

4th Annual Earth & Environmental Sciences Student Research Symposium

Virtually March 12 & 19, 2021

Zoom Link: <https://msu.zoom.us/j/91618480251>
Passcode: EESRocks

MICHIGAN STATE
UNIVERSITY

Department of Earth and
Environmental Sciences



4th Annual Earth and
Environmental Sciences
Student Research
Symposium

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Environmental Sciences

March 12th

Agenda March 12th, 2021

12:30 – 12:40	Welcoming Remarks <i>Symposium Committee</i> <i>Mike Gottfried, Graduate Affairs</i> <i>Director</i>
12:40 – 1:30	Oral Session I
1:30 – 1:40	Zoom Break
1:40 – 2:00	Poster Session
2:00 – 2:40	Oral Session II
2:40 – 2:50	Zoom Break
2:50 – 3:25	Oral Session III



Oral Session I 12:40 – 1:30 pm EST

Spatiotemporal identification and characterization of ground mounted solar photovoltaic arrays that are co-located with agriculture

Jacob Stid

Elliptical Fourier analysis versus Landmark-based morphometrics: A comparison of two quantitative morphometric techniques applied to vertebrate paleontology

Ryan McKeeby ⚡

Shear wave speed imaging of the magma-poor western branch of the East African Rift

Yaqi Jie

Stable water isotopes suggest hydrological complexity in large Arctic Alaskan rivers

Amelia Grose ⚡

Zoom Break 1:30 – 2:40 pm EST

Poster Session 1:40 – 2:00 pm EST

Experimental constraints on biotic and abiotic drivers of near surface-marine iodine redox transformations at the Bermuda Atlantic Time Series

Alexi Schnur

Updated iodine cycle constraints and parameters in the cGENIE model: implications for modern iodine redox transformation and paleoredox reconstruction

Keyi Cheng

Oral Session II 2:00 – 2:40 pm EST

Investigating the Relationship between Image DPI and Digitized Seismograms

Kaitlynn Burkhard

Predatory Trilobites: Combining Morphological and Ichnological Data

Jacob Beasecker ⚡

Event discrimination and moment tensors from digitized historic nuclear explosion seismograms

Josie Anderson & Luis Martinetti

Zoom Break 2:40 – 2:50 pm EST



Oral Session III 2:50 – 3:25 pm EST

Isotopic fractionation due to multi-stage core formation

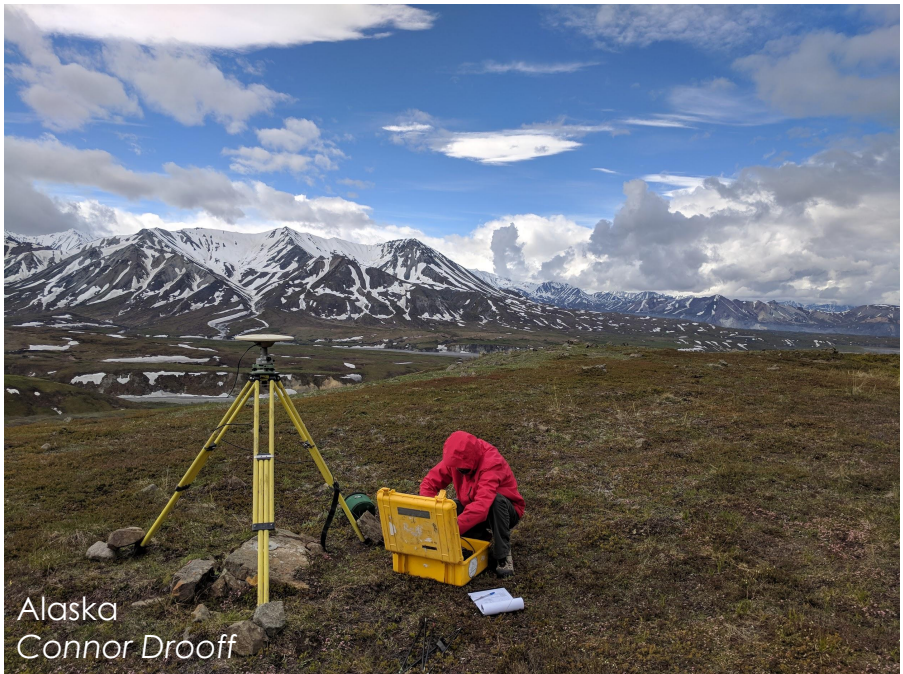
Gabriel Nathan ⚡

A Permian actinopterygian fish from the Minnekahta Limestone of South Dakota, USA

