



COLLEGE of CHARLESTON

DEPARTMENT OF GEOLOGY AND
ENVIRONMENTAL GEOSCIENCES

Faculty and student activity at the

Geological Society of America Annual Meeting

October 10-14, 2021 - Portland, OR

Click each project title to view abstracts.

Sunday, 10 October, 9:00 AM– 1:00 PM

24-15 THE GROTTO CREEK SUCCESSION: A UNIQUE RECORD OF LATE TRIASSIC – EARLY JURASSIC ENVIRONMENTAL AND BIOLOGIC CHANGE

GILL, Benjamin¹, ABERHAN, Martin², CARUTHERS, Andrew H.³, GOLDING, Martyn⁴, GRÖCKE, Darren R.⁵, MARROQUIN, Selva M.⁶, MCCABE, Kayla¹, OWENS, Jeremy⁷, THEM II, Theodore R.⁸, TRABUCHO ALEXANDRE, João⁹ and VEENMA, Yorick⁹, (1)Department of Geosciences, Virginia Polytechnic Institute and State University, 4044 Derring Hall, Blacksburg, VA 24061, (2)Museum für Naturkunde, Invalidenstr. 43, Berlin, 10115, Germany, (3)Department of Geological and Environmental Sciences, Western Michigan University, 1903 W. Michigan Ave, Kalamazoo, MI 49008-5241, (4)Natural Resources Canada Geological Survey of Canada, 1500-605 Robson Street, Vancouver, BC V6B5J3, CANADA, (5)Department of Earth Sciences, Durham University, South Road, Durham, DH13LE, United Kingdom, (6)Division of Geological and Planetary Sciences, California Institute of Technology, 1200 East California Boulevard, Pasadena, CA 91125, (7)Florida State University Earth, Ocean and Atmospheric Science, EOAS Building 1011 Academic Way, Tallahassee, FL 32306-4100, (8)Department of Geology and Environmental Geosciences, College of Charleston, Charleston, SC 29424, (9)Institute of Earth Sciences, Utrecht University, Budapestlaan 4, Utrecht, 3584 CD, Netherlands

Poster

Monday, 11 October, 8:10 AM – 8:30 AM

75-1 A LONG-TERM CARBON ISOTOPE RECORD ACROSS THE TRIASSIC-JURASSIC TRANSITION FROM ALASKA

MARROQUÍN, Selva, Caltech, 1200 E California Blvd, MC 100-23, Pasadena, CA 91125, CARUTHERS, Andrew H., Department of Geological and Environmental Sciences, Western Michigan University, 1903 W. Michigan Ave, Kalamazoo, MI 49008-5241, ABERHAN, Martin, Museum für Naturkunde, Invalidenstr. 43, Berlin, 10115, Germany, GOLDING, Martyn, Natural Resources Canada Geological Survey of Canada, 1500-605 Robson Street, Vancouver, BC V6B5J3, CANADA, GRÖCKE, Darren R., Department of Earth Sciences, Durham University, South Road, Durham, DH13LE, United Kingdom, MCCABE, Kayla, Department of Geosciences, Virginia Polytechnic Institute and State University, 4044 Derring Hall, Blacksburg, VA 24061, OWENS, Jeremy, Florida State University Earth, Ocean and Atmospheric Science, EOAS Building 1011 Academic Way, Tallahassee, FL 32306-4100, THEM II, Theodore R., Department of Geology and Environmental Geosciences, College of Charleston, Charleston, SC 29424, TRABUCHO

ALEXANDRE, João, *Institute of Earth Sciences, Utrecht University, Heidelberglaan 2, Utrecht, 3584 CS, Netherlands*, VEENMA, Yorick, *Institute of Earth Sciences, Utrecht University, Budapestlaan 4, Utrecht, 3584 CD, Netherlands* and GILL, Benjamin, *Department of Geosciences, Virginia Tech, 926 West Campus Drive, Blacksburg, VA 24061*

Abstract

Monday, 11 October, 9:00 AM – 1:00 PM

92-2 USING INSAR DATA TO MEASURE VERTICAL DISPLACEMENT IN COASTAL SOUTH CAROLINA

LINDER, Charles, *Geology, College of Charleston, Charleston, SC 29403* and HARRIS, M., *202 Calhoun Street, Charleston, SC 29424*

Poster

Monday, 11 October, 2:30 PM – 6:30 PM

122-6 EVALUATING SEDIMENTARY MERCURY CONCENTRATIONS ACROSS THE LATE DEVONIAN FRASNIAN-FAMMENIAN MASS EXTINCTION EVENT FROM THE MICHIGAN AND APPALACHIAN BASINS

LUKSCH, Corinne K.¹, LEROY, Matthew A.², HARRISON III, William B.³, FORMOLO, Michael J.⁴, RIEDINGER, Natascha⁵, CARUTHERS, Andrew H.⁶, GILL, Benjamin² and THEM II, Theodore R.¹, (1)Department of Geology and Environmental Geosciences, College of Charleston, Charleston, SC 29424, (2)Department of Geosciences, Virginia Tech, 926 West Campus Drive, Blacksburg, VA 24061, (3)Michigan Geological Survey, Western Michigan University, Western Michigan University, Department of Geosciences, Kalamazoo, MI 49008, (4)ExxonMobil Upstream Integrated Solutions, Spring, TX 77389, (5)Oklahoma State University Boone Pickens School of Geology, 105 Noble Research Ctr, Stillwater, OK 74078-3030, (6)Department of Geological and Environmental Sciences, Western Michigan University, 1903 W. Michigan Ave, Kalamazoo, MI 49008-5241

