

XVIII INQUA 2011 Congress

TERPRO – Commission on Terrestrial Processes Deposits, and History

Focus Area on Paleoseismology and Active Tectonics

MINUTE OF THE 5th Business Meeting

Bern, 27th July 2011

Agenda

- 1) NEW STRUCTURE FOR 2011-2015 INTERCONGRESS PERIOD**
- 2) ACTIVITIES**
- 3) LINKS TO OTHER INITIATIVES**
- 4) MEETINGS**

List of Participants:

G. BESANA-OSTMAN, A.M. BLUMETTI, J. CYZIENE, L. GUERRIERI, K. IRIKURA, A. MAGYARI, A.M. MICHETTI, K. OKUMURA, Y. OTA, K. REICHERTER, P. SANDERSEN, P.G. SILVA, R. TATEVOSSIAN, D. BARRELL, T. AZUMA

PREFACE

The 5th Business Meeting of the INQUA TERPRO Focus Area on Paleoseismicity and Active Tectonics was held on 27th July 2011 in the frame of the XVIII INQUA Congress, held in Bern in the period 20-27 July 2011.

The following scientific session was sponsored by the Focus Area:

#55 “Paleoseismology, megacities, and critical social infrastructures”

Conveners: *Alessandro M. Michetti, Koji Okumura, Pablo G. Silva*

Below is reported the oral and poster programme for this session:

Oral Presentations

- ✓ IRIKURA KOJIRO - Strong Motion Prediction for Inland Crustal Earthquakes Based on Active Fault Survey
- ✓ OTA YOKO - Late Quaternary reverse faulting and its significance in southwestern taiwan
- ✓ BESANA-OSTMAN GLENDA - The Lower Tagus Valley Fault Zone: Results of recent mapping
- ✓ OKUMURA KOJI - Paleoseismology of fault displacement
- ✓ BARRELL DAVID - Lessons learned from the 4 September 2010 Darfield earthquake, New Zealand
- ✓ TATEVOSSIAN RUBEN - Magnitudes of palaeo earthquakes: could they be evaluated with accuracy available for historical and instrumental time-periods?
- ✓ GUERRIERI LUCA - The EEE Catalogue: a global catalogue of Earthquake Environmental Effects
- ✓ MÖRNER NILS-AXEL - Paleoseismology and storage of high-level nuclear waste in the bedrock
- ✓ MICHETTI ALESSANDRO MARIA - Quaternary geology, paleoseismology and earthquake hazards in regions with moderate active tectonics and high vulnerability: the seismic landscape of the Po Plain

Poster Presentations

- ✓ SHAFIEI BAFTI AMIR - The calculation of quaternary deposits diffusion coefficient by fault scarps for estimation of earthquake hazards in central Iran
- ✓ AZUMA TAKASHI - Probability of the occurrence of the multi-rupture faulting on the eastern Vokote Basin fault zone, NE Japan
- ✓ BITINAS ALBERTAS- Implications of the paleoseismicity of the Eastern Baltic Sea Region
- ✓ CYZIENE JOLANTA - Assumption for the morphotectonic evidence, examples from Lithuania
- ✓ BRANDES CHRISTIAN - Reactivation of basement faults in NW Germany: interplay of ice-sheet dynamics and crustal structure
- ✓ BRANDES CHRISTIAN - Pleistocene basement tectonics as driving mechanism for deformation band formation in NW Germany
- ✓ SILVA PABLO - G.Ancient earthquakes hit the Quetzalcóatl Pyramid at Teotihuacán (México). Was it a stricken critical facility?
- ✓ SILVA PABLO G. - Evidences of Late Pleistocene Paleoeearthquakes within fluvial sequences around the Madrid City (Central Spain).
- ✓ MALIK JAVED N. - Paleoseismic and Paleo-tsunami signatures from the west coast of South Andaman, A&N Island, India

