

Jack A. Puleo, PhD
Associate Vice President
Strategic Initiatives in Coastal Engineering and Resilience
Office of Research and Economic Development
Professor
Civil and Environmental Engineering
Extreme Events Institute
Florida International University
Miami, FL 33199

My career spans over 25 years of research, teaching, and leadership experience in government and at a large, public, land, sea, and space grant university. I am a transparent leader and partner with an extensive record of leadership accomplishments at department, national, and international levels. I have organized and led large interdisciplinary teams on multiple projects fostering collaborations across colleges, universities and organizations. I have worked with faculty and staff to reorient department culture, alter undergraduate curriculum for future ready engineers, and focus on research with significant advancements in large, interdisciplinary grants all while preserving dedication to our student-focused mission. I worked to secure numerous faculty and staff hires necessary for continued growth of our education programs. I have extensive success in cultivating development and industry relationships for financial and other support of Department endeavors.

PROFESSIONAL POSITIONS HELD:

2025 - Present	Associate Vice President for Strategic Initiatives in Coastal Engineering and Resilience, Florida International University
2025 - Present	Professor, Department of Civil and Environmental Engineering, Extreme Events Institute, Florida International University
2023 - 2025	Special Government Employee, USACE Board of Coastal Engineering Research
2020 - 2025	Chair, Department of Civil, Construction, and Environmental Engineering, University of Delaware
2017 - 2025	Professor, Department of Civil, Construction, and Environmental Engineering, University of Delaware
2017 - 2020	Associate Chair, Department of Civil and Environmental Engineering, University of Delaware
2017 - 2020	Director, Center for Applied Coastal Research
2016 - 2023	Intermittent Faculty Member, Civil Engineer, Naval Research Laboratory
2010 - 2017	Associate Professor, Department of Civil and Environmental Engineering, University of Delaware
2011 - 2012	US-UK Fulbright Scholar, United Kingdom
2011 - 2012	Visiting Professor, Plymouth University, United Kingdom
2004 - 2010	Assistant Professor, Department of Civil and Environmental Engineering, University of Delaware

1998 - 2004	Oceanographer, Naval Research Laboratory
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PROFESSIONAL PREPARATION:

2004	Ph.D.	Coastal Engineering	University of Florida
1998	M.Sc.	Oceanography	Oregon State University
1996	B.S.	Oceanography, Mathematics	Humboldt State University

AWARDS AND HONORS

2025 - 2028	Selected for the IIE National Screening Committee for US/UK Fulbright applications
2023	Commander's Coin, Presented for Excellence, USACE Philadelphia District, given by Lieutenant Colonel Beeman
2023	Appointed to the USACE Board of Coastal Engineering Research
2023	Selected for the Decadal Steering Committee on Coastal Processes
2023	Organizer for the NSF-funded workshop on the concept of a full-scale flume
2023	Organizer for the SERDP-funded workshop on munitions mobility and burial in coastal environments
2021	University of Delaware, College of Engineering Award for Staff/Faculty Partnership
2020 - 2025	Chair, Civil and Environmental Engineering
2019	University of Delaware Excellence in Teaching Award
2018	The Robert G. Dean Coastal Academic Award
2018	SERDP project of the year award
2018	DAAD short-term research award from German Academic Exchange Service
2018	Nominated for the University of Delaware Study Abroad Faculty Director of the Year Award
2018 - 2025	UD College of Engineering leadership team
2017 - 2020	Associate Chair, Civil and Environmental Engineering
2017 - 2020	Director, Center for Applied Coastal Research
2017	Nominated for the University of Delaware Excellence in Undergraduate Academic Advising and Mentoring Award
2016	Outstanding Reviewer, Coastal Engineering
2012	Best paper award at the 2012 ICCE conference, Puleo et al.
2012	Best paper award at the 2012 ICCE conference, Lanckriet et al.
2012 - 2015	Selected as a US/UK Fulbright proposal panel reviewer
2012	Chi Epsilon Cumberland District Faculty Advisor Award
2012	British Fulbright Scholars Association Occasional Lecture Award
2011 - 2012	Fulbright Scholar, United Kingdom
2011	Finalist (top 3) for College of Engineering Excellence in Teaching Award
2009	National Science Foundation CAREER Award
2007	University of Delaware Excellence in Teaching Award
2007	College of Engineering Slocomb Excellence in Teaching Award

2007	ASCE ExCEED New Faculty Excellence in Teaching Award
2005 – 2020 (excluding 2007, 2011, 2019)	Nominated for the University of Delaware Excellence in Teaching Award
2005	ASCE Excellence in Civil Engineering Education Teaching Fellowship
2004, 2014, 2024	Organizer and Chair for the International Workshop on Swash-Zone Processes
2004	Department of the Navy Alan Berman Research Publication Award
2003	Department of the Navy Alan Berman Research Publication Award
1999	Department of the Navy On-The-Spot Award

DETAILED ADMINISTRATIVE EXPERIENCE

Department Chair, Civil, Construction, and Environmental Engineering at the University of Delaware (July 2020 – June 2025)

The Department of Civil, Construction, and Environmental Engineering at the University of Delaware is a medium-sized department within a highly ranked (#37) College of Engineering. The Department currently supports 31 tenured, tenure track, and continuing track faculty (18 Full Professors, 6 Associate Professors, 7 Assistant Professors). The Department has 10 full-time staff, and approximately 400 undergraduate and 100 graduate students. We achieved our planned research growth by 2025: an increase in research expenditures by 30% (~40% actual), an increase in research expenditures per faculty by 40% (~70% actual), submitting and securing numerous large interdisciplinary proposals (17 successful), and securing at least 1 center level award (secured 2). The Civil Engineering program within the Department is currently ranked #58 by US News and World Report.

Faculty Recruitment and Retention

- **Hired 8 new faculty over 4 years including in critical areas of disaster research and the Construction Engineering and Management Program**
- Focused on early-career faculty to create a foundation for years to come
- Increased the faculty size from 31 to 35 (now at 31 due to retirements)
- Successfully negotiated 2 retention offers

Faculty Development

- **Successfully initiated the process and approval for 3 named and endowed professorships, 1 named professorship, and 2 early-career termed professorships**
- Successfully supported 7 promotions to Associate Professor
- Successfully supported 2 promotions to Full Professor
- Successfully supported transition of two researchers to research faculty

- Appointed new directors of the Delaware Center for Transportation, Center for Applied Coastal Research, Center for Innovative Bridge Engineering, and the Construction Engineering and Management Program
- Nominated successfully faculty for College, national, and international awards
- Successfully supported several early-career faculty for the ExCEED teaching workshop
- Provided financial support to early-career faculty for proposal development
- Instituted semester check-ins and lunches with Assistant and Associate Professors

Staff Support and Development

- **Hired 3 staff members including a new coastal lab manager**
- Intentional support (financial and time) provided for staff development
- Nominated successfully several staff members for College of Engineering awards
- Included staff on faculty hiring committees
- Included staff in yearly Department retreat
- Participated in one staff meeting per semester
- Developed flexible work schedules for staff
- Arranged yearly staff dinner and monthly staff lunches

Research Excellence

- **Increased the number of large, interdisciplinary grants (\$1M to \$16M) secured to 17 (2020-2025) [compared to 3 (2014-2019)]**
- Increased research expenditures by ~40% (to ~\$7.3M)
- Increased research expenditures per faculty by ~70%
- Increased the number of center level grants secured (2) compared to none in the prior 20 years (records limited to this timeframe)
- Increased the number of large, interdisciplinary grants submitted for federal support
- Co-developed agenda and visit planning for university level research agreement with the US Army Corps of Engineers

Department Visibility

- **Worked through university procedures to change the Department name from Civil and Environmental Engineering to Civil, Construction, and Environmental Engineering embracing all three programs**
- Developed CCEE distinguished seminar series
- Highlighted and broadly announced the annual Kerr Lecture
- Instituted a Department showcase committee
- Active participation in the ASCE Department Heads Conference
- Increased number of touchpoints with industry partners (classes, site visits, seminars)
- Worked with communications team for more frequent stories and highlights to the Department and University webpages

Development and Alumni Relations

- **Secured over \$6M in gifts**
- **Created 3 new professorships in the Department**
- Developed formalized industry partnerships
- Met with College development office monthly and more often with potential donors
- Added numerous industry and recent alumni to the external advisory council
- Increased alumni involvement in fundraising

Space Utilization

- **Developing new student collaboration space funded through development efforts (to be completed September 2025)**
- Improved space usage and new offices for faculty and students
- Collaborated with Mechanical Engineering for space utilization in the Coastal Engineering Laboratory
- Successfully renovated several laboratories for faculty new hires

Undergraduate Programs

- **Successful completion of 6 EAC/ANSAC reviews for Civil, Construction, and Environmental Engineering programs**
- Merged undergraduate and ABET committees for more seamless integration of curricular changes and accreditation
- Initiated Building Resilience and Adaptation through Civil Engineering (BRACE) thematic concept for civil engineering curriculum (to be submitted for approval Fall 2025)
- Worked with career services to revamp and include more companies in the highly successful CCEE career fair
- Expanded number of co-ops and direct internship agreements with industry and government
- Altered civil engineering curriculum to require technical communications and professional development breadth courses
- Supported development of a student mentoring collective with alumni and sponsors
- Provided Department support for student organization conference participation
- Helped oversee Construction Engineering and Management Program and mentored early-career faculty following passing of Director

Graduate Programs

- **Spearheaded graduate training partnerships with the US Army Corps of Engineers and the US Navy**
- Increased the number of graduate students
- Led yearly graduate school forum
- Worked with staff to develop an admitted graduate student day as a recruitment event

- Initiated graduate student exit interviews to provide input on what we are doing well and what we need to improve
- Provided graduate student climate survey data to faculty, discussed at faculty meetings, and hired facilitators for a retreat on improving advisor/advisee relationships
- Provided matching funds for graduate student conference participation
- Successfully nominated graduate students for Department, College, and University awards
- Supported students, with several successful, in NSFGRFP and other graduate fellowship awards

Associate Chair, Department of Civil and Environmental Engineering at the University of Delaware (July 2017 - June 2020)

Responsibilities and Achievements

- Led undergraduate committee
- Led team for Civil and Environmental ABET document development and visit preparation
- Led freshman orientation activities
- Led Blue and Gold and Decision Day events for student recruitment
- Led events for recruitment related to articulation agreements with local community colleges
- Initiated Department tailgate event for alumni and industry sponsors
- Worked with faculty and external advisory council to alter undergraduate curriculum to include more technical electives
- Represented the Department during College of Engineering retreats and as a member of the strategic planning committee
- Developed a new model for Department-supported research projects and teaching assistants
- Participated in the Vistage leadership workshops
- Co-led the Department Academic Program Review (5-year cycle)

Director, Center for Applied Coastal Research (CACR) at the University of Delaware (July 2017 - June 2020)

Responsibilities and Achievements

- Organized research team to submit center level grant
- Initiated quarterly meetings with CACR faculty
- Developed a graduate student onboarding procedure
- Developed graduate student assistance documents (writing tips, interviewing)
- Worked with faculty to alter course sequencing and course offerings
- Presented white paper concepts to the Dean for a new laboratory
- Worked with facilities and contractors to modify laboratory layout for improved space utilization

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- Expanded scope of affiliated faculty to include those conducting groundwater and hydrology research
 - Initiated high school education outreach program using portable wave flumes
 - Successfully acquired new carpeting and desks for the graduate student offices
 - Successfully modified a space into a lunch / study room with couches, tables, refrigerator, and coastal library
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DETAILED RESEARCH LEADERSHIP EXPERIENCE

Board on Coastal Engineering Research (2023 – 2025)

- One of only 3 civilians selected for the Board. Appointed by the Secretary of the Army
- Provide detailed feedback and recommendations to USACE managers on needed basic and applied research direction
- Develop the initial framework for a dedicated fundamental research program request (~\$30M/yr) for civil works research
- Help develop agendas, topics, and speakers for the bi-annual meetings
- Review guidance documents and provide commentary during coastal working group meetings

National Full-Scale Testing Infrastructure for Community Hardening (NICHE)

- Organized and led a 3-day, NSF-funded workshop on the concept of a full-scale wave flume
- Organized alpha team to write workshop report and make recommendations to NSF program managers
- Merged wave flume concept with project led by Florida International University for a full-scale wind and wave flume
- Led stakeholder meeting breakout group
- Presented suggestions to NICHE advisory board
- One of lead authors on the NICHE design parameter document for facility justification
- Participated in 3-day NSF site visit regarding the NICHE concept

Swash Zone Workshop

- Chief organizer and leader for the decadal International Workshop on Swash Zone Processes (2004, 2014, 2024)
- Requested and received permission for peer-reviewed special issues following workshops
- Guest edited two special issues
- Wrote special issue editorials for all three special issues

Strategic Environmental Research and Development Program (SERDP) – Munitions Response

- Organized data repository for SERDP-funded researchers

- Organized and led 2-day workshop on munitions migration and burial
- Wrote workshop report regarding future directions for this research thrust
- Lead PI for two demonstration projects for munitions migration and burial

Environmental Security and Technology Certification Program (ESTCP) – Coastal Military Readiness and Resilience

- Organized and led interdisciplinary, international team of researchers for numerical modeling study of total water levels
- Worked with colleagues to provide access to CUI data for modeling at sensitive military installations
- Worked with military program managers, DOD personnel, and other government agencies for early warning system design for Kwajalein Atoll.

US Coastal Research Program

- Selected member of the Technical Committee
- Selected member and session chair of the steering committee for decadal visioning workshop
- Lead author for the sediment transport section for the Future of Coastal Processes Research Report

Building Coastal Community Resilience with Nature-based Shoreline Solutions (DEEDS)

- Lead PI for interdisciplinary team of engineers, ecologists, biologists, and landscape architects studying nature-based solutions for military resilience
- Congressional Directed Spending required interfacing with University lobbyist and government agencies
- Effort led to spin-off projects at a 2nd military installation and several industry collaborations

ACADEMIC RESEARCH INTERESTS

My research is in the area of hydrodynamics and sediment transport processes for coastal applications

My research is generally focused on the processes that occur in the direct vicinity of the shoreline. Here, coastal processes are intense with water level variations from dry to over a meter on short time scales, rapid velocities and fluid turbulence, high sediment loads, rapid morphodynamics, fluid/air/sediment interactions, and fluid infiltrating and exfiltrating the sediment surface. The complexity causes difficulty in process understanding, but at the same time makes the area rich with intriguing signals. Unfortunately, those signals are often hard to sample. Some of my work focuses on developing remote sensing and in situ sensing capabilities to help in understanding the underlying physics. Ultimately, we seek proper physical relationships between the hydrodynamic forcing and sediment response to enable better prediction for engineering level application. Other areas of research interest consist of nature-based and nature-inspired solutions for coastal disaster mitigation

and Department of Defense based applications of coastal engineering and coastal processes.

My research has been funded by DE Sea Grant, DelDOT/FHWA, EPSCOR, ESTCP, Fulbright, German DAAD, Hydralab, MARACOOS, NASA, NFWF, NOAA, NSF, ONR, ONR Global, SERDP, University of Delaware, and USACE. Total project funding since 2004 exceeds \$30M on more than 65 projects. I have supervised 7 post-docs, 39 PhD students (19 as primary advisor), 28 Master's students, 20 Undergraduate Senior Thesis students, and 63 undergraduate researchers. I have published over 100 peer-reviewed papers (h-index = 40), over 40 invited presentations, and nearly 300 other presentations. I have been the most active researcher in my Department while simultaneously serving as Department Chair (over \$850k/yr in research expenditures over the last 5 years) with a group presently composed of 1 lab manager, 2 post-docs, 6 PhD students, and 2 Master's students.

INVITED PRESENTATIONS: (* indicates with student)

43. **Puleo, J.A.** 2025. Modeling water levels at military installations, Management of Stormwater at Military Installations, DOD Applied Innovation Workshop, Washington, DC, USA.
42. **Puleo, J.A.**, D. Doran, and A. Elkut. 2025. Flooding and resilience efforts in support of coastal installations, Ride the Wave: A Collaborative Coastal Network Session, DOD Applied Innovation Workshop, Washington, DC, USA
41. **Puleo, J.A.** and A. Elkut. 2025. Modeling extreme events driven total water levels for coastal communities, Future of Hydrodynamic Modeling Workshop, USACE, ERDC, Vicksburg, MS
40. **Puleo, J.A.** 2024. Munitions burial processes in the nearshore. SERDP/ESTCP Symposium, Washington, DC, USA.
39. *Idowu, T. and **J.A. Puleo**. 2024. Behavior of variable density munitions in the nearshore under scaled storm onsets. Invited for "Earth and Planetary Surface Processes General Contributions" session. 2024 Fall Meeting, American Geophysical Union, Washington, DC, USA.
38. **Puleo, J.A.** 2024. Modeling total water levels for military installation readiness. Keynote lecture in the "Emerging Frontiers in Coastal Dynamics: Integrating Observations and Advanced Models" session. 2024 Fall Meeting, American Geophysical Union, Washington, DC, USA.
37. **Puleo, J.A.** 2024. Munitions mobility and burial in the nearshore, Coastal and Hydraulics Lab, Engineering Research and Development Center, USACE, Vicksburg, MS.
36. **Puleo, J.A.** 2024. Mobility and burial of unexploded ordnance in the surf zone. Keynote lecture at the 8th International Conference on Estuaries and Coasts, Quebec, Canada.
35. **Puleo, J.A.** 2023. Comparative assessment of total water level predictions at military installations. Spotlight Presentation. DoD Energy & Environment Innovation Symposium. SERDP/ESTCP. Arlington, VA.
34. **Puleo, J.A.** 2023. Predicting total water levels for military installation readiness. Coastal Assessment Regional Scenario Working Group.

