

CURRICULUM VITAE

Jenna Catherine Hill

Personal Information

Address: Burroughs & Chapin Center for Marine and Wetland Studies
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Education

Ph.D. 2007 “Continental margin architecture: Sea level and climate”
Earth Sciences, Scripps Institution of Oceanography, University of California, San Diego
B.A. 1999 Geology, Environmental Studies, Oberlin College, Oberlin, OH

Awards

2003 Honorable Mention, NSF MARGINS Student Presentation, AGU Fall Meeting
2003-2007 ARCS Foundation Scholarship
2002 Outstanding Student Paper Award, AGU Fall Meeting
2002 UCSD Art Proceeds Fellowship

Employment

2014-present Associate Professor of Marine Science; Coastal Carolina University, Conway, SC
2008-2014 Assistant Professor of Marine Science; Coastal Carolina University, Conway, SC
2007-2008 Post-doctoral Researcher/Lecturer; (Sponsor: Paul Gayes) Burroughs & Chapin Center for Marine & Wetland Studies, Coastal Carolina University, Conway, SC
2001-2007 Graduate Researcher, Geosciences Research Division (Advisor: Neal Driscoll);
Scripps Institution of Oceanography, University of California, San Diego
1999-2001 U.S. Geological Survey Intern; Woods Hole Field Center

Membership in Professional Societies

American Geophysical Union

Oceanographic Research Cruises

I have participated on >25 oceanographic cruises; positions ranged from independent researcher and seismic stratigrapher/sedimentologist to data watchstander/coring assistant; responsibilities included seismic, side-scan and swath sonar data acquisition, designing sonar surveys, post-cruise processing and interpretation, sediment sampling and analyses.

Service

Participant, IODP Chukchi Sea Drilling Workshop: Linking North Pacific and Arctic Ocean History
Participant, MYRES V: The Sedimentary Record of Landscape Dynamics
Participant, IODP-USSP Arctic Drilling Workshop: Catching Climate Change in Progress
Participant, NSF Earthscope-GeoPRISMS ENAM Science Planning Workshop
Participant, New Generation of Polar Researchers Symposium
Participant, NSF MARGINS Source to Sink Theoretical Experimental Institute
Participant, JOI Bering Sea Drilling Workshop

External Grants

Hill, J.C., Xu, K., and Wright, E., 2010-2012. Acquisition of instrumentation for the sediment analysis laboratory at Coastal Carolina University, NSF EAR/IF Program, \$110,227

Hill, J.C., 2011. Winyah Bay – Yawkey North Island Oyster Project, sub-award from The Nature Conservancy, \$17,934.31

Viso, R.F., **Hill, J.C.**, Lewis, B., McCoy, C.A., Peterson, R., 2009-2011. Submarine groundwater discharge to Long Bay, SC: Preliminary assessment of land use impact, geological controls and nutrient loads, South Carolina Sea Grant, \$152,220

Publications

Hill, J.C. and Condron, A., 2014. Subtropical iceberg scours and meltwater routing in the western North Atlantic, *Nature Geoscience*, doi: 10.1038/ngeo2267.

Mickey, R.C., Xu, K., Libes, S., and **Hill, J.C.**, 2014. Sediment texture, erodibility, and composition in the northern Gulf of Mexico and their potential impacts on hypoxia formation, *Ocean Dynamics*, accepted.

Brothers, D.S., Ruppel, C., Kluesner, J.W., tenBrink, U.S., Chaytor, J.D., **Hill, J.C.**, Andrews, B.D., and Flores, C., 2013. Seabed fluid expulsion along the upper slope and outer shelf of the U.S. Atlantic continental margin, *Geophysical Research Letters*, doi: 10.1002/2013GL058048.

Hill, J.C. and Driscoll, N.W., 2010. Evidence for iceberg discharge to the Chukchi shelf during the Younger Dryas, *Quaternary Research*, doi: 10.1016/j.yqres.2010.03.008.

Hill, J.C., Gayes, P.T., Driscoll, N.W., Johnstone, E.A., and Sedberry, G.R., 2008. Iceberg scours along the southern U.S. Atlantic margin, *Geology*, 36: 447-450.

Hill, J.C. and Driscoll, N.W., 2008. Paleodrainage on the Chukchi shelf reveals sea level history and meltwater discharge, *Marine Geology*, 254: 129-151.

Newman, K.R., Cormier, M., Weissel, J.K., Driscoll, N.W., Kastner, M., Solomon, E.A., Robertson, G., **Hill, J.C.**, Singh, H., Camilli, R. and Eustice, R., 2007. Active methane venting observed at giant seafloor pockmarks along the U.S. mid-Atlantic shelf break, *Earth and Planetary Science Letters*, 267: 341-352.

