

CURRICULUM VITAE

Personal Data

Full Name: Mohamed Elsayed Abdelaty Elsayed Ahmed
Date of Birth: 10-02-1990.
Nationality: Egyptian
Scientific degree: PhD in Mechanical Power Engineering, 2021.
position: Lecturer at Shoubra faculty of engineering, Benha University, Egypt.
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Academic Qualification:

Degree:	PhD in Mechanical Power Engineering, 7/2021, National Research University, “Moscow Power Engineering Institute”, Moscow, Russia.
Field:	Turbo Machinery – Steam and Gas Turbines.
Title of Thesis:	Experimental Studies of New Seals for Steam Turbines.
Scholarship:	PhD Research Scholarship, 2016-2021, from National Research University, “Moscow Power Engineering Institute”, Moscow, Russia.

Degree:	MSc. in Mechanical Engineering (Mechanical Power), 2015, Shoubra Faculty of Engineering, Benha University, Benha, Egypt.
Field:	Renewable Energy Resources (Wind Energy).
Title of Thesis:	Modelling and Construction of Airfoils for Application in Small Horizontal Axis Wind Turbines.

Degree:	B.Sc. in Mechanical Engineering (Mechanical Power), 2012, Shoubra Faculty of Engineering, Benha University, Benha, Egypt.
Field:	Mechanical Power Engineering with a general grade of Excellent with honour degree (88 %).

Academic work

- **Demonstrator** in the Department of Mechanical Power Engineering, Benha University, 2012 to 2015.
- **Assistance Lecturer** in the department of Mechanical Power Engineering, Benha University from 2015 to 2016.
- **Full-Time PhD Student** in National Research University, “Moscow Power Engineering Institute”, Moscow, Russia, to complete my PhD from 2016 to 2021.
- **Lecturer** in the department of Mechanical Power Engineering, Benha University from 2021 till now.
- **Lecturer (Part time)** in the department of Mechanical Power Engineering, Institute of Aviation.
- **Lecturer (Part time)** in the department of Mechatronics, 6 October university.

✚ Engineering Consultancy

- In the period 2013-2015, I have Reviewed the designs and shop drawing of mechanical systems (plumbing - fire – hvac- solar systems) for the benefit of ERG Consultants.
- Test and balance of fresh air system for post offices in Egypt in 2023.

✚ Language's skills:

- Mother Tongue: Arabic
- English: Very good
- Russian: Very good

✚ Research Experiences:

I have published five international journal articles, 2 conference papers, and one paper in local journal, and the majority of these articles are in the fields of renewable energy and turbo machines, as well as power stations, as can be seen in the table below:

	Journal Name	Total No	Title of Publications	Authors	Cited by	Year
1	<u>Energy Reports Q1</u>	1	<u>Experimental and numerical investigation into effect of different blade configurations on performance of small-scale wind turbines</u>	<u>EAE Ahmed Mohamed</u> , OE Abdellatif, AM Osman	<u>3</u>	2021
2	<u>Scientific Reports Q1</u>	1	<u>Evaluation of small hydropower turbines installed downstream of Nile River branches (Egypt)</u>	<u>Mohamed EAE Ahmed</u> , M Attia Abdellatif, Ahmed AA Attia, Ahmed Farouk Deifalla, Mostafa EA Elsayed, MA Abdelrahman	<u>1</u>	2023
3	<u>Journal of Energy Storage Q1</u>	1	<u>Finned-encapsulated PCM pyramid solar still–Experimental study with economic analysis</u>	<u>Mohamed EAE Ahmed</u> , Saber Abdo, MA Abdelrahman, Osama A Gaheen	<u>2</u>	2023
4	<u>Energy Conversion and Management Q1</u>	1	<u>Thermal and optical investigations of various transparent wall configurations and building integrated photovoltaic for energy savings in buildings</u>	Youssef A Marei, <u>Mohamed Emam</u> , <u>Mohamed EAE Ahmed</u> , Ahmed AA Attia, MA Abdelrahman	<u>2</u>	2024
5	<u>Thermal Engineering Q2</u>	4	1- <u>Experimental Studies into the Effect that the Rotor Rotation and Flow Swirling Upstream of Seals Have on the Leakage Flowrate</u>	SS Dmitriev, BN Petrunin, <u>EAE Ahmed Mohamed</u>	<u>3</u>	2021
			2- <u>Experimental Studies of the Discharge Characteristics of Variable-Pitch Multifinned Seals</u>	SS Dmitriev, BN Petrunin, <u>EAE Ahmed Mohamed</u>		2021
			3- <u>Study into the Separation Ability of the New NRU MPEI Peripheral Sealing</u>	VG Gribin, SS Dmitriev, BN Petrunin, <u>EAE Ahmed Mohamed</u>	1	2020
			4- <u>Experimental Studies of Honeycomb Seals with Wavy Ridges on the Rotor</u>	SS Dmitriev, BN Petrunin, <u>EAE Ahmed Mohamed</u>		2018