33. *Pontiki, M., **J.A. Puleo**, H. Bond, S.-B. Lee, M. Wengrove, R.A. Feagin, and R. Innocenti. Simulating Mantoloking Dune Erosion Under Hydrodynamics Driven by Hurricane Sandy. 2021 Fall Meeting, American Geophysical Union. New Orleans, LA, USA.
32. **Puleo, J.A.** 2021. Academic Perspective on Sediment Transport Processes, Coastal R&D Seminar, United States Army Corps of Engineers, Duck, NC.
31. **Puleo, J.A.** 2019. Near Bed Sediment Transport in the Surf and Swash Zones. Two-Phase Modeling for Sediment Dynamics Conference, Newark, DE.
30. **Puleo, J.A.** 2019. Academic Perspective: Sediment Transport Processes Capabilities, Gaps and Way Forward, Coastal Engineering Research Board, United States Army Corps of Engineers, Detroit, MI
29. **Puleo, J.A.** 2018. Nearbed sediment transport in the surf and swash zones. 8th International Symposium on Environmental Hydraulics. University of Notre Dame, IN.
28. **Puleo, J.A.** and S. Borrell. 2018. Rapid response deployments to measure intra-storm processes. Storm Processes and Impacts Workshop, St. Petersburg, FL
27. **Puleo, J.A.** 2017. Sheet flow in the surf and swash zones. LEGI, University of Grenoble, Grenoble, France.
26. **Puleo, J.A.** 2016. Keynote: Surf zone injuries: Environmental and human factors. National Board of Directors Meeting, US Lifesaving Association, Denver, Colorado.
25. **Puleo, J.A.** 2016. Keynote: Investigating, understanding, and educating about surf-zone injuries. Mid-Atlantic Marine Education Association meeting, Dewey Beach, DE.
24. **Puleo, J.A.**, P. Cowan, W. Carey, M. Arford-Granholm and K. McKenna. 2016. Surf Zone Injuries in Delaware, Delaware Sea Grant Advisory Council Meeting, Dover, DE.
23. **Puleo, J.A.** 2016. Measurements of sheet flow in the surf and swash zones. United States Geological Survey, St. Petersburg, FL.
22. **Puleo, J.A.** 2016. Sheet flow in the swash and surf zones. University of Maryland.
21. **Puleo, J.A.**, P. Cowan, W. Carey, M. Arford-Granholm and K. McKenna. 2015. Delaware surf zone injuries and associated environmental conditions. Mid-Atlantic Rip Current and Surf Zone Safety Workshop, Lewes, DE.
20. **Puleo, J.A.** 2015. Hydrodynamic and sediment transport measurements in the swash zone, Oregon State University.
19. **Puleo, J.A.** 2014. Measuring hydrodynamics and sediment transport in the swash zone, EP41D-01, 2014 Fall Meeting, AGU, San Francisco, CA.
18. **Puleo, J.A.** 2014. Measurements of near-bed hydrodynamics and sediment transport processes in the swash zone, Department of Geological Sciences, University of Delaware.
17. **Puleo, J.A.** 2013. Matlab for coastal processes and beach monitoring: 6-hour Matlab short course, Richard Stockton, College, NJ.
16. **Puleo, J.A.** 2013. Velocity, near-bed sediment concentration and morphological change in the swash zone, Instituto de Ingenieria y Procesos Costeros, Universidad Nacional Autonoma de Mexico, Sisal, Yucatan, Mexico.

15. **Puleo, J.A.** 2012. Measuring sheet flow concentrations and near bed velocity profiles on the beach face, CCOSE seminar, Plymouth University, United Kingdom.
14. **Puleo, J.A.** 2012. Swash and inner surf zone velocity profiles and bed stress on a natural beach, University of Aberdeen, United Kingdom.
13. **Puleo, J.A.** 2012. Estimating surface velocities in rivers from thermal imagery, University of Aberdeen, United Kingdom.
12. **Puleo, J.A.** 2011. Riverine Surface velocity estimation, Plymouth University, United Kingdom
11. **Puleo, J.A.** and T.E. McKenna. 2011. Quantifying riverine surface velocities using thermal imagery, Rutgers University.
10. ***Puleo, J.A.** and C.A. Lindemer. 2008. Morphodynamics at Cape Henlopen, DE. United States Geological Survey, St. Petersburg, FL
9. **Puleo, J.A.** 2007. Beach response to sea level rise. Workshop on Sea Level Rise Impacts in Delaware. Dover, DE. Sponsored by the Delaware Department of Natural Resources and Environmental Control and NOAA.
8. **Puleo, J.A.** 2006. Quantifying nearshore processes with video. Conference on saving Korea's sandy coasts, Kwandong University, South Korea.
7. ***Puleo, J.A.,** J. MacMahan, J.T. Hayden and J. McConnell. 2006. Monitoring scour hole and tidal currents in Indian River Inlet, Delaware. Delaware Department of Transportation (DelDOT).
6. McKenna, T.E. and **J.A. Puleo.** 2006. Influence of the subsurface thermal environment and ground-water discharge on horseshoe crab spawning and early development: Ground-based remote sensing and field observations. Division of Fish and Wildlife, Delaware Department of Natural Resources and Environmental Control.
5. **Puleo, J.A.** 2005. Center for Applied Coastal Research efforts on rip current studies, NOAA Coastal Communities Rip Current Workshop, Lewes, DE.
4. **Puleo, J.A.** 2002. Extracting hydrodynamic and morphodynamic information from video imagery, Beach and Inlet Observation and Prediction System (BIOPS) workshop at the University of Florida.
3. **Puleo, J.A.** and K.T. Holland. 2000. The use of fixed and aerial video platforms for littoral environmental reconnaissance, MCCDC meeting in Washington DC
2. **Puleo, J.A.** 2000. Overview of the foreshore sediment transport program at the Naval Research Laboratory, Florida Atlantic University.
1. **Puleo, J.A.** 2000. Use of video imagery to monitor littoral processes, Louisiana State University.

PEER-REVIEWED PUBLICATIONS: (* indicates published with student, § indicates published with postdoc)

Total Citations: 4717

h-index: 40

i10-index: 83

117. *Stasiewicz, J., A. Trembanis, B. McFall, D. Young, G. Savant, and **J.A. Puleo**. In Prep. SandHound: A quadruped robotic platform for integrated topographic and geotechnical mapping of coastal environments, *Coastal Engineering*.
116. §Tahmasebi, M., J. Bruck, A. Elkut, A. Alakshendra, L. Dart, and **J.A. Puleo**. In Review. From resistance to adaptation and recovery: An entropy-weighted framework for urban coastal flood resilience, *Landscape and Urban Planning*.
115. §Alhusban, Z., F. Shi, and **J.A. Puleo**. In Review. A numerical study of sandbar position and wave nonlinearity effects on beach cusp formation, *Journal of Marine Science and Engineering*.
114. *Davidson, B., H. Sung, T. Pendergast, A. Schueller, **J. A. Puleo**, J. Olsthoorn, R. P. Mulligan, and N. Pujara. In Review. Flow evolution and solute dispersion in the swash of regular waves, *Geophysical Research Letters*.
113. Song, Y.-K, J. Figlus, P. Chardon-Maldonado, and **J.A. Puleo**. In Review. Process-based numerical simulation of beach erosion and recovery via swash bar and trough system dynamics over multiple storms using CSHORE, *coastal Engineering*.
112. §Elkut, A., F. Shi, and **J.A. Puleo**. In Review. Performance of Parametric, Physics-based, and Blended Approaches for Hurricane Atmospheric Forcing in Coastal Modelling, *Ocean Modeling*.
111. §Lee, S.-B, M.E. Wengrove, B. Tsai, T.-J Hsu, and **J.A. Puleo**. Submitted. Experimental observation of surf zone megaripple formation, migration and contribution to breaker bar volumetric change, *Journal of Geophysical Research Earth Surface*.
110. McQuagge, S., B.M. Webb, S.M. Patch, and **J.A. Puleo**. Submitted. Observations of infragravity wave energy on a microtidal barrier island during an extreme event, *Shore and Beach*.
109. *Pendergast, T., Mulligan, R., Pujara, N., Davidson, B., **J.A. Puleo**, and J. Olsthoorn. 2025. Wave-induced horizontal diffusivity from optically sensed dye tracer fields in impermeable beach laboratory experiments, *Coastal Engineering*, (<https://doi.org/10.1016/j.coastaleng.2025.104925>).
108. *Knowles, J., J.C. Dietrich, A.E. Elkut, **J.A. Puleo**, F. Shi, and L.G. Tateosian. Accepted. Variations in ranges and peak storm tides between open coast and bay locations, *Journal of Geophysical Research, Oceans*.
107. §Idowu, T. and **J.A. Puleo**. 2025. Laboratory observations of object migration in the surf zone, *Applied Ocean Research*, 164, 104784, (<https://doi.org/10.1016/j.apor.2025.104784>).
106. *Sung, H., P. Lomonaco, P. Chardon-Maldonado, R. Mulligan, J. Olsthoorn, **J.A. Puleo** and N. Pujara. 2025. Swash flow due to normal and obliquely incident bores. *Journal of Fluid Mechanics*, (<https://doi.org/10.1017/jfm.2025.10777>).
105. §Schueller, A.E., A. Torres-Freyermuth, and **J.A. Puleo**. 2025. The third international workshop on swash-zone processes, *Coastal Engineering*, (<https://doi.org/10.1016/j.coastaleng.2025.104891>).
104. *Rodriguez-Burgette, J., C. Olney, A. Torres-Freyermuth, and **J.A. Puleo**. 2025. Numerical modeling of pressure gradients and bed shear stress in swash-swash

- interactions drive by double dam-break, *Coastal Engineering*, (<https://doi.org/10.1016/j.coastaleng.2025.104846>).
103. [§]Schueller, A.E., T. Pendergrast, K. Fall, H. Sung, R.P. Mulligan, J. Olsthoorn, N. Pujara, and **J.A. Puleo**. 2025. Swash and surf zone alongshore velocities and dissipation rates forced by oblique monochromatic waves on smooth and rough impermeable beaches, *Coastal Engineering*, 104812, (<https://doi.org/10.1016/j.coastaleng.2025.104812>).
 102. *Tahmasebi, M., M. Volk, E. Tepe, A. Alakshendra, A. Sadaf, **J.A. Puleo**, and J. Bruck. 2025. Coastal carbon at risk: Forecasting the impacts of sea-level rise on future land cover, *Frontiers in Ecology and Evolution*, 13, DOI: 10.3389/fevo.2025.1608422.
 101. [§]Schueller, A.E., K. Fall, H. Sung, R. Oyelakin, R. Mulligan, J. Olsthoorn, N. Pujara, and **J.A. Puleo**. 2025. Laboratory study on inner surf and swash zone hydrodynamics forced by oblique incident-band waves, *Applied Ocean Research*, 158(11), DOI:10.1016/j.apor.2025.104558
 100. [§]Elkut, A. F. Shi, **J.A. Puleo**. 2025. Sensitivity of water level and flood area prediction to hurricane characteristics and climate change impacts, *Ocean and Coastal Management*, 262, (<https://doi.org/10.1016/j.ocecoaman.2025.107573>).
 99. [§]Lashley, C., **J.A. Puleo**, F. Shi, and K. Nederhoff. 2025. Role of waves in forecasting extreme coastal flooding under a warming climate: Insights from Norfolk, Virginia, *Journal of Waterway, Port, Coastal, and Ocean Engineering*, 151, 3, (<https://doi.org/10.1061/JWPED5.WWENG-2169>).
 98. *Zhang, J., B. Tsai, Y. Rafati, T.-J Hsu, and **J.A. Puleo**. 2024. Cross-shore hydrodynamics and morphodynamics modeling of an erosive event in the inner surf zone using XBeach, *Coastal Engineering*, (<https://doi.org/10.1016/j.coastaleng.2024.104662>).
 97. *Idowu, T., and **J.A. Puleo**. 2024. Nearshore migration of munitions and canonical objects under large-scale laboratory forcing, *Journal of Marine Science and Engineering*, (<https://doi.org/10.3390/jmse12112103>).
 96. *Tsai, B. T.-J Hsu, S.-B Lee, M. Pontiki, **J.A. Puleo**, M. Wengrove. 2024. Large Eddy Simulation of Cross-Shore Hydrodynamics under Random Waves in the Surf and Swash Zones, *Journal of Geophysical Research – Oceans*, (<https://doi.org/10.1029/2024JC021194>).
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295. *Asrari, S. and **J.A. Puleo**. 2026. Comparative evaluation of sediment transport formulations in the XBeach model, 39th International Conference on Coastal Engineering, Galveston, TX, USA.
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290. *Everett, C., **J.A. Puleo**, and D. Bryant. 2025. Wave Transmission and Reflection of Biodegradable Natural Infrastructure Product, 6th IAHR Young Professionals Congress, International Association, of Hydro-Environment Engineering and Research.
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286. *Blackburn, I., P. Hossain, Z. Al Husban. L. Muldrow, E. Bardenhagen, E. Hale, M. Head, L. Morgan, K. Fall, J. Bruck, and **J.A. Puleo**. 2025. Planned living

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 284. *Asrari, S. and **J.A. Puleo**. 2025. Automated Near Real Time Coastal Change Forecasting Using XBeach Surfbeat, American Shore and Beach Preservation Association, Long Beach, CA.
 283. **Puleo, J.A.**, A. Elkut, F. Shi, J. Knowles, C. Dietrich, J. Figlus, J. Joubert, S. Patch, and U.S. Lima. 2025. Modeling total water levels at Tyndall Air Force Base, SERDP/ESTCP Symposium, Washington, DC.
 282. §Elkut, A. F. Shi, and **J.A. Puleo**. 2025. Parameterized and Full-Physics Wind Forcing for Water Levels, Waves, and Flood Modeling during Hurricanes in The Gulf of America, SERDP/ESTCP Symposium, Washington, DC.
 281. §Elkut, A., F. Shi, and **J.A. Puleo**. 2025. Sensitivity of Coastal Flood Modelling to Atmospheric Forcing Representations during Hurricane Activity: Parametric, Reanalysis, and Hybrid Approaches, American Shore and Beach Preservation Association, Long Beach, CA.
 280. **Puleo, J.A.**, P. Traykovski, C. DuVal, A. Schueller, A. Penko, and K. Fall. 2025. Munitions migration and burial at Mile Beach, ME, American Shore and Beach Preservation Association, Long Beach, CA.
 279. §AlHusban, Z. and **J.A. Puleo**. 2025. Multi-Model Simulation of Nor'easter-Induced Flooding and Erosion in Southern Delaware Bay, American Shore and Beach Preservation Association, Long Beach, CA.
 277. *Doran, D.M., J. Bruck, and **J.A. Puleo**. 2025. Evaluating Thin-Layer Placement as a Flood Risk Management Solution, American Shore and Beach Preservation Association, Long Beach, CA.
 277. *Hossain, Md. P., D.M. Doran, C.L. Everett, K. Fall, J. Bruck, and **J.A. Puleo**. 2025. Physical and numerical model of wave dissipation over oyster bags, American Shore and Beach Preservation Association, Long Beach, CA.
 276. *Sung, H., R. Mulligan, J. Olsthoorn, P. Chardon-Maldonado, **J.A. Puleo**, P. Lomonaco, and N. Pujara. 2025. Theoretical and experimental analysis of swash flow due to obliquely incident breaking waves, APS Division of Fluid Dynamics, Houston, TX.
 275. *Chen, P-C., **J.A. Puleo** and B. Johnson. 2025. Wave-turbulence decomposition in the surf zone, APS Division of Fluid Dynamics, Houston, TX.
 274. *Kumar, N., M. Nouri, B. Tsai, A. Mathieu, T.-J Hsu, **J.A. Puleo** and J. Chauchat. 2025. Understanding the significance of wave-swash interaction in cross-shore sediment transport and morphodynamics using SedInterFoam, The 6th symposium on two-phase modeling for sediment dynamics in geophysical flows, Santa Barbara, CA
 273. §Schueller, A., K. Fall, H. Sung, B. Davidson, T. Pendergrast, D. Ethier, J. Olsthoorn, R. Mulligan, N. Pujara, and **J.A. Puleo**. 2025. Laboratory study wave-induced alongshore velocities on smooth and rough planar beaches,

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272. Stasiewicz, J. A. Trembanis, D. Young, B. McFall, and **J.A. Puleo**. 2025. SandHound: An autonomous system for coastal surveying, Young Coastal Scientists and Engineers Conference - Americas (YCSECA), University North Carolina – Wilmington.
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 270. §Idowu, T. and **J.A. Puleo**. 2025. Near-instantaneous observations of various density munitions in the surf zone, Young Coastal Scientists and Engineers Conference - Americas (YCSECA), University North Carolina – Wilmington.
 269. *Kumar, N., S. Nouri, B. Tsai, T. -J Hsu, and **J.A. Puleo**. 2025. Studying the effect of wave-swash interaction on the cross-shore beach profile evolution using SedInterFoam, Young Coastal Scientists and Engineers Conference - Americas (YCSECA), University North Carolina – Wilmington.
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 267. *Swanson, T., **J.A. Puleo**, T. van Buren. 2025. Potential for sea bed munition transport due to turbulent prop wash, Young Coastal Scientists and Engineers Conference - Americas (YCSECA), University North Carolina – Wilmington.
 266. *Doran, D., **J.A. Puleo**, and J. Bruck. 2025. Wave attenuation over an oyster shell mat, Young Coastal Scientists and Engineers Conference - Americas (YCSECA), University North Carolina – Wilmington.
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 263. *Asrari, S. and **J.A. Puleo**. 2025. Optimizing XBeach modeling parameters for coastal change, Seventh Annual Mid-Atlantic Ocean Forum, Baltimore, MD.
 262. §Schueller, A. and **J.A. Puleo**. 2025. Wave Buoy and Water Level Network, Delaware, Seventh Annual Mid-Atlantic Ocean Forum, Baltimore, MD.
 261. *Eggensberger, L., N. Stark, and **J.A. Puleo**. 2025. Pore pressure assessment in sandy nearshore sediments during a large-scale wave flume experiment, Geo-Congress 2026, Salt Lake City, UT.
 260. **Puleo, J.A.**, 2024. Mobility and burial in the surf zone, SERDP/ESTCP Symposium, Washington, DC.

