

CHRISTOPHER J. HEIN

Wakefield Associate Professor of Marine Science
Virginia Institute of Marine Science • William & Mary
P.O. Box 1346 • 1375 Greate Road • Gloucester Point, VA 23062 USA
(O): 804.684.7533 • (C): 857.753.3566 • *Email*: hein@vims.edu • *Web*: www.vims.edu/coastal_geology

EDUCATION

January 2012 Ph.D., Department of Earth Sciences, Boston University (BU)
Title: *Styles of coastal evolution in response to changes in sea level and sediment supply*

June 2003 B.S., Department of Earth and Atmospheric Sciences, Cornell University (CU)
Major: *Science of Earth Systems*; Concentration: *Geological Sciences*

PROFESSIONAL APPOINTMENTS (post-bachelors)

2019 - present Associate Professor, Virginia Institute of Marine Science (VIMS), William & Mary (W&M)

2013 - 2019 Assistant Professor, VIMS, W&M

2012 - 2013 Coastal Ocean Institute Postdoctoral Scholar, Department of Marine Chemistry and Geochemistry, Woods Hole Oceanographic Institution (WHOI)

Fall 2011 Instructor, Department of Earth Sciences, BU

2005 Program Assistant, Earth and Environmental Field Studies Program in Hawai'i, CU

2003 - 2004 Research Assistant, Konza Prairie Long Term Ecological Research Station, Division of Biology, Kansas State University

INSTITUTION & ACADEMIC LEADERSHIP

2022 - present Director of Undergraduate Programs, VIMS

2021 - present Co-Director, VIMS/W&M Undergraduate Program in Marine Science

2021 - present Co-Leader, U.N. International Geoscience Programme (IGCP) Project 725: *From Cores to Code: Data-model integration to improve reconstructions & forecasts of coastal change*

HONORS AND AWARDS

2022 - 2025 Term Professorship: David D. & Carolyn B. Wakefield Associate Professor of Marine Science, W&M

2022 Thomas Jefferson Teaching Award, W&M

2018 Plumeri Faculty Award, W&M

2018 W&M Nominee, SCHEV Outstanding Faculty Award (Rising Star category)

2017 Alumni Fellowship Award, W&M

2017 Outstanding Faculty Teaching Award, VIMS

2015 - 2016 Reves Center Faculty Fellow, W&M

2011 - 2013 Coastal Ocean Institute Postdoctoral Scholar Fellowship, WHOI

2007 - 2011 National Science Foundation (NSF) Graduate Research Fellowship

2011 Best Student Paper Award, Coastal Sediments 2011 conference

2010 Society for Sedimentary Geology (SEPM) Outstanding Graduate Paper Award

2010 Graduate Student Presentation Award, Department of Earth Sciences, BU

2007 Assoc. of Environmental and Engineering Geologists Tilford Field Studies Scholarship

2006 - 2007 Dean's Teaching Fellow Award, BU

2003 Distinguished Citizen Award: Ithaca, NY

1999 - 2003 Cornell Presidential Research Scholar

1999 Eagle Scout, Boy Scouts of America

RESEARCH FUNDING (GRANTS & CONTRACTS)

Current Research Funding (VIMS Total: \$2,801,726; Subawards: \$625,794)

Source	Project Title	Project PIs	Award Amount	Dates Active
NASA Wallops Island Flight Facility	<i>Geophysical Impact Assessment and Mitigation Plan for Shoreline Stabilization at the NASA Wallops Island Flight Facility</i>	C. Hein (Co-Lead PI) I. Georgiou (The Water Institute) S. Karpanty (Virginia Tech) E. Hein (VIMS, co-PI)	Total Budget: ~\$3.5M VIMS Budget: \$895,230 Subawards: \$126,275	06/2024 – 05/2029
NOAA Ecological Effects of Sea Level Rise Program	<i>Is an old dune a more resilient dune? Assessing the importance of ecological history in coastal protection from storms and sea level rise</i>	C. Hein (Lead PI) N. Cohn (US Army Engineer Research & Development Ctr) J. Zinnert (Virginia Commonwealth U.)	Total Budget: \$689,087 VIMS Budget: \$376,239 Subawards: \$56,106	09/2019 – 08/2024
NOAA Effects of Sea Level Rise Program (via CSS)	<i>Beach nourishment effects on sediment transport and vegetation interactions</i>	C. Hein (Co-Lead PI) J. Zinnert (Virginia Commonwealth U.; Co-Lead PI)	Total Budget: \$25,213 VIMS Budget: \$14,213 Subawards: \$0	07/2022 – 09/2024
National Fish and Wildlife Foundation National Coastal Resilience Fund	<i>Stabilizing barrier islands and enhancing resilience of Virginia’s Eastern Shore through marsh construction: Phase III – Final Design & Engineering</i>	C. Hein (Lead PI) K. Gedan (George Wash. U.) M. Fenster (Randolph-Macon) Stantec Inc.	Total Budget: \$310,306 VIMS Budget: \$310,306 Subawards: \$242,425	01/2023 – 06/2024
National Science Foundation Marine Geology & Geophysics	<i>Collaborative Research: Unraveling North American Ice-Sheet Dynamics and Regional Sea-Level Change along the U.S. Mid-Atlantic over the Last Glacial Cycle</i>	C. Hein (Lead PI) T. Pico (University of California Santa Cruz)	Total Budget: \$565,490 VIMS Budget: \$299,495 Subawards: \$20,000	09/2023 – 08/2026
National Science Foundation Geomorphology and Land-Use Dynamics	<i>Collaborative Research: Storm surge deposition on salt marshes: Extent, provenance, & processes</i>	D. FitzGerald (Lead PI, BU) C. Hein (PI) C. Pondell (VIMS) Z. Hughes (BU) I. Georgiou (The Water Institute)	Total Budget: \$507,718 VIMS Budget: \$210,743 Subawards: \$0	08/2020 – 07/2024
US Geological Survey Cooperative Agreement	<i>Integrated Geomorphic Assessment of Virginia Eastern Shore Barrier Islands</i>	C. Hein (Sole PI)	Total Budget: \$325,000 VIMS Budget: \$325,000 Subawards: \$0	10/2023 – 09/2028
US Fish & Wildlife Service Competitive State Wildlife Grants	<i>Testing high marsh restoration techniques to benefit salt marsh birds</i>	C. Hein (Lead PI) K. Gedan (George Wash. U.) M. Fenster (Randolph-Macon) Stantec Inc. <i>(VIMS component is subaward from \$1M multi-state project)</i>	Total Budget: \$1,000,000 VIMS Budget: \$250,000 Subawards: \$180,988	03/2021 – 08/2024

Buzzards Bay Coalition	<i>Lower Buzzards Bay Sedimentation & Gooseberry Causeway Impact Study</i>	D. FitzGerald (Lead PI, BU) Z. Hughes (BU) S. Fagherazzi (BU) C. Hein (PI) M. Shultz (Woods Hole Grp.)	Total Budget: \$1,325,000 VIMS Budget: \$120,500 Subawards: \$0	06/2022 – 01/2024
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Completed Research Funding (VIMS Total: \$2,324,970; Subawards: \$933,671)

Source	Project Title	Project PIs	Award Amount	Dates Active
Commonwealth of Virginia	<i>Chincoteague Inlet Modeling Study Phase II&III</i>	C. Hein (Lead PI) I. Georgiou (Water Institute of the Gulf) A. Trembanis (U. Delaware) M. Fenster (Randolph-Macon)	Total Budget: \$600,000 VIMS Budget: \$600,000 Subawards: \$372,500	07/2020 – 06/2022
US Geological Survey EDMAP Program	<i>Quaternary sea-level change and the surficial geology of southern Accomack County, Eastern Shore of Virginia</i>	C. Hein (Sole PI)	Total Budget: \$27,237 VIMS Budget: \$27,237 Subawards: \$0	06/2020 – 12/2021
Virginia Port Authority / Middle Peninsula Planning District Commission	<i>Shallow Water Dredging Study</i>	D. Milligan (Lead PI, VIMS) S. Hardaway (VIMS) C. Hein (subawardee)	Total Budget: unknown Hein Budget: \$61,073 Subawards: \$0	08/2020 – 09/2021
National Fish and Wildlife Foundation National Coastal Resilience Fund	<i>Stabilizing barrier islands and enhancing resilience of Virginia's Eastern Shore through marsh construction</i>	C. Hein (Lead PI) K. Gedan (George Wash. U.) M. Fenster (Randolph-Macon) Stantec Inc.	Total Budget: \$249,707 VIMS Budget: \$249,707 Subawards: \$128,199	05/2019 – 10/2020
Commonwealth of Virginia	<i>Chincoteague Inlet Modeling Study Phase I</i>	C. Hein (Lead PI) I. Georgiou (Water Institute of the Gulf) A. Trembanis (U. Delaware) M. Fenster (Randolph-Macon)	Total Budget: \$300,000 VIMS Budget: \$300,000 Subawards: \$240,000	07/2019 – 06/2020
NSF Geomorphology and Land-Use Dynamics RAPID	<i>Marsh Sedimentation due to Hurricanes Florence and Michael Flooding Event in SC (EAR-1904496)</i>	D. FitzGerald (Lead PI, BU) C. Hein (PI) Z. Hughes (BU) C. Pondell (VIMS)	Total Budget: \$22,276 VIMS Budget: \$12,176 Subawards: \$0	12/2018 – 11/2019
Commonwealth of Virginia Center for Innovative Technology	<i>Integrated Barrier Island Systems (IBIS) Management Project Phase I: Sediment Fluxes and Trapping Dynamics around Fishing Point, Southern Assateague Island, VA</i>	C. Hein (Lead PI) A. Trembanis (U. Delaware) M. Fenster (Randolph-Macon College)	Total Budget: \$300,000 VIMS Budget: \$300,000 Subawards: \$156,972	04/2018 – 12/2019

NOAA Mid-Atlantic Regional Sea Grant	<i>Managing for biodiversity and blue carbon in the face of sea-level rise and barrier-island migration</i>	C. Hein (Lead PI) S. Gedan (U. Maryland) S. Jardine, G. Parsons (U. Delaware) J. Lorenzo Trueba (Montclair State U.)	Total Budget: \$527,888 VIMS Budget: \$139,669 Subawards: \$0	02/2016–01/2019
NSF Geomorphology and Land-Use Dynamics RAPID	<i>Storm surge deposition on Salt Marshes: Impacts of Hurricane Irma from Florida to South Carolina (EAR-1556554)</i>	D. FitzGerald (Lead PI, BU) C. Hein (PI) Z. Hughes (BU) I. Georgiou (U. New Orleans) M. Kulp (U. New Orleans)	Total Budget: \$25,412 VIMS Budget: \$4502 Subawards: \$0	05/2019–10/2020
Commonwealth of Virginia Center for Innovative Technology	<i>Coastal resiliency mapping techniques: Addressing key scientific questions through coordinated robotic geophysical surveys</i>	C. Hein (Lead PI) A. Trembanis (U. Delaware) M. Fenster (Randolph-Macon College)	Total Budget: \$50,000 VIMS Budget: \$50,000 Subawards: \$36,000	06/2017–10/2017
DOI / National Fish and Wildlife Foundation Hurricane Sandy Resiliency Fund	<i>Hydrodynamic and sediment transport modeling leading to restoration, better management and improved sustainability of Great Marsh</i>	D. FitzGerald (Lead PI, BU) C. Hein (PI) Z. Hughes (BU) I. Georgiou (U. New Orleans)	Total Budget: ca. \$300,000 VIMS Budget: \$44,628 Subawards: \$0	01/2015–12/2017
NSF Coastal SEES	<i>Sediment supply in a regime of accelerated coastal erosion (SedS-RACE): Paleoperspectives, anthropogenic influences and future challenges (OCE-1325430)</i>	C. Hein (Lead PI) E. Canuel (VIMS) J.-C. Huang (U. New Hampshire) P. Rosen (Northeastern U.)	Total Budget: \$533,461 VIMS Budget: \$428,941 Subawards: \$0	09/2013–08/2016
NSF Marine Geology and Geophysics	<i>The response of the terrestrial carbon cycle to climate change since LGM as recorded in Bengal Fan sediments (OCE-1333826)</i>	V. Galy (Lead PI, WHOI) C. Hein (PI) B. Peucker-Ehrenbrink (WHOI)	Total Budget: \$391,954 VIMS Budget: \$98,037 Subawards: \$0	08/2013–07/2016
W&M Reves Center Faculty Fellows Program	<i>Brazilian beach ridges as recorders of coastal response to Holocene climate change</i>	C. Hein (sole PI)	Total Budget: \$9000 (sole PI) Subawards: \$0	05/2015–03/2017

External Graduate Student Research Funding (Total: \$6500; does not include fellowships)

Source	Project Title	Project PIs	Award Amount	Year Awarded
GSA Farouk El-Baz Student Desert Research Grant	<i>Sea-level changes and the regressive wadi infilling of a Pharaonic harbor</i>	C. Hein (Sole PI)	Total Budget: \$2500	2009
American Association of Petroleum Geologists Grants-in-Aid Eastern Section Named Grant	<i>High-resolution study of a complex mixed-energy barrier lithosome</i>	C. Hein (Sole PI)	Total Budget: \$2500	2009
Geological Society of America Graduate Student Research Grant	<i>Reworking of inner continental shelf sediments: implications for coastal change in a regime of accelerated sea level rise</i>	C. Hein (Sole PI)	Total Budget: \$1500	2007

