

## Applications of Data Science and Machine Learning in Seismology

**Session ID#:** 26176

**Session Description:**

We currently are experiencing a dramatic increase in the volume, variety, and velocity of data in seismology. Methods and tools from data science and machine learning enable characterization of different types of signals, noise reduction, event detection, phase identification, seismic source characterization, inference of Earth's seismic structure, and novel visualizations. With all the data available to researchers and practitioners in the field of seismology and advances in computational systems, there are great opportunities for data science and machine learning algorithms to extract meaningful insights for reducing earthquake hazards, understanding plate tectonics, earthquakes and earth structures, and improving the detection and limiting the proliferation of nuclear weapons. We encourage contributions on the methods and results of combining techniques and tools from data science and machine learning with seismology.

**Primary Convener:**

**Qingkai Kong**, University of California Berkeley, Berkeley, CA, United States

**Convener:**

**Timothy Draelos**, Sandia National Laboratories, Albuquerque, NM, United States

**Index Terms:**

1914 Data mining [INFORMATICS]

1932 High-performance computing [INFORMATICS]

1942 Machine learning [INFORMATICS]

7290 Computational seismology [SEISMOLOGY]

See more of: [Seismology](#)

## SEARCH SECTION/FOCUS GROUP

### SEARCH KEYWORDS

### SEARCH CONVENER NAME

### LOGIN

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