CSDMS 2025 Annual Meeting - *"CSDMS 2025: Exploring Earth's Surface with Models, Data and AI"* May 13-15, 2025
University of Colorado, Boulder, SEEC Building, 4001 Discovery Drive, Boulder, CO 80303
****All times provided in Mountain Daylight Time

Tuesday, May 13, 2025

Time	Session	Presenter	Topic
9:00AM	Welcome and Introduction (C120)	Paola Passalacqua, U Texas, Austin	Thematic Introduction
9:05AM	Community Updates	Greg Tucker, CSDMS Exec. Director	State of CSDMS
9:20 AM	**Plenary** Keynote (C120)	Gaia Stucky de Quay, MIT	*Global Flood Volumes on Mars: Insights into a Persisting Water Cycle*
9:40 AM	**Plenary** Keynote	Manzhu Yu, Penn State U	*Spatiotemporal Methodologies for the Analysis and Prediction of Extreme Weather Events*
10:00 AM	**Plenary** Keynote	John Naliboff and Liang Xue, New Mexico Tech	*Feedbacks Between Coupled Surface Processes and Lithospheric Deformation during Multi-phase Continental Rifting*
10:20 AM	**Plenary** Student Keynote	Marie-Christin Wimmler, Technische U, Dresden	*Advancing Ecological Modeling with pyMANGA: Modularity and Reusability for Robust and Reproducible Research*
10:35 AM	*Break*		
11:00AM - 12:30PM	ESPIn/OES Visiting Scholar Presentations (Rm C120)	Moderator: Irina Overeem, CU, Boulder,	*ESPIn and OpenEarthscape student project presentations*
12:30PM - 1:30PM	*Lunch*		
1:30PM - 3:30PM	Clinic 1.1 (Rm S225)	John Naliboff and Liang Xue, New Mexico Tech	*Coupling Models of Lithospheric Deformation and Surface Processes with the Advanced Solver for Planetary Evolution, Convection and Tectonics (ASPECT) Part 1*
	Clinic 1.2 (Rm N149)	Dan Shapero, U Washington	*Simulating Glacier Flow with ICEPACK*
	Clinic 1.3 (Rm N224)	Caitlin Haedrich and Pratikshya Regmi, North Carolina State U	*An Introduction to GRASS GIS and Tangible Landscape*
	Clinic 1.4 (Rm S372)	Allen Lee, Scott Foster and Anton Suharev, Arizona State U	*Get Lazy with LLMs*
	Clinic 1.5 (Rm S127)	Moira Zellner, Northeastern U	*Fora.ai: Reshaping Collaboration for Climate and Social Impact*
3:30PM	*Break*		
3:45PM - 6:00PM	Poster Session A		

Early Career Mixer - 6:00PM to 8:00PM - Sanitas Brewing Co. (food and non-alcoholic beverages also available), 3550 Frontier Ave, Boulder, CO 80301
Sanitas is at the rear of the building (east side).