STUDENT MENTORING

Graduate Students: Major Advisor

Mary Bryan Barksdale (PhD, 2026 [anticipated], VIMS; co-advised with M. Kirwan): *thesis title TBD*

Kayla Cahoon (PhD, 2025 [anticipated], VIMS): *Reconstructing Pleistocene geologic and sea-level history along Virginia's Eastern Shore*

Elizabeth Davis (PhD, 2024 [anticipated], VIMS): *The role of internal architecture in foredune resilience to coastal hazards*

Justin Shawler (PhD, 2022, VIMS): *Barrier-island dynamics: Retreat, progradation, and state changes*

Evan Flynn (MSc, 2021, VIMS; co-advised with S. Kuehl): *Contrasting roles of seabed reworking and accumulation on terrestrial organic carbon sequestration: the Ayeyarwady example*

Julie Krask (MSc, 2018, VIMS): *Connecting climate to coastal evolution: Impact of sub-millennial-scale precipitation variability on fluvial sediment discharge*

Andrew Fallon (MSc, 2016, VIMS): *Human-induced cyclical erosion due to altered sediment bypassing mechanisms along a barrier island and the resultant impact on the housing market.*

Claudia Shuman (PhD student, 2014-2015, VIMS) (medical withdrawal from VIMS graduate program)

Graduate Students: Committee Member

Tyler Messerschmidt (MSc, 2028 [anticipated], VIMS): *Drivers of elevation change in a retreating coastal forest*

Brenna Boehman (PhD, 2023 [anticipated], WHOI): *Mechanisms of terrestrial organic carbon export and burial*

Md Mohiuddin Sakib (PhD, 2025 [anticipated], University of New Orleans): *Mechanisms of sediment bypassing along inlet interrupted coasts*

Miguel Montalvo (PhD, 2026 [anticipated], VIMS): *Billfishes and fishes with a bill: where, when, and how*

Alice Staro (PhD, 2024 [anticipated], BU): *Climate change and sea level rise effects on sedimentation patterns along salt marshes and chenier plains*

Emma Dodsworth (MSc, 2024 [anticipated], VIMS): *Development of a living shoreline model to compute ecosystem restoration benefits*

Kaitlyn McPherrin (PhD, 2023, University of Delaware): *Geomorphology and hydrodynamics of the Chincoteague-Assateague-Wallops (CAW) barrier system*

Alex Smith (PhD, 2023, VIMS): *Ecosystem transitions and state changes rapidly alter the coastal carbon landscape: evidence from the Chesapeake Bay region*

Wilson Fabiano Leite Galvão (MSc, 2022, Federal University of Santa Catarina [UFSC], Brazil): *Evolução geológica da Baía da Babitonga, Santa Catarina, durante o Pleistoceno Superior e Holoceno*

Andrew White (MSc, 2022, Virginia Commonwealth University): *Biotic characteristics of managed and unmanaged coastal dunes in the Outer Banks, North Carolina*

Daniel Coleman (PhD, 2020, VIMS): *The role of suspended sediment in assessing coastal wetland vulnerability*

Ana Paula da Silva (MSc, 2018, UFSC): *Late Holocene wave direction footprint in the South Atlantic*

Douglas Jensen (MSc, 2018, VIMS): *Use of pop-up satellite archival tag technology to investigate the movements, habitat utilization, and post-release survival of Cobia (*Rachycentron canadum*) that summer in Virginia waters*

Nathalie Schieder (MSc, 2017, VIMS): *Accelerating rates of forest retreat and marsh migration*

Elisabeth Clyne (MSc, 2017, VIMS): *High-resolution Late Holocene sediment records in northern Prince William Sound, Alaska*

Alexander Renaud (MSc, 2016, VIMS): *Chesapeake coastal community flood vulnerability: Prediction and verification*

Kyrstin Fornace (PhD, 2016, WHOI): *Late Quaternary climate variability and terrestrial carbon cycling in tropical South America*

Undergraduate Students: Honors Research Advisor

Selwyn Heminway (BS, 2023, W&M Geology; High Honors): *Modeled Changes in Foredune Morphology Influenced by Storm Intensity, Sea-level Rise, and Mitigation Strategies*

Sarah Grace Lott (BS, 2021, W&M Geology; High Honors): *Internal geometry of a headland bypassing system: São Francisco do Sul Island, Brazil*

Jessica Raff (BS, 2017, W&M Geology; High Honors): *Thresholds of barrier-island change: A case study of Parramore Island, Virginia Eastern Shore*

Justin Shawler (BS, 2016, W&M Geology; Honors): *Multi-proxy records of anthropogenic impacts on fluvial sediment discharge at Joppa Flats, MA.*

Undergraduate Students: Senior Research Advisor

Anna Van Dongen (BS, 2025 [anticipated], W&M Biology): *title TBD*

Julia Zeman (BS, 2025 [anticipated], W&M Geology): *title TBD*

Meghan Kirk (BS, 2024 [anticipated], W&M Geology): *Connecting people and place: Providing geological context of Virginia's Eastern Shore to the local community*

Katherine Kivimaki (BS, 2024, W&M Environment & Sustainability Program): *Historical coastal change and shoreline management along Wallops Island, Virginia*

Cameron Clarke (BS, 2022, W&M Geology): *Unraveling the history of Pleistocene sea-level change in Virginia: Insights from the Wachapreague Formation, Virginia Eastern Shore*

Melanie Strik (BS, 2021, W&M Geology): *Role of coastal dune sedimentology in coastal protection from sea-level rise*

Mahinaokalani Robbins (BS, 2021, W&M Geology): *Controls on multi-decadal volume and shoreline changes of the Virginia Barrier Islands*

Chloe Obara (BS, 2020, W&M Geology): *Sediment fluxes at Assateague Island, Virginia: The role of spit growth on the stability of downdrift barrier islands*

Colleen Scott (BS, 2020, W&M Geology): *The provenance of hurricane-induced marsh sedimentation on the southeast coast, USA*

Bianca Boggs (BS, 2019, W&M Geology): *Contributions of antecedent topography to long-term barrier-island dynamics: Examples from the New Jersey and Maryland coasts*

Kendall King (BS, 2019, W&M Geology): *Saltmarsh event sedimentation: A comparative study of Hurricane Irma deposits across the Southeast U.S.A.*

Kate DeMarco (BS, 2018, W&M Geology): *Beach and foredune ridges as recorders of coastal shoreline evolution: Insights from Chincoteague-Assateague-Wallops islands, northern Virginia*

Lauren Herbine (BS, 2018, W&M Geology): *Implications of Long-term Resilience of Delmarva Peninsula Marshes for Barrier-Island Stability*

Sarah Baker (BS, 2017, W&M Geology): *Historical erosion and accretion patterns along Plum Island Point and Salisbury Beach, Massachusetts*

Jennifer Connell (BS, 2017, W&M Geology): *Investigating salt marsh response to natural and anthropogenic changes in the Great Marsh, Plum Island, Massachusetts*

Brody Marino (BS, 2016, W&M Geology): *Seasonal and spatial variability in the sedimentology of the Merrimack Embayment*

Charlie Deaton (BS, 2015, W&M Geology) (co-advised with M. Kirwan, VIMS): *Barrier island migration, changes in tidal prism, and marsh loss on Virginia's Eastern Shore*

Haley Gannon (BS, 2015, W&M Geology): *An analysis of cyclical erosion and a migrating erosional hotspot on Plum Island*

Undergraduate Students: Research Experience for Undergraduates

Sarah Grace Lott (W&M), Summer 2020: *Internal geometry of a headland bypassing system: São Francisco Island, Brazil*

Soely Luyando-Flusa (Universidad Turabo), Summer 2018: *Changing Depositional Environments of the Upper Chesapeake Bay in Response to European Colonization and Implications for Oyster Populations*

Rebecca Whitney (Elmira College), Summer 2016 (co-mentored with E. Canuel): *Organic carbon content of Holocene sediment deposited at Plum Island, MA*

Justin Shawler (W&M), Summer 2015: *Multi-proxy records of anthropogenic changes in fluvial sediment supply from Joppa Flats tidal flat, northern MA, USA* (nominated and accepted for competitive Council on Undergraduate Research Symposium, Oct 2015)

Undergraduate & High School Students: Other Mentoring

Lab Interns (for credit or salary): Addison Greenfeld (W&M Geology & Marine Science, 2024 - present); Travis Cornbau (W&M Marine Science, 2024 - present); Lawrence Maclin (W&M Biology, 2023 - present); Ian Cook (W&M Marine Science, 2022 - present); Jessie Ayotte (W&M Marine Science, 2024 - present); Anna Van Dongen (W&M Marine Science, 2022 - 2023); Nathaniel Ingle (W&M Marine Science, 2022 - 2023); Grace Weeks (W&M Marine Science, 2021 - 2023); Ally Gravgaard (W&M Marine Science, 2021 - 2022); Ethan Stewart (W&M Marine Science, Summer 2022); Catherine Hughes (Randolph-Macon College, 2021)

Honors Thesis Committees: Emily Muhlitz (W&M Geology, 2019); Eve Pugsley (W&M Geology, 2018); Michael Gibson (W&M Biology, 2023)

International J1 Student Interns (Exchange students from Universidade do Vale do Itajaí, Brazil): Luis Henrique Polido de Souza (May–Oct 2014); Marcio Albernaz (Feb–Sept 2010); Thelma Scolaro (Feb–July 2009)

Undergraduate Volunteer Students: Katherine Peck (W&M Anthropology Dept; Spring 2015); Luiza Barbosa Caminada (Brazilian exchange student; 2015); Joshua Darnell (Virginia Commonwealth U.; Fall 2015)

Woods Hole Partnership Education Program (PEP) Students: Samir Karim (2013); Sequoia Riley (2012)

BU Undergraduate Students (2006–2011): Mary Ellison; Emily Carruthers (current: Assistant Director Advisory Service, VIMS), Meaghan Gorman, Nicholas Cohn (current: US Army Corps of Engineers)

American Chemical Society Project SEED Summer Fellows: Akina Chuigyn (2010); Kim Lien Le (2009)

TEACHING

Primary Instructor

Summer 2024	Co-Instructor, W&M, Coastal Environments in North Wales: Geology, Ecology, and Human Dimensions (MSCI 332); enroll: 17
Fall 2023	Instructor, W&M, Marine Science Mash-Up (MSCI 391); enroll: 83
Spring 2023	Co-Instructor (lead), VIMS, Rivers: Processes & Problems (MSCI 550); enroll: 8
Fall 2022	Instructor, VIMS/W&M, Marine Geology: Environments, Processes, & Records (GEOL 421 / MSCI 421 / MSCI 521); enroll: 36
Fall 2022	Instructor, W&M, Marine Science Mash-Up (MSCI 391); enroll: 123
Summer 2022	Co-Instructor, W&M, Coastal Marine Habitats of North Wales (MSCI 332); enroll: 16
Fall 2021	Instructor, VIMS, Fundamentals of Marine Geology (MSCI 401C/501C); enroll: 23
Spring 2021	Instructor, VIMS, Holocene Coastal Geomorphology & Evolution (MSCI 622); enroll: 6
Fall 2020	Instructor, VIMS/W&M, Marine Geology: Environments, Processes, & Records (GEOL 421 / MSCI 421 / MSCI 521); enroll: 26
Spring 2020	Co-Instructor (lead), VIMS, Rivers: Processes & Problems (MSCI 550); enroll: 8
Fall 2019	Instructor, VIMS, Fundamentals of Marine Geology (MSCI 401C/501C); enroll: 16
Fall 2018	Instructor, VIMS/W&M, Marine Geology: Environments, Processes, & Records (GEOL 421 / MSCI 421 / MSCI 521); enroll: 22
Fall 2017	Instructor, VIMS, Fundamentals of Marine Geology (MSCI 401C/501C); enroll: 15
Spring 2017	Instructor, VIMS, Holocene Coastal Geomorphology & Evolution (MSCI 622); enroll: 5 Co-Instructor, VIMS, Advanced Principles of Marine Geology (MSCI 522); enroll: 7
Fall 2016	Instructor, VIMS, Fundamentals of Marine Geology (MSCI 401C/501C); enroll: 21
Fall 2015	Instructor, VIMS, Fundamentals of Marine Geology (MSCI 401C/501C); enroll: 20
Spring 2015	Instructor, VIMS, Barrier System Dynamics (MSCI 698); enroll: 5
Fall 2014	Instructor, VIMS, Fundamentals of Marine Geology (MSCI 401C/501C); enroll: 11 Co-Instructor, VIMS, Coastal Geomorphology (MSCI 498); enroll: 4
Spring 2014	Co-Instructor, VIMS, Principles of Geological Oceanography (MSCI 522); enroll: 3 Co-Instructor, VIMS, Rivers: Processes and Problems (MSCI 550); enroll: 7
Fall 2011	Instructor, BU, Sedimentology (ES 331); enroll: 18
Fall 2006, 2009	Teaching Fellow, BU, Sedimentology (ES 331)