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256. *Schanta, R. F. Shi, T.-J Hsu, J. Zhang, and **J.A. Puleo**. 2024. Prediction of nonlinear wave statistics in the nearshore by machine learning models. 2024 Fall Meeting, American Geophysical Union, Washington DC, USA.
255. *Asrari, S. and **J.A. Puleo**. 2024. Optimizing cross-shore hydrodynamic modeling parameters using XBeach-Surfbeat. 2024 Fall Meeting, American Geophysical Union, Washington DC, USA.
254. *Idowu, T. and **J.A. Puleo**. 2024. Impact of shape and orientation on munitions migration in the surf zone under scaled forcing. 2024 Fall Meeting, American Geophysical Union, Washington DC, USA.
253. *Doran, D., L. Dart, J. Bruck, and **J.A. Puleo**. 2024. Investigating the influence of oyster reef geometry on wave attenuation. ASBPA National Conference, New Orleans, LA.
252. *Asrari, S. and **J.A. Puleo**. 2024. XBeach modeling of cross-shore hydrodynamics: Optimizing modeling parameters. ASBPA National Conference, New Orleans, LA.
251. *Pendergrast, T., R. Mulligan, D. Ethier, A. Schueller, K. Fall, H. Sung, B. Davidson, N. Pujara, **J.A. Puleo**, and J. Olsthoorn. 2024. Wave basin experiments to investigate diffusivity in the swash zone. 2024 Fall Meeting, American Geophysical Union, Washington DC, USA.
250. *Ethier, D., J. Olsthoorn, N. Pujara, **J.A. Puleo**, T. Pendergrast, B. Otsuki, A. Schueller, K. Fall, H. Sung, B. Davidson, and R. Mulligan. 2024. Wave basin experiments to quantify sediment transport from localized beach nourishments in idealized wave conditions. 2024 Fall Meeting, American Geophysical Union, Washington DC, USA.
249. [§]Elkut, A., F. Shi, and **J.A. Puleo**. 2024. Modeling total water level and compound flooding under climate change scenarios. 2024 Fall Meeting, American Geophysical Union, Washington DC, USA.
248. *Doran, D., L. Dart, J. Bruck, and **J.A. Puleo**. 2024. Assessing flood risk at Joint Base Langley-Eustis. 2024 Fall Meeting, American Geophysical Union, Washington DC, USA.
247. *Derby, B., A. Schueller, K. Fall, H. Sung, B. Davidson, T. Pendergrast, D. Ethier, J. Olsthoorn, R. Mulligan, N. Pujara, and **J.A. Puleo**. 2024. Estimating turbulence forced by oblique incident waves in the swash and inner surf zones. 2024 Fall Meeting, American Geophysical Union, Washington DC, USA.
246. *Kumar, N., A. Mathieu, B. Tsai, T.-J. Hsu, **J.A. Puleo**, and J. Chauchat. 2024. Cross-shore beach profile evolution driven by successive wave breaking in the

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 244. **Puleo, J.A.** 2024. Mobility in the swash and inner surf zones: From grains to munitions. University of Georgia
 243. ***Puleo, J.A.**, T. Idowu, E. Chapman. 2024. Mobility and burial of variable density munitions in the surf zone, 38th International Conference on Coastal Engineering, Rome, Italy.
 242. *Kumar, N., A. Mathieu, B. Tsai, T.-J. Hsu, **J.A. Puleo**, and J. Chauchat. 2024. SedInterFoam: a multi-phase numerical model for sediment transport and its application to swash zones, 38th International Conference on Coastal Engineering, Rome, Italy.
 241. *Pendergast, T., J. Olsthoorn, N. Pujara, **J.A. Puleo** and R.P. Mulligan. 2024. Analyzing the effect of alongshore-current-induced shear on horizontal mixing, Young Coastal Scientists and Engineers Conference - Americas (YCSECA), Quebec City, Quebec, CA.
 240. *Ethier, D., J. Olsthoorn, **J.A. Puleo**, N. Pujara, and R. Mulligan. 2024. Laboratory experiments to quantify sediment transport from localized beach nourishments, Young Coastal Scientists and Engineers Conference - Americas (YCSECA), Quebec City, Quebec, CA.
 239. *VanNess, J., K. Fall, and **J.A. Puleo**. Exploratory application of Wingtra Drone imagery to quantify coastal morphology, Young Coastal Scientists and Engineers Conference - Americas (YCSECA), Quebec City, Quebec, CA.
 238. §Elkut, A., F. Shi, **J.A. Puleo**. 2024. Modeling total water level at coastal military sites under the influence of climate change and hurricanes, Young Coastal Scientists and Engineers Conference - Americas (YCSECA), Quebec City, Quebec, CA.
 237. §Schueller, A., K. Fall, R. Oyelakin, R. Mulligan, J. Olsthoorn, H. Sung, N. Pujara, and **J.A. Puleo**. 2024. Flow structure in the swash zone driven by oblique waves in the incident band wave spectrum, 8th International Conference on Estuaries and Coasts, Quebec City, Quebec, CA.
 236. §Elkut, A., F. Shi, **J.A. Puleo**. 2024. Modelling total water level and flood areas in coastal military installations under the impact of climate change and hurricane activity, 8th International Conference on Estuaries and Coasts, Quebec City, Quebec, CA.
 235. *Doran, D., L. Dart, J. Bruck, and **J.A. Puleo**. 2024. Assessing flood risk at Joint Base Langley-Eustis, 8th International Conference on Estuaries and Coasts, Quebec City, Quebec, CA.
 234. *Idowu, T., M. Gangadharan, E. Chapman, J. Stolle, D. Pham Van Bang, and **J.A. Puleo**. 2024. Behavior of variable density munitions in the nearshore under scaled storm onsets, 8th International Conference on Estuaries and Coasts, Quebec City, Quebec, CA.

233. *Idowu, T., M. Gangadharan, E. Chapman, J. Stolle, D. Pham Van Bang, and **J.A. Puleo**. 2024. Migration and burial of variable density munitions under scaled storm events, Young Coastal Scientists and Engineers Conference - Americas (YCSECA), Quebec City, Quebec, CA.
232. *Doran, D., B. Webb, and **J.A. Puleo**. 2024. Investigating the Influence of Oyster Reef Geometry on Wave Attenuation, Young Coastal Scientists and Engineers Conference - Americas (YCSECA), Quebec City, Quebec, CA.
231. §Alhusban, Z., F. Shi and **J.A. Puleo**. 2024. Numerical modeling of the complex interplay between wave dynamics, sediment transport, and beach morphology, Young Coastal Scientists and Engineers Conference - Americas (YCSECA), Quebec City, Quebec, CA.
230. *Idowu, T., E. Chapman, M. Gangadharan, J. Stolle, D. Pham van Bang, and **J.A. Puleo**. 2023. Experimental observations of swash morphodynamic response to a storm onset. American Shore and Beach Preservation Association, Providence, Rhode Island, USA.
229. §Schueller, A., R. Oyelakin, K. Fall, N. Pujara, P. Chardon-Maldonado, R.P. Mulligan and **J.A. Puleo**. 2023. Detailed experimental measurements of alongshore velocity and bed shear stress in the swash zone. 2023 Fall Meeting, American Geophysical Union, San Francisco, CA, USA.
228. *Idowu, T. and **J.A. Puleo**. 2023. Swash Morphodynamic Response to Storm Onset in a Near-prototype Experiment. 2023 Fall Meeting, American Geophysical Union, San Francisco, CA, USA.
227. §Alhusban, Z., F. Shi, and **J.A. Puleo**. 2023. Studying the implementation of hybrid living shorelines to reduce sea level rise effects, Young Coastal Scientists and Engineers Conference - Americas (YCSECA), Madison, WI.
226. *Salgado-Dominguez, G., M. Malej, F. Shi, and **J.A. Puleo**. 2023. Investigating the Impact of Infragravity Waves on Arctic Sea Ice Decline and Coastal Erosion using FUNWAVE-TVD Numerical Wave Model, Young Coastal Scientists and Engineers Conference - Americas (YCSECA), Madison, WI.
225. *Idowu, T., E. Chapman, M. Gangadharan, J. Stolle, D. Pham van Bang, R. Mulligan and **J.A. Puleo**. 2023. Migration and burial of variable density munitions in the nearshore under scaled events, Young Coastal Scientists and Engineers Conference - Americas (YCSECA), Madison, WI.
224. *Hinson, S.K., **J.A. Puleo**, J. Bruck, C.L. Overcash, and K. Sermon. 2023. Building Coastal Community Resilience with Nature-Based Shoreline Solutions, Young Coastal Scientists and Engineers Conference - Americas (YCSECA), Madison, WI.
223. *Oyelakin, R., R. Mulligan, N. Pujara, and **J.A. Puleo**. 2023. Swash zone dynamics driven by obliquely incident waves, 2023 Young Coastal Scientists and Engineers Conference - Americas (YCSECA), Madison, WI.
222. *Ethier, D., R. Mulligan, J. Olsthoorn, **J.A. Puleo** and N. Pujara. 2023. Designing a Large-Scale Laboratory Beach for Swash Zone Measurements and Modelling. 2023 Young Coastal Scientists and Engineers Conference - Americas (YCSECA), Madison, WI.
221. *Ryan, M., E. Bardenhagen, J. Bruck and **J.A. Puleo**. 2022. Review of the Modeling Software Used to Quantify Watershed-Related Ecosystem Services

- During Coastal Wetland Restorations, 2022 Young Coastal Scientists and Engineers Conference - Americas (YCSECA), Pensacola, FL.
220. ***Puleo, J.A.**, M.K. Gangadharan, T. Idowu, E. Chapman, J. Stolle, D. Pham Van Bang, R. Mulligan. 2022. Mobility and Burial of Variable Density Munitions in the Inner Surf and Swash Zones during Controlled Extreme Forcing, SERDP/ESTCP Symposium, Washington, DC.
 219. **Puleo, J.A.**, F. Shi, C. Lashley, S. Patch, J. Figlus, C. Dietrich, K. Nederhoff, A. van Dongeren, E. Quataert, C. Storlazzi. 2022. Comparative assessment of total water levels for coastal military facility readiness and resilience using numerical models, SERDP/ESTCP Symposium, Washington, DC.
 218. §Gangadharan, M K., T. Idowu, E. Chapman., **J.A. Puleo**, J. Stolle, D. Pham Van Bang. 2022. Migration and burial tendencies of variable density munitions: initial results from a large-scale study, 37th International Conference on Coastal Engineering 2022 in Sydney, Australia.
 217. §Gangadharan, M K., J.K. Paskoski, T. Idowu, E. Chapman, **J.A. Puleo**. 2022. Assessment of wave characteristics and morphodynamics using lidars in a large-scale wave flume, SERDP/ESTCP Symposium, Washington, DC.
 216. §Gangadharan, M K., E. Chapman, T. Idowu, **J.A. Puleo**, J. Stolle, D. Pham Van Bang. 2022. Migration and burial of unexploded ordnances under the influence of solitary waves., Young Coastal Scientists and Engineers Conference–Americas, Pensacola Beach, Florida.
 215. *Idowu, T. E., M.K. Gangadharan, E. Chapman, **J.A. Puleo**, J. Stolle, D. Pham Van Bang. 2022. Behavior of variable density munitions under dam break forcing, 37th International Conference on Coastal Engineering, Sydney Australia.
 214. *Idowu, T. E., M.K. Gangadharan, E. Chapman, **J.A. Puleo**, J. Stolle, D. Pham Van Bang. 2022. Cross-shore migration of variable density munitions under scaled storm conditions, SERDP and ESTCP Symposium, Arlington, VA.
 213. *Chapman, E., M.K. Gangadharan, T. Idowu, **J.A. Puleo**. 2022. Berm migration under scaled storm events, 37th International Conference on Coastal Engineering, Sydney Australia.
 212. *Chapman, E., T. Idowu, M.K. Gangadharan, **J.A. Puleo**, J. Stolle, D. Pham van Bang, R. Mulligan. 2022. Berm migration and munitions motion under scaled storm events, 2022 SERDP and ESTCP Symposium, Arlington, VA.
 211. *Chapman, E., T. Idowu, M.K. Gangadharan, **J.A. Puleo**. 2022. Wave Runup and Munitions Motion Forced by Scaled Storm Events, 2022 Young Coastal Scientists and Engineers Conference - Americas (YCSEC-A), Pensacola, FL.
 210. *Zhang, J., A. Mathieu, T.-J. Hsu, N. Stark, **J.A. Puleo**, M. Wengrove XBeach Modeling of Cross-shore Hydrodynamics and Morphodynamics in a Shallow Surf Zone 2022 Fall Meeting, American Geophysical Union, Chicago, Illinois, USA.
 209. *Tsai, B., A. Mathieu, T.-J. Hsu, **J.A. Puleo**, M. Wengrove, J. Chauchat. 2022. Large-Eddy Simulations for Two Nearshore Applications. 2022 Fall Meeting, American Geophysical Union, Chicago, Illinois, USA.
 208. §Gangadharan, M K., C. Olney, and **J.A. Puleo**. 2022. Simulating a controlled swash-swash interaction (double dam break) using DualSPHysics,

- DualSPHysics Workshop, Universitat Politècnica de Catalunya - BarcelonaTech, in Barcelona, Spain.
207. *Pontiki, M., **J.A. Puleo**, H. Bond, M. Wengrove, R.A. Feagin, and S.-B. Lee. Linkages between dune morpho-sedimentary processes and erosive hydrodynamics. 2021 Fall Meeting, American Geophysical Union. New Orleans, LA, USA
 206. *Chapman, E., T.E. Idowu, M. Gangadharan, and **J.A. Puleo**. 2022. Migration and burial of variable density munitions in the nearshore, AGU Ocean Sciences Meeting, Honolulu, HI.
 205. Feagin, R.A., R.A. Innocenti, H. Bond, M. Wengrove, T.P. Huff, P. Lomonaco, V.C. Ceron, R. Silva, B. Tsai, J. Figlus, M. Pontiki, **J.A. Puleo**, T. -J. Hsu. 2022. Does coastal dune vegetation accelerate wave erosion during extreme events?, AGU Ocean Sciences Meeting, Honolulu, HI.
 204. *Williams, O., C. Everett, E. Ruggiero, F. Shi, J. Bruck, **J.A. Puleo**, and M. Malej. 2022. Funwave ship wake simulations near a living shoreline installment, AGU Ocean Sciences Meeting, Honolulu, HI.
 203. *Idowu, T., M. Gangadharan, E. Chapman, and **J.A. Puleo**. 2022. Quantification of the mobility and burial of variable density munitions under single event forcing, AGU Ocean Sciences Meeting, Honolulu, HI.
 202. *Mazur, E., O. Amante, **J.A. Puleo**, F. Shi, S. Smallegan and B. Webb. 2022. Urban coastal flooding pathways during storm events, AGU Ocean Sciences Meeting, Honolulu, HI.
 201. *Olney, C., **J.A. Puleo** and A. Torres-Freyermuth. 2022. Validating and modeling hydrodynamics under double dam break driven swash using Reynolds-averaged Navier-Stokes equations, AGU Ocean Sciences Meeting, Honolulu, HI.
 200. ^sGangadharan, M.K., J.K. Paskoski, W.E. Wengrove and **J.A. Puleo**. 2022. Comparative analysis of three LiDAR systems for estimating wave transformation and morphodynamics under the influence of a double dam break, AGU Ocean Sciences Meeting, Honolulu, HI.
 199. ^sLashley, C.H., **J.A. Puleo** and F. Shi. 2022. The contribution of wave setup and infragravity waves to coastal flooding at Norfolk (VA, USA) during extreme events, AGU Ocean Sciences Meeting, Honolulu, HI.
 198. **Puleo, J.A.** and H. Malladi. 2022. Making waves: high school coastal processes education using small-scale wave flumes, AGU Ocean Sciences Meeting, Honolulu, HI.
 197. Calantoni, J., T. -J. Hsu, and **J.A. Puleo**. 2022. On the scaling of sediments in laboratory experiments and numerical simulations, AGU Ocean Sciences Meeting, Honolulu, HI.
 196. Torres-Freyermuth, A., G. Medellin, G.U. Martin, and **J.A. Puleo**. 2022. A Virtual laboratory for teaching water wave mechanics, AGU Ocean Sciences Meeting, Honolulu, HI.
 195. *Horney, B., M. Gangadharan, T. Idowu, E. Chapman, **J.A. Puleo**, and R. Mieras. 2021. Comparing a low-cost 2D LIDAR to solid-state lidar by scanning bed evolution under double dam break driven swash, 7th Young Coastal Scientists and Engineers Conference Americas, Myrtle Beach, South Carolina.
 194. *Idowu, T., M. Gangadharan, E. Chapman, **J.A. Puleo**, J. Stolle, D. Pham van Bang, and R. Mulligan, 2021. Impact of varying bulk densities on munitions mobility, burial and exposure under single event forcing in nearshore environments, SERDP/ESTCP Symposium, Washington, DC

