SEES-ISRD 2025 Joint Meeting

Day 1: Monday, August 11

8:30 AM – Breakfast

9:00 AM - 9:30 AM – Opening Remarks
Coffee and Snack Break

9:45 AM - 11:45 AM – Session 1: Mechanical Influence of Fluids in Seismogenic Zone, Critical Zone, Cryosphere

- Cailey Condit – “Fluid Mediated Deformation Controls Slip Behaviors at the Base of the Subduction Seismogenic Zone”
- Florian Fusseis – “Lifting the Veil: What 4D Operando Imaging Can Tell Us About Fluid-Rock Interaction”
- Lucas Zoet – “Experimental Insights Into Glacier Slip”

Lunch Break

1:15 PM - 3:15 PM – Session 2: Mechanical Influence of Heterogeneity in Sediments, Rocks, Ice

- David Goldsby – “Mechanical Anisotropy of Ice Single Crystals: Implications for Flow of Polycrystalline Ice”
- Teng-Fong Wong – “Spatiotemporal Development of Damage, Multiscale Failure, and Compaction Localization in Porous Limestone”
- Hiroko Kitajima – “Experimental Investigation on the Effects of Pore Fluid Pressure on Extension-Shear Mixed-Mode Fractures in Porous and Non-Porous Rocks”

Coffee and Snack Break

3:30 PM - 5:30 PM – Session 3: Atomic-Scale Processes Controlling Short and Long Timescale Dynamics of Lithosphere and Asthenosphere

- Pamela Burnley – “Contributions of Synchrotron X-Ray Powder Diffraction to Understanding High Pressure Rock Deformation”
- Wolfgang Pantleon – “Monitoring the Evolution of Deformation Structures by High-Resolution Reciprocal Space Mapping”
- Sébastien Merkel – “Multi-Grain Diffraction and Deformation Experiments in Diamond Anvil Cells”

6:00 PM - 8:00 PM – Group Dinner

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SYNCHROTRON EARTH AND ENVIRONMENTAL SCIENCE

In-Situ Studies of Rock Deformation (ISRD)

Day 2: Tuesday, August 12

8:30 AM – Breakfast

9:00 AM - 11:00 AM – Session 4: Existing and Emerging ISRD Capabilities

- Matthew Whitaker – “Three Facilities for Studying Rock and Materials Deformation Using In Situ X-Ray Diffraction and Imaging”
- Timothy Officer – “Cracks and Creep from Shallow to Deep: In Situ Rock Deformation at GSECARS”
- Arun Bhattacharjee – “In-Situ Experiments on Geological Samples Using X-Ray Tomography at ALS”
- Benoit Cordonnier – “Cracking the Rock Mechanisms with the European Synchrotron Experimental Fleet”
- Lars Hansen – “Volumetric Strain Measurements in the D-DIA for Probing Transformation Plasticity and Semi-Brittle Deformation”

Coffee and Snack Break

11:15 AM - 12:15 PM – Poster Cameos

Lunch Break

1:45 PM - 3:15 PM – Session 5: New Opportunities at SEES Facilities

- Mark Rivers – “Tomography and Rock Mechanics at SEES”
- Andrew Campbell – “Mineral Physics at SEES”
- Tony Lanzirotti – “Petrology and Geochemistry at SEES”
- Joanne Stubbs – “Environmental Science at SEES”

Coffee and Snack Break

3:30 PM - 5:30 PM – Poster Session

Day 3: Wednesday, August 13

8:30 AM – Breakfast

9:00 AM - 11:00 AM – Working Groups

Coffee and Snack Break

11:15 AM - 12:00 PM – Closing Remarks

Lunch Boxes

12:30 PM - 6:00 PM – Tour of the Advanced Photon Source, Argonne National Laboratory*

*Limited to attendees who registered in advance

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