

## **MICHAEL M. BENEDETTI**

Department of Earth and Ocean Sciences

University of North Carolina Wilmington

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### **EXPERTISE**

Physical geography and Quaternary geology; geomorphology, soils, and geoarchaeology.

### **EDUCATION**

Ph.D., Geography (Minor in Soil Science), University of Wisconsin-Madison, 2000.

M.S., Geography, University of Wisconsin-Madison, 1993.

A.B., Geography (Honors), University of Chicago, 1991.

### **APPOINTMENTS**

2015-Present: Professor, University of North Carolina Wilmington.

2014-Pres.: Adjunct Researcher, Interdisciplinary Center for Archaeology and Evolution of Human Behavior (ICArEHB), University of Algarve, Portugal.

2006-2015: Associate Professor, University of North Carolina Wilmington.

2000-2006: Assistant Professor, University of North Carolina Wilmington.

1997-2000: Lecturer, University of Wisconsin-Madison.

1995-1997: Graduate Research Assistant, University of Wisconsin-Madison.

1991-1995: Graduate Teaching Assistant, University of Wisconsin-Madison.

### **PROFESSIONAL AFFILIATIONS**

Association of American Geographers

Geological Society of America

American and International Quaternary Associations (AMQUA, INQUA)

Society for American Archaeology, European Archaeology Association (SAA, EAA)

### **GRANTS AND AWARDS**

#### **Grants – External Sources**

Research Grant, National Science Foundation, Archaeology Program, 2022-2025. Collaborative Research: Long term accommodation to climate change. BCS-2150662, \$79,668.

Research Grant Supplement, National Science Foundation, Research Experiences for Undergraduates, 2018. Undergraduate research into fine and coarse sediment deposition processes at Lapa do Picareiro, Portugal. Supplement to BCS-1725015, \$11,474.

Research Grant, National Science Foundation, Archaeology Program, 2017-2020. Collaborative Research: Inquiry into the origins of modern human distributions. BCS-1725015, \$95,322.

Research Grant Supplement, National Science Foundation, Research Experiences for Undergraduates, 2015. Thin section analysis and digital photomodelling for site formation processes at Lapa do Picareiro, Portugal. Supplement to BCS-1420453, \$11,250.

Research Grant, National Science Foundation, Archaeology Program, 2014-2017. Collaborative Research: Neanderthal and modern human response to environmental change at the Middle-Upper Paleolithic transition, Lapa do Picareiro, Portugal. BCS-1420453, \$77,322.

Research Grant Supplement, National Science Foundation, Research Experiences for Undergraduates, 2014. Sedimentological and geochemical approaches to site formation at the Middle-Upper Paleolithic boundary: Lapa do Picareiro, Portugal. BCS-1449685, \$5,060.

Research Grant Supplement, National Science Foundation, Research Experiences for Undergraduates, 2012. Integrated Field, GIS, and Remote Sensing Methods for Studying the Paleolithic Geoarchaeology of Portuguese Estremadura. BCS-1240608, \$5,083.

Research Grant, National Science Foundation, Archaeology Program, 2011-2014. Collaborative Research: Human Responses to Late Pleistocene Coastal Environmental Change in Portuguese Estremadura. BCS-1118183, \$136,014.

Research Grant, Association of American Geographers, 2008. Geomorphic Response to Climate and Sea Level Change: Estremadura Dune Field, Portugal. \$1,000.

Research Grant, National Park Service, Cooperative Ecosystems Study Unit, 2003-2005. Sedimentation study at Sny Magill Unit, Effigy Mounds National Monument. \$19,994.48.

### **Grants – UNCW Sources**

Faculty Development and Course Preparation Stipends, UNCW Academic Affairs, 2020. \$2000 to support online course development during the COVID-19 pandemic.

International Travel Awards, UNCW International Programs, 2006-07, 2009-17. Up to \$1200 each year to support field research and conferences in Europe and Africa.

Research Reassignment, UNCW College of Arts & Sciences, Fall Semester 2016. Late Pleistocene Environmental Change and Paleolithic Geoarchaeology of Lapa do Picareiro, Portugal.

UNCW Support for Undergraduate Research and Creativity Award (SURCA), 2016. Thin Section Analysis of Sediment Samples from Lapa do Picareiro, Portugal. \$4,653.

Enhancing Undergraduate Research Award, UNCW College of Arts & Sciences (Mike Benedetti and Andrea Hawkes, PIs), 2013. International Field and Laboratory Research: Coastal Sedimentology, Tectonics, and Geoarchaeology of the Central Portuguese Coast. \$9,497.

Summer Research Initiative, UNCW College of Arts & Sciences, 2009. Landscape Response to Climate Change: New Evidence from Oxygen Isotope Stage 3. \$3,500.

Research Reassignment, UNCW College of Arts & Sciences, Spring Semester 2009. Late Quaternary environmental change and geoarchaeology of central Portugal.

Charles L. Cahill Award, UNCW Graduate School, 2008. Geomorphic response to climate and sea level change, Estremadura dune field, Portugal. \$3,000.

Charles L. Cahill Award, UNCW Graduate School, 2005. Field and laboratory analysis of Bh horizons in sandy soils of New Hanover County, North Carolina. \$2,500.

Summer Research Initiative, UNCW College of Arts & Sciences, 2005. Geomorphic response to environmental change: depositional history of the Cape Fear River. \$3,500.

Marine Science Pilot Project, UNCW Center for Marine Science, 2003-2004. From source to sea: an analysis of fluvial sediment delivery to the Cape Fear River estuary. M.M. Benedetti, L.A. Leonard, and M.S. Smith, co-investigators. \$18,885.

Summer Pedagogy Development Stipend, UNCW Center for Teaching Excellence, 2002. New teaching strategies for physical geography labs. \$3,000.

Summer Research Initiative, UNCW College of Arts & Sciences, 2001. Measuring floodplain sedimentation rates in response to environmental change. \$3,000.

Charles L. Cahill Award, UNCW Graduate School, 2000. Quaternary environments of the lower Cape Fear River valley. \$2,500.

## Other Awards, Participation in Grants and Workshops

- Research Grant (Non-PI Participant), European Research Council, 2023-2028. Dispersals, resilience, and innovation in Late Pleistocene SE Africa. ERC-101052761, €2,500,000, P.I. Nuno Bicho.
- Research Grant (Non-PI Participant), Portuguese Science and Technology Foundation, 2016-2018. Stone Age Vilankulos: Modern Human origins research south of the Rio Save, Mozambique. PTDC/EPH-ARQ/4168/2014, €198,897, P.I. Jonathan Haws.
- UNCW Chancellor's Teaching Excellence Award, 2014.
- Research Grant (Non-PI Participant), Portuguese Science and Technology Foundation, 2013-2015. Middle Stone Age archaeology and the origins of modern humans in southern Mozambique. PTDC/EPH-ARQ/4998/2012, €194,504, P.I. Nuno Bicho.
- Research Grant (Non-PI Participant), Wenner-Gren Foundation for Anthropological Research, 2012. Middle Stone Age archaeology and modern human origins research in southern Mozambique. \$19,525, P.I. Jonathan Haws.
- Marsico Visiting Scholar, University of Denver, Department of Geography, 2010.
- Invited Participant, On the Cutting Edge Workshop: Teaching Climate Change. National Association of Geoscience Teachers, Bozeman MT, August 2006.
- Research Grants (Non-PI Participant), National Science Foundation, Archaeology Program, 2005-2008. Late Pleistocene Coastal Adaptations in Central Portugal. BCS-1455145, BCS-0715279, \$159,600, P.I. Jonathan Haws.
- Invited Participant, On the Cutting Edge Workshop for Early Career Faculty. National Association of Geoscience Teachers, Williamsburg VA, June 2002.
- Graduate Teaching Award, University of Wisconsin Graduate School, 1995.
- Outstanding Student in Geography, Illinois Geographical Society, 1991.

