



The East African Rift: Tectonics, Magmatism and Natural Hazards

Guest Editor:

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Message from the Guest Editor

The East African Rift is the type location of current continental break-up. Geophysical and geochemical evidence suggests a dynamic link to a deep mantle anomaly, the African superplume. Magmatism in the East African Rift is diverse in composition, from alkaline to rhyolitic, with volcanic landforms including cinder cones, calderas and flood basalts. The extensional tectonics is accompanied by widespread magmatic underplating and intrusive mafic magma bodies, highlighting the importance of fluids and volatiles in rift initiation. Geologic hazards in the rift include effusive and explosive volcanic eruptions, CO₂ emissions and lake overturning with catastrophic CO₂ release, earthquakes and diking events, as well as landslides.

This Special Issue aims to provide an outlet for the rapid, widely-accessible publication of peer-reviewed studies utilizing the various tools of geophysics, structural geology, volcanology, geochemistry, sedimentology, and geodynamic modeling to address the processes of tectonics, magmatism and natural hazards in the East African Rift.





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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.

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