

1145-VF-2362 **Nicholas A Battista*** (battistn@tcnj.edu), 2000 Pennington Rd, Ewing Township, NJ 08628, and **Jason Miles** and **Christopher Jakuback**. *Don't get tangled or weigh me down: testing the limits of jellyfish locomotion*. Preliminary report.

Jellyfish contract their bells to create complex vortex rings that propel it forward for locomotion. It is a beautiful example of seeing Newton's laws of motion. Working in a fluid-structure interaction framework, we used a combination of springs, beams, and poroelastic elements to model the material properties of the jellyfish and tested the limits of jellyfish locomotion for a variety of bell geometries, complex tentacle morphologies, additional mass, and scale. We found interesting bifurcations in swimming performance across a diverse range of the overall parameter space. (Received September 25, 2018)