

**Curriculum Vitae**  
**Dr. Ioannis K. Koukouvelas**  
 Structural Geologist

### **Biographical notes**

Born in 1962 I have completed B. Sc. (Hons, 1984), GEOLOGY and PHD (1989) in Structural Geology at the University of Patras. Subsequently I worked as constructor of water-wells, in Tertiary sedimentary basins of the central Greece. Then, I held a three years position as senior researcher at the University of Patras (1992-1994) working in mapping active normal faults over the N. Peloponnesus. Finally after holding a research position for two working periods at University of Saint Mary's Halifax, Canada (summers of 1993 and 1994), being functionary at Public Education for two years at high schools (1994-1995) elected as Lecturer at University of Patras (1995). Being on sabbatical (1999-2000) I worked in the Rock Fracture Project, Stanford University, USA.

I am currently reviewing manuscripts for Journal of Structural Geology, Tectonophysics, Journal of the Geological Society of London, Journal of Geodynamics, Marine Geology, Journal of Geophysical Research, Comptes Rendus Geoscience, Journal of African Earth Science, Engineering Geology, NSF projects, and papers for Geological Society of London and Geological Society of America special publications.

### **Research interest**

My research interests included the following topics in the broader topic of the active tectonics:

- Various aspects of earthquake geology,
- paleoseismology.

Regarding structural geology my interests fall in the following topics

- emplacement and evolution of granite at mid- to high-crustal levels
- Geology of the Hellenides.

### **Prize**

Awarded with the David Elliott Best Paper Prize for the Koukouvelas I., et al. (2002) Tectonophysics, 348, 219-246, by the Structural Geology and Tectonics Division of the Geological Association of Canada's (<http://craton.geol.brocku.ca/ctg.html>).

### **Editorial Contribution**

Special Issue " **Deep structure, fault arrays and surface processes within an active graben: The Gulf of Corinth, Tectonophysics 2007** (Editors: Ioannis K. Koukouvelas, Gerald Roberts).

### **Recent Project Funding**

- Paleoseismology in the Central Greece, (2000-2002) OASP, Greece.
- Fractal properties of fault arrays in southern-central Greece, (2004- 2007) Karatheodori project B095, University of Patras.
- The role of deep structure and fault interaction on the seismic risk of the easternmost end of the Gulf of Corinth. PENED 2007-2010.

### **Teaching**

I am teaching the following courses: Field Mapping (one semester), Earthquake Geology (one semester), Geology of Greece (one semester), Physical Geology (one semester).

### **Text Books**

Structural Geology, pp. 303, Leader Books Co. 1998 (in Greek).

Geology of Earthquakes (with co-authors), pp. 415, Disigma Co., 2011 (in Greek).

**Participation in Meetings-Conferences: 50**

**Publications in general: more than 159** (50 papers in peer reviewed journals and edited volumes).

**References cited:** more than 530 (source Scopus 28/02/2012),  $H_{index}=14$

Representative Publications (last 10 years, most of which are on active faults)

1. Koukouvelas I., Stamatopoulos L., Katsonopoulou D. and Pavlides S. (2001) A paleoseismological and geoarchaeological investigation of the Eliki fault, Gulf of Corinth, Greece. *Journal of Structural Geology*, 23, 531-543.
2. Xypolias P., and Koukouvelas I. (2001). Kinematic vorticity and strain patterns associated with ductile extrusion in the Chelmos Shear Zone (External Hellenides, Greece). *Tectonophysics*, 338, 59-77.
3. Koukouvelas I., Pe-Piper G., & Piper, D.J.W. (2002). The role of dextral transpressional faulting in the evolution of an early Carboniferous mafic-felsic plutonic and volcanic complex: Cobequid Highlands, Nova Scotia, Canada. *Tectonophysics*, 348, 219-246.
4. Koukouvelas I. & Aydin A. (2002). Fault structure and related basins of the North Aegean Sea and its surroundings. *Tectonics*, 21(5), 10.1029/2001TC 901037.
5. Koukouvelas I. & Kokkalas S. (2003). Emplacement of the Miocene west Naxos pluton (Aegean Sea, Greece): a structural study. *Geological Magazine*, 140(1), 45-61.
6. Kokkalas S., Xypolias P., Koukouvelas I.K., Doutsos T. (2003). Relationships between folding and fracturing in orogenic belts: Examples from the Rhenohercynian Zone (Germany) and the External Hellenides (Greece). *Geologica Carpathica*, 54, 153-162.
7. Pavlides S., Koukouvelas I.K., Kokkalas S., Stamatopoulos L., Keramydas D., Tsodoulos I. (2004). Late Holocene evolution of the East Eliki Fault, Gulf of Corinth (Central Greece). *Quaternary International*, 115-116, 139-154.
8. Pantosti D., DeMartini P., Koukouvelas I.K., Stamatopoulos L., Palyvos N., Pucci S., Lemeille, & Pavlides S. (2004). Palaeoseismological investigations of the Aigion Fault (Gulf of Corinth, Greece). *Comptes Rendus Geoscience*, 336, 335-342.
9. Xypolias P. & Koukouvelas I.K. (2004). Fault trace parameters as a tool for analysing remotely sensed fault arrays: an example from the eastern Gulf of Corinth, Greece. *International Journal of Remote Sensing*, 25, 4685-4699.
10. Koukouvelas I.K., Katsonopoulou D., Soter S. & Xypolias P. (2005). Slip rates on the Helike Fault, Gulf of Corinth, Greece: New evidence from geoarchaeology. *Terra Nova*, 17, 158-164.
11. Chatzipetros A., Kokkalas S., Pavlides S., Koukouvelas I. (2005). Palaeoseismic data and their implication for active deformation in Greece. *Journal of Geodynamics*, 40, 170-188.
12. Kokkalas S., Koukouvelas I.K. (2005). Fault-scarp degradation modeling in Central Greece: the Kaparelli and Heliki faults (gulf of Corinth) as a case study. *Journal of Geodynamics*, 40, 200-215.
13. Xypolias P. Koukouvelas I.K. (2005). Paleostress magnitude in a Fold-Thrust Belt (External Hellenides, Greece): evidence from twinning in calcareous rocks. *Episodes*, 28, 245-251.
14. Doutsos T., Koukouvelas I.K. Xypolias P. (2006). A new orogenic model for the External Hellenides. In: Robertson, A.H.F. & Mountrakis, D. (eds) *Tectonic Development of the Eastern Mediterranean Region*, Geol. Soc. Spec. Publ. 260, 507-520.
15. Koukouvelas I., Pe-Piper G., Piper, D.J.W. (2006). The relationship between length and width of plutons within the crustal-scale Cobequid Shear-Zone, northern Appalachians, Canada. *International Journal of Earth Science*, DOI 10.1007/s00531-006-0077-7.
16. Gallousi C., Koukouvelas I.K. 2007. Quantifying geomorphic evolution of earthquake-triggered landslides and their relation to active normal faults. An example from the Gulf of Corinth, Greece, *Tectonophysics*, 440, 85-104.
17. Kokkalas S., Pavlides S., Koukouvelas I., Ganas A., Stamatopoulos L. 2007. Paleoseismicity of the Kaparelli Fault (Eastern Gulf of Corinth): Evidence for Earthquake recurrence and fault behavior, *Bollettino della Societa Geologica Italiana*, 126, 387-395.
18. Xypolias P., Chatzaras V., Koukouvelas I.K. 2007. Strain gradients in zones of ductile thrusting: insights from the External Hellenides. *Journal of Structural Geology*, 29, 1522-1537.
19. Tsodoulos I, Koukouvelas I.K., Pavlides S. 2008. Tectonic Geomorphology of the easternmost end of the Gulf of Corinth (Central Greece). *Tectonophysics*, 453, 211-232.
20. Zygouri V., Verroios S., Kokkalas S., Xypolias P., Koukouvelas I.K. 2008. Scaling properties within the Gulf of Corinth, Greece; comparison between offshore and onshore active faults. *Tectonophysics*, 453, 193-210.
21. Pe-Piper G, Piper D. J.W., Koukouvelas I., Dolansky L. M., Kokkalas S. 2009. Post-orogenic

