

Nicholas Barczak



President

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Detailed Resume:
[linkedin.com/in/nicholas-barczak-efficient](https://www.linkedin.com/in/nicholas-barczak-efficient)



Member of SNAME

Education

Masters of Engineering in Naval Architecture and Small Craft Design
June, 2008: University of Southampton, U.K.

Major Skills

Highlights, including examples of work completed in the past.

Numerical Analysis

Finite Element Analysis (FEA) Linear elastic, fatigue Buckling, vibration, Composite materials	Computational Fluid Dynamics (CFD) RANS, LES, DES VOF, DFBI Mesh deformation	Custom computer programming Excel VBA C++ bash, java
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Structural

Foundation design	Scantling sizing	First principle calculations
Major foundations Global structural analysis	Thermal stress analysis Class society calculations	LNG tank design Fatigue analysis

Fluid Dynamics

Resistance estimate Wind resistance	Propulsion sizing Lines plans	Waterjet sizing Towing tank test plans
Hull optimization	Towing plans	

Seakeeping

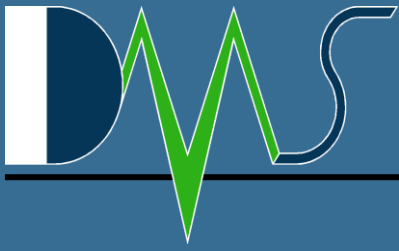
Transport analysis	Dockside mooring analysis	Single point mooring analysis
Passing ship studies	Offshore deployment analysis	Cargo accelerations
Seafastening design		

Naval Architecture

Intact stability	Deterministic stability analysis	Probabilistic stability analysis
Trim and stability booklets	Incline experiment / stability tests	Stability model development
Loadout analysis	General arrangement development	Load line criteria

Project Management

Design review	Owners representative	Client interface
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Experience

Over a decade of experience in maritime consulting

Previous Employers

Lead Hydrodynamicist: 2014 – 2018	Alan C. McClure Associates
Transport Engineer: 2014	Dockwise
Naval Architect: 2010 – 2013	Elliott Bay Design Group
Naval Architect: 2008 – 2010	Art Anderson Associates

Vessels

Small workboats	Research vessels
Fishing vessels	Polar class vessels
Military craft	Offshore oil and gas
Ferries	Innovative concepts
Barges – various types	Oil cargo barges

Software Proficiency

CFD:	StarCCM+, OpenFOAM, Helyx, ANSYS CFX
FEA:	ANSYS, Autodesk In-CAD
Stability:	GHS, Maxsurf
Drafting:	AutoCAD, Rhino, Maxsurf
Seakeeping:	AQWA, Orcaflex

Licenses

P.E. States of Washington, Texas, Michigan

Publications

Balancing the Extreme: Design of a Mooring System for a Volcanic Slope.

ANSYS Texas Innovation Conference. Aug 24, 2017.

Insights from CFD Validation of a Jackup Rig.

Offshore Technology Conference. May 2, 2016.

Economically Viable Applications of CFD In Seakeeping

SNAME 21st Offshore Symposium. Feb 26, 2016.

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