

# Dr. Estella A. Atekwana

Boone Pickens School of Geology

Dr. Estella Atekwana received a bachelor's and master's degree in geology from Howard University in Washington D.C. and a doctorate in geophysics from Dalhousie University, Halifax, Nova Scotia, Canada. She is currently a Regents Professor of Geology and the Clyde Wheeler Sun Chair Professor at the Boone Pickens School of Geology at Oklahoma State University. She was previously a professor at the University of Missouri-Rolla and spent ten years at Western Michigan University in the department of Geosciences. She has served as a panelist for several federal funding agencies including NSF, NIH, DOE and on the National Academy of Sciences. Her research has been pioneering in developing the new sub-discipline of biogeophysics.

Her biogeophysics research focuses on investigating the interaction between microorganisms and subsurface geologic media, and possibly the direct geophysical detection of microbes. Her research has included studies on biofilm growth and development, microbial nanowires, microbial attachment and transport in porous media, electrical and seismic imaging of microbial processes, and biogeophysical signatures of hydrocarbon spill sites such as the BP Deep Horizon oil spill. Understanding biosignatures in geophysical data can lead to the use of biogeophysical technologies for biomineralization, bioremediation, microbial enhanced oil recovery studies and to exploration of life in the deep ocean and other planets. Atekwana's research has received funding from NSF, DOE, ACS, and Chevron.



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