

Robert George Hatfield

Department of Geological Sciences, University of Florida
241 Williamson Hall, Gainesville, FL 32611 USA

Phone: 541-908-0048
Email: rhatfield1@ufl.edu

CURRENT POSITION	Assistant Professor <i>Department of Geological Sciences, University of Florida, USA.</i>	2019 – present
PROFESSIONAL PREPARATION	Research Associate <i>College of Earth, Ocean, and Atmospheric Science, Oregon State University, USA.</i>	2018 – 2019
	Visiting Scholar <i>Department of Earth System Science, Stanford University, USA.</i>	2018 – 2019
	Research Associate (Post-Doc) <i>College of Earth, Ocean, and Atmospheric Science, Oregon State University, USA.</i>	2010 – 2018
	Assistant Curator; Digital Curation Specialist. <i>Marine Geology Repository, CEOAS, Oregon State University, USA.</i>	2013 – 2018
	Post-Doctoral Research Fellow <i>Department of Earth and Environmental Science, University of Windsor, Canada.</i>	2008 – 2009
EDUCATION	Ph.D. Physical Geography <i>Lancaster Environment Center, University of Lancaster, UK.</i>	2008
	B.Sc. (Hons.) Geography – 1 st Class <i>University of Lancaster, UK.</i>	2003

RESEARCH INTERESTS

I am interested in the integration of chronostratigraphic dating tools with physical, magnetic, and geochemical properties of different paleo archives (marine, lacustrine, and terrestrial sediments) to empirically investigate earth system processes and changes. Specifically I my research involves: Paleomagnetism (reversal stratigraphy, relative paleointensity [RPI], and paleo secular variation [PSV]) and its integration with other chronometers to provide chronological constraint and further geomagnetic understanding.

Reconstructing the history and stability of the Greenland Ice Sheet and ocean circulation using magnetic and geochemical properties of marine sediments in the North Atlantic Ocean

Understanding the particle-size specific nature of magnetic properties and their drivers (sediment source, sorting, diagenesis) to inform the interpretation of bulk sediment records.

Sediment stratigraphy and the development and refinement of composite depth scales and continuous stratigraphic splices to address paleoceanographic and paleoclimatic questions.

PUBLICATIONS
[# of citations]
updated Nov '21
source: Google

In Review/Revision/Published

Hatfield, R.G., Stoner, J.S., and Fraass, A.J. (2021) Relative Paleointensity Record of Integrated Ocean Drilling Program Site U1396 in the Caribbean Sea: Geomagnetic and Chronostratigraphic Observations in the Pliocene. *Geochemistry, Geophysics, Geosystems*, 22, GC009677.

Carlson, A.E., Beard, B.L., **Hatfield, R.G.**, and Laffin, M. (2021) Absence of West Antarctic-sourced silt at ODP Site 1096 in the Bellingshausen Sea during the last interglaciation: Support for West Antarctic ice-sheet deglaciation. *Quaternary Science Reviews*, 261, 106939. **[1]**

Woods, A., Rodbell, D.T., Abbott, M.B., **Hatfield, R.G.**, Chen, C.Y., Lehmann, S.B., McGee, D., Weidhaas, N.C., Tapia, P.M., Valero-Garcés, B.L., Bush, M.B., and Stoner, J.S. (2020) Andean drought and glacial retreat tied to Greenland warming during the last glacial period. *Nature Communications* 11, 5135. **[2]**