Spring 2006, 2007 Teaching Fellow, BU, Earth Surface Processes (ES 333)
Fall, Spring 2002–2003 Teaching Assistant, CU, Introduction to Geology (EAS 101)

Guest Lectures

2014–2024 (annual) VIMS, Field Studies in Coastal Marine Environments (MSCI 331)
2016–2023 (annual) VIMS, Research Experience for Undergraduates Program
Fall 2023 Distributed Online Class, Disturbance in Coastal Wetlands
Spring 2019, '21, '22 W&M, Earth, Science, and Society (GEOL 100)
2014–2021 (annual) W&M, The Sedimentary Record (GEOL 322)
2013–2021 (annual) VIMS/W&M, Marine Science Mash-Up (MSCI 391)
Spring 2020 W&M, Global Climate Change (GEOL 312)
Fall 2019 Harvard Graduate School of Design Landscape Studio Course
Fall 2016–2018 W&M, Sustainability & the Chesapeake Bay (BUAD 492)
Spring 2016 VIMS, Marine Organic Geochemistry (MSCI 626)
Spring 2015 W&M, Science Communication (ENSP 249)
Fall 2013 VIMS, Fundamentals of Marine Geology (MSCI 501C)
Spring 2006–2011 BU, Beach & Shoreline Processes (ES 142); Marine Geology (ES 440)

ACADEMIC SERVICE/ ACTIVITIES

External Conference & Workshop Leadership

Lead Organizer, IGCP 725 International Workshop (virtual) (18–19 January 2024): *Geochron January III: Mining the Historical Coastal Record* (~490 global participants)
Co-Lead Organizer, IGCP 725 Meeting (Florianopolis, Brazil) (October 2023) (53 participants)
Lead Organizer, IGCP 725 International Workshop (virtual) (18–19 January 2023): *Geochron January II: Beyond Radiocarbon: Dating the Coastal Geologic Record* (~260 global participants)
Co-Lead Organizer, IGCP 725 International Workshop (virtual) (18–19 January 2022): *Geochron January: Radiocarbon Dating: Applications, Approaches, & Pitfalls* (~150 global participants)
Technical Program Co-Chair, Geological Society of America Southeastern Section Meeting, Charleston, SC (28–29 March 2019) (co-chair: Erin Beutel)

Conference Session and Field Trip Organization

Session Co-Chair, International Quaternary Association (INQUA), Rome, Italy (July 2023): *From Cores to Code: Data-Model Integration to Improve Reconstructions and Forecasts of Coastal Change* (co-chairs: Jessica Pilarczyk, Matthew Brain)
Session Chair, Coastal Sediments '23, New Orleans, LA (13 April 2023): *From Cores to Code: Data-Model Integration to Improve Reconstructions and Forecasts of Coastal Change* (co-chair: Jessica Pilarczyk)
Session Chair, American Geophysical Union Fall Meeting, New Orleans, LA (14 December 2021): *Session EP23B/E. From Cores to Code: Data-Model Integration to Improve Reconstructions and Forecasts of Coastal Change* (co-chairs: Jessica Pilarczyk, Matthew Brain)
Session Chair, Society for Sedimentary Geology (SEPM) International Sedimentary Geosciences Congress (ISGC 2020), Flagstaff, AZ (26–29 April 2020): *Sedimentary Archives of Quaternary Coastal Change* (co-chairs: Sebastian Lindhorst, Toru Tamura) (Conference postponed)
Session Chair, American Geophysical Union Fall Meeting, New Orleans, LA (12 December 2017): *EP004. Beach- and Foredune- Ridge Systems: Architecture, Formation Mechanisms, and Use as Sedimentary Archives* (co-chairs: Sebastian Lindhorst, Lars Nielsen)
Session Co-Chair, Geological Society of America Southeastern Section Meeting, Richmond, VA (1 April 2017): *T5. Beaches, Barriers, and Marshes of the Southeast Coast: Dynamic Systems in a Changing Climate* (co-chair: Michael Fenster)
Session Chair, Geological Society of America Annual Meeting, Baltimore, MD (2 November 2015): *T128. Field and Modeling Approaches to Understanding the Response of Coupled Barrier-Backbarrier Systems to Coastal Change* (co-chair: Jorge Lorenzo-Trueba)

Field Trip Co-Leader, The 106th meeting of the New England Intercollegiate Geological Conference (NEIGC), Wellesley MA (10 October 2014): *Ice, water, and wind: A source-to-sink view of the glacial, paraglacial, and coastal sediments and processes that have shaped northeast Massachusetts* (co-leader: Byron Stone, USGS)
Session Co-Chair, Geological Society of America Annual Meeting, Denver, CO (2 November 2010): T139. *The Barrier Island System: Evolution in Response to Changing Sea Levels* (co-chair: Zoe Hughes)
Co-Organizer, Climate Seminar (2008–2010), Department of Earth Sciences, BU
Field Trip Leader, Massachusetts Institute of Technology Sedimentology Class (Dr. Paul Myrow, Professor) - 3 April, 2010: *Field Trip to Plum Island MA*
Field Trip Leader, University of Massachusetts, Amherst Sedimentology Class (Dr. Jon Woodruff, Professor) - 24 April 2010: *Field Trip to Plum Island MA*

Institutional Leadership & Major Service: VIMS / W&M

Fellow, W&M Scholars Undergraduate Research Experience (WMSURE) Program: Jan 2022 – Sept 2023
Member, VIMS Academic Program Strategic Planning Implementation Team: Sept 2022 – April 2023
Member, VIMS Academic Program Strategic Planning Group: Jan 2022 – June 2022
Coordinator, VIMS/W&M Unlearning Racism in Geosciences (URGE): Spring 2021

Institution Committees and Other Service: VIMS / W&M

VIMS Academic Council: Jan 2018 – present
W&M Studio for Teaching & Learning Innovation (STLI) Advisory Committee: Sept 2023 – present
VIMS Associate Dean of Academic Studies Search Committee: March – June 2023
W&M Geology Faculty Search Committee: Nov 2022 – April 2023
W&M Jefferson Awards Committee: Dec 2022
VIMS/W&M Marine Science Minor Advisory Committee: Apr 2019 – July 2021
W&M STLI New Instructor Mentorship Program: 2021–2022
VIMS Postdoc Committee: Sept 2015 – June 2021
VIMS Chesapeake Bay Hall Replacement Committee: Nov 2018 – June 2021
VIMS Parking Committee: Oct 2013 – June 2021
VIMS Chemistry Faculty Search Committee: Aug 2018 – Sept 2019
VIMS Faculty Council: Oct 2013 – May 2017

Institution Sub-Committees, Working Groups, & Panels: VIMS / W&M

Panelist, W&M Studio for Teaching & Learning Innovation Community Conversation: *Developing Deep Discussion*: Dec 2022
W&M Executive Order 77 Advisory Council: Aug 2021 – Dec 2022
VIMS Strategic Planning Committee - Education: Jan – Feb 2021
VIMS Strategic Planning Committee – Resilience, Conservation, & Restoration: Jan – Feb 2021
Task Force on Incorporating Principles of Diversity, Equity, & Inclusion into the School of Marine Science Curriculum (VIMS/SMS Office of Academic Studies): Nov – Dec 2020
Chair, VIMS Marine Science Major Development Task Force: Oct 2019 – Mar 2020
W&M Curriculum and Research Working Group, Climate Action and Sustainability Subcommittee, W&M Strategic Planning Committee: Sept 2019 – Mar 2020
W&M Education & Outreach Working Group, W&M Sustainability Plan: Jan 2018 - Dec 2019

Symposia and Workshop Participation

Recurrent Flooding Workshop: Identifying and Prioritizing Research Needs (funded by National Science Foundation *Coastlines and People (CoPe)* program): Norfolk, VA, 15-16 April 2021.
National Science Foundation *Coastlines and People (CoPe)* Scoping Session: Chicago, IL, 26-28 Sept 2018.
Mitigation and Adaptation Research in Virginia Workshop: Suffolk, VA, 11-13 August 2015.
National Science Foundation *Coastal SEES (Science, Engineering and Education for Sustainability)* PI Meeting: Arlington, VA, 29-30 January 2015.
DISCCRS (Dissertations Initiative for the Advancement of Climate Change Research) VIII Symposium: Colorado Spring, CO, 12-19 October 2013.
Joint Penrose-Chapman Conference 2013: *Coastal Processes and Environments Under Sea-Level Rise and Changing Climate: Science to Inform Management*: Galveston, TX, 14–19 April 2013.

Magellan+ Workshop, Bay of Bengal Drilling: *Records of Geohazards and Monsoonal Changes in the Northern Bay of Bengal - Preparation of an IODP Drilling Proposal*: Bremen, Germany, 8-10 October 2012.

Reviewing (2013-2022)

Funding Panel Participation: NSF Marine Geology and Geophysics Program (Winter 2024); NSF Marine Geology and Geophysics Program (Spring 2021); NSF Geomorphology and Land-Use Dynamics Program (Fall 2019); NSF Marine Geology and Geophysics Program (Spring 2016); NSF Graduate Research Fellowship Program (2015)

Funding Agencies: Dutch Research Council (NWO) (2023); NSF Geobiology & Low Temp Geochemistry (2019, 2020); NSF Geomorphology & Land Use Dynamics (2013, 2014, 2016, 2018, 2019, 2020, 2022); NSF Marine Geology & Geophysics (2017, 2018, 2019, 2020, 2022, 2023); NSF EAR Instrumentation (2018); NSF Postdoctoral Program (2016, 2021); NSF CAREER Program (Arctic Programs; 2017, 2018); Natural Sciences and Engineering Research Council of Canada (2023); Delaware Sea Grant (2019); PRESTIGE Postdoc Program (France, EU) (2016); RESTORE Act Center of Excellence for Louisiana (2017); American Chemical Society Petroleum Research Fund (2017); North Carolina Sea Grant (2021)

Peer-Reviewed Journals: Chemical Geology; Climates of the Past; Continental Shelf Research; Earth and Planetary Science Letters; Earth Surface Processes Letters; Ecology; Ecosystems; Estuaries and Coasts; E-Surf; Frontiers; G³; Geochimica et Cosmochimica Acta; Geology; Geo-Marine Letters; Geological Society of London; Geophysical Research Letters; Geomorphology; Geology; Journal of Coastal Research; Journal of Geophysical Research – Earth Surface; Journal of Geophysical Research – Oceans; ; Journal of South American Earth Sciences; Marine Geology; Natural Hazards; Quaternary Science Reviews; Scientific Reports; Sedimentology; Terra Nova; Thalassas; The Holocene; Wiley Inc. book

Other: National Natural Landmarks Program (National Park Service) (2024), National Parks Service report reviewer (2016), Promotion & Tenure (anon., 2020)

Professional Affiliations (current)

American Geophysical Union (AGU); Geological Society of America (GSA); International Union for Quaternary Research (INQUA)

OUTREACH ACTIVITIES / SERVICE

Public Advisory Board Membership

Member: City of Norfolk Coastal Management & Review Board; Nov 2016 - present

Member: Science Advisory Board, *Storm Surge: Merrimack Valley Coastal Adaptation Workgroup*; 2020 - 2022

Outreach Workshop Coordination

Lead Organizer, North Carolina & Southern Virginia Dune Management Workshop (20 May 2024): *Advances in Dune Science to Inform Management*

Lead Organizer, North Carolina Dune Management Workshop (virtual) (27 October 2021): *Cultivating a Better Understanding of Local Coastal Dune Dynamics & Management Needs*

Lead Organizer, Stakeholder Input Workshop, Wachapreague, VA (16 January 2020): *Cedar Island Marsh Restoration Project: Field Work, Data Analysis, Marsh Template Design: Public Presentation and Stakeholder Input*

Lead Organizer, Sea Grant Outreach Workshop, Wachapreague, VA (9 November 2018): *Investigating Connections between Barriers Islands & Marshes: Past, Present, and Future Coastal Change along the Seaside of Virginia's Eastern Shore*

Co-Organizer, Sea Grant Outreach Workshop, Tuckerton, NJ (12 October 2018): *Investigating Connections between Barriers Beaches and Mainland Marshes*

Panelist Participation

Expert Witness, US House of Representatives Committee on Natural Resources, Subcommittee on Water, Wildlife and Fisheries; 28 September 2023

Webinar Panelist: Lynnhaven River Now – *Dune Systems and Coastal Resiliency in Virginia Beach*; 17 Nov 2020

Panelist: EPA / Massachusetts Bays Program - *Climate Ready Estuaries Expert Elicitation Workshop: Salt Marsh Vulnerability Assessment* - Boston, MA; 27–28 April 2010

