Electrical Hydrogeology: A Picture Is Worth 1000 Wells
The science of hydrogeology was developed by creating conceptual models of the subsurface based on chemical or physical hydrogeology principles. Numerical and analytical modeling added significantly to the science to understand how best to sample and test these subsurface ideas. The ability to collect high density electrical data on an academic and commercial basis has allowed us to make several new advancements in the science. This lecture will look at how electrical data can allow us to determine the location of flowpaths, find meter-scale structures that change our conceptual models, and monitor life in the subsurface as it grows. Examples will include water supply in porous media and karst domains as well as contaminated sites affected by microbial activity.

Biography
Todd Halihan, Ph.D., P.G., is a Professor of Geology at Oklahoma State University and Chief Technical Officer for Aestus LLC. His professional interests center in subsurface characterization and sustainable water supply. Halihan has been an associate editor for Groundwater and has served as Secretary-Treasurer of the U.S. Chapter of the International Association of Hydrogeologists. He served as Chair of the Hydrogeology Division and the South-Central Section of the Geological Society of America. He currently serves on the Oklahoma governor’s Coordinating Council on Seismic Activity.

Halihan has worked on over 200 different research and commercial sites in more than 30 U.S. states and overseas. His international research work has occurred in Australia, Bahamas, Brazil, Mexico, and South Africa along with a number of other countries on a commercial basis. He has also spent a significant amount of time in his home state of Oklahoma evaluating the Arbuckle Group of carbonates and associated springs.

Halihan is the recipient of the Karin and Robert J. Sternberg Award for Excellence, the Partners in Conservation Award from the U.S. Department of Interior, and the Sterling L. Burks Award for Outstanding Environmental Research. He is also a professional driller in the state of Oklahoma and a PADI divemaster (Professional Association of Diving Instructors). He has provided input to stories on CBS, Fox News, NPR, CNBC, Popular Science, The New Yorker, and The New York Times.

Dr. Todd Halihan
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Feb. 26
4 to 5 p.m.
1118 Rood Hall
ALL ARE WELCOME!