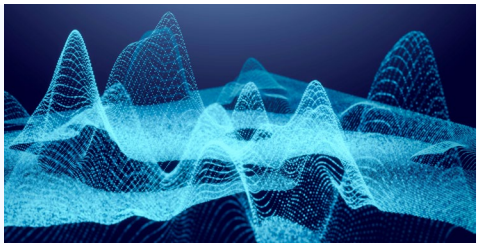
Emerging Quantitative Methods in Geophysics: COSEG Fall Meeting 2025

(rescheduled) January 15, 2026



MEETING AGENDA (EASTERN TIME)

1:00 pm **Welcome and Overview of the Meeting**

- Jessica Warren, COSEG chair
- Barbara Romanowicz, COSEG

1:15 pm **Session 1: Short- to Long-term Mantle and Crustal Deformation**

- **Community-supported multidisciplinary software innovation bridges geophysics across time-scales and processes** - Magali Billen, University of California, Davis
- **Fluids and faulting for induced seismicity and subduction zones** - Eric Dunham, Stanford University
- **From Hero Runs to Digital Twins for Earthquake Physics, Ground Shaking and Tsunami Generation** - Alice Gabriel, Scripps Institution of Oceanography
- Panel discussion

2:10 pm **Session 2: Core and Core-Mantle Structure and Processes**

- **Progress and challenges towards quantitative modelling of Earth's core dynamics** - Julien Aubert, Institut de Physique du Globe de Paris
- **Coupling thermodynamics and geodynamics using code generation** - Cian Wilson, Carnegie Institution for Science
- **Computational mineral physics in the age of AI** - Jie Deng, Princeton University
- Panel Discussion

3:05 pm *Break*

3:20 pm **Session 3: Global and Planetary Structure and System Evolution**

- **Exploring deep interiors with high-performance computing of wave propagation & full-waveform inversion: current status, challenges and future directions in global seismology** - Ebru Bozdag, Colorado School of Mines
- **Numerical modeling and projection of glaciers and ice sheets** - Alex Robel, Georgia Tech

- **Geodynamic modeling: planetary interiors and atmospheres** - Matt Weller, Rensselaer Polytechnic Institute
- Panel Discussion

4:35 pm **Synthesis and Closing Remarks**

- *Frederik Simons, COSEG*

4:45 pm **Meeting Adjourns**