	Conference Name	Total No	Title of Publications	Authors	Cited by	Year
1	Радиоэлектроника, электротехника и энергетика	1	1- Исследование сепарационной способности нового периферийного уплотнения нив "МЭИ"	АХМЕД М.Э.А.Э.		2018
2	2023 International Mobile, Intelligent, and Ubiquitous Computing Conference (MIUCC)	1	Developing a Floating Robot for Mechanical Control of Water Hyacinth	Mostafa EA Elsayed, Ahmed KA Mohamed, Mahmoud Shaaban, Mohamed A Abdelrahman, Mohamed EAE Ahmed , Mostafa R Rashed		2023

	Journal Name	Total No	Title of Publications	Authors	Cited by	Year
1	ERJ- Engineering Research Journal (Faculty of Engineering at Shoubra)	1	1- Numerical Investigation of the Performance of Twisted and Untwisted Blades for Small Horizontal axis Wind Turbines	ME Abdelaty, AM Osman, OE Abdellatif	2	2015

- I have a strong background in **CFD** simulations gained through my PhD studies and by supervising graduation projects, MSc, and PhD theses.
- I have a strong background in the **laboratory, experimental, numerical, and practical experience** and theoretical and engineering skills that enable me to build and develop a laboratory that keeps up with state-of-the-art research in renewable energy, thermal storage, and energy conservation and management.
- I have the necessary skills and experience to carry out excellent research accepted for publication in highly impacted journals or registered as a patent if possible.
- Certified reviewer in Sustainable Cities and Society journal , CFD letters journal and in many conferences.

List of Publications:

(A) International Journals:

1. EAE Ahmed Mohamed, OE Abdellatif, AM Osman. “Experimental and numerical investigation into effect of different blade configurations on performance of small-scale wind turbines”. Energy Reports. 7, 138-143, (2021). <https://doi.org/10.1016/j.egy.2021.06.025>

2. Dmitriev, S.S., Petrunin, B.N. & Ahmed Mohamed, E.A.E. “Experimental Studies of Honeycomb Seals with Wavy Ridges on the Rotor”. *Therm. Eng.* 65, 893–899 (2018). <https://doi.org/10.1134/S0040601518120030>.
3. V. G. Gribin, S. S. Dmitriev, B. N. Petrunin & E. A. E. Ahmed Mohamed. “Study into the Separation Ability of the New NRU MPEI Peripheral Sealing”. *Therm. Eng.* 67, 343–348 (2020). <https://doi.org/10.1134/S0040601520060038>.
4. SS Dmitriev, BN Petrunin, & E. A. E. Ahmed Mohamed. “Experimental Studies into the Effect that the Rotor Rotation and Flow Swirling Upstream of Seals Have on the Leakage Flowrate”. *Therm. Eng.* 68, 94–104 (2021). <https://doi.org/10.1134/S0040601521010122>
5. Dmitriev, S.S., Petrunin, B.N. & E. A. E. Ahmed Mohamed. “Experimental Studies of the Discharge Characteristics of Variable-Pitch Multifinned Seals”. *Therm. Eng.* 68, 295–301 (2021). <https://doi.org/10.1134/S0040601521030022>
6. Ahmed , M.E., Abdellatif, M.A., Attia, A.A.A. et al. Evaluation of small hydropower turbines installed downstream of Nile River branches (Egypt). *Sci Rep* 13, 15061 (2023). <https://doi.org/10.1038/s41598-023-41775-1>.
7. Mohamed E.A.E. Ahmed, Saber Abdo, M.A. Abdelrahman, Osama A. Gaheen, Finned-encapsulated PCM pyramid solar still – Experimental study with economic analysis, *Journal of Energy Storage*, Volume 73, Part A, <https://doi.org/10.1016/j.est.2023.108908>.
8. Youssef A. Marei, Mohamed Emam, Mohamed E.A.E. Ahmed, Ahmed A.A. Attia, M.A. Abdelrahman, Thermal and optical investigations of various transparent wall configurations and building integrated photovoltaic for energy savings in buildings, *Energy Conversion and Management*, Volume 299, 2024, <https://doi.org/10.1016/j.enconman.2023.117817>.

