

PETER M. CHUTCHARAVAN, PhD

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peter.chutcharavan@oberlin.edu**EDUCATION****University of Florida, Gainesville FL****August 2020**

PhD in Geology

Advisor: Dr. Andrea Dutton

*"Ice sheet histories and sea-level change during the Last Interglacial and Termination I inferred from fossil corals: an interdisciplinary approach"***University of Michigan, Ann Arbor MI****May 2014**

Bachelor of Science in Geological Sciences with Honors

Phi Beta Kappa

RESEARCH INTERESTS

- (1) **Paleoceanography/paleoclimatology**, with an emphasis on using geologic archives (e.g., corals, speleothems, etc.) to reconstruct late Quaternary sea-level change
- (2) **Isotope geochemistry**, specializing in uranium-series geochronology and isotope systematics
- (3) **Geochemical tracers** of continental weathering processes on glacial-interglacial timescales and the effects of such weathering on marine geochemical cycles

POSITIONS HELD**Visiting Assistant Professor****2021-present**

Oberlin College, Department of Geology

Research Associate**2020-2021**

University of Wisconsin – Madison, Department of Geoscience

Graduate Assistant**2014-2020**

University of Florida, Department of Geological Sciences

Undergraduate Research Assistant**2011-2014**

University of Michigan, Department of Earth and Environmental Sciences

Advisor - Dr. Sarah Aciego

Undergraduate Research Assistant**2010-2011**

University of Michigan, Radiological Health Engineering Laboratory

Advisor - Dr. Kimberlee Kearfott

TEACHING EXPERIENCE

Oberlin College GEOL 161: Oceanography, GEOL 245: Paleoclimatology (w/ lab)	Fall 2021 – Present
Graduate Mentoring (1 mentee) Trained one (1) PhD student to compile a database of Last Interglacial sea-level indicators from the Bahamas and Florida	2020-present
Guest Lecturer University of Florida <i>Topics: The marine carbon and oxygen cycles</i>	Fall 2018, Spring 2019
Guest Lecturer Broward College <i>Topics: Geologic time, coral reefs, Florida geology</i>	Summer 2018
Geochemical Oceanography Teaching Assistant	Fall 2016, 2018
Undergraduate Mentoring (3 mentees total) Trained (3) undergraduates to compile legacy data for coral U-series and ¹⁴ C geochronology databases and (1) in clean lab chemistry protocols	2015-2019
Honors 135: The Geochron (Instructor) First year seminar for incoming University of Michigan honors students. Discussed various methods of relative and absolute geologic dating to explain how scientists discovered the age of the Earth.	Fall 2013
Environ 223: Introduction to Oceanography Led weekly tutoring session to receive honors credit for course.	Fall 2011

HONORS, AWARDS AND FELLOWSHIPS

NSF Ocean Sciences Postdoctoral Fellowship* Nationally-competitive fellowship for project entitled: <i>“OCE-PRF: Constraints on sea-level change over four glacial cycles through uranium-series dating of submerged Bahamian cave deposits”</i> <small>*Anticipated funding amount ~\$300,000; recommendation for funding deferred to July, 2022 due to accepting visiting faculty position at Oberlin College.</small>	2022-2024
Maurice C. Holmes and Frances A. Holmes Endowed Fellowship UF College of Liberal Arts and Sciences – competitive, merit-based fellowship that funded the final semester of my dissertation research	2020
College of Liberal Arts and Sciences Travel Grant UF College of Liberal Arts and Sciences	2019
UF Office of Research Travel Grant University of Florida	2017

HONORS, AWARDS AND FELLOWSHIPS cont'd

Graduate Student Council Travel Grant UF Graduate Student Council	2016, 2018
SEPM Student Research Grant (\$800) Society for Sedimentary Geology	2016
GSA Graduate Student Research Grant (\$1875) Geological Society of America	2016
UF Graduate School Fellowship University of Florida – competitive, merit-based graduate 4-year fellowship	2014-2018
Thai Language Award Department of Asian Languages and Cultures University of Michigan	2014
Goldschmidt Travel Grant The Geochemical Society	2013
Honors Summer Fellowship Program LS&A Honors Program University of Michigan	2013
Eugene and Elizabeth Singer Award Department of Earth and Environmental Sciences University of Michigan	2013
Foreign Language and Area Studies Fellowship (Thai) US Department of Education (2012-2013, 2013-2015 academic years)	2012-2014
GSA-ExxonMobil Field Camp Award Geological Society of America	2012
Field Camp Scholarship Michigan GeoClub	2012
Outstanding Student Poster Award Undergraduate Research Opportunity Program University of Michigan	2012

