

Open source WEC-Sim code development, application, and release

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WEC-Sim (Wave Energy Converter SIMulator) is an open-source wave energy converter (WEC) simulation tool jointly developed by Sandia and NREL, publicly released on GitHub. The WEC-Sim project includes creation of a validation dataset, through experimental wave tank testing of the Floating Oscillating Surge WEC (FOSWEC), as shown in Figure 1. WEC-Sim has the ability to model devices that are comprised of rigid bodies, power-take-off systems, and mooring systems, as shown in Figure 2. This poster will focus on development, application, and release of the WEC-Sim code, with emphasis on engaging the wave energy community to further the code's future development and maintenance.

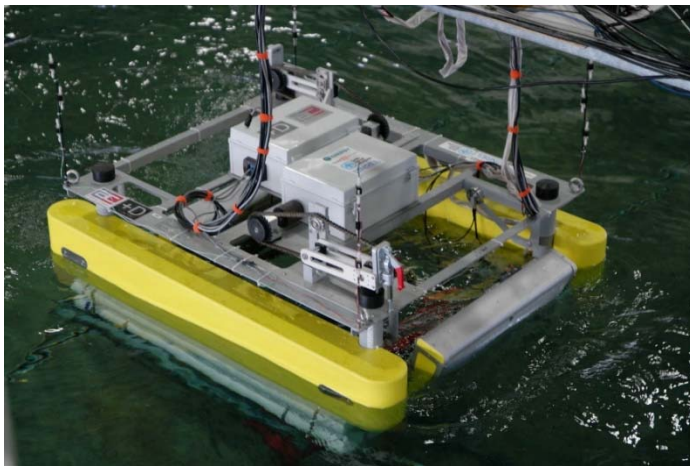


Figure 1. WEC-Sim validation testing of the FOSWEC at Oregon State University

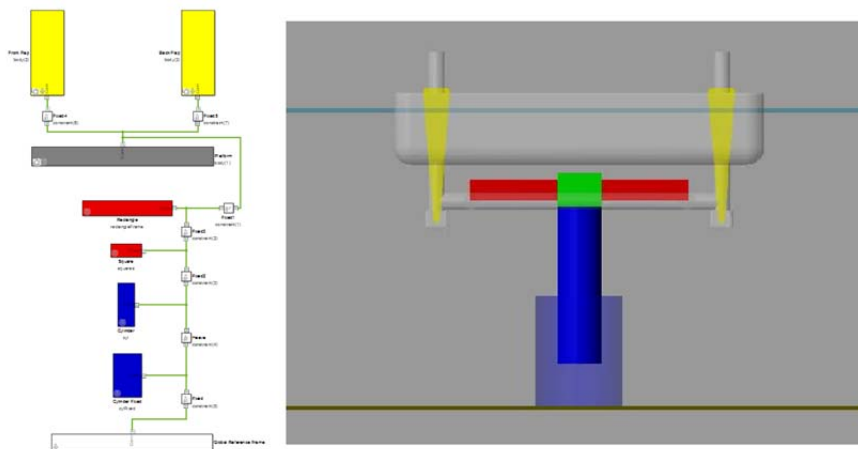


Figure 2. Application of the WEC-Sim code to model the FOSWEC