IASPEI Newsletter

February 2013

IN THIS ISSUE

KNOWLEDGE FOR THE FUTURE

The 37th IASPEI Scientific Assembly
Göteborg, Sweden July 22-26, 2013

Foreword

Dear readers,

A timely Newsletter to remind you to submit an abstract for the IASPEI Scientific Assembly in Gothenburg 2013 – 4 February! A few more days left!

As you will read further on, EMSEV has had a successful year 2012 with lots of meetings, activities and an increase of interest shown by its increasing number of members. EMSEV is jointly sponsored by IASPEI, IAVCEI and IAGA.

Also in this issue we have, with much regret, to inform you about the death of a great scientist and man, prof. N. N. Ambraseys, who has left us at the end of 2012.

Finally, I invite all of you again to support all IASPEI- sponsored meetings and activities in 2013!

Peter Suhadolc
Secretary General

REMINDER
ABSTRACT SUBMISSION DEADLINE

Abstract deadline is February 4, 2013

If possible, please, do not wait until the very last minute to submit your abstract!

The Conference website:

http://www.iahs-iapso-iaspei2013.com

reports the full scientific program. Do register and submit your abstracts as early as possible! Request for grants is part of the registration.

PLEASE SEE MORE AT THE END OF THE NEWSLETTER!

2012 EMSEV Annual Report

1. INTRODUCTION

EMSEV Inter-Association Working Group on 'Electromagnetic Studies of Earthquakes and Volcanoes' (http://www.emsev-iugg.org/emsev/) strongly focuses on the development of new research and findings related to the physics of the Earth, volcanic and eruptive processes, electromagnetic (EM) and other geophysical phenomena related to dynamic processes leading to faults rupture and volcanic eruptions.

EMSEV is now composed of more than 290 scientists who belong to IAGA, IAVCEI and IASPEI Associations.

EMSEV's objectives are (1) the evaluation and the promotion of advanced studies in the electromagnetic field through international conferences and regional workshops, high levels international publications, (2) to actively contribute to the expansion of electromagnetic methods related to the study of earthquakes and volcanic eruptions in developing or interested countries, (3) to organize international and regional workshops, and sessions at international meetings, and (4) to participate in local educational programs.

The XV-th business meeting was held during the last international EMSEV meeting at Gotemba (Japan) on October 3, 2012.

2. ADMINISTRATION

During the XV-th EMSEV business meeting, it was decided to enlarge the EMSEV expertise to include new related fields of research. A new body, called EMSEV collaborators, was defined. This body is intended to include active scientists working in Natural Hazards in any related field of research whose expertise's does not necessarily belong in the EM field but who are interested in, and wish to contribute to development of new broader geophysical knowledge. These collaborators are interested in participating in EMSEV activities, including contributing to the analysis of observations and understanding of physical processes from their different perspectives.

Therefore, EMSEV is now composed of an elected executive bureau, a nominated assembly of members and collaborators, and the community interested in electromagnetic phenomena, called corresponding members.

The bureau gathers twelve active researchers. The Chairperson is J. Zlotnicki, the Vice-Chairperson is M.J.S. Johnston, and the Secretary is T. Nagao. IAGA, IAVCEI and IASPEI liaison members are J. Y. Liu, Y. Sasai, and M.J.S. Johnston, respectively, while IAGA WG1-2 corresponding liaison member is T. Harinarayana. Q. Huang (China), V. Lapenna (Italy), A. Meloni (Italy), V. Korepanov (Ukraine), and R. Singh (India-USA) are also bureau members. S. Uyeda is Past-Chairperson.

The WG members are nominated for their expertise and their scientific activity in the EM field or in connected and related research fields. They can be nominated at any of the EMSEV business meetings. At this point, we have 32 working group members from 16 countries (China, France, Greece, India, Indonesia, Italy, Japan, Kyrgyzstan, Philippines, Poland, Romania, Russia, Taiwan, Turkey, Ukraine, and USA). The number of corresponding members now exceeds 290.

During the XV-th business meeting, it was decided to have our next EMSEV meeting to be held in Europe in September 2014. Jan Blecki from Poland will be the chair of the organization committee. It should take place in September 2014.

Annual reports, minutes of the business meetings and activities on the Working Group can be found on EMSEV web site (http://www.emsev-iugg.org/emsev/).

3. ACTIVITIES

In 2012, EMSEV was involved in several important international meetings and has continued to support international cooperative studies.