Poster

Monday, 11 October, 3:30 PM – 3:45 PM

97-8 A NEW LONG-SNOUDED AND LONG-NECKED POLYCOTYLID PLESIOSAUR FROM THE PIERRE SHALE OF WYOMING

PERSONS IV, Walter, *Geology and Environmental Geosciences, College of Charleston, Charleston, SC 29403; Glenrock Paleon Museum, Glenrock, WY 82637*, STREET, Hallie, *Rochester Institute of Vertebrate Paleontology, Rochester, NY 14610* and KELLEY, Amanda, *Department of Biology, College of Charleston, Charleston, SC 29424*

Abstract

Monday, 11 October, 5:00 PM – 5:15 PM

103-14 MOVING FROM VULNERABILITY MAPPING TO RESILIENCE PLANNING LESSONS FROM CHARLESTON SC

LEVINE, Norman, College of Charleston Department of Geology, 202 Calhoun St, Charleston, SC 29424-3501; Geology and Environmental Geosciences, College of Charleston, 202 Calhoun Street, Charleston, SC 29407 and **KNAPP, Landon**, South Carolina Sea Grant Consortium, Low Country Hazards Center, 202 Calhoun Street, Charleston, SC 29424

Abstract

Tuesday, 12 October, 9:05 AM – 9:20 AM

136-5 ENABLING ACCESS AND USE OF NASA EARTH SCIENCE DATA IN DISASTER SITUATIONS WITH THEMATIC DATA PATHFINDERS

HALL, Cynthia, NASA Earth Science Data Systems, 5217 Chicory Ln, North Charleston, SC 29420-7571 and **WARD, Kevin**, NASA Earth Science Data Systems, 8800 Greenbelt Road,, Greenbelt, MD 20771

Abstract

Wednesday, 13 October, 9:00 AM – 1:00 PM

223-7 CO-PRODUCTION OF KNOWLEDGE IN THE GEOSCIENCES: SCIENCE-TO-ACTION IN COASTAL SOUTH CAROLINA

KNAPP, Landon, South Carolina Sea Grant Consortium, Low Country Hazards Center, 202 Calhoun Street, Charleston, SC 29424, **LEVINE, Norman**, College of Charleston Department of Geology, 202 Calhoun St, Charleston, SC 29424-3501; Department of Geology and Environmental Geosciences, College of Charleston, 202 Calhoun Street, Charleston, SC 29424 and **KAUFMAN, Charlie**, South Carolina Emergency Management Division, Columbia, SC 29201

Poster

Wednesday, 13 October, 9:00 AM – 1:00 PM

226-13 TERRESTRIAL MERCURY CONCENTRATION RECORDS ACROSS THE CRETACEOUS-PALEOGENE INTERVAL IN NORTH AMERICA

BUCK, Roxanne¹, **KNIGHT, Marisa D.**¹, **PREMAK, Joshua**¹, **BERCOVICI, Antoine D.**², **LYSON, Tyler R.**³ and **THEM II, Theodore**¹, (1)Department of Geology and Environmental Geosciences, College of Charleston, Charleston, SC 29424, (2)University of Nottingham, Nottingham, NG7 2RD, United Kingdom, (3)Denver Museum of Nature and Science, Denver, CO 80205

Poster

Wednesday, 13 October, 11:20 AM – 11:35 AM

205-12 MONITORING AND MODELING THE GROUNDWATER FRESH-SALTWATER BOUNDARY ON KIAWAH ISLAND SC

MOULTON, Dedrick E., Master of Environmental Studies, College of Charleston, 202 Calhoun Street, Charleston, SC 29424, **LEVINE, Norman**, College of Charleston Department of Geology, 202 Calhoun St, Charleston, SC 29424-3501, **KNAPP, Landon**, South Carolina Sea Grant Consortium, Low Country Hazards Center, 202 Calhoun Street, Charleston, SC 29424, **CALLAHAN, Timothy J.**, Geology and Environmental Geosciences, College of Charleston, 66 George Street, Charleston, SC 29424 and **BUNDRICK, Melton**, Kiawah Conservancy, Kiawah Island, SC 29455

Abstract

Thursday, 14 October, 10:00 AM – 2:00 PM

505 NASA Data Made Easy: Getting Started with Synthetic Aperture Radar

Heidi Kristenson¹, **Helen (Baldwin) Parache**², **Africa Flores-Anderson**² and **Cynthia Hall**³, (1)Alaska Satellite Facility, Fairbanks, AK(2)NASA, NASA Marshall Space Flight Center - SERVIR, Huntsville, AL(3)**NASA Earth Science Data Systems, North Charleston, SC**

Short Course