

Abstract Submitted  
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**An experimental analog for the study of waving marine grass in tidal currents** JULIA LEE, RAVI SINGH, SHREYAS MANDRE, Brown University — Tidal currents passing through submerged vegetation mix the fluid and facilitate various environmental and ecological transport processes. This fluid-vegetation interaction, where the submerged grasses behave like those on the ground waving from wind, results from a shear instability of the surrounding flow. We devise a two-dimensional lab scale analog of the fluid-vegetation interaction using ABS plastic filaments immersed in a soap film to simulate the grass blades in a tidal flow. The array of filaments spontaneously waves in response to the flow of the soap film. Our experimental system makes direct flow measurement possible for a detailed comparison with theory.

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