prof. Ambraseys' groups have been responsible for a series of initiatives, funded by the European Commission and the UK's Engineering and Physical Sciences Research Council, for the free dissemination of strong-motion data from European, Mediterranean and Middle Eastern earthquakes. These projects led on from pioneering strong-motion data collection and dissemination projects of the 1970s-1990s, coordinated by Prof. Ambraseys. In the period since the launch of the Internet Site for European Strong-motion Data (ISESD) more than 1500 users have registered and downloaded many tens of thousands of strong-motion records and their derivatives. Currently the ISESD is run successively by University of Iceland, <http://www.ISESD.hi.is>, which has provided the funds needed.

Objectives

The objectives are to collect and process, analyse and disseminate reliable high quality strong-motion information needed for engineering design purposes as well as risk assessment and planning. Special emphasises are placed on the following issues:

- quality assurance and reliability of strong-motion recordings and their derivatives*
- spatial structure of strong-motion action*
- near source effects and finite seismic sources and their influences on strong-motion action*
- inelastic effects and strong-motion action*
- site effects and their influences on strong-motion action*
- statistical assessment of modelling uncertainties*
- presentation of data and visualisation*

The main objective is assuring the continued free access to high quality strong-motion data from Europe, the Mediterranean and the Middle East by running and updating the ISESD.

Specific goals, products

The data collected will be stored in the ISESD databank, where it will be freely accessible through the Internet. The following data will be stored as raw data, corrected time series, derivatives, seismological information, station information.

In addition downloadable computer programmes and user manuals are and will be included. Special reference will be made to practical applications like engineering design, planning and risk assessment.

Plan of activities

The plan of the main activities for the next four years is the following:

- 1. To organise Task Group meetings every two years, preferably at the ECEE and ESC meetings*
- 2. To coordinate and edit a special issue in the Bulletin of Earthquake Engineering on "small aperture strong-motion arrays and their engineering applications" (2011/12)*
- 3. To organise workshops on strong-motion engineering seismology and its applications, 2009 and yearly after that*
- 4. To organise a speciality session on "small aperture strong-motion arrays" in the European Conference on Earthquake Engineering in 2010, furthermore, to prepare a state-of-the-art report to be published in the Bulletin of Earthquake Engineering (see also #2 above)*

5. To inform the engineering community of the Task Group activities and disseminate knowledge in the field of engineering strong-motion seismology and its engineering applications, by running a special-purpose website, where different types of data and documents can be retrieved

Financial support

The basic financial support needed to carry out the above outlined Task Group activities is made available from national sources. Further support, if needed, will be sought in co-ordination with the EAEE Executive Committee.

Discussion and further information

Members of the EAEE task groups on strong-motion data headed by Prof. N. N. Ambraseys have been responsible for a series of initiatives, funded by the European Commission and the UK's Engineering and Physical Sciences Research Council, for the free dissemination of strong-motion data and associated parameters (e.g. uniformly calculated magnitudes and source-to-site distances) from European, Mediterranean and Middle Eastern earthquakes. These projects (Ambraseys et al., 2000; Ambraseys et al., 2002a,b; Ambraseys et al., 2004) led on from similar strong-motion data collection and dissemination projects of the 1970s-1990s, coordinated and initiated by Prof. Ambraseys.

In the period since the launch of the Internet Site for European Strong-motion Data (ISESD, <http://www.isesd.hi.is>) over 1500 users have registered and downloaded many tens of thousands of strong-motion records and their metadata. The site and associated articles: Ambraseys et al. (2002a, b; 2004) have been cited in about 30 articles. However, ISESD has officially been financially unsupported since the end of March 2002 (the official end of the EC Fifth Framework Programme project that created the site). In spite of this, the site has been operational almost non-stop for over five years and it has been significantly updated on five occasions: September 2002, January 2003, July 2003, March 2006, June 2008, when new data became available or associated parameters were collected or modified. Currently, we have succeeded in securing the financial support needed to fund a technical coordinator of the site, which means that ISESD's future has been secured for the next four years. Therefore, the objective of the proposed working group (see above) to continue to support the operation of ISESD and its further developments, and to undertake the necessary steps to secure the free access to high quality strong-motion data from earthquakes in Europe and surrounding regions has been achieved.