193. §Gangadharan, M., T. Idowu, E. Chapman, and **J.A. Puleo**. 2021. Simulating the motion of UXOs under the influence of double dam break forcing using Dual SPHysics, SERDP/ESTCP Symposium, Washington, DC.
192. **Puleo, J.A.**, F. Shi, C. Lashley, C. Dietrich, A. van Dongeren, K. Nederhoff, S. Smallegan, J. Figlus, C. Storlazzi. 2021. Comparative assessment of total water levels for coastal military facility readiness and resilience using numerical models, SERDP/ESTCP Symposium, Washington, DC.
191. ***Puleo, J.A.**, T. Idowu, M. Gangadharan, E. Chapman, J. Stolle, D. Pham van Bang, and R. Mulligan. 2021. Mobility and Burial of Variable Density Munitions in the Inner Surf and Swash Zones during Controlled Extreme Forcing, SERDP/ESTCP Symposium, Washington, DC.
190. *Idowu, T., M. Gangadharan, E. Chapman, and **J.A. Puleo**. 2021. Quantifying the migration and burial of variable density munitions in the nearshore under controlled extreme forcing, 7th Young Coastal Scientists and Engineers Conference Americas, Myrtle Beach, South Carolina.
189. *Pontiki, M, and **J.A. Puleo**. 2021. Sediment transport dynamics across a coupled berm-dune system, 7th Young Coastal Scientists and Engineers Conference Americas, Myrtle Beach, South Carolina.
188. *Amante, O., E. Mazur, **J.A. Puleo**, S. Smallegan and B. Webb. 2021. Measurement and Modeling of Intra-Event Processes, 7th Young Coastal Scientists and Engineers Conference Americas, Myrtle Beach, South Carolina.
187. *Williams, O., C. Everett, E. Ruggiero, **J.A. Puleo**, J. Bruck, and F. Shi. 2021. FUNWAVE ship wake simulations near a living shoreline installment, 7th Young Coastal Scientists and Engineers Conference Americas, Myrtle Beach, South Carolina.
186. §Gangadharan, M., C. Olney, E. Chapman, T. Idowu, **J.A. Puleo**, and A. Torres-Freyermuth. 2021. Simulating swash zone dynamics under the influence of a double dam break, 7th Young Coastal Scientists and Engineers Conference Americas, Myrtle Beach, South Carolina.
185. *Mazur, E., O. Amante, **J.A. Puleo**, F. Shi, S. Smallegan and B. Webb. 2021. Urban coastal flooding pathways during storm events, 7th Young Coastal Scientists and Engineers Conference Americas, Myrtle Beach, South Carolina.
184. *Olney, C., **J.A. Puleo** and A. Torres-Freyermuth. 2021. Modeling hydrodynamics under double dam break driven swash using Reynolds-averaged Navier-Stokes equations, 7th Young Coastal Scientists and Engineers Conference Americas, Myrtle Beach, South Carolina.
183. *Eley, M., E. Chapman, T. Idowu, M. Gangadharan, and **J.A. Puleo**. 2021. Horizontal and vertical pore pressure gradients and sediment response under double dam break driven swash event, 7th Young Coastal Scientists and Engineers Conference Americas, Myrtle Beach, South Carolina.
182. *Pontiki, M., **J.A. Puleo**, H. Bond, S.B. Lee., M. Wengrove, R. Innocenti, R. Feagin. 2021. Simulating Mantoloking dune erosion under hydrodynamics driven by Hurricane Sandy, AGU Fall Meeting, New Orleans, LA.
181. *Pontiki, M., **J.A. Puleo**, H. Bond, S.B. Lee., M. Wengrove, R. Innocenti, R. Feagin. 2021. Linkages between dune morphodynamic processes and erosive hydrodynamics, AGU Fall Meeting, New Orleans, LA.
180. *Chapman, E., T. Idowu, M. Gangadharan, and **J.A. Puleo**. 2021. Variable density munitions motion in the swash zone, 7th Young Coastal Scientists and Engineers Conference Americas, Myrtle Beach, South Carolina.

179. §Gangadharan, M., and **J.A. Puleo**. 2021. Dual Physics as a tool for simulating swash zone dynamics under the influence of a double dam break, ASBPA National Conference, New Orleans, LA.
178. *Idowu, T., M. Gangadharan, E. Chapman, **J.A. Puleo**, J. Stolle, D. Pham van Bang, and R. Mulligan. 2021. Experimental framework for observing the physical behavior of variable density munitions in swash and inner surf zones under extreme storm events, ASBPA National Conference, New Orleans, LA.
177. *Amante, O. E. Mazur, **J.A. Puleo**, B. Webb, S. Smallegan. 2021. Measurement and modeling of intra-event processes, ASBPA National Conference, New Orleans, LA.
176. *Mazur, E., O Amante, R. Martin, and **J.A. Puleo**. 2021. Instantaneous bed level sensor for intrawave monitoring on a beach, ASBPA National Conference, New Orleans, LA.
175. *Olney, C. and **J.A. Puleo**. 2021. Pressure gradients under double dam break driven swash, ASBPA National Conference, New Orleans, LA.
174. **Puleo, J.A.** and H. Malladi. 2021. High school STEM engagement using portable wave flumes, ASBPA National Conference, New Orleans, LA.
173. ***Puleo, J.A.**, H. Malladi, K. Rumaker, E. Noe. 2021. Making waves in the classroom; Engaging high school STEM students in coastal dynamics using portable wave flumes, Coastal Dynamics '21, Delft, The Netherlands.
172. *Mazur, E., O. Amante, **J.A. Puleo**, F. Shi, S. Smallegan, B. Webb. 2010. Urban coastal flooding pathways during storm events, Coastal Dynamics '21, Delft, The Netherlands.
171. *Olney, C., **J.A. Puleo** and A. Torres-Freyermuth. 2021. Pressure gradients under dam break driven swash, Coastal Dynamics '21, Delft, The Netherlands.
170. *Amante, O., E. Mazur, **J.A. Puleo**, S. Smallegan and B. Webb. 2021. Measurement and modeling of intra-event processes on a steep beach, Coastal Dynamics '21, Delft, The Netherlands.
169. *Pontiki, M., **J.A. Puleo**, S.-B. Lee, M. E. Wengrove, T. Huff, R. Feagin, Y. Rafati, and T.-J. Hsu, Sediment flux variability in the proximity of dunes, Coastal Dynamics '21, Delft, The Netherlands.
168. Wengrove, M.E., H. Bond., M. Pontiki, and **J.A. Puleo**. 2021. Beach dune subsurface hydrodynamics and the formation of dune scarps, Coastal Dynamics '21, Delft, The Netherlands.
167. *Rafati, Y., B. Tsai, T.-J. Hsu, M. Pontiki, **J.A. Puleo**, S.-B. Lee, M. E. Wengrove and D. Cox. 2021. Phase-resolving simulation of waves, currents and sediment fluxes in a large flume under storm waves scenarios, Coastal Dynamics '21, Delft, The Netherlands.
166. *Tsai, B., Y. Rafati, T.-J. Hsu, M. Pontiki, **J.A. Puleo**, S.-B. Lee, M. E. Wengrove and D. Cox. Large eddy simulation of cross-shore hydrodynamics under random waves in the surf and swash zones. 2021. Coastal Dynamics '21, Delft, The Netherlands.
165. *Lee, S.-B., M. E. Wengrove, D. Cox, M. Pontiki, **J.A. Puleo**, T.-J. Hsu, and Y. Rafati. 2021. Large-scale laboratory observations of sandbar formation, offshore migration, and growth during a dune scarping event, Coastal Dynamics '21, Delft, The Netherlands.
164. *Larner, M., **J.A. Puleo**, F. Shi and R. Schaefer. 2020. Relative impacts of wind- and ship-generated waves on an estuarine island. American Shore & Beach Preservation Association National Coastal Conference: Navigating Stormy Times, Oct 13-16.
163. *Rumaker, K., **J.A. Puleo**, J. Figlus, Y. Song, and J. Faries, 2020, Assessing morphodynamics and dredged sand placement effectiveness north of Indian

- River Inlet DE, American Shore & Beach Preservation Association National Coastal Conference: Navigating Stormy Times, Oct 13-16.
162. *Pontiki, M., **J.A. Puleo**, R.A. Feagin, M. Wengrove, T.-J. Hsu and D. Cox. 2020. Laboratory Study of Swash-zone Dynamics on Dune Erosion. International Conference on Coastal Engineering.
 161. *Pontiki, M., H. Bond, R. Innocenti, **J.A. Puleo**, M. Wengrove, and R.A. Feagin. 2020. Swash Zone Berm Nourishment Morphodynamics in a Physical Model. American Shore & Beach Preservation Association National Coastal Conference: Navigating Stormy Times, Oct 13-16.
 160. Rutten, J., A. Torres-Freyermuth, **J.A. Puleo**. 2020. Assessing uncertainty in the modeling of runup and swash morphodynamics using XBeach. vICCE.
 159. *Bond, H., M. Wengrove, M. Pontiki, **J.A. Puleo**, R. Feagin. 2020. Beach dune subsurface hydrodynamics and the formation of dune scarps. American Geophysical Union Fall Meeting.
 158. *Pontiki, M., Bond, H., Lee, S.B., **J.A. Puleo**., M. Wengrove, R. Feagin. 2020. Quantifying Sediment Transport Across a Rapidly Eroding Berm. American Geophysical Union Fall Meeting.
 157. *Pontiki, M., Bond, H., Lee, S.B., **J.A. Puleo**., M. Wengrove, R. Feagin. 2020. Physical Modeling on Dune Erosion: Design, Instrumentation and Experimental Observations. American Geophysical Union Fall Meeting.
 156. *Larner, M., **J.A. Puleo**, F. Shi, M. Malej. 2020. Analysis of Ship-Generated Hydrodynamic Characteristics in the Delaware River. American Geophysical Union Fall Meeting.
 155. **Puleo, J.A.** 2020. Making Waves in the Classroom – Engaging Students in STEM through Hands-on Coastal Oceanography and Engineering. AGU Ocean Sciences Meeting, San Diego, CA.
 154. Rutten, J., A. Torres-Freyermuth, **J.A. Puleo**. 2020. Assessing uncertainty in the modeling of runup and swash morphodynamics using XBeach. 37th International Conference on Coastal Engineering, virtual.
 153. Webb, B.M., J. Coogan, S. Smallegan, **J.A. Puleo**. 2020. Observations of storm tides, waves, and erosion on a low-lying barrier island during Hurricane Nate. AGU Ocean Sciences Meeting, San Diego, CA.
 152. *Bond, H., M. Wengrove, **J.A. Puleo**, R. Feagin, and B. Montoya. 2020. Observations of water content and fluid pressure within the interior of an eroding beach dune. AGU Ocean Sciences Meeting, San Diego, CA.
 151. Rutten, J., A. Torres-Freyermuth, and **J.A. Puleo**. 2020. Uncertainty in phase-resolving numerical modeling of coastal flooding and erosion. AGU Ocean Sciences Meeting, San Diego, CA.
 150. *Pontiki, M., **J.A. Puleo**. 2020. Laboratory study of swash-zone dynamics on dune erosion. 37th International Conference on Coastal Engineering, virtual.
 149. *Antonio, S.D., J. van der Werf, B. Vermeulen, I. Caceres, J. Alsina, M. Larner, **J.A. Puleo** and S. Hulscher. 2020. Cross-shore Sediment Transport in the Swash Zone: Large-Scale Laboratory Experiments. 37th International Conference on Coastal Engineering, Sydney, Australia.

148. *Pontiki, M., **J.A. Puleo**, R. Feagin, M. Wengrove, T. -J. Hsu, and D. Cox. 2020. Wave-induced sediment transport in a coupled berm-dune system: a near prototype experiment. AGU Ocean Sciences Meeting, San Diego, CA.
147. **Puleo, J.A.** 2019. Intra-storm Erosion Processes on Steep Beaches and Dunes. ASBPA National Conference, Myrtle Beach, South Carolina.
146. ***Puleo, J.A.** and D. Cristaudo. 2019. Mobility of Instrumented Unexploded Ordnance in the Nearshore Environment. SERDP/ESTCP Symposium, Washington, DC.
145. Kim, Y., R. S. Mieras, Z. Cheng, D. Anderson, T.-J. Hsu, J. Chauchat, **J. A. Puleo**, and D. Cox. 2019. A free-surface resolving Eulerian two-phase model and its application to sheet flow driven by surface waves. Two-Phase Modeling for Sediment Dynamics Conference, Newark, DE
144. *Innocenti, R., R. Feagin, B. Charbonneau, T. Huff, J. Figlus, **J. A. Puleo**, M. Wengrove, D. Cox, and T. Hsu. 2019. Relating dune grass structure to wind- and wave-induced lift forces and drag moments, and the propensity to uproot during extreme events. 6th Young Coastal Scientists and Engineers Conference – Americas, Corvallis, Oregon.
143. *Pontiki, M., R. Innocenti, H. Bond, T. Huff, **J.A. Puleo**, R. Feagin, M, Wengrove, and D. Cox. 2019. Experimental Investigation of The Response of Vegetated Dunes to Extreme Wave Conditions. 6th Young Coastal Scientists and Engineers Conference – Americas, Corvallis, Oregon.
142. *Cargill, S and **J.A. Puleo**. 2019. Quantifying Beach Profile Change Using Passive Photocell Sensors. 6th Young Coastal Scientists and Engineers Conference – Americas, Corvallis, Oregon.
141. Rutten, J., A. Torres-Freyermuth, and **J.A. Puleo**. 2019. Uncertainty in the prediction of coastal flooding and erosion. International Conference on Coastal Resilience, Merida, Mexico.
140. *Borrell, S. and **J.A. Puleo**. 2019. In-situ Hydrodynamic and Morphodynamic Measurements During Extreme Storm Events. Delaware Applied Coastal Research Symposium, Newark, DE.
139. * Pontiki, M., B. Tsai, **J.A. Puleo** and T. Hsu. 2019. Near Prototype Experimental Study of Dune Erosion Physics (DUNE3). Delaware Applied Coastal Research Symposium, Newark, DE.
138. *Borrell, S. and **J.A. Puleo**. 2019. In Situ Hydrodynamic and Morphodynamic Measurements During Extreme Storm Events. National Conference on Beach Preservation Technology, Florida Shore and Beach Preservation Association, St. Augustine, FL.
137. *Gross, B.M. and **J.A. Puleo**. 2019. Mobility of Unexploded Ordnance using Spherical Surrogates on the Beach Face. National Conference on Beach Preservation Technology, Florida Shore and Beach Preservation Association, St. Augustine, FL.
136. **Puleo, J.A.** 2019. Nearly forty years of excellence at the Center for Applied Coastal Research. National Conference on Beach Preservation Technology, Florida Shore and Beach Preservation Association, St. Augustine, FL.
135. *Cristaudo, D. and **J.A. Puleo**. 2018. Mobility of Instrumented Unexploded Ordnance in the Nearshore Environment. American Geophysical Union Fall Meeting, Washington, DC.

134. *Gross, B., D. Cristaudo, and **J.A. Puleo**. 2018. Mobility of Unexploded Ordnance using Spherical Surrogates in the Swash Zone. American Geophysical Union Fall Meeting, Washington, DC.
133. *Borrell, S. and **J.A. Puleo**. 2018. In situ hydrodynamic and morphodynamic measurements during extreme storm events. American Geophysical Union Fall Meeting, Washington, DC.
132. *Cristaudo, D. and **J.A. Puleo**. 2018. Analysis of the transport of instrumented surrogate munitions deployed in the swash zone of a large-scale laboratory beach. European Geophysical Union, Vienna Austria.
131. *Gross, B., **J.A. Puleo** and D. Cristaudo. 2018. Mobility of Unexploded Ordnance using Spherical Surrogates in the Swash Zone. SERDP/ESTCP Symposium, Washington, DC.
130. ***Puleo, J.A.**, D. Cristaudo, B. Gross. 2018. Mobility of Instrumented Unexploded Ordnance in the Nearshore Environment. SERDP/ESTCP Symposium, Washington, DC.
129. *Borrell, S. and **J.A. Puleo**. 2018. In situ hydrodynamic and morphodynamic measurements during extreme storm events. Young Coastal Scientists and Engineers Conference – Americas, Merida, Yucatan, Mexico.
128. *Cristaudo, D. and **J.A. Puleo**. 2018. Long term behavior of unexploded ordnance in the nearshore environment. Young Coastal Scientists and Engineers Conference – Americas, Merida, Yucatan, Mexico.
127. *Gross, B. and **J.A. Puleo**. 2018. Mobility of Unexploded Ordnance using Spherical Surrogates in the Swash Zone. Young Coastal Scientists and Engineers Conference – Americas, Merida, Yucatan, Mexico.
126. *Kim, Y., T. –J Hsu, R.S. Mieras, Z. Cheng and **J.A. Puleo**. 2018. Modeling sheet flow under breaking waves on a surf zone sandbar. International Conference on Coastal Engineering. Baltimore, MD.
125. *Mieras, R.S., **J.A. Puleo**, D. Anderson, D. Cox and T.-J Hsu. 2018. Observations of horizontal and vertical sediment fluxes on a sandbar in the suspended and sheet flow layers. International Conference on Coastal Engineering. Baltimore, MD.
124. Fromant, G., T. Revil-Baudar, R.S. Mieras, D. Hurther, J. Chauchat and **J.A. Puleo**. 2018. On bedload measurements performances of high-resolution acoustic (ACVP) and conductivity (CCP) profilers. RiverFlows. Lyon, France.
123. *Kim, Y., R. Mieras, Z. Cheng, T.-J Hsu, and **J.A. Puleo**. 2018. An Eulerian two-phase simulation of wave-induced sediment transport on a surf zone sandbar. AGU Ocean Sciences Meeting, Portland, OR.
122. ***Puleo, J.A.** and D. Cristaudo. 2017. Nearshore unexploded ordnance studies using instrumented surrogate munitions. SERDP/ESTCP Symposium, Washington, DC.
121. *Cristaudo, D. **J.A. Puleo**, and B. Bruder. 2017. Instrumented surrogate munitions for nearshore unexploded ordnance mobility studies - design and measurement capabilities. IEEE/MTS Oceans Conference, Anchorage, Alaska.
120. *Mieras, R.S., **J.A. Puleo**, D. Anderson, D.T. Cox and T.-J. Hsu. 2017. Large-scale experimental observations of wave-induced sediment transport over a surf