Hill, J.C., Driscoll, N.W., Brigham-Grette, J., Donnelly, J.P., Gayes, P.T., and Keigwin, L.D., 2007. New evidence for high discharge to the Chukchi shelf since the Last Glacial Maximum, *Quaternary Research*, 68: 271-279.

Hill, J.C., Driscoll, N.W., Weissel, J.K., and Goff, J.A., 2004. Large scale elongated gas blowouts along the U.S. Atlantic margin, *Journal of Geophysical Research*, 109:B9, doi: 10.1029/2004JB002969.

Published Abstracts

**Denotes mentored student author*

Hill, J.C., Brothers, D.S., tenBrink, U.S., Craig, B.K., Chaytor, J.D. and Flores, C., 2014. Subsurface architecture of the Currituck submarine landslide complex: New insights from high-resolution MCS data, to presented at the 2014 AGU Fall Meeting, San Francisco, Calif., 15-19 Dec.

Straub, J.A.*, **Hill, J.C.**, Viso, R.F., Peterson, R.N., and Carter, M., 2014. Fluvial Morphology and Bedform Migration in the Ebb Tidal Dominated Duplin River, Georgia, to be presented at the 2014 AGU Fall Meeting, San Francisco, Calif., 15-19 Dec.

Condron, A. and Hill, J.C., 2014. Massive subtropical icebergs and freshwater forcing of climate, presented at the 2014 EGU General Assembly, Vienna, Austria.

Hill, J.C. and Condron, A., 2013. Massive icebergs & freshening of the subtropical North Atlantic, presented at the 2013 AGU Fall Meeting, AGU, San Francisco, Calif., 9-13 Dec.

Condron A. and **Hill, J.C.**, 2013. Modeling the drift of massive icebergs to the subtropical North Atlantic, presented at the 2013 AGU Fall Meeting, San Francisco, Calif., 9-13 Dec.

Craig, B.K.*, **Hill, J.C.**, Brothers, D.S., Chaytor, J.D., and Driscoll, N.W., 2013. Seismic stratigraphy, gas distribution and slope stability along the U.S. Atlantic margin, presented at the 2013 AGU Fall Meeting, San Francisco, Calif., 9-13 Dec.

