Geophysical Exploration of the Earth’s Interior

Earthquake Seismology
- Spatial and temporal distributions of earthquakes
- Human-induced earthquakes as a result of waste-water injection, hydro-fracturing, mining etc.

Structural Seismology
- Imaging crustal and mantle structure using CAT-scan and other computing-intensive techniques
- Seismic wave propagation in layered and anisotropic rock layers

Crustal and mantle deformation and dynamics
- Variation of plate slip rate using precise GPS data
- Origin of forces driving motion of tectonic plates

For more information about my research group, please visit
http://web.mst.edu/~sgao/research/

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Funding (see http://web.mst.edu/~sgao/funded_projects.html)
- Funded by NSF since 2000 without interruption
- Other funding agencies include ACS, StatOil etc.
- Over 30 funded projects since 2000, total expenditure over $4 M

Keywords
- Earthquakes, Geophysics, Seismology, Rock physics

Recognitions
- Fellow of the Geological Society of America
- S&T faculty excellence award, 2014
- 6 outstanding teaching awards over the past 7 years
- Most papers are in high-impact journals including Nature, Science, Geology, EPSL, GRL, and JGR
- Numerous student advisees received awards:
  http://web.mst.edu/~sgao/sawards/