Borjan Geshkovski

Postdoc working with Laurent Demanet, Department of Mathematics

Past work:

- Mathematical control theory
- Foundations of deep learning
- The interplay of these two fields





Current work:

- Interpretable neural networks
- "Deep redatuming" using tools from matrix recovery and statistical learning.







Eve Meltzer

Graduate Student working with Professor Einstein, Civil Engineering

Past work:

Crystallographic analysis of experimentally deformed ice



Current work:

Working with the Millimeter-Wave Project for geothermal drilling to understand strength and thermophysical properties of rock, specifically sandstone, before and after melting.





Hongrui Qiu

Postdoctoral Associate working with Dr. Nori Nakata, Department of EAPS

Past work:

Multi-scale Imaging and monitoring of fault zones



Current work:

Imaging fractures and monitoring changes at depth using ambient noise



Mathilde Wimez

Field researcher with Nate Murphy, Alaska Earthquake Center Formally PhD student with William Frank at EAPS, MIT Past work:

"Systematic matched filter search of long period earthquake in volcanic swarms"



Current work:

Field work in summer

Tools implementation, mentoring and outreach in winter



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The Earthquake Center acquired 96 stations from the USArray project, greatly expanding statewide network coverage.



Tiange Xing

Post-doc Associate working with Matej Pec, EAPS

- Acoustic emissions

- Fluid composition evolution

- Microstructure (X-ray tomographic data)

Past work:

Quantify the influence of fluid interaction on the long-term creep deformation of basaltic rocks (Xing et al., 2022)

- Mechanical data
- P/S-wave velocity
- Poro-perm evolution



MIT Earth Resources Laboratory Annual Founding Members Meeting 2022

Current work:

Describe the creep deformation using a generalized equation to predict creep rate and fracture occurrence
In-situ fluid chemistry analysis (CO₂ & pH)