Jack Stack

Investigating the landscape and hydrologic controls on nutrient contamination across Michigan's Lower Peninsula

Brent Heerspink ⚡



Notes

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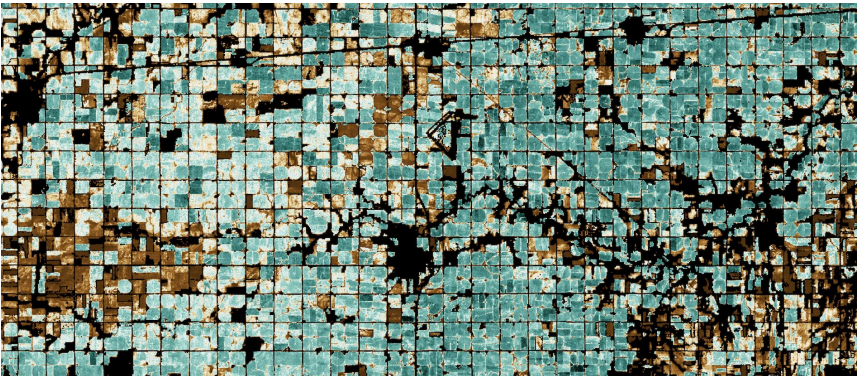
MICHIGAN STATE
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March 19th

Agenda March 19th, 2021

12:30 – 12:40	Welcoming Remarks <i>Symposium Committee</i> <i>Mike Gottfried, Graduate Affairs</i> <i>Director</i>
12:40 – 1:30	Oral Session I
1:30 – 1:40	Zoom Break
1:40 – 2:00	Poster Session
2:00 – 2:40	Oral Session II
2:40 – 2:50	Zoom Break
2:50 – 3:25	Oral Session III



Irrigation Confidence Map
Jeremy Rapp

Oral Session I 12:40 – 1:30 pm EDT

Interseismic Coupling of the Aleutian Megathrust and its Relationship to Slip in the 2020 M 7.9 Simeonof Earthquake

Connor Drooff

Coupling Crop Modeling with Remote Sensing to Estimate Subfield Maize Yield

Guanyuan Shuai ⚡

Coseismic Rupture Model of the 2020 Simeonof Earthquake Estimated from GPS, InSAR, and Waveform Data

Zhuohui Xiao

Going with the flow: Using high-frequency water quality data and effective discharge to characterize water and solute transport in two Arctic watersheds

Caroline Weidner ⚡

Zoom Break 1:30 – 2:40 pm EDT

Poster Session 1:40 – 2:00 pm EDT

Mantle Heterogeneities Explained Through Element Storage and the Perovskite Unit Cell

Allison Pease

Henry Solver for Exoplanet Atmospheres

Noah Behm

Oral Session II 2:00 – 2:40 pm EDT

Deep low-velocity layer in the Tonga slab

Fan Wang

Modeling groundwater transport of nutrients from the
Maumee River Watershed to Lake Erie

Alexis Lanier ⚡

Pharmaceutical concentrations and analysis in rural
watershed regions of Michigan

Addison Pletcher

Zoom Break 2:40 – 2:50 pm EDT



Au Sable River, MI
Kyle Cole

Oral Session III 2:50 – 3:25 pm EDT

Formation of Planetesimals through Gravitational Collapse

Jackson Barnes ⚡

Investigating how the cross-sectional shape of ULVZs provides information on the intrinsic viscosity of LLSVPs and ULVZs

Jiixin Zhang

Taking a look below the surface: Mapping and analyzing Michigan's chloride groundwater chemistry

Yvonne Kimmel ⚡



Greater Caucasus Mountains
Luis Martinetti

The Symposium Committee would like to thank the following organizations for their generous sponsorship of this event

**Department of Earth and Environmental
Sciences Alumni Group**

Graduate School



**MSU GRADUATE
SCHOOL**

Council of Graduate Students



Notes
