

MUAWIA BARAZANGI

Professor, Earth & Atmospheric Sciences
Graduate Field of Geological Sciences

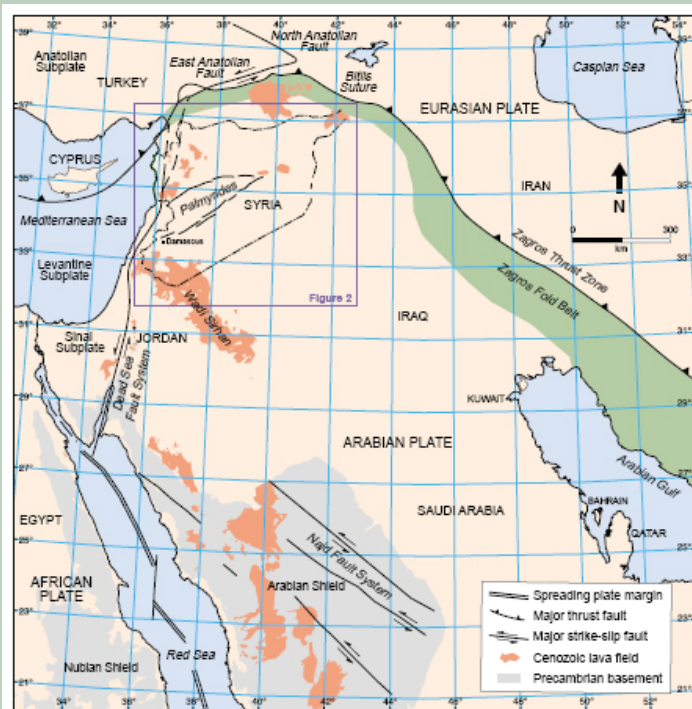
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B.S. 1965 (Damascus); M.S. 1967 (Univ. of Minnesota)
Ph.D. 1971 (Columbia)

Biography

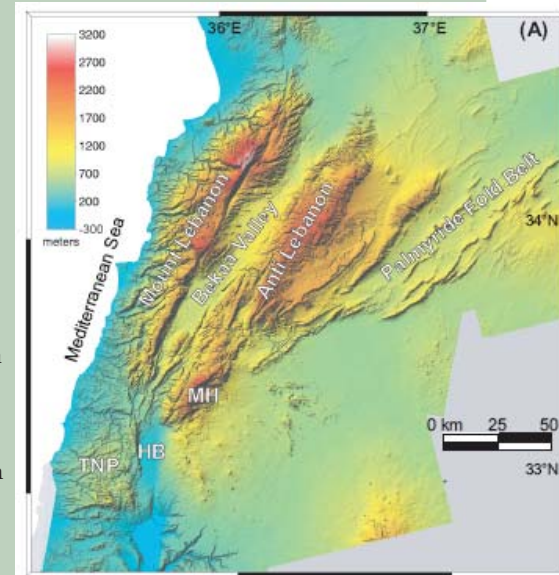
Barazangi joined the research staff of the Department of Earth and Atmospheric Sciences as a research associate immediately after completing his doctoral work. During the period from November 1978 to June 1980, he was an associate professor and chairman of the Department of Geophysics at the Faculty of Earth Sciences, King Abdulaziz University, Jeddah, Saudi Arabia. He was a senior scientist at Cornell when in 1998 he was appointed a professor. He is also the associate director of the Institute for the Study of the Continents (INSTOC) at Cornell. Barazangi is a member of the American Geophysical Union, the Seismological Society of America, and the Geological Society of America.

Research Interests

A major objective of Muawia's research is to understand the lithospheric structure and the seismotectonics of intracontinental mountain belts and young continental collision zones. His group is focusing their investigation on the Palmyride fold and thrust belt in central Syria (including the nearby Euphrates rift system) and the Rif and Atlas Mountains in Morocco, as well as a detailed study of the Anatolian Plateau in Eastern Turkey, one of the youngest continental collision zones on Earth.



Another objective of Muawia's research is to collect and organize all available seismological, geophysical, and geological data sets, on both a regional (e.g., the Middle East and North Africa) and a global-scale, using a comprehensive Geographic Information System (GIS). Examples of the data sets include Moho and basement maps, seismicity catalogs, focal mechanisms, tectonic fault maps, and detailed metadata. His group is distributing the organized databases in ArcInfo GIS format with menu driven access tools through a specially designed Web server.



We have recently initiated a study of the active tectonics of the Dead Sea fault system in western Syria and in Lebanon using SAR and TM Landsat imagery as well as detailed paleoseismology field investigations (trenching) and a dense GPS network. This project is a collaborative effort with Lebanese and Syrian scientists. The main objective of this project is to better evaluate the seismic hazard of the region in order to mitigate the seismic risk, especially for the mega cities of Damascus and Beirut.

The World Wide Web address for data distribution is <http://atlas.geo.cornell.edu>.

Current Research Projects

- Active Tectonic Studies of the Dead Sea Fault System
- Syria and Lebanon lithospheric project
- Morocco GPS project
- Syria/COPSTOC Industrial Consortium