TG5 on "Seismic Isolation of Structures"

Coordinator: Prof. Alessandro Martelli, Italy

Summary Report by A.Martelli

Present and Future Plans and Intentions For 2010-2014

The activities performed by EAEE-TG5 in the biennium 2007-2008 were summarized in the "Activity Report of EAEE-TG5 on Seismic Isolation of Structures in the Period 2007-2008", which was made available to the EAEE Secretariat on August 22, 2008. As advanced by the TG5 coordinator in that and his previous 2002-2006 activity reports, the Group activities were and will go on being performed jointly with the Anti-Seismic Systems International Society (ASSISi) and in collaboration with the "Italian National Association for Earthquake Engineering" (ANIDIS) and GLIS ("GLIS – Isolation and Other Anti-Seismic Design Strategies"), an Italian association which was founded at the end of 2006 and replaced the former Italian "Working Group on Seismic Isolation" ("Gruppo di Lavoro Isolamento Sismico") at the beginning of 1997. As stressed in such reports GLIS is an ASSISi corporate member and ASSISi was founded by the most active members of TG5 (together with experts of several non-European countries) in November 2002, as recommended at the "7th International Seminar on Seismic Isolation, Energy Dissipation and Active Control of Vibrations of Structures" (Assisi, Italy, October 2001), which had been co-organized by the TG5.

In the 2007-2008 activity report, according to the numerous important activities which had already been scheduled for the remaining part of 2008 and for 2009, the TG5 co-ordinator asked for an extension of the Group activities.

The international conferences or their sessions that were co-organized by EAEE-TG5 Coordinator since August 22, 2008 are listed below, together with those already planned to 2011.

- Special Session S05-02 (S05 JAEE Special Sessions: Spectacular Projects of Passively-Controlled Buildings), 14th World Conference on Earthquake Engineering (14WCEE), Beijing (P.R. China), October 2008.

- *International Technical-Scientific Seminar on Modern Systems for Mitigation of Seismic Action, Bucharest (Romania), October 2008.*
- *International Workshop on Advanced Numerical Methods in Seismology, Brescia (Italy), November 2008.*
- *Special Sessions on Development and Application of Passive Anti-Seismic Systems, 7th International Conference on Earthquake Resistant Engineering Structures (ERES 2009), Limassol (Cyprus), May 2009.*
- *Special Sessions on Passive Control Systems for Protection of Historical Buildings, 2009 International Conference on Protection of Historical Buildings by Reversible Mixed Technologies (PROHITECH 2009), Rome (Italy), June 2009.*
- *JSSI 15th International Symposium on Seismic Response Controlled Buildings for Sustainable Society, Tokyo (Japan), September 2009.*
- *ASSISi 11th World Conference on Seismic Isolation, Energy Dissipation and Active Vibrations Control of Structures, Guanzhou (P.R. China), November 2009.*
- *XV Jubilee Seminar on Lightweight Structures in Civil Engineering (LSCE 2009), Warsaw (Poland), December 2009.*
- *Structural Engineers World Congress (SEWC), Cernobbio (Como, Italy), April 2011.*
- *Sixth International Conference on Seismology and Earthquake Engineering (SEE6), Tehran (Iran), May 2011.*
- *Special Sessions on Anti-Seismic Systems and Devices, 2011 International Conference on Earthquake Resistant Engineering Structures (ERES 2011), Chianciano Terme (Italy), September 2011.*

Further international conferences or their sessions which (in addition to those mentioned above) saw or will see an active participation of the coordinator and other members of EAEE-TG5 since August 22, 2008 are listed below, together with those planned to 2011.