## PUBLICATIONS (\* student co-author)

### Peer-Reviewed Journal Articles

- Rüther, P.L., Husic, I.M., Bangsgaard, P., Gregersen K.M., Pantmann, P., Carvalho, M., Godinho, R.M., Friedl, L., Cascalheira, J., Taurozzi, A.J., Jørkov, M.L., Benedetti, M.M., Haws, J.A., Bicho, N.F., Welker, F., Cappellini, E., Olsen, J.V., 2022. SPIN enables high throughput species identification of archaeological bone by proteomics. *Nature Communications* 13: 2458. <https://doi.org/10.1038/s41467-022-30097-x>.
- Carvalho, M., Jones, E.L., Ellis\*, M.G., Cascalheira, J., Bicho, N., Meiggs, D., **Benedetti, M.M.**, Friedl, L., Haws, J.A., 2022. Neanderthal palaeoecology in the late Middle Palaeolithic of western Iberia: a stable isotope analysis of ungulate teeth from Lapa do Picareiro (Portugal). *Journal of Quaternary Science* 37: 300-319. <https://doi.org/10.1002/jqs.3363>.
- Haws, J.A., **Benedetti, M.M.**, Bicho, N.F., Cascalheira, J., Ellis\*, M.G., Carvalho, M., Friedl, L., Pereira, T., Talamo, S., 2021. The early Aurignacian at Lapa do Picareiro really is that old: A comment on "The late persistence of the Middle Palaeolithic and Neandertals in Iberia: A review of the evidence for and against the Ebro Frontier model." *Quaternary Science Reviews* 274: 107261. <https://doi.org/10.1016/j.quascirev.2021.107261>.
- Haws, J.A., **Benedetti, M.M.**, Carvalho\*, M., Ellis\*, M.G., Pereira, T., Cascalheira, J., Bicho, N.F., Friedl, L., 2021. Human adaptive responses to climate and environmental change during the Gravettian of Lapa do Picareiro (Portugal). *Quaternary International* 587: 4-18. <https://doi.org/10.1016/j.quaint.2020.08.009>.

- Haws, J.A., **Benedetti, M.M.**, Talamo, S., Bicho, N., Cascalheira, J., Ellis\*, M.G., Carvalho\*, M.M., Friedl, L., Pereira, T.R., Zinsious, B.K., 2020. The early Aurignacian dispersal of modern humans into westernmost Eurasia. *PNAS* 117: 25414-25422. <https://doi.org/10.1073/pnas.2016062117>.
- Haws, J.A., **Benedetti, M.M.**, Funk, C.L., Bicho, N.F., Pereira, T., Marreiros, J., Daniels, J.M., Forman, S.L., Minckley, T.A., Denniston, R.F., 2020. Late Pleistocene landscape and settlement dynamics of Portuguese Estremadura. *Journal of Field Archaeology* 45: 222-248. <https://doi.org/10.1080/00934690.2020.1733780>.
- Benedetti, M.M.**, Haws J.A., Bicho N.F., Friedl L., Ellwood B.B., 2019. Late Pleistocene site formation and paleoclimate at Lapa do Picareiro, Portugal. *Geoarchaeology* 34: 698-726. <https://doi.org/10.1002/gea.21735>.
- Taylor\*, A.K., **Benedetti, M.M.**, Haws, J.A., Lane, C.S. 2019. The hydrogen isotopic compositions of sedimentary mid-chain n-alkanes record ecological change at a Portuguese paleowetland. *Quaternary International* 532: 23-33. <https://doi.org/10.1016/j.quaint.2019.09.009>.
- Denniston, R.E., Houts\*, A.N., Asmerom, Y., Wannamaker, A.D., Haws, J.A., Polyak, V.J., Thatcher\*, D.L., Altan-Ochir, S., Borowske, A.C., Breitenbach, S.F.M., Ummenhofer, C.C., Regala, F.T., **Benedetti, M.M.**, Bicho, N.F., 2018. A stalagmite test of North Atlantic SST and Iberian hydroclimate linkages over the last two glacial cycles. *Climate of the Past* 14: 1893-1913. <https://doi.org/10.5194/cp-14-1893-2018>.
- Bicho, N., Cascalheira, J., Andre, L., Haws, J., Gomes, A., Gonçalves, C., Raja\*, M., **Benedetti, M.**, 2018. Portable art and personal ornaments from Txina-Txina: a new Later Stone Age site in the Limpopo River Valley, southern Mozambique. *Antiquity* 92: e2. <https://doi.org/10.15184/aqy.2018.95>.
- Ghoneim, E., Dorofeeva\*, A., **Benedetti, M.**, Gamble, D., Leonard, L., AbuBakr, M., 2018. Vegetation drought analysis in Tunisia: a geospatial investigation. *HSOA Journal of Atmospheric and Earth Sciences* 1: 002. <https://doi.org/10.24966/AES-8780/100002>.
- Taylor\*, A.K., **Benedetti, M.M.**, Haws, J.A., Lane, C.S. 2018. Mid-Holocene Iberian hydroclimate variability and paleoenvironmental change: molecular and isotopic insights from Praia Rei Cortiço, Portugal. *Journal of Quaternary Science* 33: 79-92. <https://doi.org/10.1002/jqs.3000>.
- Spencer\*, J., Jones\*, K.B., Gamble, D.W., **Benedetti, M.M.**, Taylor\*, A.K., Lane, C.S., 2017. Late-Quaternary records of vegetation and fire in southeastern North Carolina from Jones Lake and Singletary Lake. *Quaternary Science Reviews* 174: 33-53. <https://doi.org/10.1016/j.quascirev.2017.09.001>.
- Bicho, N., Haws, J., Raja\*, M., Madime\*, O., Gonçalves, C., Cascalheira, J., **Benedetti, M.**, Pereira, T., Aldeias, V., 2016. Middle and Late Stone Age of the Niassa Region, Northern Mozambique: preliminary results. *Quaternary International* 404: 87-99.
- Minckley, T.A., Haws, J.A., **Benedetti, M.M.**, Brewer, S.C., Forman, S.L., 2015. Last interglacial vegetation and climate history from the Portuguese coast. *Journal of Quaternary Science* 30: 59-69.
- Pereira, T., **Benedetti, M.M.**, 2013. Raw material management as a response to local and global environmental constraints: a model for the Paleolithic of southwestern Iberia. *Quaternary International* 318: 19-32.
- Conyers, L.B., Daniels, J.M., Haws, J.A., **Benedetti, M.M.**, 2013. An Upper Paleolithic landscape analysis of coastal Portugal using ground penetrating radar. *Archaeological Prospection* 20: 45-51.

