

## **CURRICULUM VITAE**

**Jenna Catherine Hill**

### **Personal Information**

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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

### **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

### **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

### **Oceanographic Research Cruises**

*I have participated on >30 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.*

### **Synergistic Activities**

NSF GeoPRISMS ENAM MCS Processing Workshop  
UNOLS Sediment Coring Strategic Planning Workshop  
NSF GeoPRISMS ENAM Community Seismic Experiment R/V Langseth Cruise  
IODP Chukchi Sea Drilling Workshop: Linking North Pacific and Arctic Ocean History  
MYRES V Workshop: The Sedimentary Record of Landscape Dynamics  
IODP-USSP Arctic Drilling Workshop: Catching Climate Change in Progress  
NSF Earthscope-GeoPRISMS ENAM Science Planning Workshop  
New Generation of Polar Researchers Symposium  
NSF MARGINS Source to Sink Theoretical Experimental Institute  
JOI Bering Sea Drilling Workshop

### **External Grants**

Hill, J.C., 2016-2018. Age constraints on subtropical iceberg scour events, NSF MGG Program, \$79,404  
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.**, Brothers, D.S., Craig, B.K., ten Brink, U.S., Chaytor, J.D., and Flores, C.H., 2016. The role of antecedent geology in submarine slope failure: An examination of the Currituck Slide Complex, U.S. Atlantic margin, *Marine Geology*, in review.

Phrampus, B., Hornbach, M.J., Shillington, D.J., Bécel, A., Magnani, B., Sawyer, D.E. and **Hill, J.C.**, 2016. Thermal Evolution of the Western North Atlantic Margin: Implications for Hydrocarbon Formation, *Marine and Petroleum Geology*, in review.

Johansen, C., Marty, E., Natter, M., Silva, M., **Hill, J.C.**, Viso, R., Lobodin, V., Diercks, A., Woolsey, M., Woolsey, A., Macelloni, L., Maskimova, E., Shedd, W., Joye, S., Abrams, and McDonald, I., 2016. A hydrocarbon budget for a Gulf of Mexico natural seep site: GC600, *Earth and Planetary Science Letters*, in review.

Hill, J.C., 2016. Iceberg ploughmarks on the upper continental slope, South Carolina, in Dowdeswell, J.A., Canals, M., Jakobsson, M., Todd, B.J., Dowdeswell, E.K. and Hogan, K.A. (Eds.), *Atlas of Submarine Glacial Landforms*. Geological Society of London Memoir, *in press*.

Hill, J.C. and Condron, A., 2014. Subtropical iceberg scours and meltwater routing in the deglacial 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*, doi: 10.1007/s10236-014-0796-4.

Brothers, D.S., Ruppel, C., Kluesner, J.W., tenBrink, U.S., Chaytor, J.D., **Hill, J.C.**, Andrews, B.D., and Flores, C., 2014. 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*

Johansen, C., Marty, E., Natter, M., Silva, M., **Hill, J.C.**, Viso, R., Lobodin, V., Diercks, A., Woolsey, M., Woolsey, A., Macelloni, L., Maskimova, E., Shedd, W., Joye, S., Abrams, and McDonald, I., 2016.

- Hydrocarbon Migration from the Micro to Macro Scale in the Gulf of Mexico, presented at the 2016 ASLO Meeting, New Orleans, Louisiana, 21-26 Feb.
- Hill, J.C., Brothers, D.S., Craig, B.K.\*, tenBrink, U.S., Chaytor, J.D. and Flores, C., 2015. The role of antecedent geology in submarine slope failure: Insights from the Currituck Slide complex along the central U.S. Atlantic Margin, *INVITED* presentation at the 2015 AGU Fall Meeting, San Francisco, Calif., 14-18 Dec.
- Hill, J.C. and Condon, A., 2015. Subtropical iceberg scours: Tracking the path of meltwater in the deglacial North Atlantic, presented at the 2015 AGU Fall Meeting, San Francisco, Calif., 14-18 Dec.
- Condon, A.C. and **Hill, J.C.**, 2015. Subtropical versus subpolar freshwater routing: The pathways of icebergs and meltwater in the North Atlantic during deglaciation, presented at the 2015 AGU Fall Meeting, San Francisco, Calif., 14-18 Dec.
- 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, 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, presented at the 2014 AGU Fall Meeting, San Francisco, Calif., 15-19 Dec.
- Condon, 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 Condon, A., 2013. Massive icebergs & freshening of the subtropical North Atlantic, presented at the 2013 AGU Fall Meeting, AGU, San Francisco, Calif., 9-13 Dec.
- Condon 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