Speaker: Dr. Vince Matthews

Title: Clockwise Rotation of the Colorado Plateau Microplate creates two active rifts in Colorado.

Abstract: The *structural* Colorado Plateau currently rifts clockwise away from the North American craton.The rotational motion creates two zones of extension in Colorado oriented WNW/ESE and N|S. These active rifts define the northeast corner of the Colorado Plateau Microplate. Several types of data support this interpretation: the distribution of Neogene and Quaternary faults, distribution of Neogene and Quaternary basalts, distribution of Neogene graben fills, orientations of stress indicators, as well as ongoing GPS measurements. This rifting is the cause of the high elevations found in Colorado and around the microplate.

Bio: Dr. Vince Matthews retired as the State Geologist and Director of the Colorado Geological Survey in 2012. In retirement, he served as Executive Director of the National Mining Hall of Fame and Museum in Leadville, served on HEI's *Special Scientific Committee on Unconventional Oil and Gas Development in the Appalachian Basin,* and has completed the manuscript for a book entitled, *Land of Ice: Jaunts into Colorado's Glacial Landscape.* He is currently teaching *Earth Resources and Sustainability* at the University of Wisconsin-Eau Claire.