- Kubátová\*, I., Friedl, L., Jurman\*, K., Lungová\*, V., Haws, J., **Benedetti, M.**, 2013. Methodology of the Paleolithic Cave Site of Lapa do Picareiro. (In Czech, with English abstract.) *Antropowebzin* 2/2013: 57-65.
- Tůma\*, P., Šneberger, J., Hošek\*, R., Haws, J., **Benedetti, M.**, Friedl, L., 2012. Changes in approach of Neanderthal study – research in Lapa do Picareiro, Portugal. (In Czech, with English abstract.) *Antropowebzin* 3/2012: 209-220.
- Ghoneim, E., **Benedetti, M.M.**, El-Baz, F., 2012. An integrated remote sensing and GIS analysis of the Kufrah Paleoriver, Eastern Sahara. *Geomorphology* 139: 242-257.
- Benedetti, M.M.**, Beach, T., Cordova, C., 2011. Soils, sediments, and geoarchaeology: introduction. *Catena* 85: 83-86.
- Haws, J.A., **Benedetti, M.M.**, Funk, C.L., Bicho, N.F., Daniels, J.M., Hesp, P.A., Minckley, T.A., Forman, S.L., Jeraj, M., Gibaja\*, J.F., Hockett, B.S., 2010. Coastal wetlands and Neanderthal settlement of Portuguese Estremadura. *Geoarchaeology* 25: 709-744.
- Benedetti, M.M.**, Haws, J.A., Funk, C.L., Daniels, J.M., Hesp, P.A., Bicho, N.F., Minckley, T.A., Ellwood, B.B., Forman, S.L., 2009. Late Pleistocene raised beaches of coastal Estremadura, central Portugal. *Quaternary Science Reviews* 28: 3428–3447.
- Rauscher, S.A., Pal, J.S., Diffenbaugh, N.S., **Benedetti, M.M.**, 2008. Future changes in runoff timing over the western United States. *Geophysical Research Letters* 35: L16703.
- Jenkins\*, S.B., Gamble, D.W., **Benedetti, M.M.**, Willey, J., 2007. The effects of local weather patterns on nitrate and sulfate rainwater concentrations in Wilmington, NC. *The North Carolina Geographer* 14: 29-38.
- Benedetti, M.M.**, Daniels, J.M., Ritchie, J.C., 2007. Predicting vertical accretion rates at an archaeological site on the Mississippi River floodplain: Effigy Mounds National Monument, Iowa. *Catena* 69: 134-149.
- Benedetti, M.M.**, Raber\*, M.J., Smith, M.S., Leonard, L.A., 2006. Mineralogical indicators of alluvial sediment sources in the Cape Fear River basin, North Carolina. *Physical Geography* 27: 258-281.
- Benedetti, M.M.**, 2003. Controls on overbank deposition in the Upper Mississippi River. *Geomorphology* 56: 271-290.
- Jacaruso\*, J., Gamble, D.W., **Benedetti, M.M.**, 2001. Hurricanes and snow: a common occurrence in eastern North Carolina. *The North Carolina Geographer* 9: 13-23.

#### Other Peer-Reviewed Publications and Abstracts

- Haws, J.A., **Benedetti, M.M.**, Cascalheira, J.M., Bicho, N.F., Carvalho, M.C., Zinsious, B.K., Ellis, M.G., Friedl, L., 2019. Human occupation during the late Pleniglacial at Lapa do Picareiro (Portugal). In: Schmidt, I., Cascalheira, J., Bicho, N., Weniger, G. (Eds.), *Human Adaptations to the Last Glacial Maximum: The Solutrean and its Neighbors*, Cambridge Scholars Publishing, Newcastle upon Tyne, pp. 188-213.
- Benedetti, M.M.**, Beach, T., Cordova, C. (Eds.), 2011. Soils, Sediments, and Geoarchaeology: a special issue based on theme sessions at the 2009 Annual Meeting of the Association of American Geographers, Las Vegas, NV. *Catena*, vol. 85.
- Haws, J.A., Funk, C.L., Daniels, J.M., **Benedetti, M.M.**, Bicho, N.F., 2011. Paleolithic landscapes and seascapes of Portuguese Estremadura. In: Bicho, N.F., Haws J.A. and Davis, L. (Eds.), *Trekking the Shore: Changing Coastlines and the Antiquity of Coastal Settlement*. Springer.
- Benedetti, M.M.**, Haws, J.A., Funk, C.L., Daniels, J.M., Bicho, N.F., Ellwood, B.B., Forman, S.L., 2010. Late Quaternary records from the central Portuguese coast: Geomorphic response to environmental change during Oxygen Isotope Stages 3 and 2. *Geological Society of America*

*Abstracts with Programs* 42: 74.

- Benedetti, M.M.**, Haws, J.A., Funk, C.L., Daniels, J.M., Hesp, P.A., Bicho, N.F., Minckley, T.A., Ellwood, B.B., Forman, S.L. 2009. Late Quaternary landscapes and seascapes of Portuguese Estremadura: geomorphic response to environmental change during MIS 3 and 2. Livro de Resúmenes, VII Reunião do Quaternário Ibérico. Universidade do Algarve, Faro, Portugal, 79-82.
- Haws, J.A., Funk, C.L., **Benedetti, M.M.**, Bicho, N.F., Daniels, J.M., Hockett, B.S., Jeraj, M. 2009. Late Quaternary landscapes and seascapes of Portuguese Estremadura: Middle and Upper Paleolithic settlement. Proceedings VII Iberian Quaternary Union. Livro de Resúmenes, VII Reunião do Quaternário Ibérico. Universidade do Algarve, Faro, Portugal, 190-192.
- Gray\*, C.M., **Benedetti, M.M.**, 2009. Buried soils as stratigraphic marker horizons on the Cape Fear River floodplain, Bladen County, NC. Southeastern GSA meeting, Tampa FL. *Geological Society of America Abstracts with Programs* 41: 46.
- Raber\*, M.J., Leonard, L.A., **Benedetti, M.M.**, Smith, M.S., 2004. Characteristics of sediments transported and deposited in the Cape Fear River estuary, southeastern North Carolina. *Geological Society of America Abstracts with Programs* 36: 87.
- Benedetti, M.M.**, 2002. Decreasing suspended sediment concentrations in the Upper Mississippi River. *Geological Society of America Abstracts with Programs* 34: 298.

#### **Other Publications (not peer-reviewed)**

- Benedetti, M.M.**, Ghoneim, E., 2014. *Student Exercises for Physical Geography (2e)*. New York: Pearson Education.
- Benedetti, M.M.**, 2006. *Sedimentation Study at Sny Magill Unit, Effigy Mounds National Monument: Final Report*. National Park Service, South Florida-Caribbean CESU.
- Benedetti, M.M.**, 2003. *Student Workbook for Physical Geography*. Dubuque: Kendall/Hunt.
- Benedetti, M.M.**, 1990. Urban municipal development, 1836-1900. In: Conzen, M.P., Daniel, A.R. (eds.), *Lockport Legacy: Themes in the Historical Geography of an Illinois Canal Town*. Chicago: University of Chicago Committee on Geographical Studies, 6-13.

#### **PROFESSIONAL PRESENTATIONS (\* student co-author)**

##### **Association of American Geographers (AAG)**

- Benedetti, M.M.**, Haws, J.A., Kubatova, I., Huckins\*, G., 2016. Geoarchaeological evidence in caves: linking the paleoenvironmental, sedimentary, and cultural chronologies of Lapa do Picareiro, Portugal. Annual Meeting, San Francisco CA.
- Taylor\*, A.K., **Benedetti, M.M.**, Haws, J.A., Lane, C.S., 2016. Molecular and isotopic proxies of Holocene hydrology and paleoenvironmental change at Praia Rei Cortiço, Portugal. Annual Meeting, San Francisco CA.
- Swain\*, K.M., **Benedetti, M.M.**, Haws, J.A., LaMaskin, T.A., 2016. Thin section analysis of sediment samples from Lapa do Picareiro, Portugal. Annual Meeting, San Francisco CA.
- Benedetti, M.M.**, Haws, J.A., Bicho, N., 2015. Paleolithic geoarchaeology of Lapa do Picareiro, Portugal. Annual Meeting, Chicago IL.
- Melvin\*, F.L., Taylor\*, A.K., **Benedetti, M.M.**, Haws, J.A., 2015. Anthropogenic sediment markers in caves and rock shelters. Annual Meeting, Chicago IL.
- Knoll\* Jr., R.A., Ghoneim, E., Reber, N., **Benedetti, M.**, Melomo, V., Beaman, T., Marsan\*, Y., 2015. Geospatial and geophysical survey at Fort Caswell, NC. Annual Meeting, Chicago IL.
- Mashaly, J.\*, Ghoneim, E., Gamble, D., **Benedetti, M.**, 2015. Remote sensing and GIS techniques for

assessment of flash flood risk in Quseir, Red Sea coast, Egypt. Annual Meeting, Chicago IL.

