

Abstract Submitted
for the MAR17 Meeting of
The American Physical Society

Swimming Pattern of *Vorticella convallaria* Trophont in the Hele-Shaw Confinements YOUNGGIL PARK, University of Texas Rio Grande Valley, SANGJIN RYU, University of Nebraska-Lincoln, SUNGHWAN JUNG, Virginia Polytechnic Institute and State University — In the trophont form *Vorticella convallaria* is a sessile stalked ciliate, which consists of an inverted bell-shaped cell body (zooid) and a slender stalk attaching the zooid to a substrate. Under mechanical shearing, the zooid is separated from the stalk and can swim using circular cilia rows around the oral part. Here we present how the stalkless trophont zooid of *V. convallaria* swims in Hele-Shaw geometries, as a model system for microorganism swimming. After having harvested stalkless zooids, we observed their swimming in water between two glass surfaces with narrow gaps using video microscopy. Based on their swimming trajectories measured with image analysis, we investigated how the swimming pattern of the trophont zooid of *V. convallaria* was influenced by the constraints.

Younggil Park
University of Texas Rio Grande Valley

Date submitted: 11 Nov 2016

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