

Guilherme Vaz

Head of HPC & Data Science Team

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Guilherme is an Aerospace Engineer with PhD in Mechanical/Naval Engineering at Instituto Superior Técnico (IST, Portugal) and at Maritime Research Institute of Netherlands (MARIN, the Netherlands). Expert on potential and viscous-flow CFD tools and high-performance computing (HPC). Founder, developer, and evangelist of open-usage/open-source multiphase CFD code ReFRESCO. 19 years of experience (Portugal, the Netherlands and Germany) on CFD, hydrodynamics and aerodynamic modelling of maritime, ocean engineering and renewable energy structures. Published more than 120 articles (conferences and journals) on these subjects.



SKILLS

HPC (High Performance Computing)
Computational Fluid Dynamics (CFD)
Data-Science
Aerodynamics
Hydrodynamics
Free-surface, Cavitation, Multi-phase Flows
Propellers and Turbines
Turbulence Modelling
Renewable Energy Systems
Acoustics

EDUCATION

PhD degree in Mechanical Engineering at IST (2005), “Instituto Superior Técnico”, Lisbon, Portugal

PhD studies (200-2002) at MARIN, “Maritime Research Institute of the Netherlands”, Wageningen, Netherlands

MSc. in Aerospace Engineering, mechanical branch (1998/1999), at IST, Lisbon, Portugal.

EXPERIENCE

2020 to date, Head of HPC& Data Science Team, WavEC – Offshore Renewables, Portugal.

2019 to date, Chief of Strategy Officer (CSO), WavEC – Offshore Renewables, Portugal.

2017 to date, Invited Lecturer at University of Duisburg-Essen, Institute of Ship Technology, Ocean Engineering and Transport Systems (ISMT), Germany.

2016 to 2019, R&D CFD Coordinator, MARIN (Maritime Research Institute Netherlands), Netherlands.

2011 to 2019, Senior CFD Researcher at MARIN, (Maritime Research Institute Netherlands), Netherlands.

2008 to 2014, Member (founder) of the “Renewable Energy Team (RENT)” of MARIN, Netherlands. CFD and current/tidal turbines expert

2008 to 2014, Invited Lecturer at TU Delft, Netherlands. Ship Hydrodynamics Department, Offshore Engineering Msc. “CFD for Offshore Applications”

2005 to 2010, CFD Researcher, MARIN (Maritime Research Institute Netherlands), Netherlands.