- *International Disaster and Risk Conference 2008 (IDRC Davos 2008), Davos (Switzerland), August 2009.*
- *UNESCO-IPRED-ITU International Workshop on Make the Citizens a Part of the Solution, Istanbul (Turkey), July 2009.*
- *4th International Congress on Science and Technology for the Safeguard of Cultural Heritage in the Mediterranean Basin, Cairo (Egypt), December 2009.*
- *International Advanced Conference on Seismic Risk Mitigation and Sustainable Development, Abdus Salam International Centre of Theoretical Physics (Trieste, Italy), May 2010.*
- *Engineering Mechanics Institute 2010 (EMI 2010), Los Angeles (USA), August 2010.*
- *International Conference on the Protection of Cultural Heritage from Earthquake Damage, Palermo (Italy), October 2010.*
- *EURODYN2011 - 8th International Conference on Structural Dynamics, Leuven (Belgium), July 2011.*

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

Coordinator: Prof. Roy T. Severn, UK

Summary Report by Prof. Severn

I apologise for not dealing with TG5 matters before now, but I will write the short report which you requested and bring sufficient copies with me for the Board meeting in Ochrid.

At the Geneva meeting I think I questioned whether, in view of the EC-funded contracts concerned with research infrastructures, there is a continuing need for TG5 in its present form. These contracts were expressly designed to bring European laboratories together, and they succeeded in doing so! Many reports and research papers were published, with wide circulation. In Geneva I handed over my EC coordinating activities, which I had held since 1992, to Pierre Sollogoub (CEA Saclay) and Michel Geradin (JRC Ispra). EC funding for our activities were not forthcoming during 2005-09, and it was not until the 7th Framework Programme that success was obtained, with Prof. Michael Fardis as Coordinator. Because I continue to be a Director of the Bristol laboratory I have kept in touch with these activities - Bristol being one of the principal partners - which allows me to write the TG5 report for the Ochrid meeting, and I shall look forward to seeing you there.

TG8 on "Seismic Behaviour of Irregular and Complex Structures"

Coordinator: Mario De Stefano

Summary Report by Mario De Stefano

Premise

EAAE TG8 on 'Seismic Behaviour of Irregular and Complex Structures' deals with a topic that, in the last two decades, has been attracting steadily increasing research efforts, leading to important scientific results and to significant outcomes regarding seismic codes and professional practice.

Since 1996, every three years, TG8 has organized the 'European Workshop on the seismic behaviour of Irregular and Complex Structures' (EWICS), which has gathered leading specialists from European and extra-European Countries.

The last workshop (5EWICS) has been held in Catania on September 16-17, 2008; it has confirmed the interest of the scientific community, with about 40 papers included in the Proceedings.

Plan of TG8 activities during 2010 - 2014

1) TG8 6EWICS

The 6th 'European Workshop on the seismic behaviour of Irregular and Complex Structures' (6EWICS) has been already scheduled for September 12-13, 2011. It will be hosted by the Technion-Israel Institute of Technology in Haifa.

Workshop themes will be:

- Asymmetric single storey buildings;
- Asymmetric multistorey buildings (frames, walls, wall-frames);
- Vertically irregular structures;
- Setback multistorey buildings;
- Passive and active control of irregular structures;
- Particular cases of irregularity in structures;
- Architectural and design issues.

Within each theme, special attention will be given to studies related to:

Methods for analysis and evaluation of irregular buildings

Seismic design and code provisions for irregular structures

Furthermore, during 6EWICS one session will be devoted to planning of future activities.

Finally, 6EWICS will be an occasion to honor Victor Rutenberg, TG8 Past-Coordinator, and his contribution to advancing the field of seismic behavior of irregular structures.

2) TG8 Plenary Meeting(s)

Between 6EWICS in 2011 and 7EWICS in 2014 it is planned at least one Plenary Meeting (PM), with the following tentative agenda:

- Discuss and define the most urgent research needs to be primarily addressed in the 7EWICS;
- Discuss and define TG8 participation to 15ECEE;
- Discuss and define TG8 activities aimed at disseminating its scientific achievements among researchers and professionals;
- Discuss and define activities aimed at attracting financial support from national, international and EU institutions.

One additional PM will be held on the occasion of 7EWICS in 2014. Further PMs will be held, if required by circumstances.

3) TG8 Website

TG8 website will be developed in short time with the following primary goals:

- Disseminate information about EAAE and TG8 activities;
- Provide a forum of discussion for TG8 members;
- Collect and disseminate technical papers authored by TG8 members;
- Support TG8 activities;
- Other functions suggested by TG8 members.