- shoshonitic rocks and their origin by melting underplated basalts: The Miocene of Limnos, Greece. *GSA Bulletin* 121, 39-45.
22. Xypolias, P., Koukouvelas, I. & Zulauf, G., 2008. Cenozoic tectonic evolution of northeastern Apulia: insights from a key study area in the Hellenides (Kythira, Greece). In: Xypolias, P. and Zulauf, G. (Eds.), *New results and Concepts on the Regional Geology of the Eastern Mediterranean*. Z. dt. Ges. Geowiss., 159, 439–455.
  23. Koukouvelas I.K., Kokkalas S., Xypolias P., 2009. Surface deformation during the Mw 6.4 (June 08, 2008) Movri Mt earthquake in Peloponnese, and its implications for the seismotectonics of Western Greece, *International Geology Review*, 52, 249- 268.
  24. Koukouvelas I.K., Papoulis D., 2009. Fluid involvement in the active Helike normal Fault, Gulf of Corinth, Greece, *Journal of Structural Geology*, 31, 237- 250.
  25. Koukouvelas I.K., Kokkalas S., Xypolias P., 2010. Surface deformation during the Mw 6.4 (June 08, 2008) Movri Mt earthquake in the Peloponnese, and its implications for the seismotectonics of western Greece, *International Geology Review*, 52, 249-268.
  26. Xypolias P., Spanos D., Chatzaras V., Kokkalas S., Koukouvelas I. 2010. Vorticity of flow in ductile thrust zones: examples from the Attico-Cycladic Massif (Internal Hellenides, Greece). In: *Continental Tectonics and Mountain Building: The Legacy of Peach and Home*. Geological Society of London, Special Publication 335, 687-714.
  27. Chatzaras V., Xypolias P., Kokkalas S., Koukouvelas I. 2011. Oligocene–Miocene thrusting in central Aegean: insights from the Cycladic island of Amorgos. *Geological Journal*, Doi: 10.1002/gj.1304.

### **Refereed Special Volumes**

1. Koukouvelas I.K., Zovoili E. & Verroios S. 2005. Geometry of relay ramps and scaling relations of active normal faults, Kythira Island, Greece. In: *Proceedings of the 22<sup>th</sup> International Tsunami Symposium*, edited by G.A. Papadopoulos and K. Satake. 120-130.
2. Pavlides S., Caputo R., Koukouvelas I.K., Kokkalas S. & Chatzipetros A. 2006. Paleoseismological investigations of Aegean-type faults. In: *Post-Collisional Tectonics & Magmatism in the Eastern Mediterranean Region* edited by Y. Dilek & S. Pavlides. Geological Society of America Special Paper 409, 175-188.
3. Kokkalas S., Xypolias P., Koukouvelas I.K., Doutsos T. 2006. Post-Collisional Contractional and Extensional Deformation in the Aegean Region. In: *Post-Collisional Tectonics & Magmatism in the Eastern Mediterranean Region* edited by Y. Dilek & S. Pavlides. Geological Society of America Special Paper 409, 97-123.

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