Abstract Submitted for the TSF17 Meeting of The American Physical Society

**Creating a Wave-Powered Robot** CHRISTINA NISSEN, ALEXAN-DRIA TREVINO, RYAN BENNER, Southwestern University — In 2008 a 9.5-meter catamaran, the Suntory Mermaid II, traveled from Honolulu, Hawaii to Wakayama, Japan using two fins that converted wave energy into forward motion. Despite the success of this Wave Devouring Propulsion System (WDPS), little has been published about how it works. The goal of this project was to create a working model based on this method, and to analyze its performance. A wave-powered boat design would be ideal for a sensor platform that could travel over a wide area for an extended period without refueling.

> Steve Alexander Southwestern University

Date submitted: 21 Sep 2017

Electronic form version 1.4