

Seminario Aleatorio

Sesión 403

Precursory seismicity and evolution of spectral features in the time series of seismic signals from active volcanoes

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Abstract

Spectral analysis constitutes a fundamental tool for monitoring seismic signals of volcanic origin. As a case study to demonstrate its applicability for detecting changes in the time series of precursory, eruptive, and post-eruptive seismicity at active volcanoes, the temporal analysis of the spectral content of seismic signals from the most intense eruptive phase recorded at Volcán de Colima in over a century will be presented. For this study, various time-frequency representations, including short-time Fourier transform and discrete wavelet decomposition at various scales, were employed to compute several spectral features, such as frequency index, dominant frequency, spectral centroid, or SSAM. Additionally, some eruptive episodes from Popocatepetl volcano and Poás volcano in Costa Rica, will also be presented. The performance of the different spectral features for forecasting eruptive episodes and for evaluating the course of volcanic processes during ongoing eruptions will be discussed.

**Viernes 03 de marzo de 2023,
13:00 horas de CDMX,
Salón SA-4 ITAM, Campus Río Hondo**

<https://itam.zoom.us/j/94538996635?pwd=dnhTcGIMVWt3UldkK2YwZGR3TVI1UT09>

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Código de acceso: 036941

El Seminario Aleatorio del Departamento de Estadística del ITAM está destinado tanto a profesores como a estudiantes, por lo que se agradece a los profesores que colaboren invitando a sus alumnos a estas sesiones.