

Special Issue on  
**Advanced Processing Techniques for Geophysical Signals  
Recorded at Active Volcanoes**

# CALL FOR PAPERS

Volcanic eruptions have social and economic impact on a global scale. They can cause damage to infrastructure, disrupt aviation traffic, and affect both nearby and distant populations. Volcanic risk mitigation depends critically on our ability to forecast eruptions and to dispatch timely warnings. Volcano monitoring is traditionally based on the analysis of seismic signals, in order to identify precursors that portend restless volcanoes and future eruptions. However, thanks to rapid technological advances over the past two decades, real-time streaming of other geophysical data (such as infrasonic, ground deformation, gravity measurements, etc.) are now available for monitoring activities. Hence, nowadays volcano observatories routinely collect vast amount of multiparametric data. Whilst desirable, the large size of these datasets poses a significant challenge for manual detection and classification of geophysical volcano signals. Automatic processing of data gathered on active volcanoes is, therefore, crucial for rapid detection of unrest and to promptly inform authorities and issue warnings to the population at risk.

In this special issue, we welcome contributions focused on recent advances in geophysical signal processing, new algorithms and tools for improved eruption monitoring, and volcano early warning. This is a highly interdisciplinary field and we especially welcome manuscripts where analysis and signal processing, data mining, automatic learning, big data, and knowledge management are combined within the framework of volcano geophysics. Review papers based on multiparametric volcano monitoring and/or analysis are also welcome.

Potential topics include but are not limited to the following:

- ▶ Volcano geophysics
- ▶ Geophysical multiparametric analysis
- ▶ Seismic signal analysis and processing
- ▶ Automatic P- and S-phase picking
- ▶ Multiband frequency analysis

Authors can submit their manuscripts through the Manuscript Tracking System at <https://mts.hindawi.com/submit/journals/ijge/aptv/>.

Papers are published upon acceptance, regardless of the Special Issue publication date.

**Lead Guest Editor**

Luciano Zuccarello, Universidad de Granada, Granada, Spain  
*luciano.zuccarello@ingv.it*

**Guest Editors**

Luz G. Martínez, Universidad de Granada, Granada, Spain  
*luzgm@ugr.es*

Janire Prudencio, University of California, Berkeley, USA  
*janire@berkeley.edu*

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