- Chen, C.Y., McGee, D., Woods, A., Perez, L., **Hatfield, R.G.**, Edwards, R.L., Cheng, H., Valero-Garces, B.L., Lehmann, S.B., Stoner, J.S., Schwalb, A., Tal, I., Seltzer, G.O., Tapia, P.M., Abbott, M.B., and Rodbell, D.T. (2020) U-Th dating of lake sediments: Lessons from the 700 ka sediment record of Lake Junín, Peru. *Quaternary Science Reviews*, 244, 106422. [6]
- Hatfield, R.G.**, Stoner, J.S., Solada, K.E., Morey, A.E., Woods, A., Chen, C.Y., McGee, D., Abbott, M.B., and Rodbell, D.T. (2020) Paleomagnetic constraint of the Brunhes age sedimentary record from Lake Junin, Peru. *Frontiers*, 8, 147. [6]
- Solada, K.E., Reilly, B.T., Stoner, J.S., de Silva, S.L., Mucek, A.E., **Hatfield, R.G.**, Pratomo, I., Jamil, R., and Setianto, B. (2020) Paleomagnetic observations from lake sediments on Samosir Island, Toba caldera, Indonesia, and its late Pleistocene resurgence. *Quaternary Research*, doi:10.1017/qua.2020.13 [3]
- Hatfield, R.G.**, Woods, A., Lehmann, S., Weidhaas IV, N., Chen, C.Y., Rodbell, D., Abbott, M.B., and Stoner, J.S. (2020) Stratigraphic correlation and splice generation for sediments recovered from a large lake drilling project: an example from Lake Junín, Peru. *Journal of Paleolimnology*, 63, 83-100. [9]
- Reilly, B.T., Stoner, J.S., Mix, A.C., Walczak, M.H., Jennings, A., Jakobsson, M., Dyke, L., Glueder, A., Nicholls, K., Hogan, K.A., Mayer, L.A., **Hatfield, R.G.**, Albert, S., Marcott, S., Fallon, F., and Cheseby, M. (2019) Holocene Collapse and Reestablishment of the Petermann Ice Tongue, Northwest Greenland. *Quaternary Science Reviews*, 218, 322-342. [14]
- Blake-Mizen, K.R., **Hatfield, R.G.**, Stoner, J.S., Carlson, A.E., Walczak, M.H., Xuan, C., Lawrence, K., Channell, J.E.T., and Bailey, I. (2019) Southern Greenland glaciation during the late Pliocene onset of Northern Hemisphere glaciation inferred from IODP Site U1307 (Eirik Drift). *Quaternary Science Reviews*, 209, 40-51. [12]
- Hatfield, R.G.**, Wheeler, B.H., Reilly, B., Stoner, J.S., and Housen, B. (2019) Particle size specific magnetic properties across the Norwegian-Greenland Seas: Insights into the influence of source and texture on bulk magnetic records. *Geochemistry, Geophysics, Geosystems*. 20 [10]
- Reilly, B.T., Stoner, J.S., **Hatfield, R.G.**, Abbott, M.B., Marchetti, D., Larsen, D., Finkenbinder, M., Hillman, A., Kuehn, S., and Heil, C. (2018) Regionally Consistent Western North America Paleomagnetic Directions from 15-35 ka: Assessing Chronology and Uncertainty with Paleosecular Variation (PSV) Stratigraphy. *Quaternary Science Reviews*, 201, 186-205. [5]
- Hatfield, R.G.**, Stoner, J.S., Reilly, B.Y., Tepley III, F.J., Wheeler, B.H., & Housen, B. (2017) Grain size dependent magnetic discrimination of Iceland and south Greenland terrestrial sediments in the northern North Atlantic sediment record. *Earth and Planetary Science Letters*, 474, 474-489 [19]
- Fraass, A.J., Wall-Palmer, D., Leckie, M., **Hatfield, R.G.**, et al., (2017) A revised Plio-Pleistocene age model and paleoceanography of the northeastern Caribbean Sea: IODP Site U1396 off Montserrat, Lesser Antilles. *Stratigraphy*, 13, 183-203. [4]
- Carlson, A.E., Kilmer, Z., Ziegler, L.B., Stoner, J.S., Wiles, G.C., Starr, K., Walczak, M.H., Colgan, W., Reyes, A.V., Leydet, D.J., & **Hatfield, R.G.** (2017) Retreat of the Columbia Glacier, Alaska. Millennial context. *Geology*, 45, G38479.1 [7]
- Hatfield, R.G.**, Reyes, A.V., Stoner, J.S., Carlson, A.E., Beard, B.L., Winsor, K., & Welke, B. (2016) Interglacial responses of the south Greenland ice sheet over the last 430,000 years determined using particle-size specific magnetic and isotopic tracers. *Earth and Planetary Science Letters*, 454, 225-236. [34]
- Coussens, M. et al., (2016) The relationship between eruptive activity, flank collapse, and sea level at volcanic islands: A long-term (>1 Ma) record offshore Montserrat, Lesser Antilles, *Geochemistry, Geophysics, Geosystems*. 17 [24]
- Coussens, M. et al., (2016) Synthesis: Stratigraphy and age control for IODP Sites U1394, U1395, and U1396 offshore Montserrat in the Lesser Antilles. In Le Friant, A., Ishizuka, O., Stroncik, N.A., and the Expedition 340 Scientists, Proc. IODP, 303/306: College Station, TX (Integrated Ocean Drilling Program Management International, Inc.) [5]