Meetings

EMSEV members have organized many sessions in international meetings like:

EGU, Vienna, April 22-27, 2011 (3 sessions), ESC2012, 33rd General Assembly, August 19-24, 2012, Moscow, Russia AOGS AGU (WPGM) Joint Assembly,13 to 17 August, 2012, Singapore AGU, December 3-7, 2012, San Francisco, USA GeoRisk Conference, December 8 -12, 2012, Chapman University, USA

Following the 2010 conference held at Chapman University, Santa-Ana, USA, the 2012 international EMSEV meeting took place from September 30 to October 3, 2012. It was organized and hosted by Tokai University at Gotemba, Japan, in front of the 3776 m high and active Mount Fuji-yama volcano. This meeting was supported by the three IUGG Associations (IAGA, IASPEI and IAVCEI) to which EMSEV belongs.

More than 75 participants from 13 countries, including ten new young scientists, presented their latest results at both plenary oral and poster sessions over these three days. Papers were organized within five different sessions, (i) Electric, magnetic, and electromagnetic phenomena associated with active processes: earthquakes, tsunamis,

volcanoes, active fault movements, landslides, and geothermal activities, (ii) Electromagnetic imaging based on land and space monitoring techniques, (iii) Pre-seismic, co-seismic and post-seismic phenomena related to the Lithosphere-Atmosphere-Ionosphere Coupling using multi-parametric observations to ensure reliable interpretation, (iv) Generation mechanisms of electromagnetic signals related to active processes: Theoretical and laboratory studies, and (v) Seismic, Geodetic and Electromagnetic studies related to the off Tohoku M9 Earthquake and tsunami on March 11, 2011.

EMSEV activity on volcanoes

In Volcanology, EMSEV first formed a co-operative program with The Philippines Institute of Volcanology and Seismology (PHIVOLCS), on Taal volcano in November 2004. (http://www.phivolcs.dost.gov.ph/). At present, this inter-national cooperation involves teams from Japan, France, USA, Greece, Italy, and Belgium. A report on the state of the cooperation, discussions of problems encountered and the latest results were presented during EMSEV 2012 meeting. It was pointed out that EMSEV has a primary responsibility to help PHILVOLCS to monitor the volcano.

Field trips were conducted in February and March, 2012 by groups from France, USA, and Japan with the collaboration from PHIVOLCS. In addition, new joint field work took place in December 2012 to repair and upgrade the telemeter network. During this time a new seismic crisis started on the volcano.

The EMSEV project on Taal volcano which now involves many teams from the international community (Japan, France, USA, Greece, Italy, Belgium) in cooperation with PHIVOLCS clearly shows its effectiveness.

EMSEV activity related to Earthquake Processes

In 2011, the EMSEV working group started a new research effort in Kyrgyzstan. We have developed a cooperative research program with the Bishkek Research Station in Kyrgyzstan under the Russian Academy of Sciences where some outstanding research on the relation between EM phenomena and electrical resistivity changes with earthquakes has been in process during the last 30 years. Previous discussions and visits had confirmed the great interest of this new cooperation:

In November 2011, teams from Japan, France and Greece visited Bishkek Research station. A meeting was held in which a synthesis of the past results was described. Furthermore, Japanese and French passive EM stations were installed at new field sites, 40 and 30 km away from the current system used by Kyrgyz colleagues (600 A, length of dipoles 4 km). Joint data processing systems are now implemented.

A cooperative agreement between EMSEV and the Bishkek Research Station was signed during the first meeting. This agreement states: "The purpose of this Agreement is to provide scientific and technical interaction between the two Sides during collaborative research on active faults and physical processes generating earthquakes in Central Asia, to promote new investigations with electromagnetic and other geophysical methods, and to enhance data processing and analyses. The Agreement will promote the development of scientific relations between participants for solving fundamental problems on the generation of earthquakes and ways to monitor and mitigate them along different active faults of Central Asian continental lithosphere."

The Agreement is valid for a 4 years period starting from November, 2011.

The first data issued from the collaboration were shown at the 2012 EMSEV meeting and it is clear that signal to noise is good. The data volumes are large. The Japanese recording system alone recorded 170 Gbytes of EM data in six months.

A presentation was made by Anatoly Rybin concerning the Bishkek station operation and obligations. The priorities of the Bishkek Institute concern scientific communication, training of younger scientists and possible visits to geophysical institutes in foreign countries and provision of long term support for field work.

