

Biographical sketch for: Christos A. PAPAIOANNOU

BORN: February 11, 1958 – Thessaloniki, Greece

e-mail: chpapai@itsak.gr

Tel: (+).30. 2310476082

Fax: (+).30. 2310476085



EDUCATION

Geologist B.Sc. University of Thessaloniki, Greece (1982) with degree “Very Good” (7.15)

Ph.D. 1984 University of Thessaloniki, Greece “Excellent”

POSITIONS HELD:

Researcher Director I.T.S.A.K. 2010 to date, Senior Researcher I.T.S.A.K. 2001 to 2010, Assistant Researcher I.T.S.A.K. 1998-2001, Lecturer Researcher I.T.S.A.K. 1995-1998

Member of the Scientific staff at the Seismological Station of the Thessaloniki University 1988-1995

Research Fellow at the Lab. of Geophysics, Thessaloniki Univ., and free-lancer geophysist 1986-1988.

POST GRADUATE STUDIES – COOPERATION WITH INTERNATIONAL INSTITUTIONS.

1986: Advanced courses in seismology at the International Center for Theoretical Physics (Trieste IT), directed by Professors B. Bolt (University of Berkeley, CA) & G. Panza (Univ. di Trieste).

1994: Research Fellow at IRIGM (Univ. Joseph Fourier, Grenoble FR) for site effects studies.

1994: Advanced course on: Three-dimensional modelling of seismic waves generation, propagation and their inversion, at the International Center for Theoretical Physics (Trieste IT).

1996: Advanced course on: Three-dimensional modelling of seismic waves generation, propagation and their inversion, at the International Center for Theoretical Physics (Trieste IT).

2008: Research Fellow at INGV Rome

2009: Research fellow at Risk Engineering Inc Boulder CO, USA

2009: Research fellow at Catholic University of America (Washington DC)

2009: Research Fellow at INGV Rome

I visited numerous research institutes in Europe (IZIIS-Skopje, 1982; Institute of Geophysics-Frankfurt, 1986, 1992; ING Rome, 1990, 1994, 1997; NEIC & CIRES US 1995; and the Universities Harvard Univ.-MA, MIT-MA, Princeton Univ.-NJ USA; and Jussieu Paris (1995 & 1996).

2. SCIENTIFIC ACTIVITIES

2.1. RESEARCH FIELDS OF INTEREST

I have been working in many fields of seismology and engineering seismology and namely in the topics of: (1) Seismic hazard assessment, (2) Attenuation of seismic intensities, (3) Attenuation of peak ground parameters (4) Application of macroseismic data for the calibration of earthquakes.(5) Stress pattern in the Aegean area (6) Aftershock studies (7) Seismicity studies (8) Determination and calculation of response spectra using strong motion records (9) Tsunami studies (10), Long term earthquake prediction (11) Seismotectonic studies (12) Application of various statistical models in seismic hazard analysis (13) Site effect studies in terms of strong, weak- motion and noise data

2.2. SCIENTIFIC OBSERVATIONS

During the aftershock studies of the Thessaloniki 1978 earthquake, I participated in the field work team for the intensity assessment for the compilation of microzonation and iso-intensity maps

I participated in the deployment of mobile seismograph networks following the earthquakes of Thessaloniki (1978 M=6.5), Rhodes Isl., (1987 M=5.6), Pyrgos-SW Greece (1988 M=6.0, March 1993 M=5.6), Lefkas Isl. - W. Greece (1994 M=5.4). I also participated in the installation and operation of networks of digital seismographs and accelerographs after the occurrence of earthquakes in: NW. Greece (1996, M=5.6), Cyprus (1996, M=6.8; 1999 M=5.4). In the framework of a project supported by the GSRT (GR) I participated in the deployment, maintenance and data analysis of a network deployed in the city of

Herakleion (GR) for the microtremors measurements.

