

OMAR SHERIF FAWZY MOHAMED

Email: omar.sherif@unifi.it or omar.sheriff94@gamil.com

ORCID: 0000-0002-0371-0783

Scopus ID: 57211978934

EDUCATION

2022 – 01 University of Florence, PhD.

Present

- Major: Industrial Engineering
- Thesis: “*Development of Darrieus Vertical Axis Turbines for Hydrokinetic Applications*”

2018 – 09 The British University in Egypt and London South Bank University, MSc.

2020 – 12

- Major: Renewable Energy Engineering
- Thesis: “*Starting of Darrieus Wind Turbine: Investigations and Enhancement Methods*”
- Classification: Distinction

2012 – 09 The British University in Egypt and Loughborough University, BSc.

2017 – 07

- Major: Mechanical Engineering
- Thesis Title: “*CFD Simulation of Multiple Rotor Darrieus Wind Turbine*”
- Classification: Second Class Honours, Upper Division – 2:1

RESEARCH EXPERIENCE

2019 – 11 Research Assistant – Centre for Renewable Energy, The British University in Egypt

2021 – 12

- Manage and develop the wind energy lab equipment and computing facilities.
- Co-supervising undergraduate research.
- Prepare tutorials and solution manuals for modules related to wind energy.

2019 – 08 Research Assistant – Centre for Advanced Materials, The British University in Egypt

2018 – 05

- Carry out fluid dynamics design duties in turbomachinery design projects.
- Instruct Computational Fluid Dynamics courses organized by the centre.

PROFESSIONAL EXPERIENCE

2018 – 04 Mechanical Engineer – United Consultants

2021 – 12

- Lead the mechanical engineering team to deliver the required submittals
- Provide engineering work in the planning and design of hydraulic processes and facilities.
- Review design and documentation to ensure compliance with design criteria and standards

SKILLS

- Proficient user of ANSYS fluent, AutoCAD, Solidworks.
- Basic knowledge of OpenFOAM, C++, Matlab, and Python.
- Multi-tasker, self-learner, and possess analytical skills with an emphasis on problem-solving.
- Native in Arabic, fluent in English, basic in Italian.

PUBLICATIONS

1. **Mohamed, O. S.**, Elbaz, A. R., and Bianchini, A. (2021) “A better insight on physics involved in the self-starting of a straight-blade Darrieus wind turbine by means of two-dimensional computational fluid dynamics” *Journal of Wind Engineering and Industrial Aerodynamics*, vol. 218, 104793. DOI: [10.1016/j.jweia.2021.104793](https://doi.org/10.1016/j.jweia.2021.104793)
2. Elbaz, A. R., Ibrahim, A., **Mohamed, O. S.**, and Etman, A. (2020) “Performance of Darrieus wind turbine using slotted blades with Gurney flap” *Proceedings of the ASME Turbo Expo 2019: Turbomachinery Technical Conference and Exposition. Volume 10: Wind Energy*. Virtual, online. DOI: [10.1115/GT2020-15239](https://doi.org/10.1115/GT2020-15239)
3. **Mohamed, O. S.**, Ibrahim, A., Etman, A., Abdelfatah, A., and Elbaz, A. R. (2020) “Numerical investigation of Darrieus wind turbine with slotted airfoil blades” *Energy Conversion and Management: X*, vol. 5, 100026. DOI: [10.1016/j.ecmx.2019.100026](https://doi.org/10.1016/j.ecmx.2019.100026)
4. **Mohamed, O. S.**, Ibrahim, A., and Elbaz, A. R. (2019) “CFD investigation of the multiple rotors Darrieus type turbine performance” *Proceedings of the ASME Turbo Expo 2019: Turbomachinery Technical Conference and Exposition. Volume 9: Oil and Gas Applications; Supercritical CO2 Power Cycles; Wind Energy*. Phoenix, Arizona, USA. DOI: [10.1115/GT2019-91491](https://doi.org/10.1115/GT2019-91491)

PROJECTS

- 2019 – 11** Wind Energy Skills in Egypt and Tunisia (WESET)
2021 – 11 *Centre for Renewable Energy, The British University in Egypt*
Co-funded by the Erasmus+ Programme of the European Union
- 2018 – 09** Design of Split-Case Double Suction Pump
2019 – 07 *Centre for Advanced Materials, The British University in Egypt*
Industrial partner: Sierra Engineering and Manufacturing
- 2018 – 05** Design and Manufacturing of a Small High-Efficiency Diffuser Augmented Wind Turbine
2019 – 02 *Centre for Advanced Materials, The British University in Egypt*
Funded by Misr El-Kheir Foundation

PROFESSIONAL MEMBERSHIPS

- American Society of Mechanical Engineers.
- Egyptian Engineering Syndicate.