Jakubcanin, A. \*, Ghoneim, E., Gamble, D., **Benedetti, M.**, Leonard, L., 2015. Drought vulnerability assessment in Tunisia using remote sensing and GIS techniques. Annual Meeting, Chicago IL.

Haws, J., Pereira, V. \*, Dias, R. \*, Benedetti, I., **Benedetti, M.**, 2015. Reconstructing Late Pleistocene paleoenvironments in central Portugal: a study of animal biogeography from the excavation of Lapa do Picareiro. Annual Meeting Chicago IL.

**Benedetti, M.M.**, Daniels, J.M., Haws, J.A., Forman, S.L., 2013, Heinrich Events as a driver of geomorphic instability, and their role in Paleolithic archaeological records from the central Portuguese coast. Annual Meeting, Los Angeles CA.

Jazwinski\*, J.H., Klinefelter\*, T.J., Schaubach\*, M.B., **Benedetti, M.M.**, Minckley, T.A., Lane, C.S, Haws, J.A., Forman, S.L., 2013. The last glacial cycle on the Iberian Atlantic coast: sedimentary evidence from Praia Rei Cortiço and Praia d'El Rei, central Portugal. Annual Meeting, Los Angeles CA.

**Benedetti, M.M.**, Haws, J.A., Daniels, J.M., 2012. The biogeomorphic response model and Quaternary landscape evolution in central Portugal. Annual Meeting, New York NY.

Klinefelter\*, T.J., Jazwinski\*, J.H., Patrick\*, J.S., Pollard\*, D.W., Forman, S.L., Daniels, J.M., Haws, J.A., **Benedetti, M.M.**, 2012. The Caldas da Rainha geosol and Quaternary landscape evolution in central Portugal. Annual Meeting, New York NY.

Pollard\*, D.W., Jazwinski\*, J.H., Patrick\*, J.S., Klinefelter\*, T.J., Ellwood, B.B., Haws, J.A., **Benedetti, M.M.**, 2012. Quaternary stratigraphy, mineralogy, and geoarchaeology of Lapa do Picareiro, Portugal. Annual Meeting, New York NY.

**Benedetti, M.M.**, Patrick\*, J.S, Haws, J.A., Hesp, P.A., Ellwood, B.B., Daniels, J.M., Bicho, N.F., Minckley, T.A., Forman, S.L., 2011. Coastal sediments of central Portugal: geomorphic response to Late Quaternary tectonics, sea level, and climate. Annual Meeting, Seattle WA.

Patrick\*, J.S., **Benedetti, M.M.**, Daniels, J.M., 2011. Coastal sediments of central Portugal: sedimentology of the Lagoa de Óbidos. Annual Meeting, Seattle WA.

**Benedetti, M.M.**, Minckley, T.A., Haws, J.A., Daniels, J.M., Funk, C.L., Bicho, N.F., Forman, S.L., 2010. Praia Rei Cortiço I: Landscape response to climate and sea level change on the central Portuguese coast. Annual Meeting, Washington DC.

Minckley, T.A., **Benedetti, M.M.**, Haws, J.A., Daniels, J.M., Funk, C.L., Bicho, N.F., Forman, S.L., 2010. Praia Rei Cortico II: Late Quaternary paleobotany of the central Portuguese coast. Annual Meeting, Washington DC.

**Benedetti, M.M.**, Daniels, J.M., Haws, J.A., Funk, C.L., Hesp, P.A., Bicho, N.F., 2009. Late Quaternary landscapes of Portuguese Estremadura: Climate-driven geomorphic change during MIS 3. Annual Meeting, Las Vegas NV.

Haws, J.A., Funk, C.L., Bicho, N.F., **Benedetti, M.M.**, Daniels, J.M., 2009. Paleolithic landscapes and seascapes, coastal Portugal. Annual Meeting, Las Vegas NV.

**Benedetti, M.M.**, Daniels, J.M., Haws, J.A., Funk, C.A., Hesp, P.A., 2008. Geomorphic Adjustments to Quaternary Climate and Sea Level Change, Estremadura Dune Field, Portugal. Annual Meeting, Boston MA.

Daniels, J.M., **Benedetti, M.M.**, Haws, J.A., Funk, C.A., 2008. Soil-geomorphic relationships in coastal Estremadura, Portugal: implications for paleoenvironmental reconstruction and archaeological survey. Annual Meeting, Boston MA.

Neal\*, L.T., **Benedetti, M.M.**, 2007. Streamflow response to tropical and extra-tropical storms on the Carolina coastal plain. Annual Meeting, San Francisco CA.

- Benedetti, M.M.**, Daniels, J.M., Haws, J.A., Funk, C.L., 2006. Geomorphic interpretation of late Paleolithic occupation in the Estremadura region of Portugal. Annual Meeting, Chicago IL.
- Benedetti, M.M.**, Raber\*, M.J., Smith, M.S., Leonard, L.A., 2005. Physical and mineralogical characteristics of floodplain sediments in the Cape Fear River basin, North Carolina. Annual Meeting, Denver CO.
- Benedetti, M.M.**, Daniels, J.M., 2004. Estimation, prediction, and monitoring of vertical accretion rates at a cultural resource site: Effigy Mounds National Monument, Iowa. Annual Meeting, Philadelphia PA.
- Benedetti, M.M.**, 2002. Recent floods and suspended sediment transport in the Upper Mississippi River. Annual Meeting, Los Angeles CA.
- Benedetti, M.M.**, 2000. Calculation of effective sediment-transporting discharges in the Upper Mississippi Valley. Annual Meeting, Pittsburgh PA.
- Knox, J.C., **Benedetti, M.M.**, 1995. Sedimentation associated with large floods on the Upper Mississippi River. Annual Meeting, San Francisco CA.

### Other Conferences

- Benedetti, M.**, Haws, J., 2019. Geomorphological and geoarchaeological impacts of Heinrich stadials in central Portugal. 20<sup>th</sup> Congress International Quaternary Association (INQUA), Dublin, Ireland.
- Benedetti, M.**, Haws, J., Denniston, R., Ellwood, B., Friedl, L., 2019. Late Pleistocene paleoclimate proxies from cave sediments and speleothems in the Estremadura region of central Portugal. 20<sup>th</sup> INQUA Congress, Dublin.
- Haws, J., **Benedetti, M.**, Cascalheira, J., Bicho, N., Carvalho\*, M., Zinsious\*, B., Ellis\*, G., Friedl, L., 2019. Human adaptive responses to abrupt climate change in western Iberia during MIS 3 and 2. 20<sup>th</sup> INQUA Congress, Dublin.
- Haws, J., **Benedetti, M.**, Pereira, T., Bicho, N., Cascalheira, J., 2019. Human adaptive responses to climate and environmental change during the Gravettian of Lapa do Picareiro, Portugal. World of Gravettian Hunters, 3rd Conference, Krakow, Poland.
- Benedetti, M.**, Haws, J., Friedl, L., 2019. Paleoclimate and site formation processes across the Middle and Upper Paleolithic at Lapa do Picareiro, Portugal. Paleoanthropology Society 2019 Annual Meeting, Albuquerque NM.
- Haws, J., **Benedetti, M.**, Friedl, L., Bicho, N., Cascalheira, J., Carvalho\*, M., Ellis\*, G., Zinsious\*, B., Talamo, S., 2019. Earlier than we thought: the Early Aurignacian technocomplex at Lapa do Picareiro (Portugal) and the arrival of modern humans in southwestern Iberia 40,000 years ago. Paleoanthropology Society 2019 Annual Meeting, Albuquerque NM.
- Carvalho\*, M., Meiggs, D., Jones, E., **Benedetti, M.**, Haws, J., 2019. A stable isotopes analysis of ungulate remains from Lapa do Picareiro: an assessment of refugia concepts during the Middle Paleolithic and transition to Upper Paleolithic. Paleoanthropology Society 2019 Annual Meeting, Albuquerque NM.
- Raja\*, M., Bicho, N., Haws, J., Cascalheira, J., Skosey-Lalonde\*, E., Zinsious\*, B., **Benedetti, M.**, Gonalves, C., Achimo\*, M., Carvalho\*, M., Gomes, A., 2019. Deciphering sediments in archaeological context: Inferences on the palaeoenvironmental changes and the site formation processes in the Middle and Late Stone Age, Txina-Txina, Massingir (Mozambique). Paleoanthropology Society 2019 Annual Meeting, Albuquerque NM.



