Active Global Seismology: Neotectonics and Earthquake Potential of the Eastern Mediterranean Region
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DESCRIPTION

Neotectonics involves the study of the motions and deformations of the Earth's crust that are current or recent in geologic time. The Mediterranean region is one of the most important regions for neotectonics and related natural hazards. This volume focuses on the neotectonics of the Eastern Mediterranean region, which has experienced many major extensive earthquakes, including the devastating Izmit, Turkey earthquake on August 17, 1999. The event lasted for 37 seconds, killing around 17,000 people, injuring 44,000 people, and leaving approximately half a million people homeless. Since then, several North American, European, and Turkish research groups have studied the neotectonics and earthquake potential of the region using different geological and geophysical methods, including GPS studies, geodesy, and passive source seismology. Some results from their studies were presented in major North American and European geological meetings.

This volume highlights the work involving the Eastern Mediterranean region, which has one of the world's longest and best studied active strike-slip (horizontal motion) faults: the east-west trending North Anatolian fault zone, which is very similar to the San Andreas fault in California. This volume features discussions of:

• Widespread applications in measuring plate motion that have strong implications in predicting natural disasters like earthquakes, both on a regional and a global scale

• Recent motions, particularly those produced by earthquakes, that provide insights on the physics of earthquake recurrence, the growth of mountains, orogenic movements, and seismic hazards
• Unique methodical approaches in collecting tectonophysical data, including field, seismic, experimental, computer-based, and theoretical approaches.

*Active Global Seismology* is a valuable resource for geoscientists, particularly in the field of tectonophysics, geophysics, geodynamics, seismology, structural geology, environmental geology, and geoengineering.

Read an interview with the editors to find out more:  
https://eos.org/editors-vox/neotectonics-and-earthquake-forecasting

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**ABOUT THE AUTHOR**

**Ibrahim Cemen** is a Professor of Geology in the Department of Geological Sciences at the University of Alabama. He has published over 50 research articles in several high impact journals including *Journal of Geophysical Research* and edited 2 *Tectonophysics* Special Volumes. His research focuses on structural geology and tectonics with special interests in neotectonics, earthquake geology and tectonics of sedimentary basins. His main research areas are Anatolia, Turkey, Basin and Range and Midcontinent regions, U.S.A.

**Yücel Yilmaz** is an Emeritus Professor of Geology in the Faculty of Mines of The Istanbul Technical University. He has published over 120 research articles in several journals and books among those are *Geological Society of America*, *Tectonics*, *JVGR* and *Geological Society of London*. His works concentrate mainly tectonic development of Anatolia, Turkey. One of the articles (co-authored with A.M.C. Pengőr) reached the highest citation score in *Tectonophysics*. His research focuses on Tectonics, Morphotectonics and petrology of igneous rocks.

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