

# Stanford

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## Matthew Edward Lees

Ph.D. Student in Geophysics

### Bio

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#### BIO

I work on using geophysics to monitor and interpret hydrologically-induced surface deformation in and around California's Central Valley. My research focuses on improving our understanding of land subsidence induced by groundwater extraction, as well as more subtle surface deformation due to hydrologic loading. I have additional interest in sustainable groundwater management around the world, and how geophysics can be used to help tackle pressing hydrologic issues of the 21st century.

Before coming to Stanford, I studied a Masters in Earth Sciences at the University of Cambridge (2013-17) and spent time as a hydrogeologist at the International Centre for Integrated Mountain Development, ICIMOD (2017).

See information about my research on the GEM-Center site: <https://gemcenter.stanford.edu/research/link-between-groundwater-pumping-and-subsidence>

#### HONORS AND AWARDS

- Outstanding Student Presentation Award (OSPA), American Geophysical Union Fall Meeting (Fall 2020)
- BGA prize for undergraduate achievement in the study of geophysics, British Geophysical Association (2017)

### Publications

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#### PUBLICATIONS

- **Gravity, Topography, and Melt Generation Rates From Simple 3-D Models of Mantle Convection** *GEOCHEMISTRY GEOPHYSICS GEOSYSTEMS*  
Lees, M. E., Rudge, J. F., McKenzie, D.  
2020; 21 (4)