- Zinsious\*, B., Pereira, T., **Benedetti, M.**, Friedl, L., Haws, J., 2019. Site and assemblage Integrity at Lapa do Picareiro: The Middle to Upper Paleolithic Transition in Portugal from a secure context. Paleoanthropology Society 2019 Annual Meeting, Albuquerque NM.
- Haws, J.A., **Benedetti, M.M.**, Bicho, N.F., 2019. Late Pleistocene Refugia and Neanderthal Extinction in Southern Iberia. Society for American Archaeology 84<sup>th</sup> Annual Meeting, Albuquerque NM.
- Zinsious\*, B., Haws, J., **Benedetti, M.**, Pereira, T., 2019. Site and Assemblage Integrity for Middle and Upper Paleolithic Levels at Lapa do Picareiro, Portugal. Society for American Archaeology 84<sup>th</sup> Annual Meeting, Albuquerque NM.
- Haws, J., **Benedetti, M.**, Friedl, L., Bicho, N., Cascalheira, J., Carvalho, M., 2018. The Middle-Upper Paleolithic transition in southern Iberia: new data from Lapa do Picareiro, Portugal. 8<sup>th</sup> Annual Meeting of the European Society for the Study of Human Evolution (ESHE), Faro, Portugal.
- Carvalho\*, M., Jones, E., Meiggs, D., **Benedetti, M.**, Haws, J., 2018. Assessing environmental change at Lapa do Picareiro (Portugal): a stable isotopes analysis using rabbits (*Oryctolagus cuniculus*) and red deer (*Cervus elaphus*) as paleoenvironmental proxies. 8<sup>th</sup> Annual Meeting of the European Society for the Study of Human Evolution (ESHE), Faro, Portugal.
- Carvalho\*, M., Jones, E., Meiggs, D., **Benedetti, M.**, Haws, J., 2018. Rabbits as paleoenvironmental proxies: a stable isotopes analysis of rabbit (*Oryctolagus cuniculus*) tissues from Lapa do Picareiro (Portugal). 24<sup>th</sup> Annual Meeting of the European Association of Archaeologists, Barcelona, Spain.
- Benedetti, M.M.**, Haws, J.A., Bicho, N.F., Friedl, L., Zinsious\*, B., Carvalho\*, M., Benedetti, I., 2018. Geoarchaeology and Late Pleistocene Paleoclimate at Lapa do Picareiro, Portugal. 18<sup>th</sup> International Union of Prehistoric and Protohistoric Sciences (UISPP), Paris, France.
- Benedetti, I., Haws, J.A., Bicho, N.F., Raja\*, M., Cascalheira, J., Zinsious\*, B., **Benedetti, M.M.**, 2018. Late Holocene Shell Midden and Human Remains from Praia da Rocha, Moçambique. 18<sup>th</sup> International Union of Prehistoric and Protohistoric Sciences (UISPP), Paris, France.
- Haws, J.A., **Benedetti, M.M.**, Carvalho\*, M., Benedetti, I., Zinsious\*, B., Bicho, N.F., Cascalheira, J., Friedl, L., 2018. Seeing short-term human occupations in the palimpsests of deeply stratified caves: an example from Lapa do Picareiro (Portugal). 18<sup>th</sup> International Union of Prehistoric and Protohistoric Sciences (UISPP), Paris, France.
- Haws, J.A., **Benedetti, M.M.**, Carvalho\*, M., Bicho, N.F., Cascalheira, J., Friedl, L., 2018. Understanding human adaptive responses to abrupt climate change in western Iberia during MIS 3 and 2 using multi-scale archaeological, paleoenvironmental, and paleoclimate records. 18<sup>th</sup> International Union of Prehistoric and Protohistoric Sciences (UISPP), Paris, France.
- Haws, J.A., Bicho, N.F., Cascalheira, J., Gonçalves, C., Raja\*, M., **Benedetti, M.M.**, Gomes, A., Carvalho\*, M., Benedetti, I., Zinsious\*, B., Skosey-LaLonde\*, E., 2018. Later Stone Age archaeology in the Limpopo river basin: new evidence from the site of Txina Txina (Massingir, Mozambique). 18<sup>th</sup> International Union of Prehistoric and Protohistoric Sciences (UISPP), Paris, France.
- Carvalho\*, M., Jones, E.L., Meiggs, D., **Benedetti, M.M.**, Haws, J.A., 2018. Rabbits as paleoenvironmental proxies: a stable isotope analysis of rabbit (*Oryctolagus cuniculus*) tooth enamel and bone from Lapa do Picareiro, Portugal. 18<sup>th</sup> International Union of Prehistoric and Protohistoric Sciences (UISPP), Paris, France.
- Denniston, R.F., Houts\*, A.N., Asmerom, Y., Wanamaker, A.D., Haws, J.A., Polyak, V.J., Thatcher\*, D.L., Altan-Ochir, S., Borowske, A., Breitenbach, S., Ummenhofer, C., Regala, F., **Benedetti, M.M.**, Bicho, N.F., 2018. Stalagmite records from west-central Portugal test links between North

