



## Mantle Circulation and Plate Movement

Guest Editor:

**Dr. James Conder**  
Department of Geology,  
Southern Illinois University,  
Carbondale, IL 62901, USA

Deadline for manuscript  
submissions:  
**closed (31 August 2019)**

### Message from the Guest Editor

Since the plate tectonic revolution, it has been widely understood that the processes of plate development on motion must be initiated, if not governed, by the underlying mantle dynamics of the planet. Competing mantle processes of buoyancy and viscous dissipation can propagate or inhibit plate tectonic processes. While standing on research advances in how the mantle works, details of how mantle circulation initiates or continues to drive plate motions are still poorly understood. The Special Issue is to explore and illuminate various aspects of mantle circulation on plate development from rifting or subduction initiation to the influence of convection on current plate motions. It aims to provide an outlet for rapid, widely accessible publication utilizing the tools of geophysics, structural geology, sedimentology, geochemistry and geodynamic modeling to elucidate how the underlying mantle interacts with plate tectonics as we understand it. It aims to cover, without being limited to, the areas: whole or layered mantle convection; plume processes; rifting/seafloor spreading development, subduction initiation; plate motions and their effect on dynamics of the underlying mantle.





an Open Access Journal by MDPI

## Editor-in-Chief

### Prof. Dr. Jesus Martinez-Frias

Instituto de Geociencias, IGEO  
(CSIC-UCM), C/ Del Doctor Severo  
Ochoa 7, Edificio  
Entrepabellones 7 y 8, 28040  
Madrid, Spain

## 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.

## Author Benefits

**Open Access:** free for readers, with article processing charges (APC) paid by authors or their institutions.

**High Visibility:** indexed within Scopus, ESCI (Web of Science), GeoRef, Astrophysics Data System, and other databases.

**Journal Rank:** JCR - Q2 (*Geosciences, Multidisciplinary*) / CiteScore - Q1 (General Earth and Planetary Sciences)

## Contact Us

---

Geosciences Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland

Tel: +41 61 683 77 34  
[www.mdpi.com](http://www.mdpi.com)

[mdpi.com/journal/geosciences](http://mdpi.com/journal/geosciences)  
[geosciences@mdpi.com](mailto:geosciences@mdpi.com)  
[X@Geosciences\\_OA](https://twitter.com/Geosciences_OA)