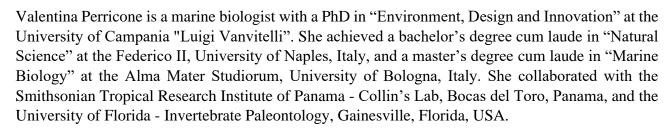
VALENTINA PERRICONE

University of Campania "Luigi Vanvitelli" Department of Engineering Via Roma 29 - 81031Aversa (CE), Italy

E-mail: <u>valentina.perricone@unicampania.it; v.perricone1108@gmail.com</u>

Research topics: functional morphology, marine ecology, and biomimetics.



The majority of her current research regards field and lab experiments to collect and analyze data on the echinoid skeletal structure in the contexts of functional morphology and technical innovation. In addition, her interests regard biomimetic and paleomimetic research for industrial design, architecture, coastal engineering, automotive, robotics and aerospace supported by multiple academic and industrial experiences acquired during internships, research grants and private commissions.

The latest relevant papers

- 1. **Perricone, V.**, & Collin, R. (2019). Larvae of Caribbean Echinoids Have Small Warming Tolerances for Chronic Stress in Panama. *The Biological Bulletin*, 115-129. (doi: 10.1086/701666)
- 2. **Perricone, V.**, Grun, T., Marmo, F., Langella, C. & Candia Carnevali, M.D (2020) Constructional design of echinoid endoskeleton: main structural components and their potential for biomimetic applications. *Bioinspiration&Biomimetics*. (doi: 10.1088/1748-3190/abb86b)
- 3. Marmo, F., **Perricone, V.***, Cutolo, A., Langella, C. Candia Carnevali, M.D & Rosati I. (2021) Flexible sutures reduce bending moments in shells: from the echinoid test to tessellated shell structures. *Royal Society Open Science*, 9(5), 211972. (https://doi.org/10.1098/rsos.211972)
- 4. **Perricone, V.**, Grun, T., Raia, P., & Langella, C. (2022). Paleomimetics: A Conceptual Framework for a Biomimetic Design Inspired by Fossils and Evolutionary Processes. *Biomimetics*, 7(3), 89. (https://doi.org/10.3390/biomimetics7030089)
- 5. **Perricone, V.**, Grun, T., Rendina, F., Marmo, F., Candia Carnevali, M. D., Kowalewski, M., Facchini, A., De Stefano, M., Santella, L., Langella, C., Micheleti A. (2022) Hexagonal Voronoi pattern detected in the microstructural design of the echinoid skeleton. *Journal of Royal Society Interface*,19, 193. (https://doi.org/10.1098/rsif.2022.0226)