Public Outreach Talks

27. Museum of Chincoteague (Chincoteague, VA) (20 April 2024): *A Geologic Perspective on Today's Sea-Level Rise*
26. Peninsula Ski Club of Virginia (Hampton, VA) (14 March 2024): *Virginia's Barrier Islands: Breakneck Change in a Rapidly Changing World*
25. Crown Colony Club of Williamsburg (Williamsburg, VA) (27 September 2023): *The Future of Virginia's Barrier Coast*
24. North Landing River & Albemarle Sound Estuarine Symposium Featured Speaker (Virginia Beach, VA) (31 March 2023): *Dunes: More than Just a Pile of Sand*
23. Museum of Chincoteague & Chincoteague Island Theater Featured Speaker (Chincoteague, VA) (29 October 2022): *Barrier Islands Past, Present, Future: Studying the History of Virginia's Barrier Islands to Better Predict the Fate of Chincoteague*
23. Alexandria Public Library Science Seminar Series (Alexandria, VA) (11 June 2022): *The Future of Virginia's Barrier Coast*
22. Chincoteague Town Council (Chincoteague, VA) (29 October 2021): *Modeling Chincoteague Inlet to Improve Management & Plan for the Future of Chincoteague* (presentation to US Representative Elaine Luria and staff)
21. NOAA Science Seminar Series (virtual) (28 September 2021): *Linked by sand: Leveraging natural synergies between saltmarshes and barrier islands to improve coastal resiliency*
20. Chincoteague Town Council (Chincoteague, VA) (16 September 2021): *Modeling Chincoteague Inlet to Improve Management & Plan for the Future of Chincoteague*
19. Museum of Chincoteague (Chincoteague, VA) (3 August 2021): *Unraveling the History of Chincoteague to Better Predict its Future*
18. Seaford Yacht Club Public Lecture Series (Yorktown, VA) (15 February 2020): *Virginia's Barrier Islands: Breakneck Change in a Rapidly Changing World*
17. Storm Surge: Lower Merrimack Valley Climate Adaptation Working Group (Newbury, MA) (27 December 2019): *The river, the sea, & the jetty: Plum Island's dynamic beaches*
16. Museum of Chincoteague (Chincoteague, VA) (9 July 2019): *Barrier Island Dynamics & Change along the Northern Virginia Eastern Shore*
15. Virginia Coast Avian Partnership (Cape Charles, VA) (22 March 2019): *The Changing Landscape of the Virginia Barrier Islands*
14. City of Chincoteague Town Council (Chincoteague, VA) (21 March 2019): *Barrier Island Dynamics & Change along the Northern Virginia Eastern Shore*
13. Historic Rivers Chapter of the Virginia Master Naturalists (Norge, VA) (14 February 2019): *Virginia's Barrier Islands: Breakneck Change in a Rapidly Changing World*
12. VIMS After Hours Public Lecture Series (Gloucester Point, VA) (31 January 2019): *Virginia's Barrier Islands: Breakneck Change in a Rapidly Changing World*
11. W&M Christopher Wren Society (Williamsburg, VA) (19 April 2018): *The Dynamics of Barrier Islands*
10. Eastern Shore Barrier Islands Center Coffee Hour Lecture Series (Machipongo, VA) (16 March 2018): *Virginia's Barrier Islands: Breakneck Change in a Rapidly Changing World*
9. VIMS Eastern Shore Lab Public Seminar (Wachapreague, VA) (8 November 2017): *Virginia's Barrier Islands: Breakneck Change in a Rapidly Changing World*
8. Science Museum of Virginia: Climate Connections Lecture Series (Richmond, VA) (15 March 2017): *Geologic Studies of Barrier Islands: Helping Society Better Understand and Respond to Changes Affecting the Outer Banks and Virginia's Eastern Shore*
7. Virginia Coast Avian Partnership (Melfa, VA) (8 March 2017): *Mapping Geologic & Geomorphic Change along Virginia's Barrier Island Systems*
6. Rappahannock Community College: Rappahannock Institute for Lifelong Learning (Gloucester Point, VA) (12 March 2015): *Sea-Level Rise in Virginia: Part I - Long-Term Changes, Causes, & Coastal System Responses*
5. VIMS After Hours Public Lecture Series (Gloucester Point, VA) (31 July 2014): *Barrier islands past, present and future*

4. UNC Coastal Studies Institute Science on the Sound Public Lecture Series (Wanchese, NC) (26 March 2014): *Soundfronts, Shorelines, and Sediments: How Does Upstream Management Affect Coasts?*
3. VIMS Eastern Shore Lab Public Seminar (Wachapreague, VA) (6 November 2013): *Sea Level: The Once and Future King (of coastal change)*
2. Eight Towns and the Bay Speaker Series (Newbury, MA) (16 March 2009): *Formation and Evolution of the Plum Island Barrier System*
1. The Great Marsh Symposium, Parker River National Wildlife Refuge (Newburyport, MA) (11 April 2009): *Sheltering the Great Marsh: Formation and Evolution of the Plum Island Barrier System*

SCHOLARLY PUBLICATIONS AND PRESENTATIONS

*VIMS graduate student author †W&M/BU undergraduate student author ‡collaborating student author

Publications in Progress

- ‡White, A.E., Cohn, N., *Davis, E.H., **Hein, C.J.**, Zinnert, J.C., *accepted*. Coastal dune management affects above and belowground biotic characteristics, *Scientific Reports*.
- *Shawler, J.L., **Hein, C.J.**, ‡Sakib, M.M., Messina, F., Georgiou, I.Y., *in review*. Local waves and sediment transport overprint climate signals in beach-and-foredune ridge plains, *Journal of Geophysical Research: Earth Surface*.

Peer-Reviewed Publications

48. **Hein, C.J.**, Connell, J.E., FitzGerald, D.M., Georgiou, I.Y., Hughes, Z., †King, K., 2024. Vertical accretion trends project doughnut-like fragmentation of saltmarshes, *Communications: Earth & Environment*, v. 5, p. 74. doi: 10.1038/s43247-024-01219-8.
47. **Hein, C.J.** and Kirwan, M.L., 2024. Marine transgression in modern times, *Annual Review of Marine Science*, v. 16, p. 55–79, doi: 10.1146/annurev-marine-022123-103802.
46. *Davis, E.H., **Hein, C.J.**, Cohn, N., Zinnert, J., †White, A., 2024. Differences in internal sedimentologic and biotic structure between natural, managed, and constructed coastal foredunes, *Geomorphology*, v. 451, p. 109083. doi: 10.1016/j.geomorph.2024.109083
45. †Heminway, S.S., Cohn, N., *Davis, E.H., †White, A., **Hein, C.J.**, Zinnert, J.C., 2024. Exploring ecological, morphological, and environmental controls on coastal foredune evolution at annual scale using a process-based model, *Sustainability*, v. 16, p. 3460. doi: 10.3390/su16083460.
44. *Barksdale, M.B., **Hein, C.J.**, Kirwan, M.L., 2023. Shoreface erosion counters blue carbon accumulation in transgressive barrier-island systems, *Nature Communications*, v. 14, p. 8425. doi: 10.1038/s41467-023-42942-8.
43. †Wilson, F.L.G., Klein, A.H.F., Mahiques, M.M., **Hein, C.J.**, de Sousa, L.A.P., Cooper, J.A.G., Green, A., 2023. Holocene barrier overstepping, estuarine rollover and drainage merging in a sub-tropical bay, *Marine Geology*, v. 462, p. 107076. doi: 10.1016/j.margeo.2023.107076
42. Georgiou, I.Y., Messina, F., †Sakib, M.M., Zou, S., Foster-Martinez, M., Bregman, M., **Hein, C.J.**, Fenster, M.S., *Shawler, J.L., †McPherran, K., Trembanis, A.C., 2023. Hydrodynamics and Sediment-Transport Pathways along a Mixed-Energy Spit-Inlet System: A Modeling Study at Chincoteague Inlet (Virginia, USA), *Journal of Marine Science and Engineering*, v. 11, p. 1075. <https://doi.org/10.3390/jmse11051075>.
41. Mariotti, G., **Hein, C.J.**, 2022. Lag in response of coastal barrier-island retreat to sea-level rise, *Nature Geoscience*, v. 15, p. 633–638. doi: 10.1038/s41561-022-00980-9
40. †Robbins, M.G., *Shawler, J.L., **Hein, C.J.**, 2022. Contribution of longshore sand exchanges to mesoscale barrier-island behavior: Insights from the Virginia Barrier Islands, U.S. East Coast, *Geomorphology*, v. 403, p. 108163. doi: 10.1016/j.geomorph.2022.108163
39. Lees, D.C., **Hein, C.J.**, FitzGerald, D.M. 2022. Measuring organization of large surficial clasts in heterogeneous gravel beach sediments. *Journal of Marine Science and Engineering*, v. 10, p. 525. doi: 10.3390/jmse10040525.
38. FitzGerald, D.M., Hughes, Z.J., †Staro, A., **Hein, C.J.**, †Sakib, M.M., Georgiou, I.Y., Novak, A., 2022. Following the sand grains, *Journal of Marine Science and Engineering*, v. 10, p. 631. doi: 10.3390/jmse10050631.

37. **Hein, C.J.**, Fenster, M.S., Gedan, K.B., Tabar, J.R., Hein, E.A., DeMunda, T., 2021. Leveraging the interdependencies between barrier islands and backbarrier saltmarshes to enhance resilience to sea-level rise, *Frontiers of Marine Science*, v. 8, p. 721904. doi: 10.3389/fmars.2021.721904
36. *Shawler, J.L., **Hein, C.J.**, †Obara, C.A., †Robbins, M.G., Hout, S., Fenster, M.S., 2021. The effect of coastal landform development on decadal- to millennial-scale longshore sediment fluxes: Evidence from the Holocene evolution of the central mid-Atlantic coast, USA, *Quaternary Science Reviews*, v. 267, p. 107096, doi: 10.1016/j.quascirev.2021.107096.
35. *Shawler, J.L., ‡Ciarletta, D.J., Connell, J.E., †Boggs, B.Q., Lorenzo-Trueba, J., **Hein, C.J.**, 2021. Relative influence of antecedent topography and sea-level rise on barrier-island migration, *Sedimentology*, v. 68(2), p. 639-669, doi: 10.1111/sed.12798.
34. FitzGerald, D.M., **Hein, C.J.**, †Connell, J.E., Hughes, Z.J., Georgiou, I.Y., Novak, A., 2021. Largest marsh in New England near a precipice, *Geomorphology*, v. 379, p. 107625, doi: 10.1016/j.geomorph.2021.107625.
33. Ciarletta, D.J., Miselis, J.L., *Shawler, J.L., **Hein, C.J.**, 2021. Quantifying thresholds of barrier geomorphic change in a cross-shore sediment partitioning model, *Earth Surface Dynamics*, v. 9, p. 183–203, doi: 10.5194/esurf-9-183-2021.
32. Wehmiller, J.F., Brothers, L.L., Ramsey, K.W., Foster, D.S., Mattheus, C.R., **Hein, C.J.**, *Shawler, J.L., 2021, Molluscan aminostratigraphy of the US Mid-Atlantic Quaternary coastal system: Implications for onshore-offshore correlation, paleochannel and barrier island evolution, and local late Quaternary sea-level history, *Quaternary Geochronology*, v. 66, p. 101177, doi: 10.1016/j.quageo.2021.101177
31. **Hein, C.J.**, Usman, M., Eglinton, T.I., Haghypour, N., Galy, V.V., 2020. Millennial-scale hydroclimate control of tropical soil carbon storage, *Nature*, v. 581, p. 63-66, doi: 10.1038/s41586-020-2233-9.
30. †Silva, A.P., Klein, A.H.F., Fetter Filho, A.F.H., **Hein, C.J.**, Mendez, F.J., Broggio, M.F., Dalinghaus, C., 2020. Climate-induced variability in South Atlantic wave direction over the past three millennia, *Scientific Reports*, v. 10, 18553, doi: 10.1038/s41598-020-75265-5.
29. FitzGerald, D.M., †Ryerson, O., Hughes, Z., †Black, S., Georgiou, I., **Hein, C.J.**, Novak, A., 2020. Long-term variability in inorganic sediment contributions to the Great Marsh, Massachusetts. *Journal of Coastal Research*, SI 95, p. 11-15.
28. **Hein, C.J.**, *Fallon, A.R., Rosen, P., Hoagland, P., Georgiou, I.P., FitzGerald, D.M., Morris, M., †Baker, S., †Marino, G.B., Fitzsimons, G., 2019. Shoreline dynamics along a developed river-mouth barrier island: Multi-decadal cycles of erosion and event-driven mitigation. *Frontiers in Earth Science*, v. 7, 103, doi: 10.3389/feart.2019.00103.
27. *Shawler, J.L., **Hein, C.J.**, Canuel, E.A., Kaste, J.M., Fitzsimons, G.G., Georgiou, I.Y., Willard, D.A., 2019. Tidal erosion and upstream sediment trapping modulate records of land-use change in a formerly glaciated New England estuary, *Anthropocene Coasts*, v. 2, p. 340-361, doi: 10.1139/anc-2018-0034.
26. †Ciarletta, D.J., *Shawler, J.L., †Tenebruso, C., **Hein, C.J.**, Lorenzo-Trueba, J., 2019. Reconstructing coastal sediment budgets from beach- and foredune- ridge morphology: A coupled field and modeling approach, *Journal of Geophysical Research Earth Surface*, v. 124, p. 1398–1416, doi: 10.1029/2018JF004908.
25. **Hein, C.J.**, Ten Hoeve, T.E., Gopalakrishnan, S., Livneh, B., Adams, H.D., Marino, E.K., Weiler, C.S., 2018. Overcoming early career barriers to interdisciplinary climate change research, *Wiley Interdisciplinary Reviews: Climate Change*, v. 9, e530. doi:10.1002/wcc.530.
24. †Raff, J.L., *Shawler, J.L., †Ciarletta, D.J., Hein, E.A., Lorenzo-Trueba, J., **Hein, C.J.**, 2018. Insights into barrier-island stability derived from transgressive/regressive state changes of Parramore Island, Virginia, *Marine Geology*, v. 403, p. 1-19, doi:10.1016/j.margeo.2018.04.007.
23. French, K.L., **Hein, C.J.**, Haghypour, N., Wacker, L., Kudrass, H., Eglinton, T.I., Galy, V.V., 2018. Millennial soil retention of terrestrial organic matter deposited in the Bengal Fan, *Scientific Reports*, v. 8, 11997, doi: 10.1038/s41598-018-30091-8.
22. †Billy, J., Robin, N., **Hein, C.J.**, FitzGerald, D.M., Certain, R., 2018. Impact of relative sea-level changes since the last deglaciation on the formation of a composite paraglacial barrier, *Marine Geology*, v. 400, p. 76-93, doi:10.1016/j.margeo.2018.03.009.

