



**Name: ESTELLA ATEKWANA**

Current Appointment: Regents Professor of Geology, Sun Chair Professor of Hydrogeology & Head

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***Area of Research/Teaching***

- 1) Biogeophysics - Geophysical investigations of the interactions between microorganisms and subsurface geologic media and the alteration of the physical properties of geologic media as a result of microbial activity including investigations of the biogeochemical cycling of carbon and metals.
- 2) Hydrogeophysics - Integrating hydrogeological and geophysical data to improve understanding of flow and transport properties in the subsurface including issues of groundwater contamination and exploration.
- 3) Tectonophysics - Geophysical investigations of incipient continental rift forming processes to understand how and where do continental rifts initiate with particular attention to the amagmatic or magma poor segments of the East African Rift System (Malawi, Botswana, Zambia, Uganda, and Tanzania).
- 4) Exploration Geophysics – Geophysical methods for oil& gas and groundwater exploration

***Biography***

Estella A. Atekwana received a B.S. in Geology (magna cum laude) and MS from Howard University, Washington DC and a PhD in geophysics from Dalhousie University, Halifax, Nova Scotia, Canada. She is currently the Regents Professor of Geology, Clyde Wheeler Sun Chair Professor of Hydrogeology and Head at the Boone Pickens School of Geology at Oklahoma State University. She was previously a Professor at the University of Missouri-Rolla now Missouri University of Science and Technology, and spent ten years at Western Michigan University as a faculty member in the department of Geosciences. She has served as a panelist for several federal funding agencies including NSF, DOE, NIH and on the National Academy of Sciences – National Research Council Committee to Assess the Performance of Engineered Barriers. She has also served as a lead organizer for several NSF workshops (Chapman Conference on Biogeophysics, Geophysical Studies of Continental Rift Initiation, US-Africa Workshop on Anatomy of Continental Rifts: The evolution of the East African Rift System from nascent extension (Okavango Rift Zone) to continental break-up (Afar Depression) and an invited lecturer for the Marie-Curie Summer School on Flow and Transport Properties in Porous Media Cargese, Corsica, France. Her

research on geophysical studies of geomicrobiology processes has helped to pioneer the new sub-discipline of biogeophysics. Her biogeophysical research has included studies on biofilm growth and development, microbial attachment and transport in porous media, electrical and seismic imaging of microbial processes, and biogeophysical signatures of hydrocarbon contaminated sites. Atekwana also has research interest in tectonophysics with particular attention to incipient continental rifting along the East African Rift System and extensional terranes in southwest Turkey. She has served on the executive committee of the American Geophysical Union (Budget & Finance Committee and Meetings Committee, Sullivan Awards Committee for Journalistic excellence in science), Board of Directors for the Environmental and Engineering Geophysical Society; Vice President Committees for Environmental and Engineering Geophysical Society, Committee of Special Merits (Society of Exploration Geophysicists Foundation). She is a member of the American Geophysical Union, Geological Society of America, Society of Exploration Geophysicists, National Association of Black Geologists and Geophysicists, Environmental and Engineering Geophysical Society, European Association of Geoscientists and Engineers and Geochemical Society. She is currently an Associate Editor for Journal of Geophysical Research-Biogeoscience and a member of the Editorial Board for the Journal of African Earth Sciences.

Atekwana has obtained more than \$9M of funding to support her research, published more than 80 scholarly papers and gave keynote addresses at several international conferences. She is a mentor for women and minorities especially in science and engineering from the US and developing countries.