FIELDWORK

College Station, Texas Sampled corals from the IODP-310 (Tahiti Sea Level) expedition at the Texas A&M Gulf Coast Core Repository	July-August 2017
Florida Keys Surveyed and cored the Last Interglacial fossil reefs at Lignumvitae and Windley Key	March 2016
San Salvador Island, Bahamas Surveyed MIS 5e fossil reef site at Cockburn Town	April 2015

FIELDWORK cont'd

- Quintana Roo, Mexico** **September 2015**
 Conducted preliminary survey of potential field sites (caves and exposed fossil reefs) for Quaternary sea-level research as part of an interdisciplinary group of scientist from the Univ. of Florida.
- Earth 436** **Spring 2013**
 Field trip to study the geology of the southwestern United States
- Earth 315** **Fall 2012**
 Field trip to Harding Pegmatite Mine in Taos, New Mexico.
- Earth 440/441** **Summer 2012**
 Camp Davis (University of Michigan Rocky Mountain Field Station), Jackson, WY. Month-long capstone field geology course. Also enrolled in an optional one-week field project that involve surveying hillslope profiles with ground-based LiDAR.

SERVICE/PROFESSIONAL ACTIVITIES

- Peer Reviewer for:** Quaternary Science Reviews
- Participant, UWisc GEO² URGE Pod** **2021**
 Developed actionable, anti-racist policies at the departmental level as a participant in the Unlearning Racism in Geosciences (URGE) program
- INTEGSCI 600: Research Mentor Training** **2021**
 Facilitated group discussions focused on developing effective mentoring strategies
- Pilot Tester, OOI Ocean Data Labs Project** **Fall 2021**
 Implemented two online data lab activities to assist with curriculum development for the NSF Ocean Observatories Initiative (*compensated w/ small stipend*)
- Unlearning Racism in Geoscience (URGE) pod** **2021**
 University of Wisconsin – Madison (<https://urgeoscience.org/pods/uwisc-geo-2/>)
- Skype a Scientist** **2018 – Present**
 Climate science communication with ~10 primary and secondary school classes per year via videoconferencing (<https://www.skypeascientist.com>)
- National Fossil Day** **2018**
 Assisted with foraminifera identification activity at the Florida Museum of Natural History.
- UF Journal of Undergraduate Research** **2018-2019**
 Associate Editor, Reviewer.
- UF Graduate Student Council (GSC)** **2018-2019**
 Travel Grants Chair – Elected position that oversees the GSC travel grant program. Responsibilities included managing the grant application project and monthly double-blind peer reviews by the travel grants committee. Awarded more than \$100,000 in travel grants to UF students during the 2018-2019 fiscal year.

SERVICE/PROFESSIONAL ACTIVITIES ct'd

Ask a Scientist Day Co-managed the geology booth at a multidisciplinary event at the Florida Museum of Natural History.	2017-2018
UF Graduate Student Council Department Representative.	2016-2019
UF Graduate Student Council Travel grant peer-reviewer	2015-2019
Geogators Earth science outreach at local elementary schools	2015-2019
University of Michigan Earth Camp Counselor (<i>paid position</i>)	2014
Can you DIG it? Annual Geological Sciences outreach event https://www.floridamuseum.ufl.edu/event/can-you-dig-it/	2014-2019

CURRENT RESEARCH COLLABORATORS

Dr. Erica L. Ashe, Rutgers University, New Brunswick, NJ, USA	Dr. Robert E. Kopp, Rutgers University, New Brunswick NJ, USA
Dr. Edouard Bard, CEREGE, Aix en Provence, France	Dr. Xianglei Li, University of Minnesota, Minneapolis, MN, USA
Dr. Paul Blanchon, UNAM, Puerto Morelos, Mexico	Dr. Jerry X. Mitrovica, Harvard University, Cambridge, MA, USA
Dr. Pierre Deschamps, CEREGE, Aix en Provence, France	Dr. Alessio Rovere, MARUM, University of Bremen, Bremen, Germany
Dr. R. Lawrence Edwards, University of Minnesota, Minneapolis, MN, USA	Dr. Jody Webster, University of Sydney, Sydney, NSW, Australia
Dr. Bruno Hamelin, CEREGE, Aix en Provence, France	

PROFESSIONAL MEMBERSHIPS

Asian Americans and Pacific Islanders in Geoscience (AAPiG)	Geochemical Society
American Geophysical Union	Geological Society of America
	Phi Beta Kappa

