

Education

- Ph.D. in Geography, Texas A&M University, College Station, TX 2014
Dissertation: Wind-blown Sand: Threshold of Motion
- M.A. in Geography, East Carolina University, Greenville, NC 2009
Thesis: Magnitude and Frequency of Wind Events
- B.S. in Geography, East Carolina University, Greenville, NC 2007

Professional Experience

- Founder, **Coastal Scientist**, RCOAST Inc., New Orleans, LA 70130, 2023-present
- Principal Investigator**, U.S. Naval Research Laboratory, Stennis Space Center, August 2016-2023
- Associate Editor**, Aeolian Research, Elsevier, 2019-2023
- Postdoctoral Fellow**, Dept. of Geology & Geophysics, Texas A&M University, College Station, TX,
November 2014 – August 2016
- Pathway's Intern**, Coastal Hydraulics Lab., USACE Field Research Facility, Duck, NC, May 2013-
May 2014

Awards and Honors

- 2021 NRL Alan Berman Publication Award. Awarded by the Naval Research Laboratory for the paper entitled, '*Experimentally-derived thresholds for windblown sand on Mars*' published in Geophysical Research Letters.
- 2020 G.K. Gilbert Excellence in Research Award. Awarded by the Geomorphology Specialty Group of the American Association of Geographers for the paper entitled, '*Experimentally-derived thresholds for windblown sand on Mars*' published in Geophysical Research Letters.

Selected Publications Related to Proposal

- Kelley, M.M., Walker, I.J., Schmeckle, M., **Swann, C.** 2025. Changes in aeolian saltation cloud properties with wind speed and ripples. *Aeolian Research*, 74 (100996)
- Sherman, D.J., Bae, J., Ellis, J.T., **Swann, C.**, Partelli, E.J.R. 2025. Aeolian saltation flux profiles: Comparison of Representation and Measurement Methods. *Geosciences*, 15(8), 323.
- Farrell, E., Delgado-Fernandez, I., Li, B., Smyth, T., **Swann, C.**, 2024. Contemporary research in coastal dunes and aeolian processes. *Earth Surface Processes and Landforms*, 49(1), 108-116.
- Farrell, E., Delgado-Fernandez, I., Li, B., Smyth, T., **Swann, C.**, 2023. Coastal dunes: Links between aeolian processes and landform dynamics. *Earth Surface Processes and Landforms*.
- Swann, C.** 2022. The Coastal Geomorphology of Mars. In: Eds. Doug Sherman, 2nd Edition of the Treatise on Geomorphology, Elsevier.
- Diniega, S., Burr, D.M., Chojnacki, M., Lapotre, M.G.A., **Swann, C.**, 2022. Martian Dunes: **A crucial record of present and past Mars surface environmental and aeolian processes.** In: Eds. Nicholas Lancaster, 2nd Edition of the *Treatise on Geomorphology*, Elsevier.

- Diniega, S., Burr, D.M., Chojnacki, M., Lapotre, M.G.A., **Swann, C.**, 2022. Martian Dunes: A crucial record of present and past Mars surface environmental and aeolian processes. In: Eds. Nicholas Lancaster, 2nd Edition of the Treatise on Geomorphology, Elsevier.
- Swann, C.**, Lee, D., Trimble, S., Key, C., 2021. Aeolian transport over a wet, sandy beach. *Aeolian Research*, 51: 100712.
- Swann, C.**, Sherman, D.J., Ewing, R., 2020. Experimentally-derived thresholds for windblown sand on Mars, *Geophysical Research Letters*, 47: DOI: 10.1029/2019GL084484.
- Newman, C., Bertrand, T., Battalio, J., Day, M., de la Torre Juarez, M., Elrod, M.K., Esposito, F., Fenton, L., Gebhardt, C., Greybush, S.J., Guzewich, S.D., Kahanpaa, H., Kahre, M., Karatekin, O., Jackson, B., Lapotre, M., Lee, C., Lewis, S.R., Lorenz, R.D., Martinez, G., Martin-Torres, J., Mischna, M.A., Montabone, L., Neakrase, L., Pankine, A., Pla-Garcia, J., Read, P.L., Smith, I.B., Smith, M.D., Soto, A., Spiga, A., **Swann, C.**, Tamppari, L, Temel, O., Vuidez-Moreiras, D., Wellington, D., Wolkenberg, P., Wurm, G., Zorzano, M-P., 2020. Toward More Realistic Simulation and Prediction of Dust Storms on Mars, National Aeronautics and Space Administration's **Decadal Survey on Planetary Science and Astrobiology**.
- Sherman, D.J., Li, B., Ellis, J.T., **Swann, C.**, 2018. Intermittent Aeolian Saltation: A protocol for quantification. *Geographical Review* 108(2): 296-314.
- Swann, C.**, Brodie, K. & Spore, N.J., 2015. Coastal Foredunes: Identifying coastal, aeolian and management interactions driving morphologic state change. USACE ERDC Coastal Hydraulics Laboratory Report p. 56.
- Sherman, D.J., **Swann, C.**, Barron, J.D., 2014. A high-efficiency low-cost aeolian sand trap. *Aeolian Research* 13: 31-34.
- Swann, C.**, Sherman, D.J., 2013. A bedload trap for aeolian sand transport. *Aeolian Research* 11:61-66.

Related Awarded Projects

- Swann, C.**, Simeonov, J., Braithwaite, E., Key, C., Bateman, S., Hode, A. 2022 – Predicting wind driven topographic change in sandy, coastal battlespace environments. Submitted to the *U.S. Naval Research Laboratory Battlespace Environments Base Program*: \$1,711,000
- Baas, A., **Swann, C.**, 2020 – **Investigating Turbulence-Driven Sediment Transport with Applications of Particle Image Velocimetry**. *Natural Environment Research Council Global Partnerships Seedcorn Fund*: £61,998
- Mensi, S., Calantoni, J., **Swann, C.**, 2020 – **Storming the Beach: Engaging Scouts in Coastal Science and Engineering**. Office of Naval Research STEM Outreach Program: \$150,000
- Lapotre, M., Ewing, R., **Swann, C.**, 2019 – **The effects of atmospheric density on eolian formation and morphology**, *National Aeronautics and Space Administration's Solar System Workings*: \$798,879
- Swann, C.**, Penko, A., Calantoni, J., 2018 – Deriving a model for aeolian sand transport on the subaerial beach. *U.S. Naval Research Laboratory Battlespace Environments Base Program*: \$1,450,000; Year 4 \$330,000

**SECOORA Members' and Member Representatives'
Annual Conflict of Interest Statement**

Name: Christy Swann

Title / Position: CEO, Founder

Employer: RCOAST

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- I and the Member institution I represent agree to comply with the policy.
CS (initial)
- I have disclosed all Disclosable Interests that existed on or before the date of this statement. CS (initial)

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Signature: 

Date: April 10, 2026
