

5 years of applied experience working on a range of consulting engineering projects in coastal engineering and the marine renewable energy sector. Francois has managed projects in the fields of coastal hazards, coastal structures, climate change adaptation, physical and numerical modelling, and coastal monitoring. Francois is also an expert in the field of marine renewables; having managed the installation of a 250 kW pilot device in Victoria and led several large studies related to wave dynamics and wave energy conversion. Francois brings to WRL the combined attributes of a practical engineering background and academic analysis to resolve complex coastal and hydraulic problems.

Francois structures, having modelled over 30 coastal and offshore structure projects in the past 10 years, and published many papers on coastal structure physical modelling methods and case studies. Francois 2D and 3D physical models for assessing rock and precast concrete armoured structures as well as the measurement of wave loading on rigid marine structures such as platforms, jetties and wharves.

Francois regularly undertakes desktop and numerical modelling investigations for coastal process, hazards and inundation studies. He has completed desktop based coastal process studies ranging from assessment of small property developments, through to regional coastal climate change vulnerability assessments. Francois Tasmania in the south to Darwin in the north, and includes several projects in the Australasia region.

Francois is an active member of the marine renewable energy and coastal engineering communities, regularly publishing work in technical conferences and journals. He is a member of PIANC and was also a committee member of the Australian Wave Energy Atlas project in 2015 and 2016. He is an Australian Standard committee member for EL-066 "Marine energy Wave, tidal and other water currents converters".

Qualifications

BSc (Mechanical Engineering), Ecole Nationale des Arts et Metiers, France
MEngSc (Hydraulics), Ecole Nationale des Arts et Metiers, France
PhD (Civil Engineering), University of Sydney

Professional history

2017-Current: Principal Engineer, UNSW WRL
2015-2017: Senior Engineer, BPS Pty Ltd
2011-2015: Senior Project Engineer, UNSW WRL
2008-2011: Mechanical Engineer, BPS Pty Ltd
2005-2007: Project Engineer, Beicip Franlab, Paris
2004-2005: Reservoir Engineer, Total, Cameroon

Expertise

- Wave energy conversion
- Physical model design, construction and testing
- Renewable energy resource assessment
- Numerical wave modelling
- Coastal processes and hazards
- Wave loading analysis
- Geo-spatial data analysis and planning
- Field investigations and data collection

Summary of relevant experience

Coastal Processes and Numerical Modelling Studies

2008-2010: Wave-structure hydrodynamic modelling
2012: Seawall

2020: Lake Illawarra foreshore protection
2021: Newport SLSC overtopping protection, NSW
2021: Scour protection for offshore renewable project, TAS
2022: Clarence City Council Coast Hazards Adaptation,
TAS