Wayne Pennington
Jefferson Science Fellow

Wayne Pennington, chair of the Department of Geological & Mining Engineering and Sciences, has been named a Jefferson Science Fellow by the US Department of State. The Jefferson Science Fellowship was established to create opportunities for substantial engagement of tenured scientists and engineers from US academic institutions.

Pennington will serve a one-year assignment working full-time as a Senior Engineering Advisor with a group at USAID, the Agency for International Development. He will help improve methods of infrastructure development for increased capacity building, particularly in post-disaster and post-conflict settings in Pakistan and Afghanistan. His focus will be primarily on improved energy development and distribution, and on earthquake hazard mitigation.

A geophysicist, Pennington’s research is centered on the response of Earth materials to changes in physical conditions, such as stress, saturation, and temperature. The applications of this work are found in induced seismicity, deep earthquakes, as well as oil and gas exploration and development.

Pennington has worked in both academia and in industry and has conducted fieldwork at sites around the world. In the 1970s, he studied tectonic earthquakes in Latin America and Pakistan. In the 1980s, at the University of Texas at Austin, he studied the relationship of earthquakes to oil and gas production. Following that, he worked at the research laboratory for Marathon Oil Company, studying techniques to improve the identification of, and production from, oil and gas reservoirs. Since 1994, he has been at Michigan Tech, teaching and conducting research into geophysical observations of oil and gas production.

He has served as the first vice president for the Society of Exploration Geophysicists, published over thirty papers, and coauthored a book (with his students). His degrees are from Princeton University, Cornell University, and the University of Wisconsin-Madison.