Islam Amin *BSc MSc PhD*

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Associated Professor *at Naval Architecture and Marine Engineering Department (NAME), Faculty of Engineering, Port Said University.* ***Research Follow*** *in Naval Architecture, Ocean and Marine Engineering Department (NAOME), Strathclyde University, UK. I had my PhD in the subject of hydrodynamic design of high speed marine craft in 2012. Since that date, I had joint to Renewable Energy Research Group in Strathclyde University, UK. I have many publications in marine renewable energy, water resources and water treatment fields. I conducted research on hydrodynamics performance of many renewable energy devices such as wind, current and wave converters. I am a reviewer in many high rank journals such as Ocean Engineer Journal. I had joint different research projects in field of renewable energy, climate changes mitigation, water treatment and water desalination. I Consultant of well-known marine companies in Egypt and had many consultant services in marine industry. I closely worked with many institutions in subject of* ***Renewable Energy and Climate Changes*** *such as University of Strathclyde, Desert Research Center, Nile Research Center, Holding Company of water and waste water and Renewable Energy Center.*

EDUCATION

University of Strathclyde — **Glasgow, UK**
Research Associated in Marine Engineering — 2012 until now

Port Said University — **Port Said, Egypt**
PhD in Mechanical Engineering, — 2012

Port Said University — **Port Said, Egypt**
MSc in Mechanical Power Engineering, — 2006

Suez Canal University — **Port Said, Egypt**
BSc in Marine Engineering, Grade: Excellent with Honours Degree, — 2001

WORK EXPERIENCE

Research Follow *with teaching, supervising and research responsibilities* — University of Strathclyde, UK **Sep 2012 – Present**

Associated Professor *with teaching and research responsibilities* — Port Said University, Egypt **April 2017 – Present**

Lecturer *with teaching and research responsibilities* — Port Said University, Egypt **May 2012 – Nov 2017**

Assistant Lecturer *with teaching and research responsibilities* — Port Said University, Egypt **Nov 2006 – Mar 2012**

Demonstrator *with teaching and research responsibilities* — Port Said University, Egypt **Jan 2001 – Oct 2006**

FUNDED RESEARCH PROJECTS

- Possibility of using Vertical Axis Marine Current Turbine in Egypt	*Funded by STDF*	2015
- Mobile Reverse Osmosis Floating Desalination Platform Powered by Hybrid Renewable Energy	*Funded by STDF & British Council*	2017
- An integrated smart system of ultrafiltration, photocatalysis, thermal desalination for waste water treatment	*Funded by STDF & British Council*	2020
- A Novel Partially Floating Photovoltaic Integrated with Smart Energy storage and Management System for Egyptian North Lakes	*Funded by STDF & British Council*	2020
- Adaptation to the Climate Change through Integration of Non-conventional Water Resources with Renewable Energy (***COP26 Roundtable*** events in line with COP26 conference)	*Funded by British Council*	2021

- Smart water-energy management system integrated with floating solar chimney for seawater desalination "***Going Global Partnerships"***	*Funded by British Council*	2022
- Towards a sustainable strategy framework to confront climate change for the water sector powered by renewable energy in Egypt (***Climate Change Partnerships*** "COP 27 events with British Council")	*Funded by British Council*	2022
- Egyptian Offshore Wind to Produce Green Hydrogen to Mitigate the Effects of Climate Change (***Climate Change Partnerships*** "COP 27 events with British Council")	*Funded by British Council*	2022

RESEARCH INTERESTS

- Offshore Wind Turbines
- Renewable Energy
- Water resources and climate changes
- Hydrodynamics

