Stereoscopic Particle Image Velocimetry Used to Study the Wake Patterns of an Ideal Anguilliform Swimming Motion BRANDON TARAVELLA, J. BAKER POTTS, University of New Orleans, New Orleans, LA, MATTHEW STEGMEIR, TSI Inc. Shoreview, MN — The University of New Orleans recently acquired a self-contained stereoscopic particle image velocimetry system for use in their 125 ft long towing tank. This system is being used to study the wake flow behind an anguilliform swimming robot that swims with an ideal motion that is theorized not to produce any trailing vortices. The presentation will describe the particulars of the SPIV system along with details of installation of the SPIV system within the towing tank. The calibration routine will be discussed in detail and results of the free-flow runs will be discussed. Preliminary results from the anguilliform swimming motion will also be presented.

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