- McCanta, M., **Hatfield, R.G.**, Thomson, B., Hook, S., & Fisher, E (2015) Identifying Cryptotephra Units Using Correlated Rapid, Non-Destructive Methods: VSWIR Spectroscopy, X-Ray Fluorescence, and Magnetic Susceptibility. *Geochemistry, Geophysics, Geosystems*. 16, 4029-4056 [15]
- Hornbach, M. et al. (2015) High pore pressure in Lesser Antilles submarine slide deposits inferred from seismic velocities and rock physics models. *Journal of Geophysical Research: Solid Earth*, 120, 7986-8011 [13]
- Hatfield, R.G.** (2015) Data Report: Stratigraphic correlation of Site U1396 and creation of a composite depth scale and splice. *In* Le Friant, A., Ishizuka, O., Stroncik, N.A., and the Expedition 340 Scientists, Proc. IODP, 340: College Station, TX (Integrated Ocean Drilling Program Management International, Inc.) [9]
- Le Friant, A., et al., (2015) Submarine record of volcanic island construction and collapse in the Lesser Antilles arc: First scientific drilling of submarine volcanic island landslides by IODP Expedition 340. *Geochemistry, Geophysics, Geosystems*. 16, 420-442 [49]
- Hatfield, R.G.** (2014) Using particle size-specific measurements to understand bulk magnetic properties. *Minerals*, 4, 758-787. [39]
- Reyes, A.V., A.E. Carlson, B. Beard, **R.G. Hatfield**, J.S. Stoner, K. Winsor, B. Welke, & D.J. Ullman (2014) South Greenland ice-sheet collapse during Marine Isotope Stage 11, *Nature*, 510, 525-528. [90]
- Wall-Palmer *et al.* (2014). Late Pleistocene stratigraphy of IODP Site U1396 and compiled chronology offshore of south and south west Montserrat, Lesser Antilles. *Geochemistry, Geophysics, Geosystems*, 15, 3000-3020. [19]
- Hatfield, R.G.**, Stoner, J.S., Carlson A.E., Reyes, A.V., & Housen, B (2013) Source as a controlling factor on the quality and interpretation of sediment magnetic records from the northern North Atlantic. *Earth and Planetary Science Letters*, 368, 69-77. [35]
- Hatfield, R.G.** & Stoner J.S. (2013) Magnetic Properties and Susceptibility, In Elias, S.A. (ed.) *Encyclopedia of Quaternary Science*, Elsevier. [19]
- Galloway, E., Trenhaile, A.S., Cioppa, M.T. & **Hatfield, R.G.** (2012) Magnetic mineral transport and sorting in the swash-zone: northern Lake Erie, Canada, *Sedimentology*, 59, 1718-1734. [31]
- Manga, M., et al., "Heat flow in the Lesser Antilles island arc and adjacent back arc Grenada basin," *Geochemistry, Geophysics, Geosystems*, Vol. 13, Q08007, 19 [41]
- Winsor, K., Carlson, A.E., Klinkhammer, G.P., Stoner, J.S. & **Hatfield R.G.** (2012) Evolution of the northeast Labrador Sea during the last interglaciation, *Geochemistry, Geophysics, Geosystems*, 13, Q11006 [39]
- Colville, E.J., Carlson, A.E., Beard, B.L., **Hatfield, R.G.**, Stoner, J.S., Reyes, A.V. & Ullman, D.J. (2011) Sr-Nd-Pb Isotope Evidence for Ice-Sheet Presence on Southern Greenland During the Last Interglacial, *Science*, 333, 620-623 [131]
- Hatfield, R.G.**, Cioppa, M.T. & Trenhaile, A.S. (2010) Sediment sorting and beach erosion along a coastal foreland: Magnetic measurements in Point Pelee National Park, Ontario, Canada, *Sedimentary Geology*, 231, 63-73 [45]
- Hatfield, R.G.** & Maher, B.A. (2009) Fingerprinting upland sediment sources: particle size-specific magnetic linkages between soils, lake sediments and suspended sediments, *Earth Surface Processes and Landforms*, 34 (10), 1359-1373 [117]
- Hatfield, R.G.** & Maher, B.A. (2009) Holocene sediment dynamics in an upland temperate lake catchment: climatic and land-use impacts in the English Lake District, *The Holocene*, 19 (3), 427-438 [23]
- Hatfield, R.G.**, Maher, B.A., Pates, J.M. & Barker, P.A. (2008) Sediment dynamics in an upland catchment: changing sediment sources, rates and deposition, *Journal of Paleolimnology*, 40 (4), 1143-1158 [28]
- Hatfield, R.G.** & Maher, B.A. (2008) Suspended sediment characterisation and tracing using a magnetic fingerprinting technique: Bassenthwaite Lake, Cumbria, UK. *The Holocene*, 18 (1), 105-115 [60]

PROPOSALS & FUNDING

Total External Funding Awards as PI or Co-PI: \$916,350

IODP Drilling Proposal – International Ocean Discovery Program (IODP) Lead Proponent: <i>“Assessing the history of the south Greenland Ice Sheet and its interaction with ocean circulation, climate, and sea level”</i>	At JRFB for scheduling
\$197,897 – National Science Foundation, OCE Marine Geology and Geophysics Principal Investigator [OCE-1737333]: <i>“Developing paleomagnetic chronologies of, and paleogeomagnetic understanding from, IODP sites U1486 and U1489 in the western Pacific warm pool.”</i>	2017 – 2020
\$14,998 – Post Expedition Award, United States Science Support Program Principal Investigator: <i>“Rock magnetic characterization of sediments recovered during IODP Expedition 363 and paleomagnetic characterization of the Gauss/Matuyama Boundary at IODP Site U1486.”</i>	2017 – 2018
\$359,424 – National Science Foundation, OCE-Marine Geology and Geophysics Co-Principal Investigator [OCE-1636381]: <i>“Developing new magnetic tracers of ice sheet instability and ocean circulation in the northern North Atlantic”</i>	2016 – 2019
\$98,304 – National Science Foundation, EAR-Petrology and Geochemistry Principal Investigator [EAR-1347912]: <i>“Collaborative Research: Expanding the Tephrochronologic Record of the Northern Lesser Antilles Arc: Rapid Identification of Cryptotephra Using Multiple Methods.”</i>	2014 – 2018
\$4,000 – Institute of Rock Magnetism Visiting Fellowship Principal Investigator: <i>“Investigating the grain size dependence of magnetic properties from Greenland and Iceland as sediment sources to the Northern North Atlantic.”</i>	2013
\$189,727 – National Science Foundation, OCE-Marine Geology and Geophysics Principal Investigator [OCE-1260671]: <i>“Paleomagnetic Assisted Chronology of IODP Sites U1395 and U1396.”</i>	2013 – 2016
\$15,000 – Post Expedition Award, United States Science Support Program Principal Investigator: <i>“Creation of a composite spliced record for IODP Site U1395 and U1396 and initial paleomagnetic and environmental magnetic measurements.”</i>	2012 – 2013
\$37,000 (CAD\$) – Commonwealth Post-Doctoral Fellowship. Govt. of Canada Recipient of a proposal driven nationally competitive Post-Doctoral Fellowship: <i>“Sediment tracing in a coastal foreland”</i>	2008 – 2009

SELECT ACTIVE COLLABORATIONS

Dr. Joseph Stoner (Oregon State Univ.)
Paleomagnetism (various), IODP Proposal 814, sediment magnetism (various)

Dr. Christina Ravelo (Univ. of California Santa Cruz)
Integration of chemo- and magnetostratigraphy for IODP Expedition 363 cores