- Atlantic paleoceanography and Iberian continental climate over the past two glacial cycles. Geological Society of America North-Central Annual Meeting, Ames IA.
- Haws, J.A., **Benedetti, M.M.**, Bicho, N.F., Cascalheira, J.M., Friedl, L., 2018. Human adaptive responses to abrupt climate change during the Late Pleistocene. Paleoanthropology Society Annual Meeting, Austin, Texas.
- Benedetti, M.M.**, Haws, J.A., 2017. Correlating cave sediment properties and Late Pleistocene paleoclimate at Lapa do Picareiro, Portugal. Geological Society of America Annual Meeting, Seattle, WA.
- Haws, J.A., **Benedetti, M.M.**, Bicho, N.F., Cascalheira, J.M., Zinsious\*, B.K., Carvalho\*, M.M., Benedetti, I., Friedl, L., 2017. Human response to climate and environmental change in Portugal during H2 and the Last Glacial Maximum. The Solutrean 3<sup>rd</sup> International Conference, Faro, Portugal.
- Haws, J.A., **Benedetti, M.M.**, Bicho, N.F., Cascalheira, J.M., Friedl, L., 2017. The Middle-Upper Paleolithic transition in southern Iberia: new dates from Lapa do Picareiro, Portugal. Society for American Archaeology 82nd Annual Meeting, Vancouver, Canada.
- Bicho, N.F., Cascalheira, J., Haws, J., Gonçalves, C., Raja\*, M., Andre\*, L., **Benedetti, M.M.**, Gomes, A., Carvalho\*, M., Zinsious\*, B., 2017. Txina Txina: a Later Stone Age site from the Limpopo basin in southern Mozambique. Paleoanthropology Society 2017 Meeting, Vancouver, Canada.
- Benedetti, M.M.**, Haws, J.A., 2016. Geoarchaeology of Lapa do Picareiro: Linking the sedimentological, paleoenvironmental, and cultural chronologies from a Paleolithic cave in Portugal. Geological Society of America Annual Meeting, Denver CO.
- Haws, J.A., **Benedetti, M.M.**, Bicho, N., Gonçalves, C., Cascalheira, J., Raja\*, M., Zinsious\*, B., Carvalho\*, M., Skosey-Lalonde\*, E., Benedetti, I., Marreiros, J., Pereira, T., Gomes, A., 2016. Stone Age archaeology and Quaternary landscapes in southern Mozambique. Geological Society of America Annual Meeting, Denver CO.
- Knoll\*, R.A., Ghoneim, E., Reber, N., **Benedetti, M.M.**, Marsan, Y., Melomo, V., Beaman, T., 2016. Geospatial and geophysical survey of coastal defenses at Ft. Caswell, NC. Southeastern Section Meeting, Geological Society of America, Columbia SC.
- Daniels, J.M., **Benedetti, M.M.**, Haws, J.A., Bicho, N.F., 2015. Soil-landscape development and late Quaternary environmental change in coastal Estremadura, Portugal. European Geophysical Union, Vienna, Austria.
- Bicho, N., Aldeias, V., **Benedetti, M.**, Cascalheira\*, J., Gonçalves\*, C., Haws, J., Madime\*, O., Pereira, T., Raja\*, M., Zinsious\*, B., 2015. Chicaza rockshelter (Niassa, Mozambique): a preliminary report on stratigraphy and chronology. Annual Meeting of the Paleoanthropology Society, San Francisco CA.
- Cascalheira\*, J., Gonçalves\*, C., Aldeias, V., **Benedetti, M.**, Haws, J., Matos\*, D., Madime\*, O., Raja\*, M., Pereira, T., Zinsious\*, B., Bicho, N., 2015. Stone Age occupations in Northern Mozambique: new evidence from a survey project in the Lunho river valley (Niassa). Annual Meeting of the Paleoanthropology Society, San Francisco CA.
- Pereira, T., Haws, J., **Benedetti, M.**, Manso, C., Alves, L., Bicho, N., Alves, E., 2014. The Neanderthal Cognition: Chert Procurement in SW Iberia using PIXE Analysis. Archaeological Institute of America, Annual Meeting, New Orleans LA.
- Pereira, T., Alves, L., Alves, E., Haws, J., **Benedetti, M.**, Manso, C., Bicho, N., 2014. Reconstructing Middle Paleolithic mobility in the central coast region of Portugal using PIXE analysis on chert artifacts. XVII World UISPP Congress (International Union of Prehistoric and Protohistoric Sciences), Burgos, Spain.

- Bicho, N., Haws, J., **Benedetti, M.**, Riel-Salvatore, J., 2014. Middle Stone Age archaeology and the origins of Modern Humans in Mozambique. 14<sup>th</sup> Congress, PanAfrican Archaeological Association of Prehistory and Related Studies, Johannesburg, South Africa.
- Gonçalves\*, C., Matos\*, D., Haws, J., **Benedetti, M.**, Riel-Salvatore, J., Bicho, N., 2014. Mapping the Early and Middle Stone Age in Mozambique: Preliminary Results. 14<sup>th</sup> Congress, PanAfrican Archaeological Association of Prehistory and Related Studies, Johannesburg, South Africa.
- Benedetti, M.**, Haws, J., Pollard\*, D., 2014. Pleistocene stratigraphy and geoarchaeology of Lapa do Picareiro, central Portugal. Society for American Archaeology Annual Meeting, Austin TX.
- Kubátová\*, I., Galeta, P., **Benedetti, M.**, 2014. Modified Preservation Index for skeletal remains: Case study from the Medieval cemetery at the church of Saint Mari Magdaleny in Pilsen, Czech Republic. Society for American Archaeology Annual Meeting, Austin TX.
- Haws, J., **Benedetti, M.**, Hockett, B., Pereira\*, V., Dias\*, R., 2014. Lapa do Picareiro: A 50,000-year record of human occupation and environmental change in central Portugal. Society for American Archaeology Annual Meeting, Austin TX.
- McDermott\*, K.J., **Benedetti, M.**, Haws, J., Hawkes, A.D., Lane, C.L., Armstrong\*, N.J., Melvin\*, F.L., O'Halloran\*, E.S., 2013. High-resolution mapping for geoarchaeology and paleoenvironmental change in central Portugal. UNCW Undergraduate Research Symposium.
- Benedetti, M.M.**, Haws, J.A., Daniels, J.M., Forman, S.L., 2013. The biogeomorphic response model and Late Pleistocene landscape evolution in central Portugal. Geological Society of America, Annual Meeting, Denver CO.
- Haws, J.A., **Benedetti, M.M.**, Hockett, B.S., Bicho, N.F., Friedl, L., Pereira\*, V., Kubátová\*, I., Dias\*, R., 2013. Lapa do Picareiro: a 50,000-year record of human occupation and environmental change in central Portugal. Geological Society of America, Annual Meeting, Denver CO.
- Haws, J., **Benedetti, M.**, 2013. From the mountains to the sea: Paleolithic ecodynamics in Portuguese Estremadura. European Association of Archaeologists, 19<sup>th</sup> Annual Meeting, Pilsen, Czech Republic.
- Pereira, T., Bicho, N., Haws, J., **Benedetti, M.**, 2013. Of Neanderthal niches: the case of western Iberia. European Association of Archaeologists, 19<sup>th</sup> Annual Meeting, Pilsen, Czech Republic.
- Benedetti, M.M.**, Daniels, J.M., Haws, J.A., Forman, S.L., 2013. Heinrich Events and Late Pleistocene geomorphic instability on the Portuguese coast. 8<sup>th</sup> IAG Conference on Geomorphology, Paris, France.
- Denniston, R., Houts\*, A., Haws, J., Polyak, V., Wanamaker, A., **Benedetti, M.**, Bicho, N., 2013. A stalagmite record of western Iberia climate from the last glacial cycle. 8<sup>th</sup> IAG Conference on Geomorphology, Paris, France.
- Haws, J., Riel-Salvatore, J., Bicho, N., Madime, O., **Benedetti, M.**, Adamowicz\*, L., Matiquida\*, H. Recent research on the Middle Stone Age of coastal Mozambique. 2013 Meeting of the Paleoanthropology Society, Honolulu HI.
- Benedetti, M.M.**, Klinefelter\*, T.J., Daniels, J.M., Forman, S.L., 2012. The Caldas da Rainha Geosol: a geoarchaeological marker horizon for the Pleistocene-Holocene transition in central Portugal. Meeting of the Paleoanthropology Society, Memphis TN.
- Paixão\*, E., Pereira, T., Haws, J.A., **Benedetti, M.M.**, Gibaja, J., Bicho, N.F., 2012. Mira Nascente, a Late Pleistocene site in SW Iberia. Meeting of the Paleoanthropology Society, Memphis TN.
- Haws, J.A., Bicho, N.F., **Benedetti, M.M.**, Ellwood, B.B., Forman, S.L., 2012. Land, sea and ice: linking local sedimentary records of environmental change from Paleolithic archaeological sites in Portugal to regional and global paleoclimatic records from deep-sea and ice cores. Meeting of the Paleoanthropology Society, Memphis TN.

