

Dr. Eliot A. Atekwana

Boone Pickens School of Geology

Dr. Eliot Atekwana received a bachelor's degree in geology from the University of Maryland, a master's degree in geology from Howard University and a doctorate in hydrogeology from Western Michigan University. He is currently an associate professor in the Boone Pickens School of Geology at Oklahoma State University. He was previously an assistant professor at the University of Missouri-Rolla (now Missouri University of Science and Technology) and spent five years at Indiana University Perdue University Indianapolis. He has served as a panelist for several programs at the National Science Foundation. He is an active member of the American Geophysical Union, Geological Society of America and the National Association of Black Geologists and Geophysicists.

Dr. Atekwana's research focuses on biogeochemical cycles, fate and transport of contaminants, microbial interactions with geologic media and paleoenvironmental change. In addition to major element chemistry, he applies stable isotopes of carbon, oxygen and nitrogen in the investigation of geologic systems. Stable isotopes are useful in understanding physical, chemical, and biological processes as these processes are associated with distinct isotopic signatures and shifts in the isotopic signatures. In his research, he uses stable isotopes to trace the carbon and water cycles and as a tool to investigate the fate and transport of contaminants.

His current research projects include the use of major elements and stable isotope ratios (a) at hydrocarbon contaminated sites to investigate biodegradation, (b) for carbon and water cycling in groundwater, streams, lakes, reservoirs and wetlands, (c) in landfill environments for leachate detection and impact analysis and (d) in soils and lake sediments to elucidate paleoenvironmental change. Other projects involve investigating carbon and oxygen isotopes in carbonates associated with concrete degradation. His research has received funding from the National Science Foundation and Chevron.



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