Dr. Mark Abbott (Univ. of Pittsburgh) & Dr. Donald Rodbell (Union College)
Chronostratigraphy for ICDP Drilling of Lake Junin, Peru

Dr. Anders Carlson (Oregon State Univ.) & Dr. Alberto Reyes (Univ. of Alberta)
Reconstructions of ice sheet behavior using geochemical tracers

Dr. Ian Bailey (Univ. of Exeter)
North Atlantic terrigenous sedimentation during the Plio-Pleistocene

Dr. Paul Pearson (Univ. of Cardiff)
Integration of paleomagnetic records and biostratigraphic datums from IODP Site U1486

Dr. Richard Harrison (Cambridge Univ.) & Ioan Lascu (Smithsonian)
First Order Reversal Curves for sediment magnetism and sediment source tracing

Ms. Christina Larkin & Dr. Alexander Piotrowski (Cambridge Univ.)
Nordic Seas and North Atlantic sediment source tracing using magnetic and Nd isotopes
 Dr. Samantha Bova & Dr. Yair Rosenthal (Rutgers Univ.)
Chronostratigraphy of the Chilean Margin for IODP Exp 379T
 Dr. Molly McCanta (Univ. of Tennessee) & Dr. Martin Palmer (Univ. of Southampton)
Tephrochronology and Lesser Antilles arc evolution from IODP Site U1396

**FORMAL
TEACHING &
ADVISING ROLES**

Courses Taught	
GLY6519 (UF) Stratigraphy and Timescales	2020
Guest Lectures:	
ESS 242 (Stanford) Antarctic Marine Geology and Geophysics <i>Topic: Sedimentary margins and future IODP drilling around Greenland</i>	2018
GPH 642 (OSU) Earth Magnetism <i>Topic: Environmental magnetism techniques and applications</i>	2017/2015/2013
OC 460 (OSU) Geological Oceanography <i>Discussion Topic/Presentations: Results of ODP/IODP Drilling</i>	2016/2014
OC 562 (OSU) Sedimentary Processes in the Ocean Basins <i>Topic: Sediment transport in ocean basins; included a lab at the OSU-MGR</i>	2013
Academic Tutor: Geographical skills for freshman undergraduate students. Designed and taught a syllabus around teaching scientific theory/skills in a small class environment (6-8 students). Additional responsibilities included marking assignments set by faculty, providing one-on-one feedback to students, and mentoring their transition from high-school students to collegiate scholars.	2005 - 2008
Teaching Assistant:	
Field Course: The Geomorphology of Northern Spain <i>Week long residential field trip studying karst and glacial geomorphology</i>	2006 - 2007
Field Course: Glacial Geomorphology of the Lake District, England <i>Day long field trips mapping glacial features and discussing paleoglaciology</i>	2006 - 2008
Students Advised:	
James Kowalski (M.S. – expected 2022)	2020 – present
Students Co-Advised:	
Benjamin Freiberg (M.S.) <i>“Developing new magnetic tracers of ice sheet instability and ocean circulation in the northern North Atlantic”</i>	2017 - 2020
Students Mentored:	
Keziah Blake-Mizen (University of Exeter Ph.D. Student)	2015 - 2019
Katharine Solada (OSU M.Sc.; Instructor at Linn Benton Community College)	2017 - 2019
Benjamin Wheeler (OSU UG; now MS Student at Uni. N. Arizona)	2016 - 2017
Jordan Morris (OSU REU)	2016
Elizabeth Patterson (OSU REU; now MS Student at University of Arizona)	2016
Tullia Upton (OSU M.Sc. student; Western Geotechnical Consultants, BC)	2014 - 2016
Jason Dorfman (OSU M.Sc. student; David Evans and Assoc., Vancouver, WA)	2010 - 2013
Sarah Strano (OSU Ph.D. student; TUNE software engineer, Seattle, WA)	2010 - 2013
David Konyndyk (OSU Increasing Diversity in Earth Sci. UG; now at Boeing)	2012 - 2013
Eric Gallaway (UG & M.Sc. student at University of Windsor)	2010 - 2011