- ✓ WIATR THOMAS - From terrestrial remote sensing to morphotectonics: Hard rock scarps on the Island of Crete, Greece
- ✓ SILVA PABLO G. - The role of Volcanic vs Seismic actions in ground deformations recorded in Oceanic Volcanic Islands: Examples from the Eastern Canary Islands (Spain).
- ✓ BLUMETTI ANNA MARIA - Geological constrains for seismic hazard assessment in the L'Aquila zone
- ✓ REICHERTER KLAUS - The Rurand fault and the 1756 Düren earthquakes - Paleoseismological studies in the Lower Rhine Embayment
- ✓ CHOI JIN-HYUCK - The evolution of the Quaternary Eupcheon fault, SE Kore
- ✓ MAGYARI ÁRPÁD - Indications of Late Pleistocene neotectonic and paleoseismic activity in the middle part of the Danube Valley (Pannonian Basin)
- ✓ LIN QIU-YAN - Historical earthquake magnitude and epicenter location determination by using intensity attenuation model in Southwestern China region
- ✓ HIGUCHI SHIGEO - Ground deformation of reclaimed land due to large earthquakes: Characteristics of ground hazards in coastal areas of Tokyo Bay due to the 2011 Tohoku Earthquake

1) NEW STRUCTURE FOR 2011-2015 INTERCONGRESS PERIOD

MICHETTI announces that he has been elected as **the new INQUA TERPRO President for the period 2011 – 2015** and therefore he is not able to continue to coordinate the activities of the Focus Area. He suggest the candidature of SILVA as the new chairman of the Focus Area. The Assembly ratifies this candidature and therefore SILVA is elected as **the new Chairman of the Focus Area on Paleoseismicity and Active Tectonics** for the 2011-2015 intercongress period.

In order to complete the new structure SILVA proposes REICHERTER, GUERRIERI and GARDUNO MONROY as **ViceChairmen** and PEREZ-LOPEZ and GRUTZNER for the **Scientific Secretary** of the Focus Area. This latter designation will be ratified later, most likely in September, in the frame of the upcoming Corinth Workshops.

2) ACTIVITIES

EEE Catalogue

GUERRIERI illustrates the public version of the EEE Catalogue based on Goggle Earth, which is available (www.eeecatalog.sinanet.apat.it/earthquakelist.php).

The infrastructure can store information on EEE data at earthquake level (rupture zones), locality (ESI intensities) and site level (EEE description, classification and pictures). He illustrates the added values for comparing modern, historical and paleoearthquakes especially in sparsely populated areas.

About 60 events are under implementation. Most of them are in Europe (geographic bias) and modern (post-1900).

Therefore, in the next intercongress period the strategy for implementation will be aimed at reducing such biases and fill the gaps.

GUERRIERI recommends again to contribute to implementation of the EEE Catalogue, through the Web Interface www.eeecatalog.sinanet.apat.it/admin/login.php

Of course, each contribute will be acknowledged through a certificate formally issued by the INQUA Focus Area.

Other activities

TATEVOSSIAN proposes for the next 2011-2015 intercongress period to use the content of the EEE Catalogue to define empirical relationships between EEE characteristics, size and distribution with seismological and fault parameters.

3) LINKS TO OTHER INITIATIVES

Link with GEO initiative

GUERRIERI suggests a potential link with the GEO initiative through an EU funded-call of the FP7 Programme (ENV.2012.6.4.2 Long-term monitoring experiment in geologically active regions of Europe prone to natural hazards: the Supersite concept. The EEE Catalogue could play the role of in-situ validator of earth observations of coseismic deformation from satellites (e.g. DInSAR).

Link with IAEA ISSC

GUERRIERI informs that in the frame of the activities of the International Seismic Safety Center c/o IAEA, the EEE Catalogue will be linked to the ISSC database in order to disseminate this information also to the worldwide nuclear engineering community.

4) MEETINGS

The Assembly identifies the following potential meetings:

- Corinth, Greece, September 2011, Field Trip and Workshop, to represent a follow-up of the successful Baelo Claudia 2009 Meeting (ref. PAPANIKOLAOU & REICHERTER)
- Roma, Italy, October 2011, 2nd World Landslides Forum (ref. GUERRIERI & PORFIDO)
- Brisbane, Australia, 34th International Geological Congress, August 2012
- Mexico, November 2012 (ref. SILVA BARROSO, RODRIGUEZ PASCUA, PEREZ LOPEZ)
- Aachen, Germany, 2013, Archeoseismology Workshop (ref. REICHERTER, HINZEN & SINTUBIN)
- Fucino, Italy, January 2015, Centennial Meeting of the January 13th, 1915, Avezzano earthquake (ref. MICHETTI, GUERRIERI & BLUMETTI)