SKILLS

Instrumentation: MC-ICP-MS, SF-ICP-MS, XRD, Clean lab chemistry

Fieldwork: Facies Analysis, Surveying, Scientific drilling

Programming: R, Generic Mapping Tools, FORTRAN (beginner)

INVITED TALKS

Oberlin College (2021)

San José State University (2021)

WORKSHOPS/PROFESSIONAL DEVELOPMENT

Cultivating Leadership for Change and Justice in the Geosciences virtual workshop series	2020-2021
How to successfully apply for academic jobs in science PAGES Early Career Network	2020
POLENET GIA Training School Gävle, Sweden	2019
<i>Workshop on modeling techniques for studying solid-earth deformation due to ice sheet loading.</i>	
Earthtime redux workshop (presenter) Barcelona, Spain	2019
<i>Workshop to train users on a new software packaged for U-series data processing and cyberinfrastructure. I assisted the workshop organizers by demonstrating how to upload data and navigate the user interface. I also updated the written training materials.</i>	
4th Annual UF Climate Communications Summit University of Florida – Gainesville, FL, USA	2018
Controversial Topics and Difficult Dialogues: Effectively Engaging Students in Critical Conversations in the Classroom University of Florida – Gainesville, FL, USA	2018
PALSEA2 2017 Workshop Playa del Carmen, Mexico	2017
GeochronR training workshop Northern Arizona University – Flagstaff, AZ, USA	2016
Communicating climate science workshop AGU Fall Meeting – San Francisco, CA, USA	2015
National Geographic Young Explorers Grant workshop University of Michigan – Ann Arbor, MI, USA	2014

PEER-REVIEWED PUBLICATIONS

1. Dutton, A., Villa, A., & **Chutcharavan, P. M.** (In prep) Compilation of Last Interglacial (Marine Isotope Stage 5e) sea level indicators in the Bahamas, Turks and Caicos and the east coast of Florida, USA
2. **Chutcharavan, P. M.**, Dutton, A., Blanchon, P., Webster, J. M., Edwards R. L., Li, X., Braga, J. C., Camoin, G., Bard, E., Hamelin, B., & Deschamps, P. (In prep) A revised magnitude for MWP-1A at Tahiti
3. Skrivaneck, A., **Chutcharavan, P. M.**, & Dutton, A. (In prep) Diagenesis or primary signal: Was Last Interglacial seawater $^{234}\text{U}/^{238}\text{U}$ higher than present?

4. **Chutcharavan, P. M.**, & Dutton, A. (2021) A global compilation of U-series dated fossil coral sea-level indicators for the Last Interglacial period (MIS 5e) *Earth Syst. Sci. Data.*, 13, 3155-3178. <https://doi.org/10.5194/essd-13-3155-2021>
5. **Chutcharavan, P. M.**, Dutton, A. & Ellwood, M. J. (2018) Seawater $^{234}\text{U}/^{238}\text{U}$ recorded by modern and fossil corals. *Geochim. Cosmochim. Act.*, 224, 1-17. <https://doi.org/10.1016/j.gca.2017.12.017>
6. Hibbert, F. D., Rohling, E. J., Dutton, A., Williams, F. H., **Chutcharavan, P. M.**, Zhao, C., & Tamisiea, M. E. (2016). Coral indicators of past sea-level change: A global repository of U-series dated benchmarks. *Quat. Sci. Rev.*, 145, 1-56. <https://doi.org/10.1016/j.quascirev.2016.04.019>
7. Stevenson, E. I., Aciego, S. M., **Chutcharavan, P.**, Parkinson, I. J., Burton, K. W., Blakowski, M. A., & Arendt, C. A. (2016). Insights into combined radiogenic and stable strontium isotopes as tracers for weathering processes in subglacial environments. *Chem. Geol.*, 429, 33-43. <https://doi.org/10.1016/j.chemgeo.2016.03.008>

OTHER PUBLICATIONS/DATA REPORTS

1. **Chutcharavan, P. M.**, & Dutton, A. (2020) Global database of U-series dated fossil coral sea-level indicators for the Last Interglacial period (Version 1.0). Zenodo. <http://doi.org/10.5821/zenodo.4309796>
2. Rovere, A., Ryan, D., Murray-Wallace, C., Simms, A., Vacchi, M., Dutton, A., Lorscheid, T., **Chutcharavan, P.**, Dominik, B., Bartz, M., Jankowski, N., Mueller, D., Cohen, K., & Gowan, E. (2020). Descriptions of database fields for the World Atlas of Last Interglacial Shorelines (WALIS) (Version 1.0). Zenodo. <http://doi.org/10.5281/zenodo.3961544>
3. **PhD Dissertation** (2020): Ice sheet histories and sea-level change during the Last Interglacial and Termination I inferred from fossil coral reefs: an interdisciplinary approach
4. **Senior Honors Thesis** (2014): Surface Area Characterization of Suspended Sediments in Glacial Meltwater using "Nano-BET" <http://deepblue.lib.umich.edu/handle/2027.42/107707>