In August 1999 I was strongly involved in the deployment, maintenance and data analysis of a strong motion network deployed after the Limassol (CY) earthquake within the framework of the project for the microzonation of Limassol.

During the last strong earthquake at Athens (September 1999, M=5.9) I was strongly involved in the installation and maintenance of a dense network of weak and strong motion instruments.

I was strongly involved in the deployment and data analysis following the strong NW Peloponnese earthquake (June 2008).

Furthermore I participated in the fieldworks of numerous European and national projects in Greece, which were undertaken in cooperation with European and national institutions.

2.3. PARTICIPATION IN RESEARCH PROJECTS AND SCIENTIFIC ACTIVITIES

I took part in 55 research projects with national or international funding. Furthermore I participated as scientific responsible in the following projects:

“Earthquake Prone Regions Study”, in cooperation with ILF Consulting Engineers (Munich-DE) & Asprofos Engineering S.A. (Athens -GR) for seismicity study of the crude-oil pipeline route Burgas-Alexandroupolis.

“Seismicity and Seismic Hazard for selected sites of large infrastructure works in Greece”, in cooperation with the Laboratory of Geophysics of the Thessaloniki Univ.

“Data collection and compilation of a new seismic hazard map of Greece compatible with the Greek Seismic Code and the EC-8”, financially supported by the Earthquake Planning & Protection Organization.

“Network of Research Infrastructure for European Seismology (NERIES)” financially supported by the European Union.

“Establishment and operation of National strong motion network” financially supported by the Earthquake Planning & Protection Organization.

and I was the principal scientist in the tasks of seismicity and seismic hazard of the following projects:

“Microzonation study of Larissa”, financially supported by the Prefecture of Larissa (GR). Principal contribution for the seismological tasks.

“A rapid warning system for earthquakes in the eastern Mediterranean region” financially supported by the EC (:ENVIRONMENT, ENV4-CT96-0282). Coordination of the tasks undertaken by the Laboratory of Geophysics of the Thessaloniki Univ.

“Microzonation study of Limassol”, financially supported by the Geological Survey Department (CY). Principal contribution in seismology and engineering seismology tasks.

“Microzonation study of Paphos region”, financially supported by the Geological Survey Department (CY). Principal contribution in seismology and engineering seismology tasks.

I was member of the organizing committee of 10 international and national congresses. I participated in the General Assemblies of the Executive Council of the European-Mediterranean Seismological Center (1994-2004). Moreover I participated in 95 National and International congresses.

2.5 PROFESSIONAL EXPERIENCE

Professional experience of 25 years in several case studies for the seismicity and seismic hazard assessment of Urban Areas, Dams, Hospitals, Critical Industrial and Chemical infrastructures and Lifelines in Greece and Cyprus, including:

2.6. PARTICIPATION IN COMMISSIONS AND WORKING GROUPS.

I participated in numerous Greek and International committees and working groups.

Reviewer of the international journals: Tectonophysics, Journal of Seismology, Bulletin Seismological Society of America, Geophysical Research Letters, Physics and Chemistry of the Earth, Geophysical Research Letters, Natural Hazards, Natural Hazards and Earth System Sciences, Journal of Earthquake Engineering, Soil Dynamics & Earthquake Engineering.

Invited speaker: in courses of EU projects , European Universities and research institutes,

I am member of the Seismological Society of America (1979), Earthquake Engineering Research Institute (1986), American Geophysical Union (1986), Hellenic Geophysical Union (1988). I participated in the working group “ADRIA project” of the Global Seismic Hazard Project (1995-1998) and in the SESAME project for the Seismic Hazard Assessment of the Mediterranean region and in the EU-Medin action of the EU.

I have been an elected member of the executive council of the European Mediterranean Seismological Center (1994-2004). I am also member of the joint working group of the EAEE (TG-6) and the ESC (WG4).

I had been elected coordinator of the “Working Group on SEISMIC HAZARD” of the European Seismological Commission (2000-2006).