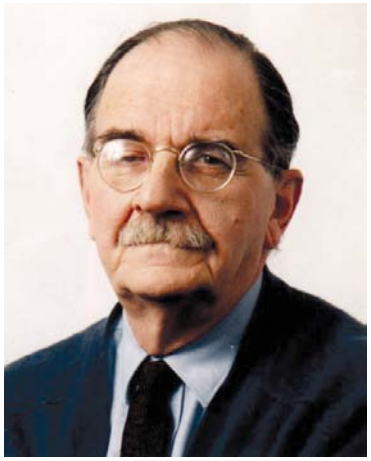
4. PLANNED FUTURE ACTIVITIES

In 2013, EMSEV will be involved in important international meetings: EGU, AOGS, IAVCEI, IAGA, IASPEI, and AGU. In parallel, EMSEV will continue to maintain a high level of collaboration in Philippines and Kyrgyzstan.

Jacques Zlotnicki

Obituaries

Nicholas Neocles Ambraseys 1929-2012



Nicholas (Nick) Ambraseys was born in Alexandria (Egypt) to Greek parents on 19th January 1929 and died peacefully at his home in Putney (United Kingdom) on 28th December 2012 at the age of 83.

Nick Ambraseys attended the National Technical University of Athens, receiving his diploma in Rural Engineering in 1952. Following this and service in the Royal Hellenic Navy he moved to Imperial College in London to study for his Diploma of Imperial College and later his PhD, which he was awarded in 1958. Following a few years at universities in Greece and in the United States of America (working with Nathan Newmark, one of the fathers of earthquake engineering) he returned to Imperial College and remained there until his death. He became Professor of Engineering Seismology in 1974. In 1968 he established the Engineering Seismology Section in the Department of Civil Engineering and from 1971 to 1994 he led this section. In 1994 he officially retired from this position but he remained very active as an Emeritus Professor. Even during the last few months of his life he continued working and collaborating on various research topics, including the stability of ancient Greek columns.

His research covered many problems connected with earthquakes and their effects on the ground, structures and populations. His PhD and early articles were concerned with the response of earth dams to earthquakes, in connection with the construction of large dams in the Himalayas (e.g. at Mangla). However, early on in his career he began studying historical accounts of earthquakes, particularly those occurring in the eastern Mediterranean region, and it is in this field where he arguably made his greatest contributions. His meticulous study of historical documents on earthquakes that occurred in the eastern Mediterranean and elsewhere (e.g. Central America) is second-to-none and he published many dozens of articles and books on this painstaking work. In 2009 his *magnum opus* on eastern Mediterranean seismicity (entitled 'Earthquakes in the Mediterranean and Middle East: a multidisciplinary study of seismicity up to 1900'), comprising almost 1000 pages, was published by Cambridge University Press.

Since he remained, at heart, an engineer he continued to work in geotechnical earthquake engineering, the assessment of earthquake ground motions and various other topics, in addition to his historical research. For example, he made significant advances in the collection and analysis of strong-motion (accelerometric) data. He started the routine collection, processing and assessment of these data and associated parameters (metadata) in 1971. In those days collection and use of strong-motion data was difficult, time consuming and, in Europe, uncommon due to analogue instruments and the lack of electronic communications to facilitate data transfer but through Nick's contacts and tenacity the collection of data grew. This task continued through various projects and initiatives from the 1970s to early 2000s and culminated with the publications in 2000 and 2004 of freely-available CD ROMs of strong-motion data and their reassessed parameters and in 2002 the establishment of the Internet Site for European Strong-motion Data. This work was conducted within the frameworks of the Strong-Motion Working Groups of the European Seismological Commission and the European Association of Earthquake Engineering, which Nick led for much of the past forty years. These strong-motion archives remain important resources for research and engineering practice and significantly help seismic hazard assessments in Europe and the Middle East.

All of Nick's publications were infused with wisdom, learning and wit, making them a joy to read. For those who are not familiar with his work, his 1988 Earthquake Engineering & Structural Dynamics article entitled simply 'Engineering Seismology' is recommended as a good place to start. In all his works he sought to act as a bridge between earth sciences and engineering and between research and practice. These studies

were enlightened by the knowledge and insights he gained during dozens of post-earthquake field missions in various parts of the world, many of which were under the aegis of UNESCO. These missions led to a series of reports that had an impact on the reconstruction of the cities affected (e.g. Skopje and Managua). He was awarded in 1998 the Freedom of the City of Skopje in recognition of the field work that he undertook in the aftermath of the devastating 1963 Skopje earthquake and the advice that he provided to the local authorities. His great ability with languages (fluent in three or four and comprehension of many others) helped all of these works and to sustain good contacts with people of many nationalities. As well as conducting research himself, he supervised many masters and PhD students and he collaborated with numerous workers worldwide. His vast experience of practical earthquake problems was put to good use through consultancy for large-scale engineering projects, such as dams and bridges in seismically active regions.