- Haws, J.A., **Benedetti, M.M.**, Bicho, N.F., Pereira, T., Forman, S.L., 2012. From the mountains to the sea: Paleolithic ecodynamics in Portuguese Estremadura. Meeting of the Society for American Archaeology, Memphis, TN.
- Benedetti, M.M.**, Patrick\*, J.S., Haws, J.A., Ellwood, B.B., Hesp, P.A., Daniels, J.M., Bicho, N.F., Forman, S.L., 2011. Late Pleistocene relative sea level high stand deposits of Portuguese Estremadura. XVIII INQUA Congress, International Quaternary Association, Bern, Switzerland.
- Haws, J.A., **Benedetti, M.M.**, Funk, C.L., Bicho, N.F., Daniels, J.M., Hesp, P.A., Minckley, T.A., Forman, S.L., Jeraj, M., Gibaja\*, J.F., Hockett, B.S., 2011. Neanderthal use of coastal wetlands during the last glacial/interglacial cycle in Portuguese Estremadura. XVIII INQUA Congress, International Quaternary Association, Bern, Switzerland.
- Ghoneim, E., El-Baz, F., **Benedetti, M.M.**, 2011. Mapping of the mighty Kufrah Paleoriver system in the eastern Sahara. Geological Society of America, Southeast Section, Wilmington, NC.
- Benedetti, M.M.**, Haws, J.A., Funk, C.L., Daniels, J.M., Bicho, N.F., Ellwood, B.B., Forman, S.L., 2010. Late Quaternary records from the central Portuguese coast: geomorphic response to environmental change during Oxygen Isotope Stages 3 and 2. Geological Society of America Annual Meeting, Denver, CO.
- Haws, J.A., Funk, C.L., **Benedetti, M.M.**, Bicho, N.F., Daniels, J.M., Minckley, T.A., Forman, S.L., 2010. Late Quaternary landscapes and seascapes of Portuguese Estremadura: Middle and Upper Paleolithic settlement (poster). Joint Meeting of the Paleoanthropology Society and the Society for American Archaeology, St. Louis, MO.
- Benedetti, M.M.**, Haws, J.A., Funk, C.L., Daniels, J.M., Hesp, P.A., Bicho, N.F., Minckley, T.A., Ellwood, B.B., Forman, S.L., 2009. Late Quaternary landscapes and seascapes of Portuguese Estremadura: geomorphic response to environmental change during MIS 3 and 2. VII Iberian Quaternary Union, Faro, Portugal.
- Haws, J.A., Funk, C.L., **Benedetti, M.M.**, Bicho, N.F., Daniels, J.M., Hockett, B.S., Jeraj\*, M., 2009. Late Quaternary landscapes and seascapes of Portuguese Estremadura: Middle and Upper Paleolithic settlement. VII Iberian Quaternary Union, Faro, Portugal.
- Benedetti, M.M.**, Haws, J.A., Funk, C.L., Daniels, J.M., Hesp, P.A., Bicho, N.F., 2009. Late Quaternary landscapes of Portuguese Estremadura: environmental change during Marine Isotope Stages 3 and 2. Geoarchaeology 2009, University of Sheffield, UK.
- Haws, J.A., Funk, C.L., Bicho, N.F., Daniels, J.M., **Benedetti, M.M.**, Hockett, B.S., Jeraj\*, M., 2009. Palaeolithic landscapes and seascapes on the Atlantic coast of Portugal. Geoarchaeology 2009, University of Sheffield, UK.
- Gray\*, C.M., **Benedetti, M.M.**, 2009. Buried soils as stratigraphic marker horizons on the Cape Fear River floodplain, Bladen County, NC. Southeastern Section Meeting, Geological Society of America, Tampa FL.
- Gray\*, C.M., **Benedetti, M.M.**, 2008. Buried soils as stratigraphic marker horizons on the Cape Fear River floodplain, Bladen County, NC. The State of NC Undergraduate Research and Creativity Symposium, Appalachian State University, Boone, NC.
- Haws, J.A., Hockett, B.S., Funk, C.L., Daniels, J.M., **Benedetti, M.M.**, Bicho, N.F., 2006. Neandertals at the Beach: Late Pleistocene Coastal Settlement, Central Portugal. Meeting of the Paleoanthropology Society and Society of American Archaeology, San Juan, Puerto Rico.
- Raber\*, M.J., Leonard, L.A., **Benedetti, M.M.**, Smith, M.S., 2004. Characteristics of sediments transported and deposited in the Cape Fear River estuary, southeastern North Carolina. Southeastern Section Meeting, Geological Society of America, Washington DC.

Raber\*, M.J., Leonard, L.A., **Benedetti, M.M.**, Smith, M.S., 2003. Characteristics of sediments entering and retained in the lower Cape Fear River estuary, North Carolina. 17th Biennial Conference of the Estuarine Research Foundation, Seattle, WA.

**Benedetti, M.M.**, 2002. Decreasing suspended sediment concentrations in the Upper Mississippi River. Geological Society of America Annual Meeting, Denver, CO.

## **COURSES TAUGHT**

### **University of Wisconsin-Madison**

Geography 120 Global Physical Environments  
Geography 127 Physical Systems of the Environment  
Geography 333 Geomorphology  
Geography 360 Quantitative Methods in Geography  
Geography 495 Senior Seminar

### **University of North Carolina Wilmington**

Geography 130 Introduction to Physical Geography  
Geography 222 Quantitative Methods in Earth Science  
Geography 235 / Geology 226 Principles of Hydrology  
Geography / Geology 335 Geomorphology  
Geography 336 Rivers and Floods  
Geography 435 Environmental Geography  
Geography 436 Ice Age Earth  
Geography 437 Soils in the Earth Sciences  
Geography 495 Senior Seminar  
Geology 120 (Honors) Environmental Geology  
Geology 250 Beaches and Coasts  
Geology 390 Field Methods in Geosciences  
Honors 191 Introduction to Research and Discovery in the Sciences

## **ADVISING**

**University College Advising:** 32 freshmen/sophomores advised in 2019-20.

**Undergraduate Advising:** 6-13 students per semester in Geography & Geology.

**Undergraduate and Graduate Independent Study:** 27 DIS projects advised.

### **Undergraduate Departmental Honors Students**

Primary advisor, B.A. Honors (Geography). Audrey Taylor, 2016. Molecular and isotopic proxies of mid-Holocene hydroclimate and paleoenvironmental change in a coastal wetland: Praia Rei Cortiço, Portugal.

Primary advisor, B.A. Honors (Geography). Jessica Patrick, 2011. Sedimentology of the Óbidos lagoon, central Portugal.

Primary advisor, B.A. Honors (Geography). Carla Gray, 2009. Buried soils as stratigraphic marker horizons on the Cape Fear River floodplain, Bladen County, NC.

Primary advisor, B.A. Honors (Geography). Laura Neal, 2007. Streamflow response to tropical and extra-tropical storms on the Carolina Coastal Plain.

Committee member, B.A. Honors (Geography). Sarah Murphy, 2017. Reconstructing intermediate depth circulation in the Labrador Sea through marine sediments.

Committee member, B.S. Honors (Biology). Nathan Messenger, 2015. Geospatial and hydrodynamic characterization of flounder habitat in the New River estuary, North Carolina.

Committee member, B.A. Honors (History). Christopher Blakely, 2010. Metaphors embedded within the Earth: the role of narrative in history and geology.

Committee member, B.A. Honors (Geography). David Johnson, 2009. Detailed GPS survey and elevation model for Masonboro Island, Southeastern NC.

Committee member, B.A. Honors (Geography). Trevor Lancaster, 2009. A spatial and temporal analysis of coastal engineering activities in southeastern North Carolina.