21. †Billy, J., Robin, N., **Hein, C.J.**, FitzGerald, D.M., Certain, R., 2018. Dominance of inherited geologic framework on the development of a coastal barrier system, *Journal of Coastal Research*, SI 85, p. 406-410, doi:10.2112/SI85-082.1.
20. **Hein, C.J.**, Galy, V.V., Galy, A., France-Lanord, C., Kudrass, H., 2017. Post-glacial climate forcing of surface processes in the Ganges-Brahmaputra River Basin and implications for the global carbon cycle, *Earth and Planetary Science Letters*, v. 478, p. 89-101, doi:10.1016/j.epsl.2017.08.013.
19. †Deaton, C.D., **Hein, C.J.**, Kirwan, M.L., 2017. Barrier-island migration dominates ecogeomorphic feedbacks and drives salt marsh loss along the Virginia Atlantic Coast, USA, *Geology*, v. 45, p. 123-126, doi:10.1130/G38459.1.
18. *Fallon, A.R., Hoagland, P., Jin, D., †Phalen, B., Fitzsimons, G., **Hein, C.J.**, 2017. Adapting without retreating: Responses to shoreline change on an inlet-associated coastal beach, *Coastal Management*, v. 45, n. 5, p. 360-383, doi:10.1080/08920753.2017.1345607.
17. **Hein, C.J.**, FitzGerald, D.M., †de Souza, L.H.P., Georgiou, I.Y., Buynevich, I.V., Klein, A.H.F., de Menezes, J.T., Cleary, W.J., *Scolaro, T., 2016. Complex coastal change in response to autogenic basin infilling: An example from a sub-tropical Holocene strandplain, *Sedimentology*, v. 63, no. 6, p. 1362-1395, doi: 10.1111/sed.12265.
16. **Hein, C.J.**, Fitzsimons, G.G., FitzGerald, D.M., *Fallon, A.R., 2016. Records of migration and ebb-delta breaching at historic and ancient tidal inlets along a river-fed paraglacial barrier island, *Journal of Coastal Research*, SI 75, p. 228-232, doi: 10.2112/SI75-46.1.
15. †Rogers, L.J., Moore, L.J., Goldstein, E.B., **Hein, C.J.**, Lorenzo-Trueba, J., Ashton, A.D., 2015. Anthropogenic controls on overwash deposition: Evidence and consequences, *Journal of Geophysical Research - Earth Surface*, v. 120, p. 2609-2624, doi: 10.1002/2015JF003634.
14. †Billy, J., Robin, N., **Hein, C.J.**, Certain, R., FitzGerald, D.M., 2015. Insight into the Late Holocene sea-level changes in the NW Atlantic from a paraglacial beach-ridge plain south of Newfoundland, *Geomorphology*, v. 248, p. 134-146, doi:10.1016/j.geomorph.2015.07.033.
13. **Hein, C.J.**, FitzGerald, D.M., Buynevich, I.V., van Heteren, S., Kelley, J.T., 2014. Evolution of paraglacial coasts in response to changes in fluvial sediment supply, *Geological Society, London, Special Publication*, 388, p. 247-280, doi: 10.1144/SP388.15.
12. **Hein, C.J.**, FitzGerald, D.M., Cleary, W.J., Klein, A.H.F., de Menezes, J.T., Albernaz, M.B., 2014. Coastal response to late-stage transgression and sea-level highstand, *Geological Society of America Bulletin*, v. 126, no. 3/4, p. 459-480, doi: 10.1130/B30836.1.
11. **Hein, C.J.**, FitzGerald, D.M., Klein, A.H.F., †Albernaz, M.B., de Menezes, J.T., Cleary, W.J., 2014. Reply to the Discussion by Dillenburg et al. on "Evidence for a transgressive barrier within a regressive strandplain system: implications for complex response to environmental change" by Hein et al. (2013), *Sedimentology* 60, 469-502: A transgressive barrier at Pinheira, Southern Brazil around 3 ka?", *Sedimentology*, v. 61, no. 7, p. 2213-2217. doi: 10.1111/sed.12133.
10. †Billy, J., Robin, N., **Hein, C.J.**, Certain, R., FitzGerald, D.M., 2014. Internal architecture of mixed sand-and-pebble beach ridges: Miquelon-Langlade Barrier, NW Atlantic, *Marine Geology*, v. 357, p. 53-71, doi: 10.1016/j.margeo.2014.07.011.
9. **Hein, C.J.**, FitzGerald, D.M., Barnhardt, W.A., Stone, B.D., 2013. Onshore-offshore surficial geologic map of the Newburyport East and northern half of the Ipswich Quadrangles, Massachusetts, *Massachusetts Geological Survey*, Geologic Map GM 13-01, map scale 1:24,000, 3 sheets.
8. **Hein, C.J.**, FitzGerald, D.M., Cleary, W.J., †Albernaz, M.B., de Menezes, J.T., Klein, A.H.F., 2013. Evidence for a transgressive barrier within a regressive strandplain system: Implications for complex coastal response to environmental change, *Sedimentology*, v. 60, p. 469-502, doi: 10.1111/j.1365-3091.2012.01348.x.
7. †Billy, J., Robin, N., Certain, R., **Hein, C.J.**, Berné, S., 2013. Barrier shoreline evolution constrained by shoreface sediment reservoir and substrate control: The Miquelon-Langlade Barrier, NW Atlantic, *Journal of Coastal Research*, SI 65, p. 2089-2094.
6. **Hein, C.J.**, FitzGerald, D.M., †Carruthers, E.A., Stone, B.D., Barnhardt, W.A., Gontz, A.M., 2012. Refining the model of barrier island formation along a paraglacial coast in the Gulf of Maine, *Marine Geology*, v. 307-310, p. 40-57, doi: 10.1016/j.margeo.2012.03.001.

5. **Hein, C.J.**, FitzGerald, D.M., Milne, G.A., Bard, K.A., Fattovich, R., 2011. Evolution of a Pharaonic harbor on the Red Sea: Implications for coastal response to changes in sea level and climate, *Geology*, v. 39, no. 7, p. 687-690, doi: 10.1130/G31928.1.
4. Buynevich, I.V., Klein, A. H. F., FitzGerald, D.M., Cleary, W.J., **Hein, C.J.**, #Veiga, F.A., Angulo, R.J., Asp, N.E., #Petermann, R., 2011. Geological legacy of storm erosion along a high-energy indented coastline: northern Santa Catarina, Brazil, *Journal of Coastal Research*, SI 64, p. 1840-1844.
3. **Hein, C.J.**, FitzGerald, D., Barnhardt, W., 2007. Holocene reworking of a sand sheet in the Merrimack Embayment, Western Gulf of Maine, *Journal of Coastal Research*, SI 50, p. 863-867.
2. FitzGerald, D.M., Cleary, W.J., Buynevich, I.V., **Hein, C.J.**, Klein, A.H.F., Asp, N., Angulo, R., 2007. Strandplain evolution along the southern coast of Santa Catarina, Brazil, *Journal of Coastal Research*, SI 50, p. 152-156.
1. Taylor, G.T., **Hein, C.**, Iabichella, M., 2003. Temporal variations in viral distributions in the anoxic Cariaco Basin, *Aquatic Microbial Ecology*, 30, p. 103-116.

Reviewed Book Chapters and Open-File Reports

7. McBride, R.A. (co-authors in alphabetical order), Anderson, J.B., Buynevich, I.V., Byrnes, M.R., Cleary, W., Fenster, M.S., FitzGerald, D.M., Hapke, C.J., Harris, M.S., **Hein, C.J.**, Johnson, C.L., Klein, A.H.F., Liu, B., de Menezes, J.T., Mulhern, J.S., Oliver, T.S.N., Pejrup, M., Riggs, S.R., Roberts, H.H., Rodriguez, A.B., Seminack, C.T., Short, A.D., Stone, G.W., Tamura, T., Wallace, D.J., and Wang, P., 2022. Morphodynamics of Modern and Ancient Barrier Systems: An Updated and Expanded Synthesis. In: Shroder, J.J.F. (Editor in Chief), *Treatise on Geomorphology, Volume 8*. Elsevier, Academic Press, p. 289-417, doi: 10.1016/B978-0-12-818234-5.00153-X.
6. **Hein, C.J.**, Ashton, A.D. 2020. Long-term shoreline change: Processes & preservation of environmental signals, In: Short, A.D., Jackson, D. (eds), *Sandy Beach Morphodynamics*, Elsevier, p. 487-531, doi: 10.1016/B978-0-08-102927-5.00021-7.
5. FitzGerald, D.M., **Hein, C.J.**, Hughes, Z., Kulp, M., Georgiou, I., Miner, M., 2018. Runaway barrier island transgression concept: Global case studies, In: Moore, L.J., Murray, A.B. (eds), *Barrier Dynamics and the Impact of Climate Change on Barrier Evolution*, Springer, p. 3-56, doi: 10.1007/978-3-319-68086-6_1.
4. Galy, V., **Hein, C.J.**, France-Lanord, C., Eglinton, T., 2014. The evolution of carbon signatures carried by the Ganges-Brahmaputra River system: a source-to-sink perspective, In: Bianchi, T., Allison, M., and Cai, W.-J. (eds), *Biogeochemical Dynamics at Major River-Coastal Interfaces: Linkages with Global Change*, Cambridge, England: Cambridge University Press, p. 353-372.
3. McBride, R.A. (co-authors in alphabetical order), Anderson, J.B., Buynevich, I.V., Cleary, W., Fenster, M.S., FitzGerald, D.M., Harris, M.S., **Hein, C.J.**, Klein, A.H.F., Liu, B., de Menezes, J.T., Pejrup, M., Riggs, S.R., Short, A.D., Stone, G.W., Wallace, D.J., Wang, P., 2013. Morphodynamics of Barrier Systems: a synthesis, In: Shroder, J. (Editor in Chief), Sherman, D., (ed.), *Treatise on Geomorphology*, San Diego, CA: Academic Press, V. 10, *Coastal and Submarine Geomorphology*, p. 166-244.
2. FitzGerald, D.M., Buynevich, I.V., **Hein, C.J.**, 2012. Morphodynamics and facies architecture of tidal inlets and tidal deltas, In: Davis, R.A., and Dalrymple, R.W. (eds.), *Principles of Tidal Sedimentology*, Springer, New York, p. 301-333.
1. Barnhardt, W., Andrews, B., Ackerman, S., Baldwin, W., **Hein, C.**, 2009. *High Resolution Geologic Mapping of the Inner Continental Shelf: Cape Ann to Salisbury Beach Massachusetts*, U.S. Geological Survey Open-File Report 2007-1373, 50 p.

Conference Proceedings, Field-Trip Guides, Data, Reports, etc.

35. **Hein, C.J.**, Connell, J.E., FitzGerald, D.M., Georgiou, I.Y., Hughes, Z., King, K., 2024. Rates of vertical accretion of backbarrier marshes along the Georgia Bight as measured from sediment cores collected during December 2017 (NCEI Accession 0286629), NOAA National Centers for Environmental Information. Dataset. <https://doi.org/10.25921/eff9-d732>.
34. Pilarczyk, J.E., Hawkes, A.D., Brain, M.J., Green, A.N., **Hein, C.J.**, Lau, A., Ramos, N., 2023. Foreword: Remembering Professor David Scott's contribution to the IGCP community, *Journal of Foraminiferal Research*, v. 53, p. 1-2. <https://doi.org/10.2113/gsjfr.53.1.1>.