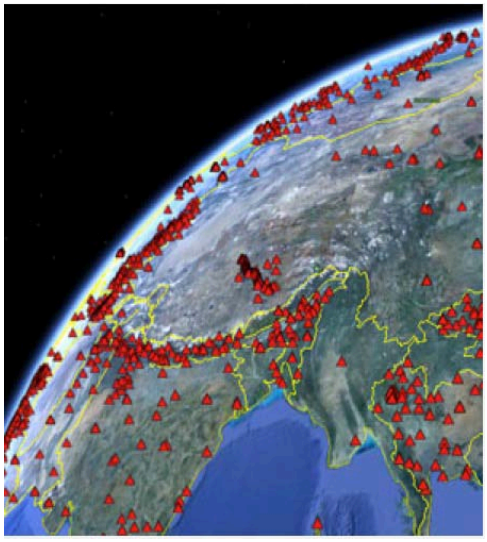
In recognition of his lifetime of achievements he was given numerous awards and fellowships from prestigious institutions, for example: Busk Medal for Scientific Discovery from the Royal Geographical Society (1975), Mercenary Award of the European Association of Earthquake Engineering (1975), Fellowship of the Royal Academy of Engineering (1985), Honorary Fellowship of the Society of Earthquake Engineering & Structural Dynamics (1986), Honorary Fellowship of the International Association of Earthquake Engineering (1992), Honoris Causa from University of Athens (1993), Member of the European Academy (1997), Award of the Freedom of the City of Skopje (1998), Harry Fielding Reid Medal of the Seismological Society of America (2006), Fellowship of the Institution of Civil Engineers, Fellowship of the Geological Society and Fellowship of the Royal Geographical Society. From his election in 2003, he was an active member of the First Section of the Academy of Athens and he divided his time between London and Athens.

His great scholarship, practical insight and wisdom were best demonstrated during relaxed discussions in small groups, often accompanied by him cleaning and refilling his pipe. He peppered his conversation with interesting and amusing asides, anecdotes and observations. He had a great ability to simplify scientific and engineering problems with the use of enlightening analogies. Two that come to mind are: when he used the permanent vertical displacement (or lack of) at a canal north of Athens to constrain the fault slip in the 1999 earthquake and he compared the canal to photographic trays used in darkroom development; and when he compared the behaviour of particles undergoing soil dilatancy to the behaviour of commuters trying to get off a packed Tube (London Underground) train.

Nick Ambraseys contributions to engineering seismology and earthquake engineering were immense, wide-ranging and spanned almost 60 years. The worldwide community in these fields owes him a great debt and he will be greatly missed. He is survived by his wife, Xeni.

John Douglas

ISC-GEM CATALOGUE



The ISC-GEM Global Instrumental Catalogue team will release v1 of the catalogue on January 31st. More than 20,000 events cover 110 years of seismic history in a highly homogenous way. Thousands of records were processed, which has led to improved, homogeneous estimates of magnitude and location. All main parameters are furnished with estimates of uncertainty. This results in a unique global catalogue that can be used for global hazard assessment and as well as contribute to harmonizing ongoing efforts to compile more detailed regional catalogues.

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Meetings Calendar

A calendar of scientific meetings relevant to the interests of IASPEI scientists is maintained at:

http://www.iaspei.org/meetings/forthcoming.html

where more details can be found. We report below just the titles, dates, places and websites of the forthcoming meetings.

APPROACHING DEADLINES

IAHS-IAPSO-IASPEI2013 – Abstract submission:
4 February 2013

2013

EUG General Assembly 2013
April 07–12, 2013, Vienna, Austria
Website: http://www.egu2013.eu/

2013 Seismological Society of America Annual Meeting
17–19 April 2013, Salt Lake City, Utah, USA
Website: http://www.seismosoc.org/meetings/

AGU Meeting of the Americas
14–17 May 2013, Cancun, Mexico
Website: http://moa.agu.org/2013/

International Symposium on 10th Anniversary of the Boumerdes-Zemmouri earthquake
21–23 May 2013, Algiers, Algeria
Website: http://www.craag.dz/symposium2013/

2013 International Conference on Geology and Geophysics (ICGG2013)
16-18 June 2013, Beijing, China
Website: http://www.engii.org/workshop/icgg2013/