- zone sandbar. Young Coastal Scientists and Engineers Conference - Americas, Dauphin Island, AL.
119. *Kim, Y., Z. Cheng, T.-J Hsu, R. Mieras and **J.A. Puleo**. 2017. An Eulerian three-phase model of sheet flow under breaking waves. Young Coastal Scientists and Engineers Conference - Americas, Dauphin Island, AL.
 118. *Cristaudo, D., B. Bruder and **J.A. Puleo**. 2017. Preliminary results of a munitions mobility study in the swash zone. Young Coastal Scientists and Engineers Conference - Americas, Dauphin Island, AL.
 117. Song, Y.K., J. Figlus, **J.A. Puleo** and P. Chardon-Maldonado. 2017. Inner Surf/Swash Zone Morphodynamic Numerical Model Simulation of an Accreting Ridge during Low-Energy Wave Conditions. European General Assembly, Vienna, Austria.
 116. *Bruder, B., D. Cristaudo and **J.A. Puleo**. 2016. Observing migration and burial of unexploded ordnance in the nearshore environment with instrumented surrogates. AGU Fall Meeting, San Francisco, CA.
 115. *Anderson, D.L., D.T. Cox, R. Mieras, **J.A. Puleo** and T.J. Hsu. 2016. Instantaneous sediment bed level response to wave-induced pore-pressure gradients on a surfzone sandbar. AGU Fall Meeting, San Francisco, CA.
 114. *Cristaudo, D., B. Bruder and **J.A. Puleo**. 2016. Quantification of hydrodynamic forcing on smart munitions on the beach face – design of smart munitions. AGU Fall Meeting, San Francisco, CA.
 113. ***Puleo, J.A.**, J.C. Pintado-Patino, D. Krafft and B. Bruder. 2016. Sediment particle velocities in the sheet layer of dam break driven swash. AGU Fall Meeting, San Francisco, CA.
 112. *Krafft, D. and **J.A. Puleo**. 2016. Drifter study of circulation near Indian River Inlet, DE. AGU Fall Meeting, San Francisco, CA.
 111. *Kim, Y., Z. Cheng, T.J. Hsu, R. Mieras, and **J.A. Puleo**. 2016. A numerical study of wave-induced sediment transport - coupling sedFoam and waves2Foam. AGU Fall Meeting, San Francisco, CA.
 110. Mieras, R., **J.A. Puleo**, D. Anderson, D.T. Cox, and T.J. Hsu. 2016. From the sand bed to the free surface: an experimental study of wave-induced sediment transport over a sandbar. AGU Fall Meeting, San Francisco, CA.
 109. Doelp, M., **J.A. Puleo**, P. Cowan, W. Carey, and M. Arford-Granholm. 2016. Surf Zone Injuries and Beach Safety along the Delaware Coast: Associated Hydrodynamic and Morphological Factors. AGU Fall Meeting, San Francisco, CA.
 108. *Mieras, R., **J.A. Puleo**, D. Anderson, D.T. Cox and T.-J. Hsu. 2016. Wave-induced sheet flow on a sandbar: roles of the pressure gradient and bed shear stress. Society of Engineering Science Conference, University of Maryland, College Park, MD.
 107. *Cristaudo, D., B. Bruder and **J.A. Puleo**. 2016. Quantification of hydrodynamic forcing on smart munitions in a large wave flume – experimental plan and design of smart munitions. Young Coastal Scientists and Engineers Conference - Americas, Kingston, Ontario, Canada.

106. *Murshid, S., **J.A. Puleo** and D.L. Kriebel. 2016. Impacts of beach nourishment on surf zone wave characteristics and morphology. Young Coastal Scientists and Engineers Conference - Americas, Kingston, Ontario, Canada.
105. *Chardon-Maldonado, P., **J.A. Puleo** and A. Torres-Freyermuth. 2016. Inner-surf and swash-zone dynamics on a sea-breeze dominated beach. Young Coastal Scientists and Engineers Conference - Americas, Kingston, Ontario, Canada.
104. *Belivanis, D., **J.A. Puleo** and D.L. Kriebel. 2016. Modeling of beach morphology evolution under storm condition for different beach fill scenarios. Young Coastal Scientists and Engineers Conference - Americas, Kingston, Ontario, Canada.
103. *Doelp, M. and **J.A. Puleo**. 2016. Surf zone injuries and beach safety along the Delaware coast: associated hydrodynamic and morphological factors. Young Coastal Scientists and Engineers Conference - Americas, Kingston, Ontario, Canada.
102. *Krafft, D. and **J. A. Puleo**. 2016. Drifter study of circulation near Indian River Inlet, DE. Young Coastal Scientists and Engineers Conference - Americas, Kingston, Ontario, Canada.
101. *Kim, Y., T.J. Hsu, Z. Zhou, and **J.A. Puleo**. 2016. Modeling dam-break driven swash using a large-eddy simulation. Young Coastal Scientists and Engineers Conference - Americas, Kingston, Ontario, Canada.
100. *Mieras, R., **J.A. Puleo**, D. Anderson, D.T. Cox and T.J. Hsu. 2016. Large-scale experimental observations of wave-induced sheet flow on a sandbar: roles of bed shear stress and pressure gradient. Young Coastal Scientists and Engineers Conference - Americas, Kingston, Ontario, Canada.
99. *Kim, Y., Z. Zhou, T. –J. Hsu and **J.A. Puleo**. 2016. Turbulent coherent structure under dam-break driven swash – A 3D numerical study. EC12A-03. AGU Ocean Sciences Meeting, New Orleans, LA.
98. *Alrushaid, T., J. Figlus, A. Torres-Freyermuth, **J.A. Puleo** and T. Dellapenna. 2016. Surf Zone Sediment Size Variation, Morphodynamics, and hydrodynamics during sea/land breeze and El-Norte storm in Sisal, Yucatan, Mexico. EC24B-1098. AGU Ocean Sciences Meeting, New Orleans, LA.
97. *Krafft, D., **J.A. Puleo**, and J.C. Pintado-Patino. 2016. Quantification of swash-zone velocities in the sheet flow layer using particle image velocimetry. EC14C-1002. AGU Ocean Sciences Meeting, New Orleans, LA.
96. §Bruder, B., D. Cristaudo and **J.A. Puleo**. 2016. Quantification of hydrodynamic forcing on spherical objects in the swash zone. EC14C-0997. AGU Ocean Sciences Meeting, New Orleans, LA.
95. *Pintado-Patino, J., A. Torres-Freyermuth and **J.A. Puleo**. 2016. On the role of swash-swash interaction in swash zone dynamics. EC11A-03. AGU Ocean Sciences Meeting, New Orleans, LA.
94. *Torres-Freyermuth, A., **J.A. Puleo**, N. DiCosmo, J. de la Roza, B. Figueroa, A. Ruiz de Alegria-Arzaburu, J. Lopez-Gonzalez, and M.E. Allenda-Arandia. 2016. Nearshore coastal dynamics during intense winds: Local and synoptic scale events. EC11A-08. AGU Ocean Sciences Meeting, New Orleans, LA.
93. *Chardon-Maldonado, P., **J.A. Puleo** and A. Torres-Freyermuth. 2016. Field observations of swash-zone dynamics on a sea-breeze dominated beach at the

- Yucatán Peninsula, México. EC14C-1001. AGU Ocean Sciences Meeting, New Orleans, LA.
92. *J. Lopez-Casillejos, A.R. de Alegria-Arzaburu, A. Torres-Freyermuth, **J.A. Puleo**, H. Garcia-Nava and R. Guardado-France. 2015. Morfodinamica de brisas sumergidas durante eventos de brisa y vientos de mesoscale en una playa micromareal. UGM Annual Meeting, Puerto Vallarta, Jalisco, Mexico.
 91. *Pintado-Patino, J.C., A. Torres-Freyermuth, **J.A. Puleo** and D. Pokrajac. 2015. Sobre el rol de la infiltracion en la dinamica de la zona de swash. UGM Annual Meeting, Puerto Vallarta, Jalisco, Mexico.
 90. Torres-Freyermuth, A., **J.A. Puleo**, DiCosmo, N., J. de la Roza and B. Figueroa. 2015. Dinamica costera en una playa micro-mareal dominado por brisas marinas, Parte 1. Hidrodinamica costera. UGM Annual Meeting, Puerto Vallarta, Jalisco, Mexico.
 89. *Heiss, J.W., **J.A. Puleo**, W. J. Ullman and H.A. Michael. 2015. Temporal and spatial variability of sediment saturation and groundwater-surface water exchange patterns at swash and tidal time scales in the intertidal zone. AGU Fall Meeting, San Francisco, CA.
 88. *Belivanis, D., **J.A. Puleo** and D. Kriebel. 2015. Evolution of beach profiles and sediment grain distribution following beach nourishment. ASBPA National Conference 15, New Orleans, LA.
 87. *Murshid, S., **J.A. Puleo** and D. Kriebel. 2015. Assessment of beach and surf zone modifications due to beach nourishment practices on the Delaware coast. ASBPA National Conference 15, New Orleans, LA.
 86. *DiCosmo, N. and **J.A. Puleo**. 2015. Hydrodynamics offshore of the downdrift beach of Indian River Inlet, DE. Young Coastal Scientists and Engineers Conference- North America, Newark, DE.
 85. *Chardon-Maldonado, P., **J.A. Puleo** and J. Figlus. 2015. Near-bed turbulence dissipation and suspended sediment measurements in the swash zone. Young Coastal Scientists and Engineers Conference- North America, Newark, DE.
 84. *Mieras, R. and **J.A. Puleo**. 2015. Near-bed sediment transport over a sandbar under breaking waves. Young Coastal Scientists and Engineers Conference- North America, Newark, DE.
 83. *Krafft, D. and **J.A. Puleo**. 2015. Quantification of swash-zone velocities in the sheet flow layer using particle image velocimetry. Young Coastal Scientists and Engineers Conference- North America, Newark, DE.
 82. *Murshid, S.M., **J.A. Puleo** and D. Kriebel. 2015. A Numerical approach to understand the impacts of beach and surf zone modifications due to beach nourishment practices in Bethany Beach, Delaware. Young Coastal Scientists and Engineers Conference- North America, Newark, DE.
 81. *Belivanis, D., **J.A. Puleo** and D. Kriebel. 2015. Evolution of beach profiles and sediment grain distribution following beach nourishment. Young Coastal Scientists and Engineers Conference- North America, Newark, DE.
 80. *Pieterse, A., **J.A. Puleo** and T. E. McKenna. 2015. Flow velocity, shear stress, and turbulence in man-made channels within a tidal wetland. Young Coastal Scientists and Engineers Conference- North America, Newark, DE.

79. McKenna, T.E., **J.A. Puleo** and A. Pieterse. 2014. Thermal imaging of hydrologic processes in streams and wetlands in the Delaware Estuary Watershed, Delaware and Pennsylvania. Delaware Estuary Conference.
78. Ojeda Casillas, E., E.T. Mendoza Ponce, A. Torres-Freyermuth and **J.A. Puleo**. 2014. Mediciones del remonte del oleaje en la playa de sisal (Yucatan) a partir de imagenes de video. Unión Geofísica Mexicana.
77. Calantoni, J., M.L. Palmsten, J. Simeonov, D.W. Dobson, K.Zarske, **J.A. Puleo** and K.T. Holland. 2014. Combining remote sensing with in situ measurements for riverine characterization, EP44B-08, 2014 Fall Meeting, AGU, San Francisco, Calif.
76. *Pintado-Patino, J.C., A. Torres-Freyermuth, **J.A. Puleo** and D. Pokrajac. 2014. Numerical and laboratory investigation of turbulence dissipation in the swash zone, OS11A-1263, 2014 Fall Meeting, AGU, San Francisco, Calif.
75. §Allis, M., C.E. Blenkinsopp, I.L. Turner, T.E. Baldock and **J.A. Puleo**. 2014. Investigation of the logarithmic model applied to bed shear stresses in the swash zone, OS21E-07, 2014 Fall Meeting, AGU, San Francisco, Calif.
74. *O'Neill, B., S. Marks, Skalak, K. **J.A. Puleo**, Wilcock, P.R. and J.E. Pizzuto. 2014. Evolution of fine-grained channel margin deposits behind large woody debris in an experimental gravel-bed flume, EP13A-3503, 2014 Fall Meeting, AGU, San Francisco, Calif.
73. *Chardon-Maldonado, P., **J.A. Puleo** and J. Figlus. 2014. In situ observations of swash zone flow velocities and sediment transport on a steep beach, OS23B-1185, 2014 Fall Meeting, AGU, San Francisco, Calif.
72. *Pieterse, A., **J.A. Puleo** and T.E. McKenna. 2014. Shear stress, turbulence production and dissipation in small tidal channels intersecting a tidal flat, OS23B-1198, 2014 Fall Meeting, AGU, San Francisco, Calif.
71. *DiCosmo, N.R. and **J.A. Puleo**. 2014. Hydrodynamics offshore of the north beach of Indian River Inlet, DE, OS13B-02, 2014 Fall Meeting, AGU, San Francisco, Calif.
70. *Torres-Freyermuth, A., **J.A. Puleo**, A. Ruiz de Alegría-Arzaburu, J. Figlus, T. Mendoza, J.C. Pintado-Patino, A. Pieterse, P. Chardon-Maldonado, N.R. DiCosmo, N. Wellman, H. Garcia-Nava, L. Palemón-Arcos, T. Roberts, J. López-González, M. Bravo¹, E. Ojeda, G. Medellín, C. Mario Appendini, B. Figueroa, Ma. González-Leija, C. Enriquez, A. Pedrozo-Acuña and P. Salles. 2014. Nearshore coastal dynamics on a sea-breeze dominated micro-tidal beach (NCSAL), OS11A-1266, 2014 Fall Meeting, AGU, San Francisco, Calif.
69. DiCosmo N. and **J.A. Puleo**. 2014. Hydrodynamics along the north beach of Indian River Inlet, Delaware. ASBPA National Conference 14, Virginia Beach, VA.
68. *Chardon-Maldonado, P., **J.A. Puleo** and J. Figlus. 2014. Field study of swash-zone dynamics at South Bethany Beach, Delaware. ASBPA National Coastal Conference, Virginia Beach, VA.
67. *Pintado-Patino, J.C., A. Torres-Freyermuth, **J.A. Puleo** and D. Pokrajac. 2014. Modeling bottom boundary layer dynamics in the swash zone. T4-03. Young Coastal Scientists and Engineers Conference- North America.

66. *Heiss, J.W., **J.A. Puleo** and H.A. Michael. 2014. The effects of wave runup on moisture dynamics and groundwater flow in the saturated and unsaturated zones of a beach aquifer. T7-05. Young Coastal Scientists and Engineers Conference- North America.
65. *Keshtpoor, M., **J.A. Puleo**, F. Shi, and G. Ma. 2014. Modeling of scour hole evolution inside the Indian River Inlet, DE, USA. P1-01. Young Coastal Scientists and Engineers Conference- North America.
64. *Pieterse, A., **J.A. Puleo** and T.E. McKenna. 2014. Shear stress, turbulence production and dissipation in a tidal saltmarsh in Kent County, Delaware. T7-02. Young Coastal Scientists and Engineers Conference- North America.
63. *DiCosmo, N. and **J.A. Puleo**. 2014. Hydrodynamics near Indian River Inlet, DE. T7-06. Young Coastal Scientists and Engineers Conference- North America.
62. *Chardon-Maldonado, P., **J.A. Puleo** and J. Figlus. 2014. Field observations of the swash zone hydrodynamics and morphodynamic change. T7-07, Young Coastal Scientists and Engineers Conference- North America.
62. *Pieterse, A., **J.A. Puleo**, and T.E. McKenna, 2013. Near-bed turbulent kinetic energy and dissipation in a small tidal channel. GSA Annual Meeting, Denver, CO.
61. ***Puleo, J.A.**, T. Lanckriet, C. Blenkinsopp, 2013. Bed level fluctuations on a dissipative beach, EP13A-0851, presented at the 2011 Fall Meeting, AGU, San Francisco, Calif.
60. *Pieterse, A., **J.A. Puleo**, T.E. McKenna, 2013. Hydrodynamics and inundation of a tidal saltmarsh in Kent County, Delaware, EP13A-0850, 2011 Fall Meeting, AGU, San Francisco, Calif.
59. *Lanckriet, T., **J.A. Puleo**. and D.L. Foster. 2013. Large-scale laboratory measurements of sheet flow sediment transport in the swash zone, EP21A-04, presented at the 2011 Fall Meeting, AGU, San Francisco, Calif.
58. *Keshtpoor, M., **J.A. Puleo** and F. Shi. 2013. Numerical simulation of alongshore variation of sediment transport rate downdrift of a tidal inlet, EP21A-06, 2011 Fall Meeting, AGU, San Francisco, Calif.
57. *Keshtpoor M., **J.A. Puleo** and F. Shi. 2013. Downdrift beach erosion adjacent to the Indian River Inlet, Delaware, USA., NSBPA Conference, The Richard Stockton College of New Jersey, Galloway, New Jersey.
56. *Pieterse, A., **J.A. Puleo** and T. McKenna. 2013. Hydrodynamics of a small tidal channel in Kent County, Delaware. Amtrak Club Conference, Baltimore, MD.
55. *Keshtpoor M., **J.A. Puleo** and F. Shi. 2012. Sediment transport modeling within a tidal inlet., Soil to Sea Geomorphology, Amtrak Club Conference, Philadelphia, PA.
54. Lanckriet, T., **J.A. Puleo**, G. Masselink, I.L. Turner, P. Russell, D. Conley, C. Blenkinsopp and N. Waite. 2012. Sheet flow sediment concentrations on a natural beach. Amtrak Club Conference, Philadelphia, PA.
53. **Puleo, J.A.** and T. Lanckriet. 2011. Swash zone velocity profiles and bed stress on a natural beach, Nortek Technical Symposium, Newport, Rhode Island.
52. *McKenna, T.E., T.M. Sliwinski and **J.A. Puleo**. 2011. Transforming ground-based oblique thermal images to enable quantitative analysis of coupled heat and