3. PUBLICATIONS

I published 104 research papers in Greek/international journals and proceedings of international meetings, 3 atlases of macroseismic maps, and 12 papers in publications of the Laboratory of Geophysics and ITSAK. There more than 1000 references to my research woks. Following is a list of the most recent publications:

1. Triantafyllidis, P., N. Theodulidis, A. Savvaidis, Ch. Papaioannou and P. Dimitriu. (2006): Site Effects Estimation Using Earthquake and Ambient Noise Data: The Case of Lefkas Town (W. Greece), *Proc. IECEES*, Paper No. 1249, *Geneva-SWITZERLAND, September 2-8, 2006*.
2. Papaioannou, C. V. Kontogianni and S. Stiros (2006): Expected peak ground accelerations for selected sites of the telecommunication network in Crete (S. Greece). *In Geodynamics of the Balkan Peninsula, Warsaw University of Technology*, Paper 4.5.6, 9pp.
3. Moratto, L., B. Orlecka-Sikora, G. Costa, P.Suhadolc, Ch. Papaioannou and C.B. Papazachos (2007): A deterministic seismic hazard analysis for shallow earthquakes in Greece. *Tectonophysics*, 442, 66–82
4. Papaioannou, Ch.A. (2007): A preliminary study for the distance dependence of the spectral decay parameter κ for the Euroseisrisk strong motion array, *Proc. 4th Intern. Conf. on Earthq. Geotech. Engin.*, Thessaloniki June 25-28, 2007, Paper No. 1524, 10pp.
5. Papazachos, B.C.. Ch.A. Papaioannou, E.M. Scordilis, C.B. Papazachos and G.F. Karakaisis (2008): A forward test of the Decelerating–Accelerating Seismic Strain model to western south and central America. *Tectonophysics*, 454, 36–43.
6. Skarlatoudis, A. A., C. B. Papazachos, B. N. Margaris, Ch. Papaioannou, Ch. Ventouzi, D. Vamvakaris, A. Bruestle, T. Meier, W. Friederich, G. Stavrakakis, T. Taymaz, and R. Kind (2009): Combination of Acceleration-Sensor and Broadband Velocity-Sensor Recordings for Attenuation Studies: The Case of the 8 January 2006 Kythera Intermediate-Depth Earthquake., *Bull. Seism. Soc. Am.*, 99, 694-704.
7. Gallovič, F., M. Käser., J. Burjánek, and Ch. Papaioannou (2010). 3-D Modeling of Near-Fault Ground Motions with Non-Planar Rupture Models and Topography: the case of the 2004 Parkfield Earthquake, *J. Geophys. Res.*, 115, No. B3, B03308, <http://dx.doi.org/10.1029/2008JB006171>
8. Margaris B. G. Athanasopoulos, G. Mylonakis, Ch. Papaioannou, N. Klimis, N.Theodulidis, A. Savvaidis, V. Efthymiadou, and J. Stewart (2010). $M_w=6.5$ Achaia-Elia (Greece) Earthquake on 8 June 2008: Source Characteristics, Ground Motions and Ground Failure, *Earthquake Spectra*, **26**, 399–424.
9. Oliveira, C.S., G. Gassol, T. Susagna, X. Goula, Ch. Papaioannou, P. Gueguen, J. Clinton, C. Zulfikar and S. Godey (2010): Statistical analysis of European accelerogram parameters: a contribution to observational hazard in Europe. *Paper 1497, Proc. 14 ECEE*, Ohrid, FYROM, Aug. 30-Sep. 3, 2010, 8pp.
10. Pettenati, F., L. Sirovich, D. Sandron and Ch. Papaioannou (2010):Earthquake sources retrieved from intensities: seven successes in Greece *Paper 1809, Proc. 14 ECEE*, Ohrid, FYROM, Aug. 30-Sep. 3, 2010, 8pp.