Committee member, B.A. Honors (Geography). Sara Beth Jenkins, 2006. Effects of local weather patterns on nitrogen analyte rainwater concentrations in Wilmington, NC.

Committee member, B.S. Honors (Biology). Katie Day, 2003. Geographic variability in mitochondrial DNA of the eastern field mouse (*Peromyscus maniculatus*).

Committee member, B.S. Honors (Geology). Kemp Burdette, 2003. Correlating trade routes and ballast stone provenance: Campbell Island, Cape Fear River.

### **Graduate Students**

Primary advisor, M.S. (Geoscience). Mitchell Mrus, current. Late Quaternary fluvial transitions in the Cape Fear River, Bladen County NC.

Primary advisor, M.S. (Geoscience). Erin Warren, 2020. Fluvial response of the Cape Fear River to late Quaternary climate change.

Primary advisor, M.S. (Geoscience, non-thesis). Darryl Mott, 2017. Laser diffraction particle size analysis: output response to user treatments.

Primary advisor, M.S. (Geology). John Hawkins Gagnon, 2011. Age and stratigraphy of the Smith Island complex, southeastern NC.

Primary advisor, M.S. (Geology). Carolyn Gomes, 2008. Spatial distribution of subsurface horizons in a pine flatwood landscape, New Hanover County, NC.

Primary advisor, M.S. (Geology). Maverick Raber, 2004. Characteristics of sediments transported to and deposited in the Cape Fear River estuary, southeastern North Carolina.

Committee member, M.S. (Geology). John Russell, 2017. Zircon chronology for syn-tectonic basin architecture, Aldrich Mountains Basin, OR.

Committee member, M.S. (Geology). Konrad Grochocki, 2017. Multi-proxy paleolimnological evidence of prehistoric human activity from Piseco Lake, Adirondack Mountains, New York.

Committee member, M.S. (Geology, non-thesis). Randy Knoll, 2017. Geospatial survey of a historic military site: site assessment and management of Ft. Caswell, NC.

Committee member, M.S. (Geology). Alina Jakubcanin, 2015. Drought vulnerability assessment in Tunisia using space data and GIS techniques.

Committee member, M.S. (Geology). Jeri Burke, 2015. Assessing surface inundation and soil moisture patterns in a tectonically controlled flood-pulsed savannah watershed in Botswana and Namibia using radar and thermal imagery.

Committee member, M.S. (Geology). Jessica Nester, 2015. Stable isotope and macroscopic charcoal analysis of climate variability, Jones Lake and Lake Waccamaw, NC.

Committee member, M.S. (Geology). Kaylee Barkett, 2015. Pollen and microscopic charcoal analysis of climate variability, Jones Lake and Lake Waccamaw, NC.

Committee member, M.S. (Geology). Jehan Baggarley, 2014. Assessing flash flood risk in the

Eastern Desert, Egypt.

- Committee member, M.S. (Geology). Paula Reidhaar, 2013. Spatial and temporal variations in *Pyrodinium bahamense* cyst concentrations in sediments of Mangrove Lagoon, St. Croix, USVI.
- Committee member, M.S. (Geology). Julie Kemble, 2012. Mineralogical and textural trends in sediment distribution along the northeastern coast of Tamaulipas, Mexico.
- Committee member, M.S. (Geology). Josh April, 2012. North Carolina sea level rise assessment: Evaluating flood risk for community lifelines in northern and southern North Carolina.
- Committee member, M.S. (Geology). Will Weiland, 2012. The Caribbean mid-summer drought (MSD) and ocean-atmosphere interactions: San Salvador Island rainfall patterns.
- Committee member, M.S. (Geology). Launna Carvalho Sampaio, 2011. Comparison of inlet-induced geomorphic changes related to unmodified inlets along a sand rich coastal system.
- Committee member, M.S. (Geology). John Robert Mitchell, 2011. Development of rainfall-flood threshold values for evacuation routes in Brunswick County, NC.
- Committee member, M.S. (Geology). Devon Olivola, 2008. Short-term sediment deposition rates in riparian marshes and swamps along the lower Cape Fear River, NC.
- Committee member, M.S. (Marine Science). Sara Althof, 2007. Effects of *Spartina alterniflora* on turbulence in a tidal marsh: a field experiment of biophysical interactions.
- Committee member, M.S. (Geology). Luke Davis, 2006. Sediment dynamics of a fluvially-influenced inner shelf environment, Long Bay, NC.
- Committee member, M.S. (Geology). Lauren Saal, 2005. The impact of rainfall on suspended sediment concentrations in an urbanized tidal creek, Bradley Creek, NC.
- Committee member, M.S. (Marine Science). Alisha Renfro, 2004. Sedimentation processes in riparian wetland systems of the Cape Fear River, NC.

## **SERVICE**

### **Professional Service**

- Editorial Board, *North Carolina Undergraduate Research Journal – Explorations* (2009-11).
- Session Moderator, North Carolina Undergraduate Research Symposium (2009).
- Joint Editor for physical geography, *The North Carolina Geographer* (2004-08).
- Grant Proposal Technical Committees: Water Resources Research Institute of North Carolina (2002); Environmental Protection Agency (2006); National Science Foundation (2012); ICArEHB Seed Fund (2022).
- Grant Proposal Reviews, National Science Foundation programs: Geoscience, Geography and Spatial Science, Hydrologic Sciences, Instrumentation and Facilities, Research Experiences for Undergraduates (REU), Partnerships for International Research and Education (PIRE).
- Journal Manuscript Reviews: *Catena, Geomorphology, Quaternary Research, Geoarchaeology, Physical Geography, The North Carolina Geographer, Southeastern Geographer, North Carolina Undergraduate Research Journal – Explorations, Journal of the American Water Resources Association, Remote Sensing, Journal of Geoscience Education, Journal of Latin American Geography Applied Geography.*

### **UNCW Service**

- Advisory board, Center for Support of Undergraduate Research and Fellowships (2008-Pres).
- Member, Student Tuition and Fees Advisory Committee (2014, 2019).
- Advisor for undeclared 1<sup>st</sup> & 2<sup>nd</sup> year students, University College (2019-20).

Member, International Programs Advisory Committee (2019-Pres).  
Member and Chair, Radiation Safety Committee, Environmental Health & Safety (2017-Pres).  
Chair, Student Matters Committee, Faculty Senate (2012-20).  
Member, Provost's Task Force on Undergraduate Student Success (2013-14).  
Departmental representative, Faculty Senate (2008-13, 17-18).  
Member, Provost's Task Force for Performance Funding Measures (2012-13).  
Departmental Ambassador, Quality Enhancement Plan (2010-12).  
Member, Admissions Committee (2003-05, 2009-12).  
Chair, Geography Curriculum Committee, Earth & Ocean Sciences (2017-2020).  
Chair, Annual Evaluation Committee, Earth & Ocean Sciences (2014-16, 2020).  
Chair, Scholarships and Awards Committee, Geography & Geology (2004-07).  
Member, Graduate Advisory Committee, Earth & Ocean Sciences (2016-18).  
Faculty Advisor, Geography Club, Geography & Geology (2001-02, 2005-06).  
Supervisor, Soil & Sedimentology Laboratories, Geography & Geology (2000-08).  
Supervisor, Laser Diffraction laboratory, Earth & Ocean Sciences (2017-Pres).  
Coordinator, GGY 130 Labs and Teaching Assistants, Earth & Ocean Sciences (2000-Pres).

### **Community Service**

Volunteer Official, Regional Science Fair (2003).  
Event Leader (*Dynamic Planet*), Regional Science Olympiad (2002-07).  
UNCW College Day lecture, Osher Lifelong Learning Institute (2017).  
Volunteer admissions interviews, University of Chicago Alumni Schools Committee (2001-12).