AWARDS & RECOGNITION	Jack Dymond Excellence in Mentoring Award.	2017
	Annual award open to 100+ CEOAS faculty. Awarded to a faculty member that goes above and beyond in mentoring graduate and/or undergraduate students other than their own advisees.	
	Best Oral Presentation	2008
	Soils System Science, European Geophysical Union	
SERVICE & EXPERIENCE	Seagoing and Field Experience	
	Shipboard Paleomagnetist, JR100 IODP Expedition 379T <i>Paleoceanography of the Chilean Margin (Bova/Rosenthal Chief Scientists)</i>	2019
	Shipboard Paleomagnetist, IODP Expedition 363 <i>Western Pacific Warm Pool (Rosenthal/Holbourn)</i>	2016
	Stratigraphic Correlator, ICDP Drilling of Lake Junín, Peru <i>A Quaternary record of climate change for the tropical Andes (Abbott/Rodbell)</i>	2015
	Coring Participant and Physical Properties Specialist <i>Fish Lake, Utah. Western US lakes coring project (Abbott/Marchetti)</i>	2014
	Coring Participant and Physical Properties Specialist <i>Fish Lake, Oregon. Western US lakes coring project (Stoner/Abbott)</i>	2013
	Shipboard Paleomagnetist, IODP Expedition 340 <i>Lesser Antilles Volcanism and Landslides (Le Friant/Osamu)</i>	2012
	Coring Participant, RV Wecoma <i>Oregon Margin Sedimentation (Mix)</i>	2011
	Field Investigator, Greenland terrestrial sediment characterization <i>Collection of glacio-fluvial sediment from Iceland/Greenland (Stoner/Carlson)</i>	2011/2010
	Workshops Invited/Attended	
	MagellanPlus Workshop participant. Greenland Ice sheet evolution, Copenhagen	2018
	EarthRates Workshop invitee. Western US Pliocene Lakes, Minneapolis, MN.	2018
	NSF White Paper participant. How Stable is the Greenland Icesheet, Buffalo, NY	2017
	JOIDES Resolution Assessment Workshop (JRAW) participant, Denver, CO	2017
	Curators of Marine, Lacustrine, and Geological Samples Meeting. Corvallis, OR.	2017
	LinkedEarth Workshop participant. Paleoclimate Data Standards, Austin, TX	2017
	iSamples EarthCube Workshop participant. Digital sample curation, Austin, TX	2016
	Continental Scientific Drilling and Coring Community Meeting. Minneapolis, MN.	2015
	PAGES Workshop Participant. Assessing the history of the Greenland Ice Sheet through ocean drilling. Corvallis, OR	2011
	Select Community Service/Activities	
	Session Convener AGU Fall Meeting	2019/2018/2015
	Editorial Board Member IODP Expedition 363 Proceedings Volume	2016
	National Ocean Science Bowl Volunteer	2016
	OSPA Judge AGU Fall Meeting	2014
	Editorial Board Member IODP Expedition 340 Proceedings Volume	2012
	Reviewer: <i>Marine Geology and Geophysics (NSF); Geochemistry, Geophysics, Geosystems; Palaeogeography, Palaeoclimatology, Palaeoecology; The Holocene; Hydrology and Earth System Science; Journal of Quaternary Science; Quaternary Science Reviews.</i>	2009 - present

**PRESENTATIONS
& CONFERENCE
ABSTRACTS**

Invited Talks:

- Hatfield, R.G.**, Stoner, J.S. (2019) *“Relative Paleointensity (RPI) observations from IODP Expeditions 340 and 363; towards a new Pliocene tuning target”* Geological Society of America, 26th September 2019.
- Hatfield, R.G.**, Stoner, J.S., Reyes, A.V., Carlson, A.E., Beard, B.L., and Reilly, B.T. (2018) *“The Greenland Ice sheet; a late-Pleistocene story from the ocean floor”*. Stanford Radioglaciology Research Group, 17th October 2018.
- Hatfield, R.G.**, Stoner, J.S., Reyes, A.V., Carlson, A.E., and Beard, B.L. (2015) *“Using particle size specific magnetic properties to understand North Atlantic sediment records and the history of the Greenland Ice Sheet”*. Geology and Geophysics Seminar Series, CEOAS, Oregon State University, 12th March 2015
- Hatfield, R.G.** (2014) *“What is environmental magnetism and how can we use it in earth science.”* Summer Research Experience for Undergraduate Student Symposium, 29th July 2014
- Hatfield, R.G.**, Stoner, J.S., Carlson A.E., Reyes, A.V., and Housen, B *“Source as a controlling factor on the quality and interpretation of sediment magnetic records from the northern North Atlantic”*. Invited Presentation to the American Geophysical Union, San Francisco, 5th December 2012.
- Hatfield, R.G.** and Maher, B.A. *“Sediment dynamics in an upland temperate catchment: magnetic identification of changing sediment sources and rates.”* Sedimentology Seminar Series, University of Liverpool, 11th April 2008

*First Author (or *student first author) Contributed Presentations:*

- Hatfield, R.G.**, Stoner, J.S., Solada, K., Reilly, B.T., Abbott, M.B., Rodbell, D.T., Woods, A., McGee, D., Chen, C.Y. Assessing Orbital Forcing in the Tropical Andes: Developing a 700 kyr paleointensity assisted chronology for ICDP drilling in Lake Junín, Peru. Oral Presentation to AGU Fall Meeting, Washington D.C., 12th December 2018.
- *Freiberg, B., **Hatfield, R.G.**, Stoner, J.S., Reilly, B.T., and Solada, K. The Particle Size Specific Magnetic Properties of Eirik Ridge Sediments over the Last 150 ka from IODP Expedition 303 U1305 and U1306: Disentangling the Influences of the Greenland Ice Sheet and Deep Western Boundary Current. Oral Presentation to AGU Fall Meeting, Washington D.C., 13th December 2018.
- Hatfield, R.G.**, Stoner, J.S., Freiberg, B., Reilly, B.T., Reyes, A.V., Carlson, A.E., and Beard, B.L., Eirik Ridge marine sediments: A Plio-Pleistocene archive of the past behavior of the south Greenland Ice-Sheet (sGIS). Presentation at the Magellan Plus workshop on Greenland Ice Sheet Evolution, 11th September, 2018
- Hatfield, R.G.**, Stoner, J.S., Kumagai, Y., & Expedition 363 Scientists. A Two Million Year Equatorial Paleogeomagnetic and Relative Paleointensity Record from IODP Site U1489 in the West Pacific Warm Pool: Towards an Improved Tuning Target. Presentation to AGU Fall Meeting, New Orleans, 14th December 2017.
- *Blake-Mizen, K.R., **Hatfield, R.G.**, Carlson, A.E., Walczak, M.H., Stoner, J.S., Xuan, C., Lawrence, K.T., & Bailey, I. Reconstructing Southern Greenland Ice Sheet History During the Plio-Pleistocene Intensification of Northern Hemisphere Glaciation: Insights from IODP Site U1307. Presentation to AGU Fall Meeting, New Orleans, 13th December 2017.
- *Kumagai, Y., **Hatfield, R.G.**, Nakamura, N., Yamazaki, T., & Expedition 363 Scientists. Initial report for magnetostratigraphy of IODP Site U1490. Presentation to AGU Fall Meeting, New Orleans, 14th December 2017.
- Hatfield, R.G.**, Stoner, J.S., Reyes, A.V., Carlson, A.E., Walczak, M.H., and Beard, B.L. Reconstructing the response of the south Greenland Icesheet to climate using marine sediments. Presentation to an NSF sponsored workshop “How stable is the Greenland Icesheet”, Buffalo, NY, 11th September 2017
- *Wheeler, B.H., **Hatfield, R.G.**, and Stoner, J.S. Characterizing the magnetic variability of the Nordic Basaltic Province: Particle-size specific magnetic insights from 72 cores collected before the