- Brothers, D.S., Ruppel, C., Kluesner, J.W., Chaytor, J.D., tenBrink, U.S. and **Hill, J.C.**, 2013. Pervasive evidence for seabed gas expulsion along upper slope of the U.S. Atlantic continental margin, presented at the 2013 AGU Fall Meeting, San Francisco, Calif., 9-13 Dec.
- Carter, M.*, Viso, R., Peterson, R., and **Hill, J.**, 2013. Tidal pumping as a driver of groundwater discharge to a back barrier salt marsh ecosystem, presented at the 2013 AGU Fall Meeting, San Francisco, Calif., 9-13 Dec.
- Gregorcyk, K.L.* and Hill, J.C., 2013. Benthic habitat mapping of Port Jefferson Harbor in Long Island Sound, NY, presented at the ASLO 2013 Aquatic Sciences Meeting, New Orleans, LA.
- Hill J.C., 2012. Iceberg scouring on the Florida margin: Implications for paleocirculation, Abstract OS41D-1775 presented at 2012 AGU Fall Meeting, San Francisco, Calif., 2-7 Dec.
- Brothers, D.S., Chaytor, J.D., Ten Brink, U.S., **Hill, J.C.**, and Flores, C.H., 2012. Growth and destruction of siliciclastic continental slopes: new insights from multi-resolution seismic reflection data along the US Atlantic passive margin, Abstract OS43C-1829 presented at 2012 AGU Fall Meeting, San Francisco, Calif., 2-7 Dec.
- Hill, J.C. and Wright, E.E., 2011. River Responses to Climate Change: Examining the Subsurface Architecture of the Pee Dee River, South Carolina, Abstract EP31A-0788 presented at 2011 AGU Fall Meeting, San Francisco, Calif., 5-9 Dec.
- Wright, E.E., **Hill, J.C.**, and Harris, M.S., 2011. Stratal architecture of inland dunes along the Pee Dee River, South Carolina, Abstract EP31A-0789 presented at 2011 AGU Fall Meeting, San Francisco, Calif., 5-9 Dec.
- Wright, E.E., **Hill, J.C.**, Harris, M.S., and Urban, E., 2011. GPR stratigraphy of an eolian dune field in Horry County, SC, *Geological Society of America Abstracts with Programs*, Vol. 43, No. 2, p. 76
- Klotsko, S.A.*, **Hill, J.C.**, Gayes, P.T., Viso, R.F., Alexander, C., and R. McFall, G., 2010. The Influence of geologic framework on habitat and sediment distribution in Grays Reef National Marine Sanctuary, *Eos Trans. AGU*, 91 (26), Ocean Sci. Meet. Suppl., Abstract GO45A-05
- Hill, J.C., Gayes, P.T., and Viso, R.F., 2010. Structural controls on sediment distribution along the inner shelf of South Carolina, *Eos Trans. AGU*, 91 (26), Ocean Sci. Meet. Suppl., Abstract GO25A-16
- Wright, E.E., Harris, M.S., **Hill, J.C.**, and Xu, K., 2010. Stratigraphic architecture of the Conway paleo-barrier system of northeastern, South Carolina, *Geological Society of America Abstracts with Programs*, Vol. 42, No. 1, p. 70
- Miller, S.A.*, McCoy, C.A., Gayes, P.T., Viso, R.F., and **Hill, J.C.**, 2009. Geological impacts on and sediment transport and beach erosion in Fire Island, New York, *3rd International Conference on Aquatic Resources*, November 17-19, Alexandria, Egypt.
- Viso, R., Gayes, P., **Hill, J.C.**, and McCoy, C., 2009. Geophysical Techniques to Investigate Linkages Between Coastal Geology and Submarine Groundwater Discharge, *3rd International Conference on Aquatic Resources*, November 17-19, Alexandria, Egypt.
- Hill, J.C., Gayes, P.T., McCoy, C., and Viso, R., 2008. Imaging the changing shoreface along South Carolina's Grand Strand, *Eos Trans. AGU*, 89 (53), Fall Meet. Suppl., Abstract OS43B-1290
- Hill, J.C., Gayes, P.T., Driscoll, N.W., Johnstone, E.A., and Sedberry, G.R., 2007. Iceberg scours offshore of South Carolina, *Eos Trans. AGU*, 88 (52), Fall Meet. Suppl., Abstract OS53A-0982
- Hill, J.C., Driscoll, N.W., Phillips, R.L., Donnelly, J.P., Brigham-Grette, J., Gayes, P.T. and Keigwin, L.D., 2006. A large incised valley on the Chukchi shelf: Implications for high discharge, sea level fluctuations and climatic variations since the LGM, *Eos Trans. AGU*, 87 (36), Ocean Sci. Meet. Suppl., Abstract OS16A-15
- Hill, J.C., Driscoll, N.W., and Donnelly, J.P., 2005. Holocene record of deglaciation on the Chukchi shelf, offshore NW Alaska, *Eos Trans. AGU*, 86 (52), Fall Meet. Suppl., Abstract OS51B-0567
- Newman, K., Cormier, M., Driscoll, N., **Hill, J.**, Kastner, M. Singh, H., and Weissel, J., 2005, Geophysical and Geochemical Evidence For Methane Venting at Large Gas Blowouts Along the US Mid-Atlantic Shelf Edge, *Eos Trans. AGU*, 86(52), Fall Meet. Suppl., Abstract OS32A-05

- Hill, J.C., Driscoll, N.W., Weissel, J.K., Kaster, M., Singh, H., Cormier, M., Camilli, R., Eustice, R., Lipscomb, R., McPhee, N., Newman, K., Robertson, G., Solomon, E., and Tomanka, K., 2004, A potential link between fluid expulsion and slope stability: Geochemical anomalies measured in the gas blowouts along the U.S. Atlantic Margin provide new constraints on their formation, *Eos Trans. AGU*, 85(47), Fall Meet. Suppl., Abstract OS23B-1307
- Newman, K., Cormier, M., Weissel, J., Driscoll, N., Kastner, M., Singh, H., Camilli, R., Eustice, R., McPhee, N., Ahern, J., **Hill, J.**, Robertson, G., Solomon, E., and Tomanka, K., 2004, A Detailed Near-bottom Survey of Large Gas Blowout Structures Along the US Atlantic Shelf Break Using the Autonomous Underwater Vehicle (AUV) SeaBED, *Eos Trans. AGU*, 85(47), Fall Meet. Suppl., Abstract OS23B-1312
- Hill, J.C., Driscoll, N.W., Brigham-Grette, J., and Lundeen, Z., 2003, Large incised channels on the Chukchi Shelf provide new constraints on onshore drainage: Implications for tectonic and climatic evolution of NW Alaska, *Eos Trans. AGU*, 84(46), Fall Meet. Suppl., Abstract OS52B-0911
- Brigham-Grette, J., Driscoll, N., Keigwin, L., Lundeen, Z., **Hill, J.**, Cook, M., and Donnelly, J., 2003, Beringian sea level and marine climate history: Investigations into regional & global Impacts, *Eos Trans. AGU* 84(46), Fall Meet. Suppl., Abstract PP51C-0939
- Hill, J.C., Driscoll, N.W., Weissel, J.K., and Goff, J.A., 2002, Large-Scale Elongated Gas Blowouts, Offshore Virginia/North Carolina: Process and Product, *Eos Trans. AGU*, 83(47), Fall Meet. Suppl., Abstract OS71C-0305