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Wednesday, May 14, 2025

Time	Session	Presenter	Topic
9:00 AM	Welcome	Moderator - Albert Kettner, CSDMS IF	Welcome
9:05 AM	**Plenary** Keynote (C120)	Kathe Todd-Brown, U Florida	*Global Soil Carbon Potential - What if Everyone Is Right and Where Do We Go from Here?*
9:25 AM	**Plenary** Keynote	Allison Reilly, U Maryland	*Extending on the Burden of Sea-level Rise on the Built Environment Beyond Housing*
9:45 AM	**Plenary** Keynote	Fredrick Kratzert, Google	*Long Short-term Memory Networks for Rainfall-Runoff Modeling*
10:05 AM	**Plenary** Keynote	Volker Grimm, UFZ, Helmholtz	*The Open Modeling Foundation: Operationalizing FAIR Principles*
10:25 AM	*Break*		
11:00AM - 12:30PM	Breakout 1 (Rm C120)	Group Meetings	*Terrestrial WG, Geodynamics, Hydrology and CZ FRGs*
	Breakout 2 (Rm S372)	Group Meetings	*Marine and Coastal WGs, Chesapeake and Ecosystem Dynamics FRGs*
12:30PM - 1:30PM	*Lunch*		
1:30PM - 3:30PM	Clinic 2.1 (Rm S225)	John Naliboff and Liang Xue, New Mexico Tech	*Coupling Models of Lithospheric Deformation and Surface Processes with the Advanced Solver for Planetary Evolution, Convection and Tectonics (ASPECT) Part 2*
	Clinic 2.2 (Rm C120)	Fernando Perez, UC, Berkeley and Matt Fisher, Schmidt Center for Data Science and Environment	*From Exploration to Publication: Geospatial Research in the Jupyter Ecosystem*
	Clinic 2.3 (Rm S372)	Wolfgang Bangerth, Colorado State U	*The Finite Element Method (FEM)*
	Clinic 2.4 (Rm N224)	Steve Railsback, California Polytech State U, Humboldt and Volker Grimm, UFZ, Helmholtz	*Pattern-oriented Agent Based Modeling to Achieve Structural Realism and Testable Predictions*
3:30PM	*Break*		
3:45PM - 4:30PM	Awards Ceremony	Moderator - Greg Tucker, CIF	*Lifetime Achievement, Student Modeler*
4:30PM - 6:30PM	Poster Session B		

Banquet 6:30PM to 8:30PM - SEEC Cafe and Patio, 4001 Discovery Drive, Boulder, CO 80303

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Thursday, May 15, 2025

Time	Session	Presenter	Topic
9:00AM	Welcome	Moderator - Julia Moriarty, CU Boulder	Welcome and Poster Awards
9:10AM	**Plenary** Keynote (C120)	Jaap Nienhuis, University of Utrecht	*Two Worlds on a Single Planet: Long-term Coastal Geomorphological Data Versus Models*
9:30AM	**Plenary** Keynote	Yalan Song, Penn State U	*High-resolution Differentiable Models for Operational National and Global Water Modeling Assessment*
9:50AM	**Plenary** Keynote	Andy Wickert, U Minnesota	*Simulating Alluvial River Evolution from Geological to Human Time Scales*
10:10AM	**Plenary** Student Keynote	Ari Koeppel, Dartmouth College	*Standardizing Soil Thermal Inertia Derivations with Bayesian Statistics*
10:25AM	*Break*		
11:00AM - 12:30PM	Human Dimensions Focus Group (C120)	Moira Zellner, Northeastern U & Katherine Anarde, NCSU	*Plenary Human Dimensions Focus Group*
12:30PM	*Lunch*		
1:30PM - 3:30PM	Clinic 3.1 (Rm C120)	Allison Pfeiffer, Western Washington U	*Landlab's NetworkSedimentTransporter: A Lagrangian Model for River Bed Material Transport Dynamics*
	Clinic 3.2 (Rm S225)	Irina Overeem, and Ethan Pierce, U Colorado, Boulder, Billy Armstrong, Appalachian State U	*Accelerating Glacier and Surface Processes Modeling with Machine Learning and New Python Libraries*
	Clinic 3.3 (Rm N224)	Andrew Moodie, Texas A&M U and Eric Barefoot, UC, Riverside	*Using the Collaborative Sandpiper Toolchain to Support Interoperability in Geomorphology Research*
	Clinic 3.4 (Rm S127)	Mohamed Fathi Said, Florida Gulf Coast University	*Integrating CNN with LSTM Models for Capturing Spatiotemporal Dynamics of Flood Modeling*
3:30PM	*Break*		
3:45PM - 4:45PM	Plenary (C120)	Science Collider	*Networking around research topics developed in group meetings - Pizza served*
4:45PM - 5:00PM	Closing Remarks and Adjourn	Greg Tucker, Executive Director, CSDMS IF	*Farewell and information about 2026 Annual Meeting at University of Minnesota, Minneapolis, MN*

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Friday, May 16- meeting by invitation

9:00AM-11:00AM	Location: Rm S228	CSDMS Executive Committee Meeting	(by invitation only - lunch will be served 11AM-12PM)
12:00PM - 2:00PM	Location: Rm S228	CSDMS Steering Committee Meeting	(by invitation only - lunch will be served 11AM-12PM)