

## Special Issue

# Seismic Full-Waveform Imaging and Inversion across Scales

### Message from the Guest Editor

The overall goal of this Special Issue is to bring together original cutting-edge research articles, reviews, and notes addressing seismic full-waveform imaging and inversion. This Special Issue invites contributions that cover aspects including but not limited to the following: Reflectivity imaging: acoustic/elastic reverse-time migration, least-squares migration, and other high-resolution migration methods; Tomographic inversion: full-waveform inversion (FWI) or teleseismic FWI (deterministic or stochastic) using body waves, surface waves, or both; Misfit function using L2 norm, Wasserstein norm, and so on, with regularization constraints, insensitive to local minima; Multi-parameter applications in viscous media, elastic media, or both; Multi-scale applications at the local, regional, or global scale; Uncertainty quantification in deterministic or stochastic (gradient-based or Bayesian) approaches; High-performance computing using MPI, GPU, or both. Research on emerging technologies such as distributed acoustic sensing and machine learning is also welcome.

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### Guest Editor

Dr. Qiancheng Liu

Institute of Geology and Geophysics, Chinese Academy of Sciences, Beijing, China

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### Deadline for manuscript submissions

closed (30 June 2023)



## Geosciences

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## About the Journal

### Message from the Editor-in-Chief

Understanding the Earth's origin and its bio-geological evolution, the multiple implications of the geosciences (as a coherent set of interconnected disciplines), and the sociocultural and ethical interdisciplinary approaches, will be crucial for a better understanding of Nature, and also for undertaking scientifically based political decisions.

We are committed to drive *Geosciences* to a position in which it is recognized for its high-quality, cutting-edge research and scientific influence, and strongly encourage and invite your participation and manuscripts.

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### Editor-in-Chief

Prof. Dr. John C. Eichelberger

Alaska Center for Energy and Power, University of Alaska Fairbanks,  
Fairbanks, AK, USA

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