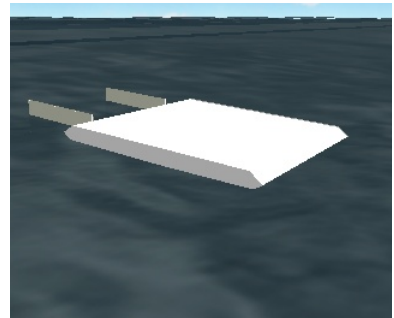
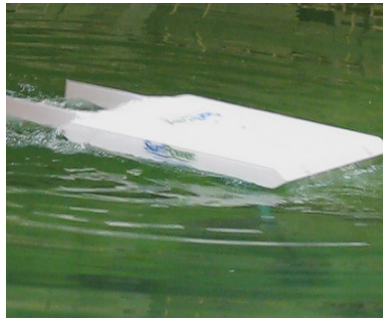
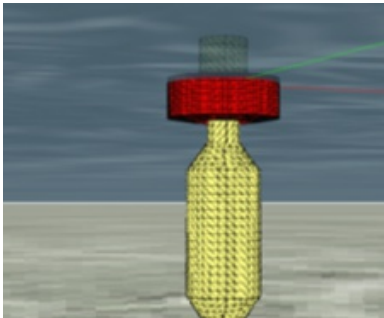
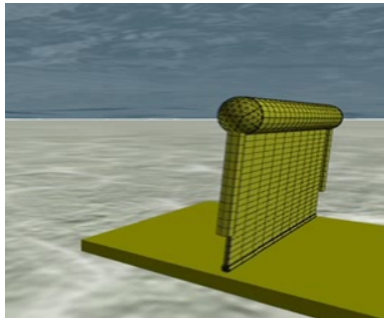
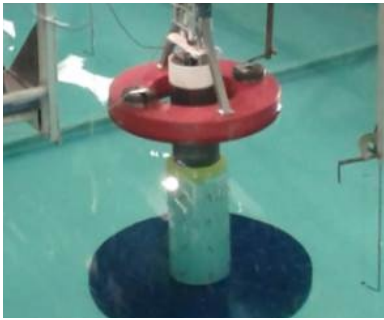


Wave Energy Software and Services

Analyse WEC moorings, mechanism joints, wave and wind interaction, and power take-offs by using ProteusDS or working Dynamic Systems Analysis Ltd.



About DSA

DSA has experienced personnel who work with wave energy converter (WEC) developers to optimize and dimension their technology for reliability, efficiency, and power capture. DSA works cooperatively with its clients to improve designs and reduce physical prototyping expenditures using the simulation software ProteusDS.

ProteusDS software

ProteusDS is used by naval architects, marine and mechanical engineers, offshore specialists, oceanographers and research groups to develop numerical models of ocean technologies such as wave energy converters. ProteusDS has been developed by DSA in conjunction with the University of Victoria and is rigorously validated against empirical and theoretical data.

Software features

- Finite-element mooring line model
- Multi-component mooring lines
- Custom bathymetry and mooring interaction
- 3D pre and post processing visualization
- Articulated body algorithm / efficient joint simulation
- Nonlinear buoyancy and Froude-Krylov effects
- Wave radiation/diffraction
- Multi-body hydrodynamic interaction via DLL
- PTO model and custom control with Matlab via DLL
- Power umbilical modeling
- Wind loading
- Integrated documentation and professional support

WEC mooring analysis

Mooring WECs is a unique challenge. ProteusDS is a validated time-domain mooring analysis tool. DSA has experience in designing moorings for wave energy applications. Common problems such as assessing mooring line loads, anchor requirements, umbilical bend radius, and mooring watch circle can be completed with ProteusDS.

Services

DSA works with early stage WEC developers and wave energy test centers such as the West Coast Wave Initiative (WCWI) to accelerate proof of concept and prototype WEC modeling. DSA provides confidential analysis services and responds rapidly to its clients requests.

Software customization

DSA has structured the ProteusDS software to be rapidly customizable. This allows DSA to add custom features that may be required to model novel WECs. DSA runs validation routines nightly for software quality assurance.

Region specific wave modeling

DSA can work with developers to simulate their devices in a particular region using local wave climate data.

Locations

DSA has offices in Halifax, NS and Victoria, BC which are ideally suited to serve the North and South American markets, providing in-time-zone support.