ABSTRACTS (* = presenting author)

1. Villa, A., Molinek, R.*, Batchelor, C., Christenson, C. A., **Chutcharavan, P. M.**, Diaz Vallejo, E. J., Dodge, S., Dutton, A., Goodwin, L. B., Jones, A., Lovelace, D. M., Lusk, A., Mairn-Spiotta, E., McDowell, T. M., Mixon, E., Norsted, B., Reusche, M., Stevens, S. M., Vo, T., & Zahasky, C. (Submitted) URGE at UW-Madison: The Experience of a Super-Pod. *AGU 2021 Fall Meeting*.
2. **Chutcharavan, P.M.***, Dutton, A., Blanchon, P., Webster, J.M., Edwards, R.L., Li, X., Camoin, G., Edouard, B., Deschamps, D., & Hamelin, B. (2020) New constraints on Meltwater Pulse 1A from U-series dating of Tahitian fossil corals. *AGU 2020 Fall Meeting*.
3. **Chutcharavan, P.M.***, Dutton, A., & Webster, J.M. (2020 - Invited) Robust millennial- and centennial-scale interpretations of late Pleistocene sea-level change from fossil coral reefs: an interdisciplinary challenge. *GSA Annual Meeting "GSA 2020 connects online"*.
4. **Chutcharavan, P.M.***, Blanchon P., Dutton A., Webster, J.M., & Edwards R.L. (cancelled due to COVID-19) New insights of early deglacial sea-level rise through U-series dating of Tahitian fringing-reefs. *14th International Coral Reef Symposium, Bremen, Germany*.

5. **Chutcharavan, P. M.***, Dutton, A., Kopp, R. E., Ashe, E., & Mitrovica, J. X. (2019) Standardization and interpretation of fossil coral records of Last Interglacial sea-level change. *AGU 2019 Fall Meeting, San Francisco, CA, USA*.
6. Rovere, A.*, Ryan, D. D., Murray-Wallace, C., Simms, A., Vacchi, M., Dutton, A., Lorscheid, T., **Chutcharavan, P. M.**, Brill, D., Bartz, M., Jankowski, N., & Mueller, D. (2019) The World Atlas of Last Interglacial Shorelines (WALIS) – an ongoing research effort to standardize sea-level proxy data from the Last Interglacial. *AGU 2019 Fall Meeting, San Francisco, CA, USA*.
7. **Chutcharavan, P. M.***, Dutton, A., Kopp, R. E., Ashe, E., & Mitrovica, J. X. (2019) A data-model comparison of Last Interglacial sea-level change constrained by fossil-coral RSL data. *POLNET GIA Training School, Gävle, Sweden*.
8. **Chutcharavan, P.***, Dutton A., Ellwood, M., Skrivanek, L. & Vyverberg, K. (2017) Surface-ocean $^{234}\text{U}/^{238}\text{U}$ and its implications for coral-based sea-level reconstructions. *Palsea2 2017 Workshop, Playa del Carmen, Mexico*.
9. **Chutcharavan, P.***, Dutton A., & Ellwood, M. (2016) Implications for Seawater $^{234}\text{U}/^{238}\text{U}$ Composition and Weathering on Glacial-Interglacial Timescales Based on Modern and Fossil Corals. *AGU 2016 Fall Meeting, San Francisco, CA, USA*.
10. **Chutcharavan, P.***, Dutton, A., & Ellwood, M. (2016) Uranium Isotopic Variability in Seawater and its Implications for Coral-based Sea Level Reconstructions. *UF Water Institute Symposium, Gainesville, FL, USA*.
11. **Chutcharavan, P.***, Dutton, A., Ellwood, M., & Kopp, R. (2016) Glacial-interglacial variability of the ocean's uranium isotopic budget. *North Florida Marine Science Symposium, Gainesville, FL, USA*.
12. **Chutcharavan, P.***, Dutton, A., & Ellwood, M. (2015). Constrains on the Uranium Isotopic Composition of Seawater and Implications for Coral U/Th Geochronology. *AGU 2015 Fall Meeting, San Francisco, CA, USA*.
13. **Chutcharavan, P.***, & Aciego, M. (2013). Surface area characteristics of suspended sediments in glacial meltwater using “Nano BET”. *Goldschmidt 2013 Conference, Florence, Italy*.