Abstract Submitted
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Swimming of *Vorticella* in two-dimensional confinements[1] LUZ SOTELO, YOUNG-GIL PARK, University of Texas-Pan American, SUNGHWAN JUNG, Virginia Polytechnic Institute and State University, SANGJIN RYU, University of Nebraska-Lincoln — *Vorticella* is a ciliate observed in the stalked sessile form (trophont), which consists of an inverted bell-shaped cell body (zooid) and a slender stalk attaching the zooid to a substrate. Having circular cilia bands around the oral part, the stalkless zooid of *Vorticella* can serve as a model system for microorganism swimming. Here we present how the stalkess trophont zooid of *Vorticella* swims in two-dimensional confined geometries which are similar to the Hele-Shaw cell. Having harvested stalkless *Vorticella* zooids, we observed their swimming in water between two glass surfaces using video microscopy. Based on measured swimming trajectories and distributions of zooid orientation and swimming velocity, we analyzed how *Vorticella*'s swimming mobility was influenced by the geometry constraints.

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