(B) International Conferences:

1. МЭАЭ Ахмед, исследование сепарационной способности нового периферийного уплотнения ниу" мэи", РАДИОЭЛЕКТРОНИКА, ЭЛЕКТРОТЕХНИКА И ЭНЕРГЕТИКА, 2018, pp. 823–923.
2. M. E. A. Elsayed, A. K. A. Mohamed, M. Shaaban, M. A. Abdelrahman, M. E. A. E. Ahmed and M. R. Rashed, "Developing a Floating Robot for Mechanical Control of Water Hyacinth," *2023 International Mobile, Intelligent, and Ubiquitous Computing Conference (MIUCC)*, Cairo, Egypt, 2023, pp. 1-8, doi: 10.1109/MIUCC58832.2023.10278351.

(C) Local Journals:

1. Abdelaty, M.E., A.M. Osman and Abdellatif, O.E. “Numerical Investigation of the Performance of Twisted and Untwisted Blades for Small Horizontal Axis Wind Turbines.” Engineering Research Journal- Faculty of Engineering (Shoubra) (July 2015, Vol.25).

Current Research interests:

- I actively participate in the supervision of many postgraduate students, as well as in many research teams working on several research points that cover the following research areas:

Field	Research point	Methodology	
		Exp.	Num.
Steam and Gas turbines	We are enhancing the thermal and electrical performance of Turbo machines by decreasing amount of leakage through seals and remove excess moisture from last stage.	✓	✓
Solar water desalination applications	Boosting the productivity of Solar water desalination techniques via innovating and testing new solar designs still operating under Concentrated solar Energy.	✓	-
	We are improving the productivity of RO membranes by regulating the temperature of the saltwater feed using solar Energy and different heat exchanger designs.	✓	-
Energy storage systems	Thermal energy storage uses phase change materials (low temperature range) for heating, cooling, and domestic applications.	✓	
	Thermal energy storage using molten salts (<u>high</u> -temperature range) for electricity generation applications.	✓	
	Design, evaluate and analyze the performance of hydraulic energy storage systems	✓	
Solar collectors	Improving the performance of flat plat and evacuated tube solar collectors using hybrid-Nano fluids.	✓	
	Studying the performance of flat plat and evacuated tube solar collectors by using pulsate flow techniques	✓	
Energy efficiency in buildings.	Innovate and test new building facade designs combined with semi-transparent photovoltaic glazing to enhance energy efficiency in buildings.	✓	✓
Wind Energy	A study of various passive techniques for improving wind turbine aerodynamic performance.	✓	✓
	Study of the effect of turbulent characteristics on the performance of wind turbines	-	✓

Research projects:

- **A Supervisor** of a research project funded by the ministry of higher education (Management of supporting excellence), **Egypt**, under “Design and implementation of small-scale wind turbines” from November 2014 to November 2015.
- **A Member** of the work team in the National Alliance for the design and manufacture of the electric car in Egypt.
- **A Member** of a research project funded by STDF with collaboration with BUE under title: “A Guide Study for Integrated Sustainable Solutions for Energy & Water Management in Future Education Buildings in Egypt” from Dec. 2022 till now.

Courses Assisting in Teaching:

- Renewable energies and environmental protection
- Turbomachinery
- Advanced numerical analyses.
- Computer applications in fluid mechanics
- Heat transfer
- Gas dynamics
- Wind Energy
- Fluid Power.
- Solar cells fundamentals
- Solar energy systems
- Water desalination
- Internal Combustion Engines
- Fluid machines
- Economics and Project Management

Important links:

- Google scholar account:
<https://scholar.google.com/citations?user=eCTGccIAAAAJ&hl=en>
- ResearchGate account:
<https://www.researchgate.net/profile/Eae-Ahmed-Mohamed>
- Scopus account:
<https://www.scopus.com/authid/detail.uri?authorId=57204775064>
- Orcid account:
<https://orcid.org/0000-0002-1897-4933>