33. Davis, E., **Hein, C.J.**, Cohn, N., White, A., & Zinnert, J., 2023. North Carolina Outer Banks, USA Coastal Fore-dune Sediment Cores - Grain Size Data & Core Log Descriptions (1.0) [Data set]. Zenodo. <https://doi.org/10.5281/zenodo.10137063>.
32. **Hein, C.J.**, Pilarczyk, J.E., Brain, M., Green, A.N., Lau, A.Y.A., Ramos, N., 2023. From cores to code: Enhancing data-model integration to improve forecasts of coastal change – An introduction to IGCP Project 725, In: *Coastal Sediments '23*, Proceedings of the 13th International Symposium on Coastal Engineering and Science of Coastal Sediment Processes, World Scientific Publishing Co., Singapore, p. 2340-2354, https://doi.org/10.1142/9789811275135_0215.
31. †Heminway, S.S., *Davis, E.H., Cohn, N., Skaden, J., Anderson, D., **Hein, C.J.**, 2023. Modeled changes in fore-dune morphology influenced by variable storm intensity and sea-level rise, In: *Coastal Sediments '23*, Proceedings of the 13th International Symposium on Coastal Engineering and Science of Coastal Sediment Processes, World Scientific Publishing Co., Singapore, p. 684-697, https://doi.org/10.1142/9789811275135_0064
30. *Davis, E.H., Cohn, N., †Heminway, S.S., Skaden, J., **Hein, C.J.**, 2023. Linking internal coastal fore-dune moisture dynamics to erosion vulnerability, In: *Coastal Sediments '23*, Proceedings of the 13th International Symposium on Coastal Engineering and Science of Coastal Sediment Processes, World Scientific Publishing Co., Singapore, p. 656-669, https://doi.org/10.1142/9789811275135_0062
29. †Sakib, Md. M., Messina, F., Zou, S., Bregman, M., Georgiou, I.Y., **Hein, C.J.**, Fenster, M.S., 2023. Spit elongation and re-orientation controls downdrift sediment flues and inlet morphology: Chincoteague Inlet, VA, USA, In: *Coastal Sediments '23*, Proceedings of the 13th International Symposium on Coastal Engineering and Science of Coastal Sediment Processes, World Scientific Publishing Co., Singapore, p. 90-102, https://doi.org/10.1142/9789811275135_0009
28. †Galvão, W.F.L., Klein, A.H.d.F., de Mahiques, M.M., **Hein, C.J.**, de Sousa, L.A.P., Cooper, A., Green, A., 2023. Impact of Sub-tropical incised valley infill along the Upper Pleistocene and Holocene on the coastal evolution of Babitonga Bay, In: *Coastal Sediments '23*, Proceedings of the 13th International Symposium on Coastal Engineering and Science of Coastal Sediment Processes, World Scientific Publishing Co., Singapore, p. 2391-2397, https://doi.org/10.1142/9789811275135_0219
27. †McPherran, K., Trembanis, A., **Hein, C.J.**, Georgiou, I.Y., 2023. Impact of wave climate on interannual to decadal trends in shoreline change at Fishing Point, Virginia, USA, In: *Coastal Sediments '23*, Proceedings of the 13th International Symposium on Coastal Engineering and Science of Coastal Sediment Processes, World Scientific Publishing Co., Singapore, p. 57-70, https://doi.org/10.1142/9789811275135_0006
26. Buynevich, I.V., FitzGerald, D.M., Klein, A. H. F., **Hein, C.J.**, Cleary, W.J., 2023. Cyclone-generated geoidicators along Camboriú headland beaches and Navegantes strandplain, Brazil, In: *Scientific Research in the Modern World, Proceedings of the 5th International Scientific and Practical Conference*. Perfect Publishing, Toronto, Canada, p. 162-167.
25. *Cahoon, K., †Clarke, C.G., Fenster, M.S., †Vaughn, J.P., Hein, C.J., 2022. Onshore-Offshore Surficial geologic Map of the Wachapreague Quadrangle with Additional Surrounding Fractions of the Pungoteague, Accomack, Metompkin, Exmore, Wachapreague East, Nassawadox, and Quinby Quadrangles. unpublished EDMAP geologic map, 1:64,000.
24. †Leite Galvão, W.F., Klein, A.H.d.F., de Mahiques, M., **Hein, C.J.**, Prado, M.F.V., Pinto, M.W., Pandolpho, B.T., Dias, R.J.S., Connell, J., Tureck, C.R., L.L., 2022. Datasets: Holocene barrier overstepping, estuarine rollover and drainage merging in a sub-tropical bay, Mendeley Data, V1, <https://doi.org/10.17632/vw3c7t3gm3.1>
23. †Robbins, M.G., **Hein, C.J.**, 2022. Shorelines and island boundaries for the Atlantic barrier islands of Virginia, 1851-2017 ver 1. Environmental Data Initiative, <https://doi.org/10.6073/pasta/69c10fdd9b27e43168f24ca8ef293dc7>
22. **Hein, C.J.**, Galy, V., 2020. Compound-specific organic analyses of sediment cores from the Bay of Bengal, *EarthChem Library (ECL)*, <https://doi.org/10.1594/IEDA/111489>.
21. **Hein, C.J.**, Eglinton, T., Haghypour, N., Galy, V., 2020. Compound-specific radiocarbon analyses of sediment cores from the Bay of Bengal, *EarthChem Library (ECL)*, <https://doi.org/10.1594/IEDA/111488>.

20. **Hein, C.J.**, Usman, M., Eglinton, T., Haghypour, N., Galy, V., 2020. Bulk sediment organic radiocarbon analyses of sediment cores from the Bay of Bengal, *EarthChem Library (ECL)*, <https://doi.org/10.1594/IEDA/111487>.
19. **Hein, C.J.**, Eglinton, T., Haghypour, N., Galy, V., 2020. Radiocarbon ages of sediment core samples from the Bay of Bengal, *EarthChem Library (ECL)*, <https://doi.org/10.1594/IEDA/111486>.
18. **Hein, C.J.**, *Shawler, J.L., De Camargo, J.M., Klein, A.H.F., †Tenebruso, C., Fenster, M.S., 2019. The role of coastal sediment sinks in modifying longshore sand fluxes: Examples from the coasts of southern Brazil and the Mid-Atlantic USA, In: *Coastal Sediments '19*, Proceedings of the 12th International Symposium on Coastal Engineering and Science of Coastal Sediment Processes, World Scientific Publishing Co., Singapore, p. 2330–2344.
17. *Shawler, J.L., †Ciarletta, D.J., Lorenzo-Trueba, J., **Hein, C.J.**, 2019. Drowned foredune ridges as evidence of pre-historic barrier-island state changes, In: *Coastal Sediments '19*, Proceedings of the 12th International Symposium on Coastal Engineering and Science of Coastal Sediment Processes, World Scientific Publishing Co., Singapore, p. 158-171.
16. **Hein, C.J.**, Galy, V.V., Galy, A., France-Lanord, C., Kudrass, H., 2018. Radiocarbon ages of sediment core samples from the Bay of Bengal. *EarthChem Library (ECL)*, <http://dx.doi.org/10.1594/IEDA/111212>.
15. **Hein, C.J.**, Galy, V.V., Galy, A., France-Lanord, C., Kudrass, H., 2018. Bulk sediment inorganic and organic analyses of sediment cores from the Bay of Bengal. *EarthChem Library (ECL)*, <http://dx.doi.org/10.1594/IEDA/111207>.
14. †Deaton, C.D., **Hein, C.J.**, Kirwan, M.L., 2017. GIS layers for marsh extent, inlet tidal prism and watershed size on the Virginia Coast, 1851-2009. *Environmental Data Initiative*, <http://dx.doi.org/10.6073/pasta/43e3ca25691c216a7e2c337877882687>.
13. **Hein, C.J.**, Georgiou, I.Y., FitzGerald, D.M., †de Souza, L.H.P., Klein, A.H.F., de Menezes, J.T, 2015. Wave energy, sediment supply, and sea-level fall: Late Holocene basin infilling in southern Brazil, In: *Coastal Sediments '15*, Proceedings of the 11th International Symposium on Coastal Engineering and Science of Coastal Sediment Processes.
12. *Fallon, A.R., **Hein, C.J.**, Rosen, P.S., †Gannon, H.L., 2015. Cyclical shoreline erosion: The impact of a jettied river mouth on the downdrift barrier island, In: *Coastal Sediments '15*, Proceedings of the 11th International Symposium on Coastal Engineering and Science of Coastal Sediment Processes.
11. **Hein, C.J.**, Stone, B.D., 2014. Ice, water, and wind: A source-to-sink view of the glacial, paraglacial, and coastal sediments and processes that have shaped northeast Massachusetts, In: Thompson, M., *Field Trip Guide for the 106th Meeting of the New England Intercollegiate Geological Conference (NEIGC)*, Wellesley MA, 10 October 2014, Field Trip A5, 38 p.
10. Lees, D.C., **Hein, C.J.**, FitzGerald, D.M., Carruthers, E.A., 2013. *Re-assessment of Bivalve Recovery on Washed Heterogeneous Beaches in Prince William Sound*, EXXON VALDEZ Oil Spill Restoration Project Draft Final Report, Restoration Project 10100574, 165 p.
9. Rits, M., FitzGerald, D.M., **Hein, C.J.**, 2013. *A Multi-year Investigation of the Coastal Setting and Sediment-Transport Patterns at 137 Eel Point Road, Nantucket*, Assessment Report, 80 p.
8. Robin, N., Billy, J., Barthe, P., Barousseau, J.P., Carvalho, E., Certain, R., Chanoué, M., FitzGerald, S., **Hein, C.**, Michel, C., Millescamps, B., Raynal, O., Wilson, C., Wright, S., 2013. *Etude globale de l'isthme de Miquelon-Langlade*, Final Report, Université de Perpignan Via Domitia, 282 p.
7. **Hein, C.J.**, FitzGerald, D.M., Stone, B.D., †Carruthers, E.A., Gontz, A.M., 2011. The role of backbarrier infilling in the formation of barrier island systems, In: Kraus, N.C., and Rosati, J.D. (Eds), *Coastal Sediments '11*, Proceedings of the 8th International Symposium on Coastal Engineering and Science of Coastal Sediment Processes, p. 687–690.
6. **Hein, C.J.**, FitzGerald, D.M., Barnhardt, W.A., Stone, B.D., 2010. *Onshore-offshore surficial geologic map of the Newburyport East Quadrangle, Massachusetts*, StateMap Preliminary Map (non-reviewed), 1 sheet.
5. **Hein, C.J.**, 2010. *Barrier Island Formation, Evolution, Modern Processes, and Challenges: Plum Island MA*, Field Trip Guide, 30 p.
4. **Hein, C.J.**, FitzGerald, D.M., 2009. *The Search for a Middle Kingdom Harbor: Geological Investigations at Mersa/Wadi Gawasis, Egypt*, MUSEUM EXHIBIT, Museum of Egyptian Antiquities (Cairo, Egypt).

3. **Hein, C.J.**, FitzGerald, D.M., 2009. *Documenting sand and gravel resources on the inner continental shelf: Merrimack Embayment, New England*, report to the US Minerals Management Service, 83 p.
2. **Hein, C.J.**, FitzGerald, D., Barnhardt, W., 2007. Holocene evolution of the Merrimack Embayment, Northern Massachusetts, interpreted from shallow seismic stratigraphy, *In: Kraus, N.C., Rosati, J.D. (eds), Coastal Sediments '07*, Proceedings of the 6th International Symposium on Coastal Engineering and Science of Coastal Sediment Processes: New Orleans, LA, 13-17 May, 2007, p. 856-866.
1. Klein, A.H., FitzGerald, D.M., Cleary, W.J., Abreu, J.G.N, Menezes, J.T., Petermann, R., **Hein, C.J.**, Buynevich, I.V., 2006. *Field Trip Guidebook of Santa Catarina Coast, Brazil*, Third IGCP-495 Quaternary Land-Ocean Interactions: Natural and Human Forcings on Coastal Evolution. 33 p.