advent of the field of environmental magnetism. International Conference on Rock Magnetism, Utrecht, Netherlands, 12th July, 2017.

- Hatfield, R.G.**, Stoner, J.S., Reyes, A.V., Carlson, A.E., Beard, B.L., Winsor, K., Reilly, B.T., Welke, B., Housen, B.A., & Wheeler, B.H. Linking Particle Size Specific Measurements of Terrestrial and Marine Sediments to Understand the Deglacial Behavior of the Southern Greenland Icesheet since MIS12. Presentation to AGU Fall Meeting, San Francisco, 12th December 2016.
- Hatfield, R.G.**, Stoner, J.S., & Tepley III, F. Discrimination of Terrestrial Source Materials to the Northern North Atlantic Using Particle Size Specific Magnetic Measurements and Electron Microscopy. Presentation to AGU Fall Meeting, San Francisco, 18th December 2015.
- Hatfield, R.G.** and Stoner, J.S. Paleo- and Environmental Magnetic Record of U1396: a 4.5Myr record from the Caribbean Sea. Presentation to AGU Fall Meeting, San Francisco, 16th December 2014.
- Hatfield, R.G.**, Stoner, J.S., and Jennings, A.E. "Paleo- and environmental magnetic record of Holocene marine sediments from West Greenland" Presentation at the MagIC Workshop, Scripps Institution of Oceanography, La Jolla, 12th May, 2014.
- Hatfield, R.G.**, Stoner, J.S., and Jennings, A.E. "Paleo- and environmental magnetic record of Holocene marine sediments from West Greenland" Presentation to AGU Fall Meeting, San Francisco, 12th December 2013.
- Hatfield, R.G.**, Stoner, J.S., Carlson A.E., and Reyes, A.V. "*Fingerprints of Greenlandic and Icelandic Sediment Sources to the Eirik Drift through Five Glacial Terminations and Interglacials*" Abstract PP23B-2056. Presentation to AGU Fall Meeting, San Francisco, 4th December 2012.
- Hatfield, R. G.**, Stoner, J. S., Carlson, A. E., and Reyes, A.V. "*Fingerprints of Greenlandic and Icelandic Sediment Sources to the North Atlantic through Five Glacial Terminations and Interglacials*" Abstract PP33A-1911. Presentation to AGU Fall Meeting, San Francisco, 7th December 2011.
- Hatfield, R. G.**, Stoner, J. S., Carlson, A. E., and Reyes, A.V. "*Magnetic fingerprints of Greenlandic sediments*" Abstract ID 2570. Presentation to INQUA XUIII Congress, Bern, 21st July 2011.
- Hatfield, R. G.**, Stoner, J. S., Carlson, A. E., and Reyes, A.V. "*Development of particle sized magnetic fingerprints to trace the retreat of the Greenland ice sheet.*" Presentation to The Arctic Workshop, UQAM, Montreal, 4th March 2011.
- Hatfield, R. G.**, Stoner, J. S., Carlson, A. E., and Strano, S.E. "*Magnetic fingerprints of Greenlandic sediments*" Abstract PP11D-1455. Presentation to AGU Fall Meeting, San Francisco, 13th December 2010.
- Hatfield, R.G.**, and Maher, B.A. "*Sediment sourcing and environmental reconstruction using particle size-specific magnetic fingerprinting: Bassenthwaite Lake, UK.*" Presentation to PAGES YSM, Oregon State University, 7th July 2009.
- Hatfield, R.G.**, and Cioppa, M.T. "*Particle size specific magnetic fingerprinting of beach sands: Point Pelee National Park, Ontario, Canada.*" Abstract GP32A-05 Presentation to the AGU Joint Assembly, Toronto, 27th May 2009.
- Hatfield, R.G.**, and Maher, B.A. "*Sediment dynamics in an upland temperate catchment: magnetic identification of changing sediment sources and rates.*" Abstract ID 1607-7962. Presentation to the EGU, Vienna, 16th April 2008.
- Hatfield, R.G.**, and Maher, B.A. "*Suspended sediment tracing using a magnetic fingerprinting technique*" Presentation to SET for Britain, 13th March 2005, House of Commons, Palace of Westminster, London

Other Invited/Contributed Presentations:

- Stoner, J.S., Reilly, B.T., **Hatfield, R.G.**, Abbott, M.B., Marchetti, D.W., Larsen, D.J., Finkenbinder, M.S., Hillman, A.L., Kuehn, S.C., and Heil, C.W. Regionally Consistent Western North America Paleomagnetic Directions from 15-35 ka: Assessing Chronology and Uncertainty with Paleosecular Variation (PSV) Stratigraphy. Presentation to AGU Fall Meeting, Washington D.C., 13th December 2018.

