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Nicholas A Battista* (battistn@tcnj.edu), 2000 Pennington Road, Ewing Township, NJ 08628. *Whose more sensitive: Jellyfish or Eels?* Preliminary report.

Aquatic organisms use diverse mechanisms for locomotion depending on their shape and size. Jellyfish have been deemed as one of the most efficient swimmers and use propulsatory methods via their bell contractions to swim. Their morphology and kinematics place them within the intermediate Reynolds Number, Re , regime. Many other animals also fall within this regime, such as larval fish, eels, or lamprey, which demonstrate anguilliform modes of locomotion. The effectiveness of both of these modes are highly dependent on a number of parameters, such as the frequency and kinematics of undulation and fluid scale. In this work we quantify the sensitivity of swimming performance (forward speed and cost of transport) to these parameters for both of these swimming modes using fluid-structure interaction tools. (Received January 21, 2020)