OSU Expertise

Oregon State University

PMEC Pacific Marine Energy Center

Contact
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Bret Bosma
Numerical Modeling: Experimental testing, numerical modeling.

Marine Energy Engineering: Control system design for wave energy converters.

Ted Brekken
Numerical Modeling: Wave energy converter control and modeling.

Marine Energy Engineering: Power system resilience analysis.

Eduardo Cotilla-Sanchez
Numerical Modeling: Multiscale power system modeling and protection.

Marine Energy Engineering: Open source models for broadening access, (e.g.; uGrid: reliable minigrid design and planning toolset for rural electrification).

Matt Evans
Numerical Modeling: Discrete Element Method (DEM) using the following software: PFC (Particle Flow Code), YADE (Yet Another Dynamic Engine), finite difference software FLAC (Fast Lagrangian Analysis of Continua).

Marine Energy Engineering: Quantitative characterization of microstructure, and signal processing. Application areas include granular mechanics, large deformation behavior, multiphysics problems, emergent phenomena, and data modeling.

Burke Hales
Numerical Modeling: Numerical reaction and transport modeling and statistical modeling of large oceanographic datasets using Fortran and C/C++. Instrumentation automation and real-time data processing using LabView.

Merrick Haller
Numerical Modeling: Expertise in coastal wave modeling including spectral wave modeling (SWAN) and phase-resolved nonlinear wave modeling (funwave/funwaveC). Developed a tool to incorporate WECs into SWAN.

Joe Haxel
Marine Energy Engineering: Expertise in passive acoustic hardware and platform development. Specifically, integration of passive acoustic systems on mobile and fixed platforms for sound level measurement and characterization.

Kyle Niemeyer
Numerical Modeling: Reacting and non-reacting fluid flows; using modern parallel high-performance computing systems, including GPUs.

Bryson Robertson
Numerical Modeling: Expertise in wave resource assessments (spacio-temporal and extreme value), technology hydrodynamic modeling.

Marine Energy Engineering: WEC array analyses, remote community integration, utility-scale value propositions.

Meagan Wengrove
Numerical Modeling: Fluid mechanics, especially boundary layer development and drag.

Minjie Zhu
Numerical Modeling: Numerical software development for structural, fluid, and geotechnical simulations. Particle Finite Element Method (PFEM) for fluid-structure interaction. High performance computing using MPI, Python, C++, and CUDA.