- fluid flow in the critical zone, H41D-1067, 2011 Fall Meeting, AGU, San Francisco, Calif.
51. Torres-Freyermuth, A., **J.A. Puleo**, D. Pokrajac, and P. Salles. 2011. RANS modeling of swash zone hydrodynamics, EGU2011-8891, European Geophysical Union Meeting, EGU, Vienna, Austria.
 50. *Sliwinski, T., T.E. McKenna, **J.A. Puleo** and C.L. Meehan. 2010. Ground-based thermal imaging of coastal and riverine sediments, Abstract OS51B-1278, 2010 Fall Meeting, AGU, San Francisco, Calif., 13-17 Dec.
 49. *Kidwell, A., **J.A. Puleo** and A. Torres-Freyermuth. 2010. Pressure gradients in the inner surf and outer swash zone, Abstract OS51B-1316, 2010 Fall Meeting, AGU, San Francisco, Calif., 13-17 Dec.
 48. ***Puleo, J.A.**, T.M. Lanckriet and P. Wang. 2010. Swash-zone velocity profiles and bed stress on a natural beach, Abstract OS51B-1318, 2010 Fall Meeting, AGU, San Francisco, Calif., 13-17 Dec.
 47. *Sutkowski, C.M., **J.A. Puleo** and T.E. McKenna. 2010. Quantifying riverine surface velocities using thermal infrared PIV, Abstract OS51B-1277, 2010 Fall Meeting, AGU, San Francisco, Calif., 13-17 Dec.
 46. *Lanckriet, T.M. and **J.A. Puleo**. 2010. Spatially dense kinematic maps in the swash zone using a continuity-based imaging technique, Abstract OS51B-1317, 2010 Fall Meeting, AGU, San Francisco, Calif., 13-17 Dec.
 45. *Keshtpoor, M., **J.A. Puleo** and N. Kraus. 2010. Numerical simulation of flow and sediment transport patterns in Indian River Inlet, DE, USA, Abstract OS51B-1280, 2010 Fall Meeting, AGU, San Francisco, Calif., 13-17 Dec.
 44. *Hicks, B., N. Kobayashi and **J.A. Puleo**. 2010. Cross-shore transport of coarse grained sediment. *Eos. Trans. AGU*, 84(52), Ocean Sci. Meet. Suppl., Abstract PO25C-24.
 43. *Lindemer, C.A. and **J.A. Puleo**. 2010. Quantifying short-term morphologic evolution and alongshore sediment transport rates using remote sensing and GPS-equipped vehicles. *Eos. Trans. AGU*, 84(52), Ocean Sci. Meet. Suppl., Abstract PO25C-11.
 42. *Kidwell, A., **J.A. Puleo** and A. Torres-Freyermuth. 2010. Pressure gradients in the swash zone. *Eos. Trans. AGU*, 84(52), Ocean Sci. Meet. Suppl., Abstract PO15E-01.
 41. *Lanckriet, T., **J.A. Puleo** and J.W. Faries. 2010. Nearbed sediment concentration profile measurements in the swash zone. *Eos. Trans. AGU*, 84(52), Ocean Sci. Meet. Suppl., Abstract PO14B-06.
 40. *Sliwinski, T., M. Stewart, T.E. McKenna, **J.A. Puleo**, and C. Meehan. 2010. Experimental examination of the factors affecting ground-based thermal imaging of intertidal sediments. *Eos. Trans. AGU*, 84(52), Ocean Sci. Meet. Suppl., Abstract IT25E-11.
 40. *Lindemer, C.A., N.G. Plant, J.A. Puleo and D. Thompson. 2009. Numerically simulating morphological change at the Chandeleur Islands during hurricane Katrina using XBeach. ASBPA National Conference, St. Petersburg, FL.
 39. *Keshtpoor, M. and **J.A. Puleo**. 2010. The Effect of a sand bypassing system on morphologic variability at Indian River Inlet, DE. *Eos. Trans. AGU*, 84(52), Ocean Sci. Meet. Suppl., Abstract G025A-13.

38. *Hayden, J.T., **J.A. Puleo** and J.H. MacMahan. 2008. Advanced scour monitoring at Indian River Inlet, Delaware. *EOS Trans. AGU*, 89(53), Fall Meet. Suppl., Abstract OS23A-1243.
37. *Faries, J. and **J.A. Puleo**. 2008. Nearbed sediment transport in swash zone laboratory beaches. *EOS Trans. AGU*, 89(53), Fall Meet. Suppl., Abstract OS12B-04.
36. *Lindemer, C.A., N.G. Plant, **J.A. Puleo** and D. Thompson. 2008. Modeling wave overtopping on the Chandeleur Islands during hurricane Katrina using XBeach. *EOS Trans. AGU*, 89(53), Fall Meet. Suppl., Abstract OS34A-05.
35. **Puleo, J.A.**, M.A. O'Neal, T.E. McKenna, T. White, 2008. A remote-control airship for coastal and environmental research. *EOS Trans. AGU*, 89(53), Fall Meet. Suppl., Abstract OS12D-1220.
34. *Faries, J. Hicks, B. and **J.A. Puleo**. 2008. Preliminary study of swash zone bedload concentration using a resistivity profiler. *Eos. Trans. AGU*, 84(52), Ocean Sci. Meet. Suppl., Abstract 2096.
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30. *Lindemer, C.A. and **J. A. Puleo**. 2008. Coastal imaging at Cape May, NJ. University of Delaware Research Foundation Symposium, University of Delaware.
29. *Pietro, L. M.A. O'Neal, **J.A. Puleo** and D. R. Legates. 2007. Large-scale, high-fidelity surface models of Rehoboth Beach, DE. Association of American Geographers Meeting, San Francisco, Ca.
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26. **Puleo, J.A.** and T. Butt. 2006. Status of the integrated study of swash zone processes, Presented to the field experiment team in Honolulu, HI.
25. **Puleo, J.A.** 2005. Video imaging for nearshore processes analysis: NOT another surf cam, Presented to the Division of Soil and Water Conservation, Shoreline and Waterway Management Section, Department of Natural Resources and Environmental Control, State of Delaware.
24. **Puleo, J.A.** and R. Johnson. 2004. The effect of bubbles on optical backscatter sensors, *Eos Trans. AGU*, 85 (47), Fall Meet. Suppl., Abstract OS21B-1219.
23. Calantoni, J.C. and **J.A. Puleo**. 2004. Using a Navier-Stokes solver to drive a discrete particle model for sediment transport in the swash zone, *Eos Trans. AGU*, 85 (47), Fall Meet. Suppl., Abstract OS24A-03.

22. Calantoni, J.C. and **J.A. Puleo**. 2004. Discrete particle model of sediment transport in the swash zone, The 1st International Workshop on Swash Zone Processes.
21. Masselink, G. and **J.A. Puleo**. 2004. Sediment transport and morphological change in the swash zone, The 1st International Workshop on Swash Zone Processes.
20. Russell, P. T. Butt, J. Miles, **J.A. Puleo** and D. A. Huntley. 2004. The role of swash in nearshore dynamics, The 1st International Workshop on Swash Zone Processes.
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10. **Puleo, J.A.**, K.T. Holland, G. Farquharson, S.J. Frasier and B. Raubenheimer. 2001. A comparison of remote sensing and in situ measurements of nearshore flows, *Trans. Amer. Geophys. Union*, 82(46).
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8. **Puleo, J.A.** and K.T. Holland. 1999. Use of video imagery to monitor and predict littoral morphodynamics, presented to representatives from National Geographic visiting the Naval Research Laboratory.
7. **Puleo, J.A.** and K.T. Holland. 1999. Creating rectified color mosaics from Argus imagery, Presented at the Argus Workshop in Corvallis, Oregon.
6. **Puleo, J.A.** and K.T. Holland. 1999. Estimating the kinematic effects of friction and percolation in the swash zone, *Trans. Amer. Geophys. Union*, 80(46).

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4. de Angelis, M.A., B. Davis, G. Downey, M. Fowler, S. Grimes, M. Logan, **J. Puleo** and M. Schneider. 1999. Distribution and potential ecological significance of epibenthic woody debris on a northern California continental shelf, *American Society for Limnology and Oceanography 1999 Aquatic Sciences Meeting*.
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RESEARCH AND TECHNICAL REPORTS: (* indicates with student, § indicates with postdoc)

25. *§Sadaf, A., M. Tahmasebi, W. Iqbal, L. Muldrow, and M. Ryan, Editors: J. Bruck, M. Head, **J.A. Puleo**, J. McCusker, and E. Bardenhagen. 2025. Placement and Impact of Living Shoreline and Nature-Based Solutions: A Narrative Review, *US Army Corps of Engineers*, 77 pp.
24. §Elkut, A., F. Shi, **J.A. Puleo**, J. Knowles, C. Dietrich, J. Joubert, J. Figlus, U. Lima and S. Patch. 2025. ESTCP Demonstration Report: Modelling Total Water Level at Tyndall Air Force Base (TAFB), RC21-5028, 178 pp., ESTCP.
23. §Elkut, A., F. Shi, **J.A. Puleo**, J. Knowles, C. Dietrich, J. Joubert, J. Figlus, S. Patch and E. Quataert. 2025. Comparative Assessment of Total Water Levels for Coastal Military Facility Readiness and Resilience Using Numerical Models – Tyndall Air Force Base, RC21-5028, 56 pp., ESTCP.
22. **Puleo, J.A.**, C. DuVal, P. Traykovski and A. Penko. 2024. UnMES Demonstration of Munitions Migration and Burial at Maine Bombing Area (FUDS: D01ME044001), MR21-5207, 39 pp. ESTCP.
21. §Elkut, A., F. Shi, **J.A. Puleo**, J. Knowles, and C. Dietrich. 2024. ESTCP Demonstration Report: Modeling Total Water Level at Naval Station Norfolk, RC21-5028, 440 pp. ESTCP.
20. §**Puleo, J.A.**, C. Lashley, F. Shi, C. Dietrich, and J. Knowles. 2023. Demonstration Plan: Comparative Assessment of Total Water Levels for Coastal Military Facility Readiness and Resilience Using Numerical Models – Naval Station Norfolk, RC21-5028, 54 pp. ESTCP.
19. **Puleo, J.A.** and J. Calantoni. 2023. SERDP Workshop on UXO Mobility, Burial, and Exposure Processes: Discussion for a Demonstration Project, SERDP.
18. **Puleo, J.A.** 2002. White Paper: Understanding the Swash Zone Environment and Impact on UXO Mobility, Burial, and Exposure Processes. SERDP.
17. **Puleo, J.A.** and D. Cristaudo. 2020. Quantification of Hydrodynamic Forcing and Burial, Exposure, and Mobility of Munitions on the Beach Face. Final Report. SERDP. W912HQ-15-C-0007.

16. *Kidwell, A.N. and **J.A. Puleo**. 2011. Pressure Gradients in the Inner Surf and Outer Swash Zone: A Laboratory and Numerical Investigation. Center for Applied Coastal Research, University of Delaware, CACR-11-07.
15. *Sliwinski, T., **J.A. Puleo** and T. McKenna. 2011. Experimental Examination of the Effect of Observation Geometry on Land Surface Temperature Estimates from Remotely Sensed Ground Based Thermal Imagery. Center for Applied Coastal Research, University of Delaware, CACR-11-06.
14. *Lindemer, C. and **J.A. Puleo**. 2010. Explorations of Morphological Change at Cape Henlopen, DE Using Remote Sensing, Rapid-Response GPS-Equipped Vehicles and Numerical Modelling. Center for Applied Coastal Research, University of Delaware, CACR-10-02.
13. *Hicks, B., J. Figlus, **J.A. Puleo** and A. Farhadzadeh. 2010. Cross-Shore Transport on Gravel Beaches. Center for Applied Coastal Research, University of Delaware, CACR-10-01.
12. *Hayden, J.T. and **J.A. Puleo**. 2009. Indian River Inlet Bridge and Bathymetry Scour Monitoring System. Center for Applied Coastal Research, University of Delaware, CACR-09-02.
11. *Faries, J.W.C and **J.A. Puleo**. 2009. A New Conductivity Sediment Concentration Profiler (CCP) for the Measurement of Nearbed Sediment Concentrations: Application in the Swash Zone on a Laboratory Beach. Center for Applied Coastal Research, University of Delaware, CACR-09-03.
10. *Pearre, N.S. and **J.A. Puleo**. 2007. Sandcam at Rehoboth: Quantifying shoreline change using video. Center for Applied Coastal Research, University of Delaware, CACR-07-02.
9. *O'Neal, M.A., **J.A. Puleo** and L.S. Pietro. 2007. Pilot Study on the Use of Terrestrial LIDAR for Rapid, High-Resolution Beach Monitoring. Delaware Department of Environmental Protection, Technical Report, 86 pp.
8. *Schmied, L., N. Kobayashi, A. Payo, and **J.A. Puleo**. 2006. Cross Shore Sediment Transport and Beach Profile Change. Center for Applied Coastal Research, University of Delaware, CACR-06-03.
7. *He, L. and **J.A. Puleo**. 2006. Video-Based Particle Image Velocimetry of Laboratory Rip Currents. Center for Applied Coastal Research, University of Delaware, CACR-06-05.
6. ***Puleo, J.A.** and N.S. Pearre. 2006. Surf and Nearshore Dynamics Camera (SANDCam). Center for Applied Coastal Research, University of Delaware, CACR-06-06.
5. Butt, T. Coco, G. **Puleo, J.A.**, Raubenheimer, B. Turner, I. and van Thiel de Vries, J. 2005. Planning for an Integrated Field Study of Swash Zone Processes (SWASH3D). Workshop report submitted to the Office of Naval Research Global.
4. **Puleo, J.A.** 2005. The effect of Bubbles on Optical Backscatter Sensors, ONR Annual Report, Coastal Geosciences Division.
3. **Puleo, J.A.** and O. Mouraenko. 2003. Wave Bottom Boundary Layer Models on Smooth and Rough Beds, NRL Report: NRL/FR/7440—03-10,053.
2. **Puleo, J.A.**, K.T. Holland and T.N. Kooney. 2001. A Video-Based Particle Image Velocimetry (PIV) Technique for Nearshore Flows, NRL Review pp:162-164.

1. Holland, K.T. and **J. A. Puleo**. 1999. High Resolution Observations of Foreshore Morphodynamics, NRL Review, 148-149.

RESEARCH CONTRACTS AND GRANTS:

Approximate Total Funds Awarded (Puleo as lead PI): \$30.7M (\$23.1M)

Awarded as Lead PI:

	Funding Period	PIs	Award Title	Sponsor	Amount (\$)
45	2025-2030	Puleo, Schueller	Wave Buoy and Water Level Network, Delaware	MARACOOS	512,553
44	2024-2025	Puleo, DuVal, Traykovski	UnMES Demonstration of Munitions Migration and Burial at Mile Beach, ME	ESTCP	638,000
43	2023-2026	Puleo, Bruck	Exploring the Potential of Self-Generative Infrastructure for Coastal Resilience in the Hampton Roads Region and at Joint Base Langley-Eustis	USACE	960,743
42	2023-2024	Puleo	Services Agreement – Delaware National Guard	DE National Guard	25,000
41	2023-2024	Puleo	Conference: Mid-scale RI-EW: Discussing the Need for a Full-Scale Wave Flume (USAFume) for National Research Priorities on Coastal Resilience and Adaptation	NSF	45,999
40	2022-2025	Puleo, Bruck, Bardenhagen, Head, Hale	Developing Engineering practices using Ecosystem Design Solutions for Future Army (Military DEEDS Project)	USACE	9,431,003
39	2022-2023	Puleo	Services Agreement – Delaware National Guard	DE National Guard	25,000
38	2022-2026	Puleo, Shi, van Dongeren, Smallegan, Figlus, Dietrich, Storlazzi	Comparative assessment of total water levels for coastal military facility readiness and resilience using numerical models	ESTCP	2,179,985
37	2020-2024	Puleo	Mobility and Burial of Variable Density Munitions in the Inner Surf and Swash Zones during Controlled Extreme Forcing	SERDP	1,795,658
36	2020-2022	Puleo, Bruck, Shi	Addressing Obstacles that Preclude Installation of Living Shorelines in Areas Influenced by Ship Wake	DE Sea grant	362,325

35	2019-2021	Puleo	Assessing morphodynamics north of Indian River Inlet from nearshore dispersal of Massey's ditch dredged sand	DNREC	240,007
34	2018-2020	Puleo	Intra-storm Erosion Processes on an Engineered Dune System	USCRP/USACE	107,378
33	2018-2021	Puleo, Hsu, Cox, Wengrove, Feagin	Collaborative Research: Physics of Dune Erosion during Extreme Surge and Wave Events	NSF	1,134,514
32	2018-2021	Puleo	Making Waves in the Classroom – Engaging Students in STEM through Hands-on Coastal Oceanography and Engineering	ONR	437,983
31	2018-2020	Puleo	Hydrodynamics and Beach Morphology <u>During</u> Extreme Events	DE Sea Grant	158,541
30	2016-2018	Puleo	Surf Zone Injuries and Beach Safety Along The Delaware Coast	DE Sea Grant	140,138
29	2016-2017	Puleo, Doelp	Surf Zone Injury and Beach Safety Awareness Campaign: Enhancing the Delaware Surf Zone Injury Study	DE Sea Grant	14,976
28	2014-2015	Puleo, Torres-Freyermuth, Mulligan, Palmsten	Young Coastal Scientists and Engineers Conference – North America	COPRI, DE Sea Grant, UD (7 more)	26,350
27	2015-2016	Puleo	Data Collection for the Delaware Surf Zone Injury Study	DE Sea Grant	14,000
26	2015-2019	Puleo	Quantification of Hydrodynamic Forcing and Burial, Exposure and Mobility of Munitions on the Beach Face	SERDP	1,080,359
25	2014-2015	Puleo	Quantifying Environmental Conditions Associated with the Delaware Surf Zone Injury Study	DE Sea Grant	50,925
24	2014-2017	Puleo	Drifter Study of Circulation near Indian River Inlet, DE	DNREC	256,648
23	2014-2016	Puleo, Kriebel	Beach Nourishment Design Practice in Delaware: Modifications to Beach and Surf Zone Characteristics	DNREC	237,281
22	2014	Puleo, Torres-Freyermuth	Visiting Scientist Proposal: Alec Torres-Freyermuth, Universidad Nacional Autonoma de Mexico	ONR Global	5,022

