

# 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

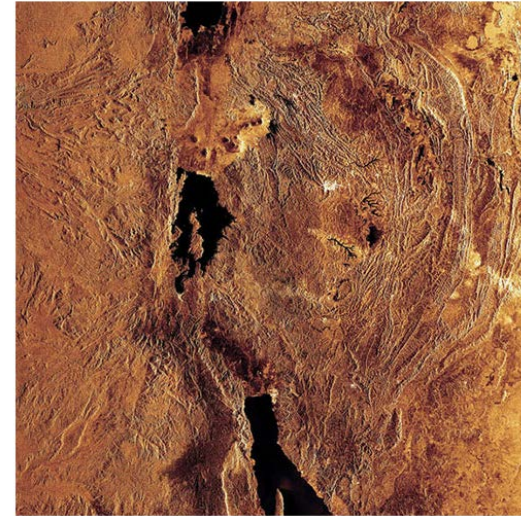
## Crustal and mantle deformation and dynamics

- 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/>

## Getting the continental rift



<http://news.mst.edu/2013/12/13-important-research-stories-from-2013/>

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**Funding** (see [http://web.mst.edu/~sgao/funded\\_projects.html](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/>