Postdoctoral position in biological fluid dynamics, Sutherland Lab, University of Oregon

Project: Multi-jet propulsion by salps and siphonophores

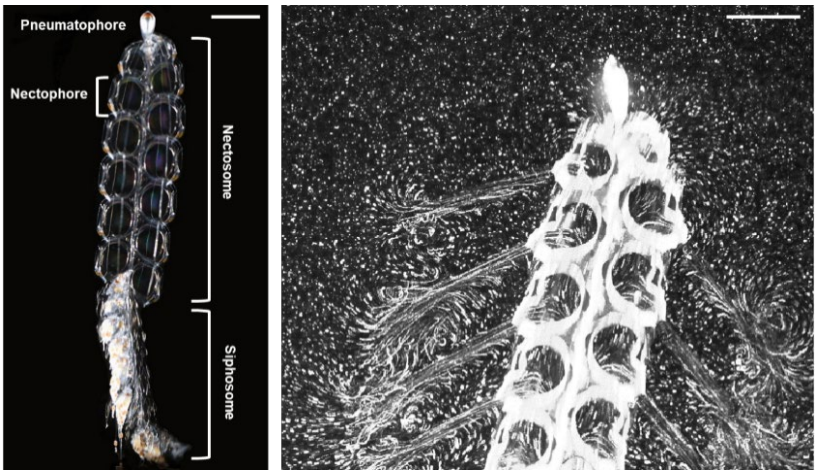
Description:

Our aim is to decipher the biological and physical mechanisms of coordinated pulsed jets— as seen in salps and siphonophores— and elucidate design principles optimized by nature. Propulsion with multiple jetting units is orders of magnitude more efficient than solitary swimming, and gives rise to diverse propulsive modes including long-range low-speed swimming, high-speed sprints and maneuverability at zero speed. The presence of multiple swimming units that operate following a set of simple rules yields numerous advantages including redundancy, scalability and the possibility of complex coordination. The candidate will develop and employ biological imaging tools in the ocean to understand the kinematics and fluid dynamics of multi-jet swimming.

The successful candidate will work with a dynamic, interdisciplinary group and receive a competitive salary and health benefits (http://hr.uoregon.edu/careers/about-benefits). The postdocs's primary home will be in the Sutherland Lab, located on the University of Oregon campus in Eugene. The successful candidate will also work closely with collaborators Brad Gemmell (University of South Florida), John Dabiri (Caltech) and Sean Colin and Jack Costello (Marine Biological Laboratory).

Qualifications: Applicants with a PhD degree in the natural sciences that have marine field experience, biological fluid dynamics, quantitative skills including computer programming (e.g. Python, MATLAB, R) are encouraged to apply.

To apply: Please contact Kelly Sutherland via email (ksuth@uoregon.edu) and provide a cover letter, CV and a brief statement of your research interests (1-2 pages). Applications review will begin by December 15, 2019 but position open until filled.



Natural models-- like the colonial siphonophore *Nanomia bijuga*-- coordinate multiple swimming units for high-speed and efficient swimming.