CTBTO Science and Technology Conference (SnT2013)
17-21 June 2013, Vienna, Austria
Website: http://www.ctbto.org/specials/snt2013/

Joint Scientific Assembly of IAHS-IAPSO-IASPEI
22-26 July, Gothenburg, Sweden
Contact: iahs.iapso.iaspei2013@congrex.com
Website: www.iahs-iapso-iaspei2013.com

8th International Symposium on Rockbursts and Seismicity in Mines
1-7 September, St.-Petersburg and Moscow, Russia
Contact: rasim2013@rambler.ru
Website: http://pts.mi-perm.ru/rasim

2nd Annual International Conference on Geological and Earth Sciences (GEOS 2013)
28-29 October 2013, Phuket, Thailand
Website: http://www.geoearth.org/index.html

2014

ESC General Assembly 2014
(joint with EAEE, 2nd ECEES)
August 24–29, 2014, Istanbul, Turkey

ASC General Assembly 2014
2014, Manila, Philippines

LACSC Regional Assembly 2014
2014, Bogota, Colombia

REMINDER - ABSTRACT DEADLINE 4 February

Welcome to the IUGG Scientific Assembly on hydrology (IAHS), oceanography (IAPSO) and seismology and physics of the earth's interior (IASPEI)!

Call for abstracts and grant application

On behalf of the Local Organising Committee and the Scientific Programme Committee we are pleased to invite you to the "Knowledge for the Future" Assembly in Gothenburg. Present your findings, meet your colleagues, develop future research collaborations, and enjoy the stimulating atmosphere of Sweden's second city. We are very pleased to note that Gothenburg has been awarded second place in Lonely

Planet's "Best value destinations".

The Scientific Programme Committee invites the submission of abstracts on original or review work to be considered for oral or poster presentations.

The deadline for submission of abstract and grant application is 4 February, 2013.

Authors, who wish to apply for a travel grant, have to submit their application together with the abstract. Three different grants are available primarily for young scientists from developing countries. For further details please click here.

Registration

When submitting your abstract, don't forget to register in time to get the early bird registration fee. Deadline early bird fee is 18 April, 2013.

Significant lower cost for early birds!

For further details about the registration please click here

To view the preliminary scientific programme please click here

Important Dates

Last day for abstract submission and grant application	4 February, 2013
1st notification of abstract acceptance/rejection	Mid April, 2013
Last day for early bird registration	18 April, 2013
Last day for abstract authors to register	18 April, 2013
2nd notification of abstract oral/poster	Early May, 2013
IAHS/IAPSO/IASPEI 2013, Gothenburg	22 - 26 July, 2013

Mark your calendar with the important dates for the Scientific Assembly.

For questions please contact the Joint Assembly Secretariat at: *Congrex Sweden* AB

CONGREX

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Welcome to the Joint Assembly and Gothenburg 22 - 26 July 2013!

General Information about IASPEI

The International Association of Seismology and Physics of the Earth's Interior is one of the eight Associations of the International Union of Geodesy and Geophysics [IUGG].

The other IUGG Associations are:

Int'l Association of Cryospheric Sciences (IACS)
Int'l Association of Geodesy [IAG]
Int'l Association of Hydrological Sciences [IAHS]
Int'l Association of Meteorology and Atmospheric Sciences [IAMAS]
Int'l Association for the Physical Sciences of the Oceans [IAPSO]
Int'l Association of Geomagnetism and Aeronomy (IAGA)
Int'l Association of Volcanology and Chemistry of the Earth's Interior [IAVCEI]

Scientific Assemblies

IASPEI holds an Ordinary General Assembly every four years in conjunction with each Ordinary General Assembly of IUGG. Between the General Assemblies, IASPEI holds a Scientific Assembly, sometimes meeting with one of the other Associations of IUGG.

Participation in IASPEI Activities

IASPEI welcomes all scientists throughout the world to join in research into Seismology. IASPEI is subdivided into a number of Commissions, many of which have working groups for the study of particular subjects in

their general areas of interest. On occasion, these internal IASPEI groups issue their own newsletters or circulars and many maintain their own web sites. At the IASPEI Assemblies, the groups organize specialist symposia, invite scholarly reviews and receive contributed papers that present up-to-the-minute results of current research. The IASPEI web site gives, or provides links to, information on the range of IASPEI activities.

The IASPEI Web site

Information on IASPEI can be found at:
http://www.iaspei.org/

Contacting IASPEI

The Secretary-General is the main point of contact for all matters concerning IASPEI.

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