4) TG8 Secretariat

TG8 Secretariat will be in short time established at the Dipartimento di Costruzioni e Restauro of the Università di Firenze, Italy.

It will be primarily aimed at:

- Structuring TG8 membership; - Supporting TG8 activities and TG8 members; - Supporting TG8 website.

TG11: Seismic Design, Assessment, and Retrofit of Bridges

Coordinator: Prof. Andreas Kappos

Summary Report by Andreas Kappos

Report of activities of EAEE TG11 Seismic Design, Assessment, and Retrofit of Bridges (2007 – 2010)

The Task Group was launched in January 2007, following the approval by the EAEE ExCom of a proposal submitted in October 2006 by the Coordinator of the TG (Kappos); the current membership of the TG includes the following people:

Full members

1. Kappos, Andreas <ajkap@civil.auth.gr> (University of Thessaloniki, Greece), TG coordinator
2. Aydinoglu, Nuray <aydinogn@boun.edu.tr> (University of Bosphorus, Turkey)
3. Crewe, Adam <A.J.Crewe@bristol.ac.uk> (University of Bristol, UK)
4. Delgado, Raimundo <pdelgado@fe.up.pt> (University of Porto, Portugal)
5. Dolce, Mauro <dolcerom@libero.it> (University of Basilicata, Italy)
6. Fischinger, Matej <mfischin@ikpir.fgg.uni-lj.si> (University of Ljubljana, Slovenia)
7. Flesch, Rainer <rainer.flesch@arsenal.ac.at> (Arsenal research, Austria)
8. Karakostas, Christos <christos@itsak.gr> (ITSAK, Greece)
9. Mylonakis, George <christos@itsak.gr > (University of Patras, Greece)
10. Nuti, Camillo <c.nuti@uniroma3.it> (University of Rome III, Italy)
11. Pantazopoulou, Stavroula <pantaz@civil.duth.gr> (University of Thrace, Greece)
12. Papadimitriou, Costas <costasp@mie.uth.gr> (University of Thessaly, Greece)
13. Pinho, Rui <rui.pinho@unipv.it> (EUCENTRE & Rose School, Italy)
14. Pinto, Artur <artur.pinto@jrc.it > (JRC, Ispra, Italy)
15. Saiidi, Mehdi (Saiid) <saiidi@unr.edu> (University of Nevada Reno, USA)
16. Uzdin, Alexander <uzdin@mail.ru> (University of Petersburg, Russia)

Corresponding members

1. Deodatis, George <deodatis@civil.columbia.edu> (Columbia University, USA)
2. Gazetas, George <gazetas@ath.forthnet.gr> (National Technical University, Greece)
3. Karamanos, Spyros <skara@mie.uth.gr> (University of Thessaly, Greece)
4. Pecker, Alain <alain.pecker@geodynamique.com> (Geodynamique et Structures, France)
5. Stojadinovic, Bozidar <boza@ce.berkeley.edu> (University of California, Berkeley, USA)

During the reported period (Jan. 2007 – Aug. 2010) the following activities were pursued by the Group:

1. Creation and maintenance of website: Since spring 2007 the TG website has been set up (<http://nisida.civil.auth.gr/tg11/>); to the Group's best knowledge this is the only TG website within the EAEE. Currently it includes the following main items:
 - a. Background, scope, and foreseen activities of TG11.
 - b. Details of TG members.
 - c. Details of TG activities (Meetings-workshops, TG documents, publications).
 - d. Bridge research documents (papers, reports), that can be downloaded directly from the site, and links to a number of research projects dealing with seismic aspects of bridges.
 - e. Bridge design and assessment documents (codes, guidelines, handbooks), that can be downloaded directly from the site.
 - f. Links to a number of websites closely related to the issues tackled by TG11.

- g. A secured 'Members Area', wherein exchange of documents (at the draft stage) can take place, solely among the TG members.

The site is also accessible via a link on the Task Group page of the EAEE website (<http://www.eaee.boun.edu.tr/tgwg/TGS.HTM>)

2. Meetings – workshops: The TG organised a number of meetings, all of them within the framework of Conferences related to Earthquake Engineering and all of them open to the public, so that exchange of ideas was maximised and visibility of the group increased. All scientific presentations made at the Meetings-Workshops can be found on the TG11 website (<http://nisida.civil.auth.gr/tg11/Meetings.htm>).