- Carlson, A.E., Walczak, M.H., Beard, B.L., Laffin, M.K., Stoner, J.S., and **Hatfield, R.G.** Absence of the West Antarctic ice sheet during the last interglaciation. Accepted Oral Presentation to AGU Fall Meeting, Washington D.C., 10th December 2018.
- Woods, A., Lehmann, S.B., Chen, C.Y., **Hatfield, R.G.**, Stoner, J.S., McGee, D.M., Bush, M.B., Abbott, M.B., and Rodbell, D.T. Extra-tropical Influence on Hydrologic Balance in the High Elevation Andes: Physical Sedimentology Evidence from Lake Junín, Peru during the Last Glacial Period. Accepted Oral Presentation to AGU Fall Meeting, Washington D.C., 11th December 2018.
- Kumagai, Y., Nakamura, N., **Hatfield, R.G.**, Yamazaki, T., Yamamoto, Y., & Expedition 363 Scientists. Preliminary report on sedimentary structure and magnetostratigraphy of IODP Site U1490. Presentation to JpGU, Chiba, Japan, 21st May 2018.
- Rodbell, D., Abbott, M., McGee, D., Chen, C., Stoner, J.S., **Hatfield, R.G.**, Tapia, P., Bush, Weidhaas, N., Woods, A., M. Valero Garces, B., Lehmann, S.B., Bustamante, M.G., & Larsen, D. A continuous record of glacial-interglacial cycles spanning more than 500 kyr from Lake Junín, Perú. Presentation to AGU Fall Meeting, New Orleans, 13th December 2017.
- Solada, K., de Silva, S.K., Stoner, J.S., Mucek, A.E., Reilly, B.T., **Hatfield, R.G.**, Pratomo, I., Bowers, J., Jamil, R., Setianto, B. Constraining Resurgence through Lake Sediment Paleomagnetism on Resurgent Dome Samosir Island in Toba Caldera, Sumatra, Indonesia. Presentation to AGU Fall Meeting, New Orleans, 12th December 2017.
- Rodbell, D., Abbott, M.B., Chen, C., McGee, D., **Hatfield, R.G.**, Stoner, J.S., Tapia, P., Valero Garces, B., Weidhaas, N., Woods, A., Hillman, A., Larsen, D., Valencia, B., & Bush, M. An ~500,000 yr record of tropical glaciation recovered during the Lake Junin (Peru) Drilling Project. Presentation to the EGU, Vienna, 27th April, 2017.
- Weidhaas, N., Woods, A., Rodbell, D., Larsen, D., Abbott, M., & **Hatfield, R.G.** The Timing and Magnitude of Late Pleistocene and Holocene Lake Level Change from a Paired Carbonate $\delta^{18}\text{O}$ - Stratigraphy Record Of A Core Transect In Lake Junin, Peru. Presentation to GSA Joint Annual Section Meeting, Pittsburgh, 21st March 2017.
- Morris, J., Stoner, J.S., Reilly, B.T., **Hatfield, R.G.**, Konyndyk, D., Abbott, M., Finkenbinder, M.S., Hillman, A.L. Lake Sediment Particle Size Analysis for Holocene Paleoenvironmental Study of Steens Mountain, Eastern Oregon. Presentation to AGU Fall Meeting, San Francisco, 12th December 2016.
- McCanta, M.C. & **Hatfield, R.G.** Identifying Eruption Dynamics in the Northern Lesser Antilles Using Cryptotephra. Presentation to AGU Fall Meeting, San Francisco, 12th December 2016.
- Palmer, M.R., Fraass, A.J., **Hatfield, R.G.**, & McCanta, M.C. The pace of arc volcanism. Presentation to AGU Fall Meeting, San Francisco, 12th December 2016.
- Rodbell, D., Abbott, M., Weidhaas, N., **Hatfield, R.G.**, Woods, A., Hillman, A.L., Tapia, P.M., Chen, C.Y., McGee, D., & Stoner, J.S. Initial Results from the Deep Drilling of Lake Junin, Perú. Presentation to AGU Fall Meeting, San Francisco, 13th December 2016.
- Walczak, M.H., Carlson, A.E., Stoner, J.S., **Hatfield, R.G.**, Mathias, A., & Wolhowe, M.D. Late Pliocene Glaciation of Southern Greenland and Ice/Ocean Interactions. Presentation to AGU Fall Meeting, San Francisco, 15th December 2016.
- Weidhaas, N., Larsen, D., Rodbell, D., Woods, A., **Hatfield, R.G.**, & Abbott, M. Controls on the composition and distribution of late Pleistocene and Holocene sediment in Lake Junín, Peru: A transect core study. Presentation to AGU Fall Meeting, San Francisco, 13th December 2016.
- Blake-Mizen, K., Bailey, I., Carlson, A.E., Stoner, J.S., **Hatfield, R.G.**, Xuan, C., & Lawrence, K. Reconstructing southern Greenland Ice Sheet history during the intensification of Northern Hemisphere glaciation: Insights from IODP Site U1307. Presentation to the EGU, Vienna, 22nd April, 2016.
- Farrington, E., Rodbell, D., Abbott, M., Tapia, P., Stoner, J., **Hatfield, R.G.**, Weidhaas, N., Woods, A., Hillman, A., Chen, C., Larsen, D., & Delgado, G. Initial Results from Deep Drilling Lake Junin, Peru. Presentation to GSA Northeastern Section Meeting, Albany, 23rd March 2016.
- Weidhaas, N., Woods, A., Abbott, M., Rodbell, D., Larsen, D., Hillman, A., Finkenbinder, M.S., **Hatfield, R.G.**, Delgado, G., & Tapia, P. Controls on the Composition and Distribution of

