

ISTerre/GFZ days.

Haus H. Telegrafenberg. Potsdam.

Direction and location. <https://www.gfz-potsdam.de/en/about-us/organisation/directions-and-locations/potsdam>

Wednesday 18/12/2024

09:00 - 10:00 Keynote: Julia de Sigoyer (ISTerre). Activity of Middle branch of the North Anatolian Fault (Turkey) based on archaeoseismological and paleoseismological studies from Lake Iznik and land.

10:00 - 10:30 Coffee Break

10:30 - 12:30 Machine Learning and Big Data Seismology (breakout session, Amphitheater. Conveners: René Steinmann und Jannes Münchmeyer.

- Marie Gärtner (ISTerre) und Reza Esfahani (ISTerre), Exploring continuous seismogram with a scattering network, (15min+15min)
- Jannes Münchmeyer (ISTerre), Using machine learning to build a high-resolution earthquake catalog for Northern Chile (15min)
- Sebastian Nunez-Jara: Enhanced catalog for the Kahramanras sequence and the related findings (15min)
- Qi Zhou (GFZ), Enhancing debris flow warning via machine learning: from seismic feature reduction and model selection to model transferability, (15min)
- René Steinmann (GFZ), Unlocking the seismic perspective in wildlife monitoring with machine learning, (15min)
- Sadegh Karimpouli (GFZ), Enhancing Machine Learning Inputs for Laboratory Earthquake Forecasting (15min)
- Marius Isken (GFZ), title to be defined (15min)

10h30 - 12h30 Critical Zone, Mineralogy, Early Earth (breakout session, room VR1-2).

Conveners: Sergey Lobanov and Christoph Keuschnig

- Roland Hellmann (ISTerre): "Weathering of minerals and glasses and the formation of surface altered layers" (20 min)
- Bastien Wild and Christoph Keuschnig (ISTerre/GFZ): "Geosphere-Biosphere interactions through a microbial lens"(20 min)
- Patrick Frings (GFZ): "Evolution of bioweathering impacts over the Phanerozoic" (20 min)
- Emily Stevenson (GFZ): "Rivers, rocks and carbon: Calculating an inorganic carbon budget for Arctic landscapes" (20 min)
- Jeffrey Paolo Perrez (GFZ): "Organic carbon and iron biogeochemical cycling in polar wetlands" (20 min)
- Nick Arndt (ISTerre): "Solidification of the Terrestrial Magma Ocean – a Petrologist's Point of View" (20 min)

12:30 - 13:30 Lunch

13:30 - 16:00. Amphitheater. Tectonics, Geomorphology and Geohazards. Conveners: Peter van der Beek and Jean Braun

- Kirsten Cook (ISTerre): "Himalayan sediment bombs - investigating catastrophic sediment transport events"
- Anne Replumaz (ISTerre): "Building the Tibetan orogenic plateau : the role of thrust faults and the influence of erosion on the eastern edge"
- Juliane Starke (ISTerre): "Monitoring Cliffs with Acoustic and Seismic Methods to Understand Erosion"
- Luc Illien (GFZ): "Monitoring mountain groundwater with seismic velocity changes"
- Sibashish Dash (GFZ): "The Role of Internal Processes in Landslide Mobilization: Precursors to the 2 Million m³ Brinzauls Rockslide on 15th June 2023"

16h-20h. Christmas Markets in Potsdam and Dinner.

Thursday 19/12/2024

09:00 - 10:00 Keynote: Laura Ermert (ISTerre/ETHZ)

Part 1. Gender differences in authorship in seismology

Part 2. Monitoring seismic velocity changes in Mexico City.

10:00 - 10:30 Coffee Break

10:30 - 13:00. Amphitheater. General Geophysics. Conveners: Fabrice Cotton and Eleonora Rivalta

- Jorge Jara (GFZ). Metamorphic dehydration reactions trigger slow slip events in subduction zones. (15min)
- Manuel Asnar (GFZ, SPIN). anisotropy and physics of velocity changes sandstone. (15min).
- Mehdi Nikkhoo (GFZ). Vladimir Lyakhovsky A damage model for the deformation of lava-dome samples during high-temperature uniaxial compression experiments. (15min)
- Gesa Petersen (GFZ). Rens Hofman, Jörn Kummerow, Simone Cesca: Revealing microseismic sequences, rupture mechanisms, and active faults in the the large-N Swath-D network (Eastern Alps). (15min)
- Sreeram Kotha (ISTerre). Maurienne swarm ground-motion analyses: signature of natural noise (< 2Hz) on spatio-temporal trends in ground-motions, and potential hazard and risk from swarms. (15min)
- Angela Carrillo-Ponce (GFZ). Sebastian Heimann, Gesa Petersen, Thomas R. Walter, Simone Cesca, Torsten Dahm: The 16 September 2023 Greenland megatsunami: Analysis and modeling of the source and a weak-long. (15min) monochromatic seismic signal
- Leila Ehsaninezhad (GFZ). Enhancing DAS ambient seismic noise processing for urban subsurface investigation. Leila Ehsaninezhad, Christopher Wollin, Verónica Rodríguez Tribaldos, Benjamin Schwarz, Charlotte M. Krawczyk. (15min)

- Marco Pilz (GFZ) and Philippe Roux (ISTerre). A dense wind farm as a proxy for an urban environment: an experimental investigation using a dense seismic array and complementary sensing technologies.
- Ssu Ting Lai (GFZ). Linear and nonlinear site responses in southeastern Türkiye. (15min)

13:00 - 14:00 Lunch

14:00 -

- GIPP Visit of the [Geophysical Instrument Pool Potsdam](#) by Britta Wawerzinek.
- HELGES labs Sec.3.3 visit by Patrick Frings (number of people might be limited due to space reasons)
- Uni. Potsdam. Lab visit by Peter Van des Beck
- Small groups scientific discussions