The following meetings were organised

- a. First meeting on 16-6-2007, held in the form of a half-day workshop in Rethymno, Crete; the venue was kindly made available by the organisers of the COMPDYN Conference. The EAEE Secretary General was present at Workshop and spoke on recent activities of the Association. The day before the TG workshop, a special session, titled "Analysis and Assessment of Bridges Subjected to Seismic Actions", was organised within COMPDYN; most of the papers presented at the sp. session were authored by TG members and their groups. The minutes of the meeting are given in Appendix 1.
- b. 2nd meeting, held on 14-10-2008 in Beijing, during the 14WCEE; it included a presentation of Activities report (by the Coordinator), and a brief discussion of future TG11 activities, while most of the meeting was devoted to the discussion of the document "Inelastic methods for seismic design and assessment of bridges" (see Activity 4), which is expected to appear first as a report and subsequently, depending on the quality of the final outcome, as a book to be published by Springer. The minutes of the meeting are given in Appendix 2.
- c. 3rd meeting, held on 24-7-2009 in Rhodes, Greece, during the COMPDYN 2009 Conference. Again, it included a presentation of Activities report and a brief discussion of future TG11 activities, while most of the meeting was devoted to the discussion of the document "Inelastic methods for seismic design and assessment of bridges", which was at a relatively mature stage. The day before the TG workshop, a special session, titled "Analysis and Assessment of Bridges Subjected to Seismic Actions", was organised within COMPDYN; most of the papers presented at the sp. session were authored by TG members and their groups. The minutes of the meeting are given in Appendix 3.
- d. 4th meeting, held on 14-10-2008 in Toronto, Canada, during the 9USN & 10CCEE. After a presentation of the Activities report and a brief discussion of future TG11 activities, most of the meeting was devoted to the discussion of the document "Inelastic methods for seismic design and assessment of bridges" which was then at its final stage (see also Activity 4). The minutes of the meeting are given in Appendix 4.
3. Production of the special issue of the BEE "Earthquake Protection of Bridges" (Guest Editor: A. J. Kappos), published as no. 2 of Volume 7 (2009) that included a total 11 papers plus an editorial, most of them contributed by TG members and their co-workers. The papers are listed in the following table.

Table 1. Contents of BEE Sp. Issue 'Earthquake Protection of Bridges'

	Authors	Title
BEEE121	A.N. Kotsoglou & S. J. Pantazopoulou	Modeling the seismic response of integral bridges by consideration of embankment participation - Performance-based earthquake design
BEEE123	T.B. Panagiotakos, C.P. Katsaras, B. Kalias	Effect of torsional stiffness of prestressed concrete box girders and uplift of abutment bearings on seismic performance of bridges
BEEE126	R. Delgado, P. Delgado, N. Vila Pouca, A. et al.	Shear effects on hollow piers under seismic actions. Experimental and numerical analysis.
BEEE127	D. Cardone, M.	Direct Displacement-Based Design of Seismically Isolated

	<i>Dolce, G. Palermo</i>	<i>Bridges</i>
<i>BEEE129</i>	<i>D. Timosidis & S. J. Pantazopoulou</i>	<i>Experimental and analytical modelling of monolithic joints in concrete bridges</i>
<i>BEEE131</i>	<i>I. Moschonas, A.J Kappos, P. Panetsos, V. et al.</i>	<i>Seismic fragility curves for greek bridges - Methodology and case studies</i>
<i>BEEE132</i>	<i>E.Ntotsios, C. Papadimitriou, P. et al.</i>	<i>Bridge Health Monitoring System Based on Vibration Measurements</i>
<i>BEEE133</i>	<i>E. Ntotsios, C.Karakostas, V.Lekidis, P. et al.</i>	<i>Structural Identification of Egnatia Odos Bridges Based on Ambient and Earthquake Induced Vibrations</i>
<i>BEEE134</i>	<i>N. Johnson, M. Saiid Saiidi, D. Sanders</i>	<i>System vs. Component Bent Response of a Two-Span Bridge System</i>
<i>BEEE136</i>	<i>A. Sextos, A. Kappos</i>	<i>Evaluation of the new Eurocode 8 - Part 2 provisions regarding multiple support excitation of bridges</i>
<i>BEEE210</i>	<i>N. Gerolymos, V. Drosos, G. Gazetas</i>	<i>Seismic Response of Yielding Pile–Columns in Nonlinear Soil</i>