- Holocene Sediment in Lake Junín, Peru. Presentation to GSA Northeastern Section Meeting, Albany, 23rd March 2016.
- Weidhaas, N., Woods, A., **Hatfield, R.G.**, Abbott, M., Rodbell, D., Larsen, D., Brady, K., Delgado, G., & Hillman, A. Controls on the Composition and Distribution of Holocene Sediment in Lake Junín, Peru. Presentation to AGU Fall Meeting, San Francisco, 14th December 2015.
- Walczak, M., Carlson, A.E., Stoner, J.S., **Hatfield, R.G.**, Wolhowe, M., & Mathias, A. Late Pliocene deglaciation of Southern Greenland. Presentation to AGU Fall Meeting, San Francisco, 17th December 2015.
- Stoner, J.S., Abbott, M., Ziegler, L., Reilly, B., Finkenbinder, M., **Hatfield, R.G.**, Hillman, A., & Konyndyk, D. The Holocene History of the North American Flux lobe: New Constraints From Fish Lake, Harney County, Oregon. Presentation to AGU Fall Meeting, San Francisco, 17th December 2015.
- Carlson, A.E., Mathias, A., **Hatfield, R.G.**, Winsor, K., and Stoner, J.S. "South Greenland ice-sheet response to the Mid-Pliocene Climatic Optimum. Presentation to AGU Fall Meeting, San Francisco, 17th December 2014.
- Reilly, B., Stoner, J.S., **Hatfield, R.G.**, Ziegler, L.B., Abbott, M.B., Larsen, D.J., Hillman, A.L., and Finkenbinder, M.S. A 33kyr paleomagnetic secular variation record from Fish Lake, Utah. Presentation to AGU Fall Meeting, San Francisco, 19th December 2014.
- Stinton, A.J., **Hatfield, R.G.**, and McCanta, M. Effect of aseismic ridge subduction on volcanism in the NE Lesser Antilles Arc. Presentation to AGU Fall Meeting, San Francisco, 17th December 2014.
- Ziegler, L.B., Stoner, J.S., Abbott, M.B., Finkenbinder, M.S., **Hatfield, R.G.**, Konyndyk, D., Reilly, B., and Hillman, A.L. A Holocene paleomagnetic record from Fish Lake, Oregon. Presentation to AGU Fall Meeting, San Francisco, 19th December 2014.
- Stoner, J.S., Ziegler, L., Abbott, M., Finkenbinder, M., **Hatfield, R.G.**, & Strano, S. Does the Mantle Impose a Structure on the Geodynamo That Dictates Paleo-Geomagnetic Behavior? New Results from Fish Lake, Oregon. Presentation to the EGU, Vienna, 29th April, 2014.
- Gorby, D.B., Winsor, K., Carlson, A.E., Mathias, A., McKay, J.L., and **Hatfield, R.G.** Investigating Labrador Sea warmth during the mid-Pliocene optimum with Eirik Drift sediments. Presentation to AGU Fall Meeting, San Francisco, 12th December 2013.
- Reyes, A.V., Carlson, A.E., Beard, B.L., Winsor, K., Ullman, D.J., **Hatfield, R.G.**, Stoner, J.S., and Welke, B. "*Sr-Nd-Pb Isotope Composition of Eirik Drift Silt as a Proxy for South Greenland Ice Sheet Retreat during the Last Five Interglaciations*" Abstract PP11E-06. Presentation to AGU Fall Meeting, San Francisco, 3rd December 2012.
- Dominguez, D.B., Stoner, J.S., Jin, Y., Xuan, C., **Hatfield, R.G.**, Dorfman, J.M., Mix, A.C., Goni, M.A., and Wheatcroft, R.A. "*Observing diagenesis on the Oregon Margin through a Paleomagnetic lens.*" Abstract GP41A-1112. Presentation to AGU Fall Meeting, San Francisco, 6th December 2012.
- Reyes, A.V., Carlson, A.E., Beard, B.L., **Hatfield, R.G.**, and Stoner, J.S. "*Sr-Nd-Pb isotope evidence for substantial retreat of the southern Greenland Icesheet during marine isotope stage 11.*" Abstract PP33A-1910. Presentation to AGU Fall Meeting, San Francisco, 7th December 2011.

REFERENCES

Dr. Joseph Stoner

Professor, College of Earth, Ocean, and Atmospheric Science, 104 CEOAS Admin Building, Oregon State University, Corvallis, OR 97331. USA
jstoner@ceoas.oregonstate.edu; +1 (541) 737-9002

Dr. Mark Abbott

Professor, Department of Geology and Environmental Science, University of Pittsburgh, 315 SRCC, 4107 O'Hara Street, Pittsburgh, PA 15260. USA
mabbott1@pitt.edu; +1 (412) 624-1408

Dr. Ana Christina Ravelo

Professor, Ocean Sciences Department, University of California Santa Cruz, 1156 High Street, Santa Cruz CA 95064
acr@ucsc.edu; +1 (831) 459-3722

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