21	2014-2016	Puleo, McKenna	Quantifying Inundation and Hydrodynamics in an Anthropogenically-Altered Tidal Wetland	DE Sea Grant	172,594
20	2013-2014	Puleo, Torres-Freyermuth, Pedrozo-Acuna, Mulligan, Ozkan-Haller	Young Coastal Scientists and Engineers Conference – North America	COPRI, DE Sea Grant, UD (8 more)	20,400
19	2013-2016	Puleo, Figlus	Collaborative Research: Ridge-Runnel, Post-Storm Beach Recovery	NSF	345,223
18	2013-2016	Puleo	In Situ and Modeling Efforts of Hydrodynamics and Morphology near Indian River Inlet, DE	DNREC	284,185
17	2012-2014	Puleo, McKenna	Quantifying Spatio-Temporal Variability in Hydrodynamics and Inundation of a Tidal Saltmarsh (Brockonbridge Marsh, Kent County, Delaware)	DE Sea Grant	186,290
16	2010-2012	Puleo	Near Real-Time Monitoring of Indian River Inlet Scour Hole Edge Evolution Seaward of the Bridge Piers: Phase II	DelDOT/FHWA	192,511
15	2010-2012	Puleo, Wang	Investigating Gravel Distributions from Rehoboth Beach to Cape Henlopen	DNREC	78,917
14	2010-2011	Puleo, McKenna, Meehan	Characterizing Riverine Environments Through Remote Sensing	ONR	25,612
13	2009-2015	Puleo	Swash Zone Sediment Transport	NSF CAREER	444,229
12	2009-2010	Puleo	SANDCam at Rehoboth Beach	DNREC	35,856
11	2009-2012	Puleo	Quantifying Short-Term Morphologic Evolution and Alongshore Sediment Transport Rates at Cape Henlopen, DE Using Remote Sensing and Rapid-Response GPS-Equipped Vehicles	DE Sea Grant	345,540
10	2008	Puleo	Bathymetry Collection in Support of SANDCam	UDRF - REU	3,500
9	2007-2010	Puleo, McConnell, MacMahan, Chajes	Near Real-Time Monitoring of the Indian River Inlet Scour Hole Edge Evolution Seaward of the Bridge Piers: Phase I	DelDOT/FHWA	842,398

8	2007-2009	Puleo	SANDCam at Rehoboth Beach	DNREC	30,019
7	2007-2008	Puleo, Shenton	Feasibility in Using a Calibrated Video System for Traffic Speed and Vehicle Identification	DelDOT	20,016
6	2007-2008	Puleo	Quantifying Storm and Seasonal Morphologic Variability of Delaware Bay Capes	UDRF	24,981
5	2007	Puleo, McKenna, Meehan	Characterizing Morphology and Geotechnical Properties of a Macrotidal Muddy Coast using Multi-Spectral Ground-Based Remote Sensing (Gyeonggi Bay Tidal Flat, South Korea)– PHASE I – Planning Meetings	ONR	23,733
	2005-2006	Puleo	Hands-On Model of Beach Processes	DE Sea Grant	8,989
4	2005-2007	Puleo	Nearshore Video Imaging Analysis System At Rehoboth Beach	DNREC	135,508
3	2005	Puleo	ONRG Science and Technology Engagement Program (STEP): Support Request for International Collaboration on Plan Development for an Integrated Swash Zone Field Study	ONR	10,647
2	2004-2005	Puleo	The Effect of Bubbles on Optical Backscatter Sensors	ONR	12,269
1	2004	Puleo	The Effect of Bubbles on Optical Backscatter Sensors	ONR	37,303

Awarded as co-PI:

	Funding Period	PIs	Award Title	Sponsor	Amount (\$)
21	2025-2027	Storlazzi, Puleo, Shi	Developing an Early Warning System (EWS) for Coastal Flooding at Roi-Namur Island, USAKA, Kwajalein Atoll, RMI	ESTCP	756,845
20	2024-2028	Hale, Puleo, Trembanis	Implementation of Encroachment Mitigation and Military Installation Resilience Strategy through Coordination and Involvement in Community Planning.	NFWF	1,500,000
19	2023-2024	Van Buren, Puleo	Potential for sea bed munition transport due to turbulent prop wash	SERDP	243,991

18	2023-2026	Mieras, Johnson, Hsu, Puleo	Breaking wave-induced rapid beach profile evolution in the inner surf and swash zones	USCRP	999,187
17	2022-2025	Pujara, Puleo, Chardon-Maldonado	Collaborative Research: Swash Zone Dynamics Driven by Obliquely Incident Waves	NSF	654,897
16	2022-2025	Van Buren, Matthaeus, Prasad, Puleo, Veron	Turbulence Decay of a Bubble/Sediment-Laden Liquid in ISS Microgravity	NASA EPSCoR	99,520
15	2020-2023	Mieras, Puleo	MRI Consortium: Development of CCPflex – A multi-function, modular platform for next-generation Conductivity Concentration Profilers	NSF	924,974
14	2020-2023	Webb, Smallegan, Puleo, Elko	Barrier Island Hydrodynamics and Morphodynamics DURING an Extreme Event	USACE	500,000
13	2019	Hsu, Puleo, Kirby	A symposium on sediment dynamics in geophysical flows using two-phase flow methodology	NSF	21,649
12	2014-2015	Torres-Freyermuth, Puleo	Nearshore Coastal Dynamics on a Sea-Breeze Dominated Micro-Tidal Beach	UNAM	30,000
11	2014-2017	Cox, Puleo, Hsu	Collaborative Research: Large-scale Laboratory Investigation and Numerical Modeling of Sheet Flow Sediment Transport Dynamics across a Surf Zone Sand Bar	NSF	452,129
10	2012-2014	Masselink, Turner, Conley, Ruessink, Matias, Castelle, Puleo, Blenkinsopp	Barrier Dynamics Experiment (BARDEX II) HydraLab IV	Seventh Framework Programme, European Union	395,550
9	2010-2011	McKenna, Puleo, Meehan	Temporal Imaging of the Intertidal Critical Zone	NASA EPSCoR	49,459
8	2009-2010	McKenna, Puleo, Meehan	Temporal Imaging of the Intertidal Critical Zone	NASA EPSCoR	44,186
7	2008-2009	Imhoff, O’Neal, Puleo, Meehan, Dentel	Quantifying Reductions in Greenhouse Gas Emissions with Airship-Based Measurements	UDRF	45,000
6	2008-2010	Nordstrom, Jackson, Puleo	Evaluation of Wind and Wave Processes Critical in Sustaining Beach Backshore Environments	NJ Sea Grant	289,863

5	2008-2011	Johnston, Smith, Puleo	Selective Detection and Characterization of Nanoparticles from Motor Vehicles	HEI	330,327
4	2007-2009	McKenna, Puleo, O'Neal	Temporal Remote Sensing of Salt Marsh Inundation at Webbs Marsh in the Murderkill River Estuary, Delaware	Kent County, DE	17,379
3	2007-2008	O'Neal, Puleo	Low Altitude Environmental Analysis Dirigible (LEAD)	Private donor	150,000
2	2006-2007	Righman, Puleo, MacMahan, Chajes	Scour Monitoring of the Indian River Inlet Bridge: Pilot Study	DelDOT	50,112
1	2005-2006	O'Neal, Puleo, Trembanis	Pilot Study on the Use of Terrestrial LIDAR for Rapid, High-Resolution Beach Monitoring	DNREC	77,764

*ACRONYMS EXPLAINED: COPRI (Coasts, Oceans, Rivers and Ports Institute), DelDOT (Delaware Department of Transportation), DNREC (Delaware Department of natural Resources and Environmental Control), FHWA (Federal Highway Administration), HEI (Health Effects Institute), NASA EPSCoR (National Aeronautics and Space Administration Experimental Program to Stimulate Competitive Research), NSF (National Science Foundation), ONR (Office of Naval Research), SERDP (Strategic Environmental Research and Development Program), ESTCP (Environmental Security Technology Certification Program), UD (University of Delaware), UDRF (University of Delaware Research Foundation), UNAM (Universidad Nacional Autonoma de Mexico).

RESEARCH ADVISING:

POST-DOCTORAL RESEARCHERS

Time Frame	Name	Place of Employment
2025	Temitope Idowu	Old Dominion University
2023 -	Ahmed Elkut	
2023 - 2025	Alexandra Schueller	
2023 -	Zaid Alhusban	
2021 - 2023	Chris Lashley	Stantec
2021 - 2023	Manoj Gangadharan	WSP
2015 - 2017	Brittany Bruder	USACE

Ph.D. STUDENTS (* indicates co-advisor; † indicates committee member):

Time Frame	Name and Dissertation Title	Place of Employment
2025 -	Cassie Everett	USACE
2024 -	†Julian Rodriguez	Current Student at UNAM
2024 -	Julia Zimmerman	USACE
2023 -	*Onur Manat	Current student at UD

2023 -	Delaney Doran	Current student at UD
2023 -	Sahar Asrari	Current student at UD
2022 - 2024	Shadrack Hinson	
2022 -	†Narayan Kumar	Current student at UD
2022 -	†Jenero Knowles	Current student at NCSU
2022 - 2023	Alex Baffour Akoto	
2022 - 2024	Rafiu Oyelakin	
2022 -	†Sadegh Nouri	Current student at UD
2022 - 2025	†Jiaye Zhang; “A Multi-Scale Numerical Study on Coastal Hydrodynamics, Sediment Transport, and Morphodynamics”	
2022 -	Gaby Salgado-Dominguez	USACE
2021 - 2025	†Frank Tricouros; “Flow Control of Wall-Bounded Vortex Structures”	NSWC
2021 -	†Martha Ryan	Current student at UD
2020 - 2025	Temitope Idowu; “Variable Density Munitions Behavior and Morphodynamics in the Nearshore under Controlled Storm Events”	Old Dominion University
2018 - 2023	†Kaitlyn McPherran	USGS
2018 - 2023	Maro Pontiki; “Physics of Eroding Coastal Berm-Dune Systems during Extreme Waves and Storm Surge”	Ocean Network
2018 -	†Jirat Laksanalamai	
2017 - 2023	†Benjamin Tsai	Oregon State University
2016 - 2021	†Yashar Rafati	Environmental Science Associates
2015 - 2020	Demetra Cristaudo; “Experimental Study of Burial and Mobility of Unexploded Ordnance in the Swash Zone”	JBA
2016 – 2021	†Stephanie Dohner	
2014 - 2019	†Yeulwoo Kim	PKNu
2013 - 2016	†Zhen Cheng	MIT
2012 - 2016	†Babak Tehranirad	USGS
2014 - 2017	Ryan Mieras; “Sheet Flow and Suspended Sediment Transport Processes on a Surf Zone Sandbar”	University of North Carolina at Wilmington
2012 - 2017	*Jose Carlos Pintado-Patino; “Procesos Dinámicos en la Zona de Swash : un estudio integral”	UNAM
2013 - 2016	Patricia Chardon-Maldonado; “Inner Surf and Swash Zone Hydrodynamics and Sediment Transport Processes during	CARICOOS, University Puerto Rico

	Accretive Conditions and Local Wind Forcing”	
2012 - 2016	Aline Pieterse; “Near-bed Hydrodynamics and Sediment Transport in Tidal Channels and on Tidal Flats”	IMDC
2012 - 2016	†Jun Cheng	Kean University
2008 - 2013	*Tiffany Roberts; “Natural and Anthropogenic Influences on the Morphodynamics of Sandy and Mixed Sand and Gravel Beaches”	Florida Atlantic University
2009 - 2014	Thijs Lanckriet; “Near-bed Sediment Transport and Hydrodynamics in the Swash Zone”	Marlinks
2009 - 2014	Mohammad Keshtpoor; “Modeling Hydrodynamics and Sediment Transport in an Inlet-Beach System”	AIR Worldwide
2007 - 2008	Nat Pearre (switched to Marine Policy)	Natural Resources Canada
2005 - 2009	†Ali Farhadzadeh	SUNY Stonybrook
2006 - 2010	†Jens Figlus	TAMU Galveston
2003 - 2007	†Wen Long	NOAA
2001 - 2006	†Jen Irish	Virginia Tech

MASTERS STUDENTS (* indicates co-advisor; † indicates committee member):

Time Frame	Name and Dissertation Title	Place of Employment
2024 -	†Julia Greco	
2024 - 2025	Topher Swanson, “Assessment of Seabed Munition Mobility Induced by Propeller-Generated Turbulence”	US Navy
2024 -	Parvez Hossain	
2024 -	Isaac Blackburn	
2023 -	†Ali Jarrar	
2021 - 2023	Emily Chapman, “Berm Migration and Munitions Motion Under Scaled Storm Events”	Dewberry
2020 - 2022	Evan Mazur, “Urban Coastal Flood Pathways During Extreme Events”	Bayland
2020 - 2022	Olivia Amante; “Modeling Intra-Event Process on a Barrier Beach During an Extreme Event”	RPS
2020 - 2022	Oscar Williams; “Evaluating Living Shoreline Performance and Vessel Wake Using the Ship Wake Module of FUNWAVE-TVD”	Seattle DOT

2020 - 2022	Courtney Olney; “Horizontal Pressure Gradient and Bed Shear Stress Under Double Dm-break Driven Swash and Validation of a Reynolds-Averaged Navier-Stokes Equations Based Model”	Cummins Cederburg
2020 - 2022	Cassie Turner; “Performance of a Living Shoreline Under Ship Wake Forcing on an Estuarine Shoreline”	USACE
2019 - 2021	Erika Beddings; “Assessing Morphodynamics North of Indian River Inlet from Offshore Dispersal of Massey Ditch Dredged Sand”	
2019 - 2021	Mike Lerner; “Relative Significance of Shear Stress and Horizontal Pressure Gradients on Sediment Mobility in the Inner Surf and Swash Zone”	Applied Coastal Research
2019 - 2021	†Emma Ruggiero; “Assessing Living Shoreline Feasibility at a Remote Site Influenced by Ship Wake”	Current PhD student at UD
2018 - 2019	Rory O’Boyle; “Sea Mine Burial Prediction for Naval Mine Countermeasures Mission Planning”	United States Navy
2017 - 2019	Ben Gross; “Mobility of Unexploded Ordnance using Spherical Surrogates in the Swash Zone”	Foth
2017 - 2019	Stan Borrell; “In situ Hydrodynamic and Morphodynamic Measurements During Extreme Storm Events”	Moffatt and Nichol
2016 - 2018	Matt Doelp; “Surf Zone Injury Study along Delaware Atlantic-Fronting Beaches: Quantification, Prediction and Directed Awareness”	Applied Coastal Research
2016 - 2017	Douglas Krafft; “Drifter Study of Circulation Near Indian River Inlet, DE”	USACE
2015 - 2016	Shamim Murshid; “Assessment of Beach and Surf Zone Modifications Due to Intermittent Beach Nourishment on the Delaware Atlantic Coast”	
2015 - 2016	Dimitris Belivanis; “Beach Nourishment Impacts on the Beach Profile”	
2013 - 2015	†Bridget O’Neill	
2013 - 2015	Nick DiCosmo; “Hydrodynamics Offshore of the Downdrift Beach and Southern Ebb Shoal of Indian River Inlet”	Remington and Vernick

2009 - 2011	Autumn Kidwell; “Pressure Gradients in the Inner Surf and Outer Swash Zone: A Laboratory and Numerical Investigation”	Applied Research Laboratories
2009 - 2011	Tim Sliwinski; “Experimental Examination of the Effect of Observation Geometry on Land Surface Temperature Estimates from Remotely Sensed Ground Based Thermal Imagery”	Bechtel
2008 - 2010	*Betsy Hicks; “Cross-Shore Transport on Gravel Beaches”	URS
2008 - 2010	Christina Lindemer; “Explorations of Morphological Change at Cape Henlopen, DE using Remote Sensing, Rapid-Response GPS-equipped vehicles and Numerical Modeling”	FEMA
2007 - 2009	Joe Faries; “A New Conductivity Sediment Concentration Profiler (CCP) for the Measurement of Nearbed Sediment Concentrations: Application in the Swash Zone on a Laboratory Beach”	DNREC
2006 - 2009	Jesse Hayden; “Indian River Inlet Bridge and Bathymetry Scour Monitoring System”	DNREC
2005 - 2007	Nat Pearre; “SANDCam at Rehoboth: Quantifying Shoreline Change Using Video”	Natural Resources Canada
2004 - 2006	Liang He; “Video-Based Particle Image Velocimetry of Laboratory Rip Currents”	Jacobs

SENIOR THESIS

Time Frame	Name and Dissertation Title	Place of Employment
2025	Brenna Derby; “Investigating the importance of bed roughness on turbulence in the inner surf and swash zones”	Master’s student at Stevens Institute of Technology
2025	Jackson VanNess; “Investigating Morphodynamics along Canary Creek and Roosevelt Inlet, Lewes, DE”	Master’s student at Duke University
2024	Brooke Gaenzle; “Currents and sediment transport estimates at Cape Shores, DE”	PhD student at NC State
2022	Maya Eley; “Vertical pressure gradients on the beach face under double dam-break flows”	PhD student at Stanford
2021	Emily Chapman; “Horizontal pressure gradient and sediment response	Dewberry

	under double dam-break flows in the swash zone”	
2021	Taira Baldauf; “Quantifying the effect of ship wake on commonly used living shoreline treatments”	USACE
2021	Kyle Rumaker; “Modeling dredge disposal near Indian River Inlet”	Taylor Engineering
2019	Sydney Cargill; “Beach Profile Evolution during Extreme Events”	USACE
2018	Rachel Schaefer; “Investigating Impact of Pea Patch Island Vegetation on Waves”	National Park Service
2018	Michael Larner; “Boat Wake Erosion at Pea Patch Island”	Applied Coastal
2017	Emily Robison; “Hydrodynamics and Beach Erosion during Storms on Delaware Beaches”	Whitman, Requardt and Associates
2015	Katie Hutschenreuter; “Surf Zone Injuries and Forcing Conditions along the Delaware Coast”	MRD Associates
2015	Douglas Krafft; “PIV Velocities in the Swash Zone from an In Situ Bed Camera”	USACE
2014	Adam DeJean; “Image-Derived Velocities and Turbulence at a Tidal Channel Confluence”	Ryan Homes
2014	Veronica Citerone; “Grain Size and Geomorphic Co-Variability across the Inner Surf and Swash Zones”	Roux Associates
2011	Christine Sutkowski; ”Quantifying Riverine Surface Currents using Thermal Imagery and PIV”	RK&K
2010	Rebecca Aiken; “Spatio-Temporal Hydrodynamic Variability in a Tidal Channel”	URS
2010	Melissa Stewart; ”Effect of Angle on Thermal Imager Response to Surface Temperature”	U. Colorado
2008	Christina Lindemer; “Coastal Imaging at Cape May, New Jersey”	FEMA