Invited Research Talks

29. Virginia Commonwealth University Department of Biology Seminar (18 March 2024): *Accelerating dynamics of barrier systems in response to sea-level rise: New insights from the Virginia Barrier Islands*
28. Alfred Jahn Cold Regions Research Centre, University of Wrocław (12 March 2024): *The past, present, and future of barrier-system dynamics: New insights from the Virginia Barrier Islands (USA)*
27. University of Delaware School of Marine Science and Policy Seminar (6 October 2023): *Complex barrier-system dynamics in response to sea-level rise: New insights from the Virginia Barrier Islands*
26. University of Florida Geosciences Department Seminar (1 December 2022): *Mesoscale barrier-system dynamics in response to sea-level rise: New insights from the Virginia Barrier Islands*
25. Old Dominion University Ocean & Earth Sciences (OES) Seminar (7 October 2021): *The mesoscale dynamics of barrier system response to sea-level rise*
24. University of Southern California Lithospheric Dynamics Seminar (virtual) (15 April 2020): *Beach-ridge systems as archives of Holocene coastal change*
23. Montclair State University PhD program in Environmental Science and Management Sustainability Seminar (virtual) (31 March 2020): *Island-marsh couplings and the sustainability of barrier-island systems in the face of accelerated sea-level rise*
22. University of Maryland Center for Environmental Science Horn Point Lab (Cambridge, MD) (28 November 2018): *Island-marsh couplings and the stability of barrier-island systems in the face of accelerated sea-level rise*
21. Lamont-Doherty Earth Observatory Division of Biology & Paleo Environment (Palisades, NY) (1 October 2018): *Reconstructing Holocene sea level, climate, and coastal processes from beach-ridge archives*
20. Coastal Carolina University, Department of Coastal & Marine Systems Science (Conway, SC) (29 March 2018): *Island-marsh couplings and the stability of barrier-island systems in the face of accelerated sea-level rise*
19. Webinar on Geological Research of the North Atlantic Ocean (presented online) (10 March 2017): *Coastal response to autogenic & climatic changes: An example from the Tijucas River / Strandplain, southern Brazil*
18. Montclair State University, Department of Earth and Environmental Studies (Montclair, NJ) (21 February 2017): *Beach-ridge systems as archives of Holocene coastal change*
17. Universidade Federal de Santa Catarina, Department of Chemistry (Florianópolis, SC, Brazil) (21 April 2016): *Regressive beach- and dune- ridge systems as archives of Holocene coastal change*
16. Sustainable Adaptive Gradients in the Coastal Environment (SAGE) Research Network: Local Solutions: Eastern Regional Climate Preparedness Conference: Workshop on Coastal Adaptation Planning, Implementation and Policy (Baltimore, MD) (4 April 2016): *Coastal geomorphology and its impact on susceptibility of coastal zones to slow and fast onset events*
15. University of North Carolina at Chapel Hill, Department of Geological Sciences (Chapel Hill, NC) (19 November 2015): *Beach-ridge systems as archives of Holocene coastal change*
14. Sustainable Adaptive Gradients in the Coastal Environment (SAGE) Research Network: The Fundamentals of Coastal Adaptation Workshop (Boston, MA) (8 September 2015): *The role of geomorphology on the susceptibility of the coastal zone to climate change*
13. Virginia Polytechnic Institute and State University, Department of Geosciences (Blacksburg, VA) (24 April 2015): *Strandplain sedimentary sequences as recorders of coastal response to Holocene change*
12. Universidade Federal de Santa Catarina, Laboratory of Coastal Oceanography (Florianópolis, SC, Brazil) (17 April 2015): *Coupled Barrier-Backbarrier Dynamics and the Evolution of Barrier-Island Systems*

11. Universidade do Vale do Itajaí, Laboratory of Geological Oceanography, Laboratory of Biodiversity Informatics and Geomatics (Itajaí, SC, Brazil) (16 April 2015): *The role of tidal inlets in barrier island formation and stability Part I: Barrier-inlet processes and the formation of Plum Island barrier island, Massachusetts, USA*
10. Old Dominion University, Center for Coastal Physical Oceanography, Mitigation & Adaptation Research Institute (Norfolk, VA) (29 September 2014): *Beyond sea-level rise: Coastal response to climate-driven changes in fluvial sediment supply*
9. W&M Department of Anthropology (Williamsburg, VA) (24 September 2014): *Sea-level and climate change along the African Red Sea coast: Impacts on ancient Egyptian civilization & implications for the future of our coasts*
8. University of North Carolina Coastal Studies Institute (Wanchese, NC) (26 March 2014): *The role of backbarrier sedimentation on the formation of barrier island systems*
7. University of Massachusetts, Amherst, Department of Geosciences (Amherst, MA) (29 March 2013): *Beyond sea-level rise: Complex coastal response to Holocene climate change*
6. Universidade do Vale do Itajaí, Lab. of Geoprocessing and Remote Sensing (Itajaí, SC, Brazil) (17 April 2012): *River-associated coastlines as recorders of Holocene environmental change*
5. Universidade Federal de Santa Catarina, Laboratory of Coastal Oceanography (Florianópolis, SC, Brazil) (16 April 2012): *River-associated coastlines as recorders of Holocene environmental change*
4. Plum Island Ecosystem LTER All Scientists Meeting (Woods Hole, MA) (29 March 2012): *The big (geologic) picture: Formation of the Plum Island barrier system*
3. University of Alabama, Department of Geological Sciences (Tuscaloosa, AL) (27 March 2011): *Coastal strandplains as recorders of Holocene environmental change*
2. University of Rhode Island, Department of Geosciences (Kingston, RI) (9 March 2011): *Coastal strandplains as recorders of Holocene environmental change*
1. WHOI, Marine Chemistry and Geochemistry Department (Woods Hole, MA) (18 January 2011): *Geophysical examination of coastal barrier Systems in Southern Brazil: Implications for Holocene sea-level change in the Southern Hemisphere*

Conference Abstracts

(note: abstracts only listed if presented by Hein or by direct/closely mentored students)

116. *Barksdale, M.B., Valentine, K., **Hein, C.J.**, Kirwan, M.L., 2024, Optimizing salt marsh restoration using a sediment model, *Middle Peninsula Restoration Workshop*, Gloucester Point, Virginia, February 2024.
115. *Davis, E.H., **Hein, C.J.**, Cohn, N., White, A., Zinnert, J.C., 2023. Ecomorphostratigraphic differences between natural, managed, and constructed foredunes and implications for dune response to storm impacts, *American Geophysical Union Fall Meeting 2023*, San Francisco, CA, December 2023.
114. *Barksdale, M.B., Valentine, K., **Hein, C.J.**, Kirwan, M.L., 2023. Optimizing salt marsh restoration for marsh resilience and carbon storage using a carbon-sediment transport model, *Coastal Estuarine Research Federation*, Portland, OR, November 2023.
113. †Staro, A., FitzGerald, D., Hughes, Z., **Hein, C.J.**, Georgiou, I., 2023. Physical processes affecting hurricane sedimentation on marshes, *Coastal Estuarine Research Federation*, Portland, OR, November 2023.
112. Zinnert, J.C., †White, A.E., Cohn, N., *Davis, E.H., **Hein, C.J.**, 2023. Quantifying the effect of management on biotic and abiotic properties of coastal foredunes above and below ground, *American Shore & Beach Preservation Association National Coastal Conference*, Providence, RI, September 2023.
111. *Barksdale, M.B., **Hein, C.J.**, Kirwan, M.L., Shoreface erosion counters blue-carbon accumulation in transgressive barrier-island systems, *IGCP 725: From Cores to Code, Annual Meeting*, Florianópolis, Brazil, October 2023.
110. *Davis, E.H., **Hein, C.J.**, Cohn, N., White, A.E., Zinnert, J.C., 2023, The role of internal dune structure in moderating dune response to storm impacts, *IGCP 725: From Cores to Code, Annual Meeting*, Florianópolis, Brazil, October 2023.
109. *Cahoon, K.M., **Hein, C.J.**, 2023. Providing inputs to improve glacio-isostatic adjustment models through reconstruction of last glacial, mid-field relative sea-level change from preserved beach ridges, *IGCP 725: From Cores to Code, Annual Meeting*, Florianópolis, Brazil, October 2023.

108. †Boehman, B., **Hein, C.J.**, French, K., Phelps, S., Pearson, A., Galy, V., 2023. Rice production alters organic carbon cycling in the Ganges-Brahmaputra-Meghna River Basin. *International Meeting on Organic Geochemistry*, Montpellier, France, September 2023.
107. **Hein, C.J.**, *Shawler, J.L., Mariotti, G., †Robbins, M.G., 2023. The past, present, and future of barrier-system dynamics: New insights from the Virginia Barrier Islands (USA), *International Union for Quaternary Research (INQUA) Congress*, Rome, Italy, July 2023.
106. *Cahoon, K.M., **Hein, C.J.**, Fenster, M.S., †Clarke, C.G., †Vaughn, J.P., Ramsey, K., Huot, S., Wehmiller, J.F., 2023. Refined geologic mapping reveals a more complicated depositional history of the US Mid-Atlantic Coast since the Last Interglacial Period, *International Union for Quaternary Research (INQUA) Congress*, Rome, Italy, July 2023.
105. †Boehman, B., **Hein, C.J.**, French, K., Galy, V., 2023. GDGT age distributions from the Ganges-Brahmaputra-Meghna River Basin: Implications for paleoenvironmental reconstructions and soil carbon stabilization, *GDGT Workshop 2023*, Zurich, Switzerland, September 2023.
104. †White, A., Cohn, N., *Davis, E.H., **Hein, C.J.**, Zinnert, J.C., 2023, Variability & Elevation Drive Changes in Plant Community & Belowground Biomass in Coastal Dunes of the Outer Banks, *Associated of Southeastern Biologists Annual Meeting*, Winston-Salem, NC, June 2023.
103. *Cahoon, K.M., **Hein, C.J.**, Fenster, M.S., †Clarke, C.G., †Vaughn, J.P., Huot, S., Wehmiller, J.F., Ramsey, K., 2023. Refined Chronostratigraphic Mapping Provides New Insights into the Late-Pleistocene Relative Sea-Level History of the Delmarva Peninsula, *Virginia Energy Annual Research Symposium*, Charlottesville, VA, April 2023.
102. *Cahoon, K.M., **Hein, C.J.**, Fenster, M.S., †Clarke, C.G., †Vaughn, J.P., Huot, S., Wehmiller, J.F., Ramsey, K., 2023. Refined Chronostratigraphic Mapping Provides New Insights into the Late-Pleistocene Relative Sea-Level History of the Delmarva Peninsula, *Geological Society of America Northeast/Southeast Section Conference*, Reston, VA, April 2023.
101. **Hein, C.J.**, Pilarczyk, J.E., Brain, M., Green, A.N., Lau, A.Y.A., Ramos, N., 2023. From cores to code: Enhancing data-model integration to improve forecasts of coastal change – An introduction to IGCP Project 725, *Coastal Sediments '23*, New Orleans, LA, April 2023.
100. *Davis, E.H., Cohn, N., †Heminway, S., Skaden, J., **Hein, C.J.**, 2023. Linking internal coastal foredune moisture dynamics to erosion vulnerability, *Coastal Sediments '23*, New Orleans, LA, April 2023.
99. †Heminway, S., *Davis, E.H., Cohn, N., Skaden, J., Anderson, D., **Hein, C.J.**, 2023. Modeled changes in foredune morphology influenced by variable storm intensity and sea-level rise, *Coastal Sediments '23*, New Orleans, LA, April 2023.
98. †Sakib, Md. M., Messina, F., Zou, S., Bregman, M., Georgiou, I.Y., **Hein, C.J.**, Fenster, M.S., 2023. Spit elongation and re-orientation controls downdrift sediment flues and inlet morphology: Chincoteague Inlet, VA, USA, *Coastal Sediments '23*, New Orleans, LA, April 2023.
97. †Galvão, W.F.L., Klein, A.H.d.F., de Mahiques, M.M., **Hein, C.J.**, de Sousa, L.A.P., Cooper, A., Green, A., 2023. Impact of Sub-tropical incised valley infill along the Upper Pleistocene and Holocene on the coastal evolution of Babitonga Bay, *Coastal Sediments '23*, New Orleans, LA, April 2023.
96. †McPherran, K., Trembanis, A., **Hein, C.J.**, 2023. Impact of wave climate on interannual to decadal trends in shoreline change at Fishing Point, Virginia, USA, *Coastal Sediments '23*, New Orleans, LA, April 2023.
95. †Heminway, S., *Davis, E.H., Cohn, N., **Hein, C.J.**, 2023. Modeled influence of variable storm intensity and sea-level rise on barrier-island foredune stability, *Northeast-Southeast Regional Geological Society of America Meeting*, Reston, VA, March 2023.
94. *Cahoon, K., **Hein, C.J.**, Fenster, M.S., †Clarke, C.G., †Vaughn, J.P., Huot, S., Wehmiller, J., Ramsey, R.W., 2023. Refined chronostratigraphic mapping provides new insights into the Late Pleistocene relative sea-level history of the Delmarva Peninsula, *Northeast-Southeast Regional Geological Society of America Meeting*, Reston, VA, March 2023.
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91. †Boehman, B., **Hein, C.J.**, French, K., Galy, V.V., 2022. GDGT age distributions from the Ganges-Brahmaputra-Meghna River basin: Implications for paleo-environmental reconstructions and soil carbon stabilization, *Gordon Research Conference for Organic Geochemistry*, Holderness, NH, USA, July 2022.
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83. †Staro, A., FitzGerald, D.M., Hughes, Z.J., **Hein, C.J.**, Pondell, C.R., †Guthrie, R., Connell, J.E., 2021. Hurricane deposition can enhance salt marsh resiliency to sea-level rise, *AGU Fall Meeting*, New Orleans, LA, December 2021.
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81. †White, D.E., †Ramos, K.V., Cohn, N., *Davis, E.H., †Goeke, M.E., **Hein, C.J.**, Zinnert, J.C., 2021. Patterns and characteristics of belowground biomass distribution across natural and managed coastal foredunes, *Coastal & Estuarine Research Federation Biennial Conference (virtual)*, November 2021.
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78. **Hein, C.J.**, Galy, V.V., Eglinton, T.I., Usman, M., Haghypour, N., 2020. Post-glacial hydroclimate forcing of tropical soil-carbon storage, *Goldschmidt2020 (virtual)*, June 2020.
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76. **Hein, C.J.**, *Krask, J.L., Galy, V.V., FitzGerald, D.M., Klein, A.H.d.F., 2020. Records of terrestrial climate change preserved within a sub-tropical coastal strandplain, *Society for Sedimentary Geology International Sedimentary Geosciences Congress*, Flagstaff, AZ, April 2020. (Conference canceled)
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74. *McPherran, K., Trembanis, A., Hein, C.J., 2020, The disjointed double channel of Chincoteague Inlet and implications for sediment transport, *AGU Fall Meeting*, virtual, December 2020.
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 72. †Obara, C.A., *Shawler, J.L., Connell, J.E., **Hein, C.J.**, 2020. Spit elongation as a control on downdrift barrier-island stability: Insights from Assateague Island, VA, *Geological Society of America Northeast-Southeast Section Meeting*, Reston, VA, March 2020. (Conference canceled, presented virtually)
 71. *Shawler, J.L., **Hein, C.J.**, Canuel, E.A., Kaste, J., Fitzsimons, G.G., Georgiou, I.Y., Willard, D.A., 2020. Anthropogenic impacts to sedimentation in the Merrimack River Estuary: Insights from field, historical, and modeling approaches, *Geological Society of America Northeast-Southeast Section Meeting*, Reston, VA, March 2020. (Conference canceled, presented virtually)
 70. †Scott, C., **Hein, C.J.**, Pondell, C., FitzGerald, D., Hughes, Z.J., Georgiou, I., 2020. Provenance of hurricane-induced salt marsh sedimentation along the southeast US coast, *Geological Society of America Northeast-Southeast Section Meeting*, Reston, VA, March 2020. (Conference canceled)
 69. †Robbins, M., *Shawler, J.L., **Hein, C.J.**, 2020, Sea-level rise and updrift sediment trapping drive net sand loss along the Virginia barrier islands, *Geological Society of America Northeast-Southeast Section Meeting*, Reston, VA, March 2020. (Conference canceled, presented virtually)
 68. Reeder-Myers, L., **Hein, C.J.**, †Luyando-Flusa, S., 2020. Sea-level rise and shell middens in the Rhode and West rivers, Chesapeake Bay, USA, *Geological Society of America Northeast-Southeast Section Meeting*, Reston, VA, March 2020. (Conference canceled)
 67. **Hein, C.J.**, Canuel, E.A., *Shawler, J.L., 2019. Climatic and anthropogenic controls on sediment sources, fluxes, and transport pathways to and across a formerly glaciated coastal zone, *International Quaternary Association Congress*, Dublin, Ireland, July 2019.
 66. **Hein, C.J.**, Strzelecki, M., Lindhorst, S., †Billy, J., Robin, N., 2019. High-latitude, coarse-grained beach ridges as archives of Holocene sea-level change, *International Quaternary Association Congress*, Dublin, Ireland, July 2019.
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 64. **Hein, C.J.**, *Fallon, A.R., Rosen, P., Hoagland, P., Georgiou, I.P., FitzGerald, D.M., Morris, M., †Baker, S., †Marino, G.B., Fitzsimons, G., 2019. Shoreline dynamics along a developed river-mouth barrier island: Multi-decadal cycles of erosion and event-driven mitigation, *Geological Society of America Southeast Section Meeting*, Charleston, SC, March 2019.
 63. *Shawler, J.L., †Ciarletta, D.J., Lorenzo-Trueba, J., **Hein, C.J.**, 2019. Drowned foredune ridges as evidence of pre-historic barrier-island state changes, *Coastal Sediments 2019*, St. Petersburg, FL, May 2019.
 62. *Shawler, J.L., **Hein, C.J.**, †Ciarletta, D.J., Lorenzo-Trueba, J., 2019. Beyond storms and sea level: The imprints of antecedent geology and sediment supply on the evolution of the Virginia barrier islands, *Geological Society of America Southeast Section Meeting*, Charleston, SC, March 2019.
 61. †King, K., **Hein, C.J.**, FitzGerald, D.M., Hughes, Z., Georgiou, I.Y., Connell, J.E., 2019. Saltmarsh event sedimentation: A comparative study of Hurricane Irma deposits across the Southeast USA, *Geological Society of America Southeast Section Meeting*, Charleston, SC, March 2019.
 60. †Boggs, B.Q., *Shawler, J.L., Connell, J.E., **Hein, C.J.**, 2019. Quantifying the slope of antecedent topography underlying New Jersey and Maryland barrier islands, *Geological Society of America Southeast Section Meeting*, Charleston, SC, March 2019.
 59. *Connell, J.E., †Herbine, L.E., Gedan, K.B., Hughes, Z., FitzGerald, D.M., Georgiou, I.Y., **Hein, C.J.**, 2019. Event-driven sedimentation in Massachusetts and Virginia salt marshes, *Geological Society of America Southeast Section Meeting*, Charleston, SC, March 2019.

