

# in Application of Machine Learning to Seismic Monitoring Data Processing

Thursday, 22 June 2023 09:26 (1 minute)

This paper summarizes the advances in the application of machine learning to seismic monitoring data processing. Then it focuses on our work including local events detection based on multi-task Convolutional neural network (CNN), Generative Adversarial Network - Long Short-Term Memory (GAN-LSTM) joint network applied to seismic noise signal recognition, the seismic phase sequence detection based on transformer, and seismic event association based on probabilistic models.

Finally, the trend of the development and potential challenges with machine learning applications are discussed.

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## Promotional text

The seismic monitoring data model was built using machine learning and deep learning. Phase picking, noise signal recognition, and event association methods were established to realize seismic event detection.

## Oral preference format

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**Session Classification:** Lightning talks: P3.5, P5.1

**Track Classification:** Theme 3. Monitoring and On-Site Inspection Technologies and Techniques: T3.5  
Analysis of Seismic, Hydroacoustic and Infrasound Monitoring Data