UNDERGRADUATE RESEARCH

Time Frame	Name
2025	Abigail McCarthy
2023 - 2025	Jackson Vanness
2023 - 2025	Brenna Derby
2023	Julia Jacob

2023 - 2024	Julia Komorowski
2022 - 2024	Brooke Gaenzle
2022 - 2023	Harrison Fleetwood
2022	David Bogart
2022	Megan Hamilton
2022	Lillian Gilardi
2022	Mackenzie Hammel
2021 - 2022	Delaney Doran
2021	Heather Fettke von Koeckritz
2021	Benjamin Horney
2019 - 2022	Maya Eley
2019 - 2020	Taira Baldauf
2019 - 2020	Brendan Green
2019 - 2020	John Mercer
2019 - 2021	Emily Chapman
2019 - 2020	Rebecca Schurr
2019 - 2020	Aidan Kedzierski
2018 - 2019	Meagan Koutsandreas
2018 - 2020	Sydney Cargill
2018 - 2021	Kyle Rumaker
2018 - 2019	Eric Noe
2018 - 2019	Janelle Skaden
2018 - 2019	Shannon Brown
2018 - 2019	Rachel Schaefer
2018 - 2019	Mike Larner
2017 - 2018	Helena Garcia
2017 - 2018	Sean Duncan
2016 - 2017	Zach Irons
2016 - 2017	Stephen Napoli
2016 - 2017	David Polakoff
2016 - 2017	Michaela Maguire
2016	Darrell Kennedy
2016	Samuel Harry
2015 - 2017	Shannon Emrich
2015 - 2018	Emily Robison
2015	Jillian McKenna
2015	Douglas Krafft
2015	Zach Nerwinski
2015	Brian Lowe
2015	Katie Hutschenreuter
2015	Ryan Dayton
2014	Hannah Billian
2013 - 2014	Veronica Citerone
2013 - 2014	Adam DeJean
2013	Kaitlyn Gisonda
2013	Jack Cardinal

2012 - 2013	Rebecca Aiken
2011	Christine Sutkowski
2011	Lauren Munoz
2011	Sam Vaughan
2010	Doug Innocent
2010	Bob McGurk
2010	Raymond Strawley
2009	Sean Davis
2009 - 2010	Melissa Stewart
2009	Justin Seeney
2009	Tim Burke
2008	Jake Voorhees
2007 - 2008	Betsy Hicks
2007 - 2008	Christina Lindemer

TEACHING EXPERIENCE:

Coastal Seminar (CIEG865) Spring 2005-2009
Fluid Mechanics (CIEG305), Fall 2004-2011; 2012-2022, 2024
Fluid Mechanics Lab (CIEG306), Spring 2012-2016, Fall 2017-2020, 2024
Advanced Fluid Mechanics (CIEG405), Spring 2022-2024
Freshman Design (CIEG161), Spring 2008-2011, 2015, 2023, 2024
Intro to Engineering (EGGG101) Fall 2010
Coastal Processes (CIEG680), Spring 2005-2021, Fall 2022-
Matlab for Engineering Analysis (CIEG675), Spring 2007- 2018, Winter 2019,
2021, 2022, 2023, Winter 2025
University Studies (UNIV401, UNIV402) Fall, Spring 2007-
Graduate Seminar (CIEG865) Fall 2022-2024
Fluid Mechanics (CIEG305) Study Abroad: Melbourne Australia, Winter 2017
Matlab for Engineering Analysis (CIEG675) and *Coastal Processes and Resilience*
(CIEG667) Study Abroad: Barbados, Winter 2024
Technical Communication in Coastal Engineering (CIEG667) Summer 2025

DEPARTMENT, COLLEGE, AND UNIVERSITY SERVICE:

2024 - 2025	Chairs Caucus Steering Committee
2023	UD ADVANCE training
2020 - 2025	Department Chair, Department of Civil, Construction, and Environmental Engineering
2020 - 2025	Order of the Engineer Ceremony
2020 - 2025	College of Engineering External Advisory Council Meetings
2020 - 2025	College of Engineering Leadership Team
2020	Guiding Coalition College planning committee
2020	Search committee: Cluster hire: Hydrological Systems
2020	Search committee Chair: Business administrator
2020 - 2025	University Chairs Caucus
2020 -	Blue and Golden Days and Decision Days
2019	College of Engineering Vistage Leadership Workshops

2019	College of Engineering Strategic Planning Committee
2019	College space retreat and engineering bldg. planning
2018 -	Mentor for junior and mid-level faculty
2018	Delaware Sea Grant Associate Director search committee
2018 -	College of Earth Ocean and Environment Promotion and Tenure Committee
2018	Delaware Sea Grant Research Coordinator search committee
2017 - 2020	Associate Chair, Department of Civil and Environmental Engineering
2017 - 2020	Director, Center for Applied Coastal Research
2017, 2018	Teaching pedagogy seminar for Iraqi Fulbright Scholars
2017	Delaware Sea Grant Coastal Processes Specialist search committee
2017	Delaware Sea Grant Executive Director search committee
2016	Structures faculty search committee
2016	Interviewer for CEE Laird Fellowship candidates
2015	UD video for Fulbright recruitment
2015	Interviewer for the University Distinguished Scholars event
2015	Proposal reviewer for UD student Fulbright proposal submissions
2014	Lecturer for US/Iraq visiting Fulbright scholars
2013	Initiation of formal collaboration between the University of Delaware and the Universidad Nacional Autonoma de Mexico
2013	UD CEE alumni awards committee member
2013	Marshall and Rhodes scholar interviews for honors program
2013	Search committee for academic advisor I position
2012	Served on two-year review committee for junior faculty member
2011	Search committee chair for Civil and Environmental Engineering CNTT position.
2010	New faculty orientation program panel member
2010, 2012-2014	Organizer for Chi Epsilon FE exam review session
2009 - 2013, 2015 -	Organizer for the Graduate School Forum
2008 - 2018	Advisor for Civil Engineering honors students
2007 - 2017	Civil and Environmental Engineering Undergraduate Education Committee
2008 - 2025	Civil and Environmental Engineering ABET Committee
2009 - 2010	Advisor for Delaworld for incoming honors students
2007 - 2017	Civil and Environmental Engineering Safety Committee
2005 - 2010	Faculty Senate
2004 - 2015	Chi Epsilon faculty advisor
2009	Environmental Engineering Faculty Search Committee
2006 -	Department tours
2005, 2007, 2008	Freshman orientation

2004	Department web page committee
2004	Department recruitment video

PROFESSIONAL SERVICE:

2025 - 2028	US/UK IIE Fulbright National Screening Committee
2025	Reviewer for the 2026 American Society for Engineering Education Mid-Atlantic Conference
2025	Panelist: Smart Cities TechConnect “MEGA” Conference
2025	Panelist: THE Innovation and Impact Summit
2023 - 2025	Board of Coastal Engineering Research (USACE)
2023 -	Steering committee decadal workshop on coastal processes
2022 - 2024	Wisconsin Sea Grant Technical Advisory Board
2022 -	USCRP Technical Committee
2022 -	Organizing team for ICCE 2026 conference in Galveston, TX
2022 -	ASCE Civil Engineering Education Innovation Working Group
2021 - 2022	Guest editor for special issue on education and outreach underpinned by coastal processes in <i>Continental Shelf Research</i>
2021	Reviewer for Fondazione Cariparo; Italian funding agency
2020 - 2021	Organizer/Chair for the 7th Young Coastal Scientists and Engineers Conference – North America, Myrtle Beach, SC
2020 - 2024	Center for Inland Bays (Delaware) Scientific and Technical Advisory Committee
2020	Invited panelist for DNREC Delaware Coastal Management Program Strategic Planning
2020	USACE coastal hazards advisory board
2019	Organizing committee for 4th Symposium on Two-phase Modelling for Sediment Dynamics in Geophysical Flows, Newark, DE
2019 -	USACE Coastal Hazards System Technical Oversight Committee
2018 - 2023	Moderator for Coastal List (listserv)
2018	Steering committee for 5th Young Coastal Scientists and Engineers Conference – Americas, Merida, Mexico
2017 - 2018	Local organizing committee for the 36 th International Conference on Coastal Engineering, Baltimore, MD
2017	Organizer and co-chair for the Mid-Atlantic Rip Current and Beach Safety Workshop, Lewes, DE
2017	Steering committee for 4th Young Coastal Scientists and Engineers Conference – Americas, Dauphin Island, AL
2017	Abstract reviewer for the Coastal Dynamics Conference
2016	Steering committee for 3 rd Young Coastal Scientists and Engineers Conference – Americas, Kingston, Ontario
2015	Organizer/Chair for the 2 nd Young Coastal Scientists and Engineers Conference – North America, Newark, DE
2015	Panel reviewer for National Science Foundation, OCE
2015	NJDEP rip current awareness and surf zone injury conference

2014	Organizer/Chair for the 1 st Young Coastal Scientists and Engineers Conference – North America, Newark, DE
2014	Organizer/Chair for the 2 nd International Workshop on Swash Zone Processes, University of Delaware, Newark, DE
2014	SERDP planning meeting (Arlington, VA)
2012 - 2014	US/UK Fulbright proposal review panel
2012	Organized meeting between UD, USACE and DNREC personnel regarding coastal processes at Indian River Inlet
2012	Chair for swash zone session at the ICCE meeting
2012	Abstract review committee for Coastal Sediments
2009 - 2020	Associate Editor for <i>Journal of Waterway, Port, Coastal and Ocean Engineering</i>
2009	Mentor for the ExCEED teaching workshop
2008	Session chair for AGU Ocean Sciences Meeting
2008	Field reviewer for the Naval Research Laboratory (NRL) Postdoctoral Fellowship
2007 - 2009	Abstract reviewer for IEEE conferences
2007	ONR DRI workshops in Hawaii, Korea and Washington
2006	Organizer of workshop on Integrated Study of Swash Zone Processes held in Honolulu, HI
2006	Guest editor for special issue on swash zone processes in <i>Continental Shelf Research</i>
2005	Organizer/Chair of workshop on Integrated Study of Swash Zone Processes held at the University of Delaware
2004	Organizer/Chair for the 1 st International Workshop on Swash Processes, Lisbon, Portugal
2004 -	Reviewer for <i>Coastal Engineering, Coastal Futures, Continental Shelf Research, Estuarine, Coast and Shelf Science, Geo-Marine Letters, Geophysical Research Letters, IEEE Transactions on Geoscience and Remote Sensing, IEEE Journal of Oceanic Engineering, Journal of Coastal Research, Journal of Coastal and Hydraulic Structures, Journal of Fluid Mechanics, Journal of Geophysical Research, Journal of Hydraulic Research, Journal of Hydraulic Engineering, Journal of Marine Science and Engineering, Journal of Waterways, Ports, Coasts and Ocean Engineering, Marine Geodesy, Marine Geology, Ocean Engineering, Water Resources Research, European Journal of Mechanics B/Fluids, Safety Science, Earth Surface Processes and Landforms, American Journal of Physics.</i>
2004 -	Proposal reviewer for the National Science Foundation (OCE, CBET, MGG, NEES, EAR and CAREER), Ohio Sea Grant, Texas Sea Grant, Washington Sea Grant, South Carolina Sea Grant, Wisconsin Water Resources Institute, Hong Kong Research Grants Council, Fulbright, SERDP, NOAA, USACE, the Netherlands VIDI Award, ERDC, Hudson River Foundation, Fondazione, Swiss National Science Foundation

2017 - Reviewer for tenure and promotion cases for numerous universities

OTHER SERVICE:

2025	Close Up High School Student panel at FIU DC
2025	Lego League demonstrations – autonomous vessel and buoyancy
2025	Autonomous surveying discussion at Thurgood Marshall Elementary
2024	Lego League demonstrations - sensors
2024	Newark Charter High School Beyond the Classroom Educational Series
2020 - 2022	Center for Inland Bays Strategic Advisory Committee
2019	Making Waves in the Classroom wave flume delivery and high school presentations
2018	Cngineering outreach with Thurgood Marshall Elementary
2018	Guest reader at Thurgood Marshall Elementary
2017	Coastal engineering presentation to Science and Engineering Apprenticeship Program (SEAP) students at Naval Surface Warfare Center, Philadelphia
2017 - 2021	Wave tank delivery and simulations at the Naval Surface Warfare Center, Philadelphia
2016	Wave tank delivery and simulations for National Ocean Sciences Bowl preparation (Newark Charter High School)
2015	Beach safety meeting with mayoral council of Cape May City, NJ
2015	15-second science video for DE Sea Grant and beach safety
2015	5 th grade science night demonstration and presentation at Newark Charter Elementary School
2014	Assisted with FutureCities team from Holy Angels School
2014 - 2015	Thurgood Marshall Elementary science fair judge
2013	Thurgood Marshall Elementary science fair mentoring for 4 th grade students with Chi Epsilon members
2013	Thurgood Marshall Elementary school STEM night
2013	Portable wave flume presentations given to 4 th grade students at the Make A Splash Event at the St. Jones DNERR
2011	Waves and Tides on Beaches session (2 hours) presented to more than fifty year 5 students at Looe Primary School, Cornwall, UK
2011	Organizer and faculty advisor (Chi Epsilon) for pedestrian bridge building service-learning project in hurricane Katrina damaged Oceans Springs, MS. Secured funding from University of Delaware's office of service learning to help fund project
2011	Sea Grant sponsored talks (lunch and learn series and science presentation) at Cape Henlopen State Park
2010	Organizer and faculty advisor (Chi Epsilon) for observation tower structural enhancement and wetlands restoration service-learning project in hurricane Katrina damaged Waveland, MS. Secured funding from University of Delaware's office of service learning to help fund project

2009 - 2025	Portable wave flume modules and demonstration for science and math education at McKean, A.I. DuPont, Conrad High and Newark Charter High Schools
2009	Beach erosion flume experiments with 6 th grade students
2008, 2009	Assisted beach erosion team for Lego League competition
2008	Helped elementary school teams at the Lego Robotics competition
2008	Habitat for Humanity effort with Chi Epsilon members
2007, 2009	Coastal Cleanup with the University of Delaware's Chi Epsilon chapter
2006	Assisted with ENGINEERING CONCEPTS TO ENHANCE MATH/SCIENCE/TECH ED CURRICULA: A Workshop for Secondary School Teachers
2006	met with ECyberResearch junior high team for rip current studies
2006, 2008	Developed summer science modules for middle school students (through Engineering Outreach)
2005 -	Coast Day demonstrations
2005 -	Demonstrations to local elementary and junior high school students describing beach processes

IN THE NEWS:

2024	UDaily article about USCRP-funded swash zone research
2023	UDaily article on Barbados study abroad program
2023	CEE news article on dune vegetation and storms
2022	UDaily article on USACE DEEDS project on hybrid living shorelines
2022	UDaily article on ESTCP project on total water levels
2020	UDaily article on NSF and SERDP projects related to sensor development and munitions mobility in the nearshore
2020	Delaware Beach Life article on bay swimming safety
2019	Sea Grant article on surf zone injuries related to publication in Natural Hazards
2019	UDaily article on Making Waves in the Classroom ONR project
2019	Story on NBC news in Florida on using the wave flume in Barron Collier high School
2019	Interviewed by Barron Collier School District, Naples, FL on use of wave flumes for coastal engineering education
2018	Interviewed by WHYY on the Pea Patch Island ship wake project
2018	Interviewed by the NewsJournal during winter storm regarding beach erosion
2017	Interviewed by WDEL radio station regarding beach safety
2017	Interviewed by the Cape Gazette for rip current and beach safety
2016	Interviewed by Philadelphia Magazine for the Surf Zone Injury project.
2015	UDaily article on SERDP-funded munitions project
2015	Interviewed by WDDE.org (Delaware NPR station) on SERDP-funded munitions project

2015	Interviewed by WBOC-TV regarding the 2015 surf zone injury study
2015	Interviewed by the News Journal in relation to the surf zone injury study along the Delaware coast
2015	Interviewed by Delaware Beach Life Magazine in relation to beach slope variability along the Delaware coast
2015	Interviewed by The Review on the use of unmanned aerial vehicles
2015	Interviewed by Delaware Coast Press in relation to tidal mudflat study
2015	UDaily article on thermal infrared imagery for tidal mud flat elevations
2014	UDaily article on the surf zone injury study
2014	Philadelphia inquirer article on surf zone injuries
2014	Interviewed by the Cape Gazette for research related to surf zone injuries
2014	WHYY radio interview on surf zone injuries
2014	West Hawaii newspaper article on surf zone injuries
2013	UDaily article on tidal flow in Kent County Delaware
2012	Interviewed by NewsJournal regarding Hurricane Sandy
2011	National Geographic Canada, BBC and roughly 30 other new agencies reporting on sediment transport study at Perranporth beach UK
2011	Interviewed by WDEL radio station regarding beach erosion
2008	Interviewed for coastal processes section for DNREC informational video
2006	Assisted NOAA film crew for rip current video
2006	Interviewed by Cape Gazette in Rehoboth Beach, DE
2005	Rip current demonstration and interview for CBS morning show
2005	Interviewed by LA Times regarding rip currents

PROFESSIONAL AFFILIATIONS:

American Geophysical Union
American Shore and Beach Preservation Association
American Society of Civil Engineers
American Society of Engineering Education
Chi Epsilon