58. †Luyando Flusa, S.E., **Hein, C.J.**, Reeder-Myers, L., Rick, T., Connell, J.E., 2019. The imprint of sea-level rise and land-use change on oyster habitats in a small tributary creek of the Upper Chesapeake Bay, *Geological Society of America Southeast Section Meeting*, Charleston, SC, March 2019.
57. †Ryerson, O., FitzGerald, D.M., Hughes, Z., *Black, S., Georgiou, I.Y., **Hein, C.J.**, Novak, A., 2019. Temporal and spatial variability in inorganic sediment contributions to the Great Marsh, Massachusetts, *Geological Society of America Southeast Section Meeting*, Charleston, SC, March 2019.
56. †Luyando Flusa, S.E., **Hein, C.J.**, Reeder-Myers, L., Rick, T., Connell, J.E., 2019. Changing Depositional Environments of the Upper Chesapeake Bay in Response to European Colonization and Implications for Oyster Populations, *Association for the Sciences of Limnology and Oceanography 2019*, San Juan, P.R., February 2019.
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53. †Kurz, M., Jardine, S., Parsons, G., **Hein, C.J.**, 2018. Valuing blue carbon in shrinking Mid-Atlantic backbarrier marshes, *AGU Fall Meeting*, Washington, D.C., December 2018.
52. †Billy, J., Robin, N., **Hein, C.J.**, Certain, R., FitzGerald, D.M., 2018. Primary influence of inherited geologic framework on the development of a coastal barrier system. *International Coastal Symposium 2018*, Busan, Republic of Korea, May 2018.
51. **Hein, C.J.**, Hoagland, P., Huang, J.-C., Canuel, E.A., Fitzsimons, G., Rosen, P., Shi, W., *Fallon, A.R., *Shawler, J., 2017. Centennial-scale human alterations, unintended natural-system responses, and event-driven mitigation within a coupled fluvial-coastal system: Lessons for collective management and long-term coastal change planning, *AGU Fall Meeting*, New Orleans, LA, December 2017.
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49. *Krisk, J., **Hein, C.J.**, Galy, V.V., FitzGerald, D.M., Klein, A.H.d.F., 2017. Beach-ridge sedimentology as an archive of terrestrial climate change: Insights from a geochemical and stratigraphic study of the Tijucas Strandplain, southern Brazil, *AGU Fall Meeting*, New Orleans, LA, December 2017.
48. †Billy, J., **Hein, C.J.**, Robin, N., Certain, R., FitzGerald, D., 2017. Beach-ridge internal architecture and use for Holocene sea-level reconstruction: A case study from the Miquelon-Langlade Isthmus (NW Atlantic), *AGU Fall Meeting*, New Orleans, LA, December 2017.
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46. †Ciarletta, D., Lorenzo-Trueba, J., †Tenebruso, C., *Shawler, J.L., **Hein, C.J.**, 2017. Coupled modeling and field approach to explore patterns of barrier ridge and swale development, *AGU Fall Meeting*, New Orleans, LA, December 2017.
45. †Vaughn, J.P., Fenster, M.S. **Hein, C.J.**, *Shawler, J., McFarland, E.R., 2017. Reconstructing the Pleistocene geologic and evolutionary history of Virginia's Eastern Shore during and following the Sangamonian interglacial period, *AGU Fall Meeting*, New Orleans, LA, December 2017.
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43. †Raff, J.L., *Shawler, J., †Ciarletta, D.J., **Hein, C.J.**, Hein, E.A., 2017. Barrier island change along the Eastern Shore of Virginia: Insights from a chronological and sedimentological study of Parramore Island, *Geological Society of America Southeast Section Meeting*, Richmond, VA, March 2017.
42. **Hein, C.J.**, Galy, V., France-Lanord, C., Galy, A., Kudrass, H., Peucker-Ehrenbrink, B., 2016. Post-glacial climate forcing of surface processes in the Ganges-Brahmaputra basin and implications for the global carbon cycle, *AGU Fall Meeting*, San Francisco, CA, December 2016.

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40. †Shawler, J., **Hein, C.J.**, 2016. Estuarine records of long-term human impacts on fluvial sediment discharge from a large New England river, Geological Society of America Southeast Section Meeting, Columbia, SC, March 2016.
39. **Hein, C.J.**, 2015. Integrating the natural environment into adaptation, *Mitigation and Adaptation Research in Virginia Workshop*: Suffolk, VA, August 2015.
38. **Hein, C.J.**, Georgiou, I.Y., FitzGerald, D.M., †de Souza, L.H.P., 2015. Wave energy, sediment supply and sea-level fall: Late Holocene basin infilling in southern Brazil, *Coastal Sediments '15*, San Diego, CA, May 2015.
37. †Deaton, C.D., **Hein, C.J.**, Kirwan, M.L., 2015. Barrier island migration, salt marsh loss, and ecogeomorphic feedbacks on the Eastern Shore of Virginia, *Geological Society of America Annual Meeting*, Baltimore, MD, November 2015.
36. †Shawler, J., **Hein, C.J.**, 2015. Multi-Proxy Records of Anthropogenic Impacts on Fluvial Sediment Supply from the Joppa Flats tidal flats, northern MA, *Geological Society of America Annual Meeting*, Baltimore, MD, November 2015.
35. *Fallon, A.R., **Hein, C.J.**, Rosen, P.S., †Gannon, H.L., 2015. Cyclical shoreline erosion: The impact of a jettied river mouth on the downdrift barrier island, *Coastal Sediments '15*, San Diego, CA, May 2015.
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33. **Hein, C.J.**, FitzGerald, D.M., de Menezes, J.T., Klein, A.H.d.F., Albernaz, M.B., Cleary, W.J., 2014. Coastal response to late-stage transgression and sea-level highstand in Brazil, *Geological Society of America Annual Meeting*, Vancouver, Canada, October 2014.
32. **Hein, C.J.**, FitzGerald, D.M., de Menezes, J.T., Klein, A.H.d.F., Albernaz, M.B., Cleary, W.J., 2014. Depositional signatures associated with late-stage transgression and the mid-Holocene sea-level highstand in Brazil, *Geological Society of America Annual Meeting*, Vancouver, Canada, October 2014.
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29. **Hein, C.J.**, Bard, K.A., Cleary, W.M., Fattovich, R., FitzGerald, D.M., Klein, A.H.F., de Menezes, J.T., Milne, G.A., Petsch, S.T., 2013. Beyond sea-level rise: Coastal response to climate-driven changes in fluvial sediment supply, Penrose-Chapman Conference: Coastal Processes and Environments Under Sea-Level Rise and Changing Climate: Science to Inform Management: Galveston, TX, April 2013.
28. †Billy, J., Robin, N., Certain, R., **Hein, C.**, FitzGerald, D., 2013. Architecture interne par Géo-Radar (GPR) de la plaine de beach-ridges, mixte sable-galet, de Miquelon-Langlade (N-O Atlantique). 14^{ème} Congrès Français de Sédimentologie (ASF), Paris, *Centre de congrès de La Vilette cité des sciences et de l'industrie*, November 2013.
27. †Billy, J., Robin, N., Certain, R., **Hein, C.J.**, Berne, S., 2013. Coastal barrier behavior in relation to nearshore sediment supply: the Miquelon-Langlade Barrier, France, *International Coastal Symposium 2013*, Plymouth, UK, April 2013.
26. †Mosquera, D., Buynevich, I.V., Klein, A.H.F., FitzGerald, D.M., Cleary, W.J., **Hein, C.J.**, Angulo, R.J., 2013. Paleo-scarp gradients within the outer Navegantes Strandplain, Brazil: Subsurface signatures of cyclones over the past 1,000 years, *GSA Southeastern Section Regional Meeting*, San Juan, Puerto Rico, March 2013.
25. **Hein, C.J.**, FitzGerald, D.M., Cleary, W.J., de Menezes, J.T., Klein, A.H.F., †Albernaz, M.B., 2012. Diverse sedimentological signatures of the mid-Holocene highstand in Brazil, *AGU Fall Meeting*, San Francisco, CA, December 2012.

24. **Hein, C.J.**, Galy, V., Peucker-Ehrenbrink, B., Eglinton, T.I., 2012. Preliminary evidence for a monsoonal forcing of the dynamics of terrestrial organic carbon export to the Bay of Bengal, *Gordon Research Conference in Organic Geochemistry*, Plymouth, NH, July – August 2012.
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