4. Preparation of a state-of-the-art document titled “Inelastic methods for seismic design and assessment of bridges”, including: modelling of bridges for inelastic analysis, presentation of available methods (pushover and time-history analysis methods), examples – case studies of application of specific methods and comparisons of alternative methods, and finally conclusions on the range of applicability of (pushover) methods and criteria for selecting appropriate methods. Main drafters of the individual chapters of the document were M. Saiidi, N. Aydinoglu, M. Fischinger, T. Isakovic, and A. Kappos, while several other TG members also contributed sections to the document.

The document is currently (Aug. 2010) at the stage of a final draft and will be presented at the TG11 meeting to be held in Ohrid during the 14ECEE. The list of contents of the document is given in Table 2.

Table 2. Contents of the document
'Inelastic methods for seismic design and assessment of bridges'

Sections	Principal drafter of the chapter	Other authors
1. Introduction	<i>Kappos</i>	
List of symbols and key terms	<i>Kappos</i>	<i>Fischinger, Mylonakis</i>
2. Modelling of bridges for inelastic analysis	<i>Saiidi</i>	
a. deck		<i>Pantazopoulou</i>
b. bearings and shear keys		<i>Saiidi</i>
c. isolation and energy dissipation devices		<i>Dolce-Cardone</i>
d. piers		<i>Delgado-Vila Pouca, Pinho, Fischinger</i>
e. abutments, foundations, and SSI		<i>Pantazopoulou, Sextos, Mylonakis</i>
3. Presentation of available methods (pushover and time-history analysis methods)	<i>Aydinoglu</i>	
a. code methods		<i>Fischinger</i>
b. research proposals		<i>Aydinoglu, Pinho, Kappos</i>
4. Examples – case studies of application of specific methods – Comparisons of alternative methods	<i>Fischinger, Isakovic</i>	<i>Aydinoglu, Dolce -Cardone, Flesch-Benko, Kappos-Sextos, Pinho, Isakovic,</i>

		<i>Delgado-Vila Pouca, Nuti</i>
<i>5. Conclusions – Range of applicability of (pushover) methods – criteria</i>	<i>Kappos</i>	

5. *Future activities and a new Action Plan for TG11 will be presented by the Coordinator during the first meeting of the TG after the ECEE, provided its mandate will be renewed by the EAEE Ex. Committee (as anticipated)*

BULLETIN OF EARTHQUAKE ENGINEERING (BEE)

Approximately four years after we started to publish BEE, I was informed on November 4, 2006 by Springer that BEE has been selected by ISI and will be included in SCIE and CC/Engineering, Computing, and Technology starting from the first issue of 2007. Thus, BEE will get its first 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.

Bulletin of Earthquake Engineering was indexed by SSI as of 2007 and received its first impact factor for 2007 recently. I am very happy to inform you that BEE was ranked as the second among the five Earthquake Engineering Journals [Eartq. Eng. and Str. Dyn. (1.386), BEE (1.125), Earthquake Spectra (1.090), Soil Dynamics and EE (0.620), Journal of EE (0.560)].

Recently, Springer introduced an important decision for BEE; starting as of 2008 colour pictures in the printed version of the journal will be free of charge. Both of these two developments had very positive impact on the number of manuscript submissions.

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 next four year (as of August 2010) **Out of these 379 manuscripts 174** will be published.

In Volume 8, First 4 issues are printed, 5th issue is in production, and 6th issue is ready.

During the past four years 9 Special Issues were printed. Additional 3 Special issues are under preparation to be published during 2011.