PUBLICATIONS

- **Amin, I.**, "Hydrodynamic Design Aspects of High Speed Marin Crafts", M.Sc. Thesis, 2006, Egypt.
- Mosaad, M. A., Gaafary, M. M., and **Amin, I.** A., "Energy Saving and Dynamic Stability of Planing Hull due to Hydrodynamic Control of Trim Angles," IMAM conference, Oct, 2005, Portugal.
- **Amin, I,** Mosaad, M. A., Gaafary, M, and Kilani, H, "Power Prediction of WIG Craft", International Shipbuilding Progress vol. 58, (2011), page 219–238.
- **Amin, I**, Mosaad, M. A., Gaafary, M, and Kilani, H, "Effect of Airfoil Camber on WIG Aerodynamic Efficiency", Port Said Engineering Research Journal PSERJ, 2011.
- **Amin, I.,** "Efficiency of Wing-In-Ground Marine Crafts", PhD Thesis, 2011, Egypt
- **Amin, I.** and Xaio, Q " Hydrodynamic Performance of a Vertical Axis Marine Current Turbine under Steady and Unsteady Current Conditions".
- **Amin, I** and Xaio, Q "Numerical Simulation of Steady and Unsteady Current Velocity of a Vertical Axis Marine Turbine", IMAM Conference, Spain, 2013
- **Amin, I** and Xaio, Q "Numerical simulation of a horizontal axis tidal turbine with a pre-swirl stator", IMAM Conference, Spain, 2013
- **Amin, I** " Numerical Investigation on the Blade Geometrical Parameters of a Vertical Axis Marine Current Turbine", International Marine and Offshore Engineering Conference (IMOC), Alexandria, Egypt, 2013.
- Nadia Esra and **Islam Amin**. Hybrid Floating Power Station driven by Renewable Energy for Saudi Arabia Coastal Areas. Proc. of the 2nd International Conference on Electrical, Communication and Computer Engineering (ICECCE), 12-13 June 2020, Istanbul, Turkey.
- **Amin, I.,** Ali, M., Bayoumi, S., Oterkus, S., Shawky, H. and Oterkus, E. Conceptual Design and Numerical Analysis of a Novel Floating Desalination Plant Powered by Marine Renewable Energy for Egypt. Journal of marine science and engineering, Vol. 8, 2020, pp 95. (doi:10.3390/jmse8020095).
- **Amin, I.,** Dai, S., Oterkus, S., Day, D. and Oterkus, E. Experimental investigation on the motion response of a novel floating desalination plant for Egypt. Ocean Engineering, Volume 210, 107535, 2020.
- **Amin, I.,** Ali, M., Bayoumi, S., Balah, A., Oterkus, S., Shawky, H. and Oterkus, E. Numerical Hydrodynamics-Based Design of an Offshore Platform to Support a Desalination Plant and a Wind Turbine in Egypt. Ocean Engineering, 229, 108598, 2021.
- **Islam Amin**, Saishuai Dai, Sandy Day, Mohamed E.A. Ali, Ahmed Balah, Hosam Shawky, Selda Oterkus and Erkan Oterkus. Experimental study on the motion response of an integrated floating

desalination plant and offshore wind turbine on a non-ship platform. Ocean Engineering, 234, 109275, 2021.

- **Amin, I.,** Dai, S., Day, S., Oterkus, S., Oterkus, E. Experimental investigation on the influence of interceptor plate on the motion performance of a cylindrical FPSO. Ocean Engineering, 2022, 243, 110339.
- **Amin, I.,** Oterkus, S., Ali, M.E.A., Shawky, H., Oterkus, E. Experimental investigation on a towing assessment for a floating desalination plant for Egypt. Ocean Engineering, 2021, 238, 109746.
- Bayoumi, S., Ali, M.E.A., **Amin, I**., Shawky, H., Oterkus, E. Environmentally-driven design of a floating desalination platform (Case study: Reverse osmosis floating desalination platform of ras gharib, Egypt). AIMS Energy, 2021, 9(3), pp. 623–650.
- CT Nguyen, S Oterkus, E Oterkus, **I Amin**, M Ozdemir, AH El-Aassar. Modelling of Eulerian incompressible fluid flows by using peridynamic differential operator. Ocean Engineering 239, 109815.
- M Ozdemir, S Oterkus, E Oterkus, **I Amin**, CT Nguyen, S Tanaka. Evaluation of dynamic behaviour of porous media including micro-cracks by ordinary state-based peridynamics. Engineering with Computers, 1-19.
- Elminshawy, N., Mohamed A.M.I., Osama, A., Oterkus, E., Amin, I., Bassam, A. Performance and potential of a novel floating photovoltaic system in Egyptian climate on calm water surface. International Journal of Hydrogen Energy, Feb, 2022.
- Amin, I., Eshra, N., Oterkus, S., Oterkus E. Experimental investigation of motion behavior in irregular wave and site selection analysis of a hybrid offshore renewable power station for Egypt. Ocean Engineering, 2022, Vol 249, 110858.