

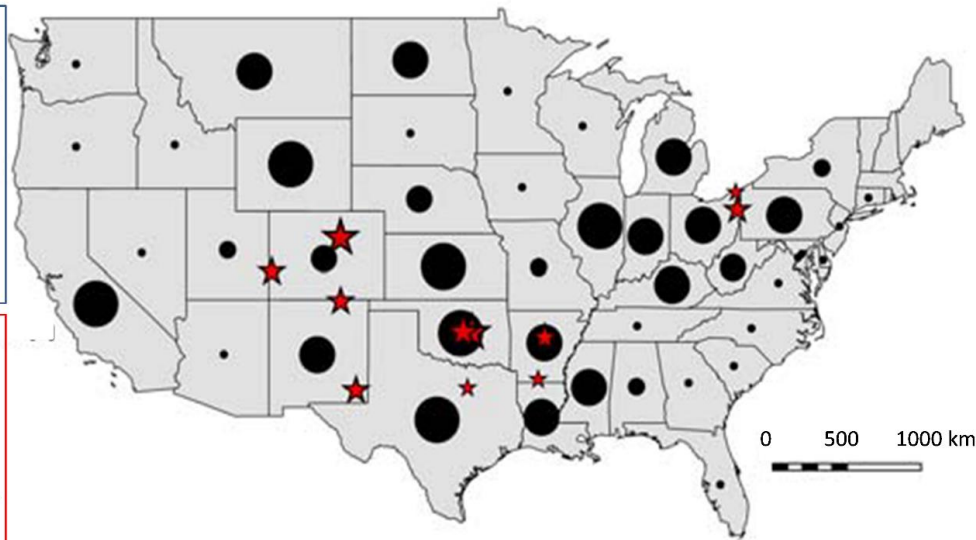
“A PORE PRESSURE PERSPECTIVE ON FLUID INJECTION INDUCED SEISMICITY”

Class II injection wells in 2011 [US EPA]

- < 100
- 100 - 500
- 500 - 1000
- 1000 - 5000
- > 5000

- ★ < 4.0
- ★ 4.0 - 5.0
- ★ > 5.0

≥ 3.0 earthquakes associated with injection



Increased seismicity in recent years in geologically quiescent regions in the central and eastern US has been linked to wastewater injection associated with oil and natural gas production. How excess pore pressures generated from the injected wastewater propagate spatially and evolve temporally is likely a key control in inducing the earthquakes, providing a physical linkage between injection activity and seismicity occurrence. In spite of the basic physics of pore pressure propagation being well established, the linkage remains controversial and inconclusive.

March 31, 2015

Beach Hall 233 at 12:30pm

Shemin Ge, Professor in Hydrogeology
 Department of Geological Sciences, University of Colorado-Boulder

Shemin Ge received Ph.D. from the Johns Hopkins University in 1990, worked for S.S. Papadopoulos Associates before joining CU-Boulder in 1993. Her research interests are in coupling fluid flow and rock deformation, earthquake hydrology, geothermal energy and fluid flow, and impact of climate on groundwater resources.