- Earthquake Scenarios for European Cities - The RISK-UE Project; Guest Editors: Robin Spence and Benoît Le Brun, Vol. No.4, November 2006
- 11th Mallet Milne Lecture by Robin Spence Guest Editor: Paul Greening Vol.5 No.2; May 2007
- The H/V Technique: Results of the SESAME project; Guest Editor: Pierre-Yves Bard, Vol.6 No.1, February 2008
- Integrated approach to fault rupture- and soil-foundation interaction; Guest Editors: Alain Pecker and George Gazetas. Almost ready to be published as Vol.6 No.4, November 2008
- Earthquake Protection of Bridges; Guest Editor: Andreas Kappos. Vol.7 No.2., May 2009
- 11th Mallet Milne Lecture by Roger Bilham Guest Editor: I.G.Smith Vol.7 No.4, November 2009
- Structural Seismic Safety Assessment; Guest Editors: Carlos Sousa Oliveira, Aníbal Costa and Raimundo Delgado, Vol.8, No.1, February 2010

- Ambient Noise Measurements on Soil and Buildings; Guest Editor: Marco Mucciarelli, Vol.8 No.3, June 2010
- Strong Motion Monitoring in Italy; Guest Editors: Lucia Luzi, Paolo Augliera and Antonella Gorini, Vol.8 No.5, September 2010 (in production)
- L'Aquila earthquake: Seismic sequence of 6th April 2009, Abruzzo, Italy; Guest Editors: Dina D'Ayala and Mauro Dolce, Vol.9 No.1, February 2011 (in preparation)
- Old Masonry under Seismic Loading; Guest Editors: Carlos Sousa Oliveira and Anibal Costa, Vol.9 No.3, June 2011 (in preparation)
- The L'Aquila earthquake – A view of site effects and structural behavior from temporary networks; Guest Editors: Marco Mucciarelli, Giovanna Cultrera, Stefano Parolai, Vol.9 No.5, September 2011 (in preparation)

BOOK SERIES ON GEOTECHNICAL, GEOLOGICAL AND EARTHQUAKE ENGINEERING

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. Springer offers 20% to EAEE Individual Members for this book series.

Printed Books:

- GGEE5: Andrew Dawson: Water in Road Structures - Movement, Drainage & Effects, 2009
- GGEE6: Kyriazis D. Ptilakis (Ed.): Earthquake Geotechnical Engineering, 2007
- GGEE7: L.A. Mendes-Victor, C.S. Sousa Oliveira, J. Azevedo, A. Ribeiro (Eds.): The 1755 Lisbon Earthquake: Revisited, 2009
- GGEE8: Michael N. Fardis: Seismic Design, Assessment and Retrofitting of Concrete Buildings – with reference to EN Eurocode, 2009
- GGEE9: Milutin Srbulov: Geotechnical Earthquake Engineering, 2008
- GGEE10: Alper Ilki, Faruk Karadoğan, Sumru pala, Ercan Yüksel (Eds.): Seismic Risk Assessment and Retrofitting with Special Emphasis on Existing Low Rise Structures, 2009
- GGEE11: A.Tuğrul Tankut (Ed.): Earthquakes and Tsunamis Civil Engineering Disaster Mitigation Activities Implementing Millennium Development Goals, 2009
- GGEE12: Milutin Srbulov: Ground Vibration Engineering Simplified Analyses with Case Studies and Examples, 2010
- GGEE13: Michael N. Fardis (Eds.): Advances in Performance-Based Earthquake Engineering, 2010
- GGEE17: Mihail Garevski and Atilla Ansal (Eds.): Earthquake Engineering in Europe, 2010

Title in preparation:

- GGEE13: Akkar, D. Sinan; Gülkan, Polat; Eck, Torild van (Eds.); Earthquake Data in Engineering Seismology, Networks, Data Management and Predictive Models
- GGEE14: Atilla Ansal and Muhammed Sakr (Eds.) Advances in Earthquake Geotechnical Engineering
- GGEE15: Susumu Iai (Ed.) Geotechnics and Earthquake Geotechnics towards Global Sustainability

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 Newsletters for 2008 2007: No.25/1, 25/2, 2008: 26/1, 27/1, 2009: 28/1, 28/2, 2010: 29/1 were drafted and distributed to all members.

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 were registered in USA through Godady.com.

Atila Ansal
Secretary General