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, Specialization (Electro and Heat Power Engineering), 7/2021.
position	Lecturer at Shoubra faculty of engineering, Benha University, Egypt.
Marital Status:	Married
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My research interests lie in the fields Turbo Machinery, Steam and Gas Turbines, wind energy, solar energy (photovoltaic, solar collector) and solar water desalination. I have a particular focus on renewable energy technologies and water desalination systems.

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 from 2022 till now.
- **Lecturer (Part time)** in the department of Mechatronics, 6 October university from 2022 to 2025.

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 2023-2024.**

Language's skills:

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

Research Experiences:

I have published ten 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, water desalination 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	Energy Reports Q1	1	Experimental and numerical investigation into effect of different blade configurations on performance of small-scale wind turbines	EAE Ahmed Mohamed , OE Abdellatif, AM Osman	10	2021
2	Scientific Reports Q1	1	Evaluation of small hydropower turbines installed downstream of Nile River branches (Egypt)	Mohamed EAE Ahmed, M Attia Abdellatif, Ahmed AA Attia, Ahmed Farouk Deifalla, Mostafa EA Elsayed, MA Abdelrahman	7	2023
3	Journal of Energy Storage Q1	1	Finned-encapsulated PCM pyramid solar still–Experimental study with economic analysis	Mohamed EAE Ahmed, Saber Abdo, MA Abdelrahman, Osama A Gaheen	78	2023
4	Energy Conversion and Management Q1	1	Thermal and optical investigations of various transparent wall configurations and building integrated photovoltaic for energy savings in buildings	Youssef A Marei, Mohamed Emam, Mohamed EAE Ahmed, Ahmed AA Attia, MA Abdelrahman	50	2024
5	Energy Q1	1	Experimental evaluation of recycled aluminum cans solar air heater: Comprehensive 4E assessments	MA Abdelrahman, Osama A Gaheen, Mohamed A Aziz, Mostafa R Rashed, Mohamed EAE Ahmed	3	2025
6	Case Studies in Thermal Engineering Q1	1	Energy, exergy, environmental, and economic (4E) analysis of an indirect solar cooker	Tao Zhang, Mahmoud A. Abdelhamid, Mohamed E.A.E. Ahmed, Fatma Shaaban, Sarah O. Makram, Zhao Zhang, Tarek Kh. Abdelkader	2	2025

7	Thermal Engineering Q2	4	1- Experimental Studies into the Effect that the Rotor Rotation and Flow Swirling Upstream of Seals Have on the Leakage Flowrate	SS Dmitriev, BN Petrunin, EAE Ahmed Mohamed	4	2021
			2- Experimental Studies of the Discharge Characteristics of Variable-Pitch Multifinned Seals	SS Dmitriev, BN Petrunin, EAE Ahmed Mohamed	1	2021
			3- Study into the Separation Ability of the New NRU MPEI Peripheral Sealing	VG Gribin, SS Dmitriev, BN Petrunin, EAE Ahmed Mohamed	1	2020
			4- Experimental Studies of Honeycomb Seals with Wavy Ridges on the Rotor	SS Dmitriev, BN Petrunin, EAE Ahmed Mohamed		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 ниу "мэи"	АХМЕД М.Э.А.Э.	1	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	5	2015

- My PhD studies and my experience overseeing graduation projects, MSc theses, and PhD theses have given me a solid foundation in **CFD** simulations.

- I have a solid background in laboratory work, as well as experimental, numerical, practical, theoretical, and engineering skills. These allow me to create and grow a laboratory that stays up to date with cutting edge research in thermal storage, renewable energy, and energy conservation and management.

- I possess the knowledge and expertise to conduct outstanding research that will be accepted for publication in highly regarded journals or, if it is feasible, filed as a patent.
- In addition to several conferences, I am a credentialed reviewer for the journals Sustainable Cities and Society and CFD Letters.

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.egyr.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.
9. M.A. Abdelrahman, Osama A. Gaheen, Mohamed A. Aziz, Mostafa R. Rashed, Mohamed E.A.E. Ahmed, Experimental evaluation of recycled aluminum cans solar air heater:

Comprehensive 4E assessments, Energy, Volume 316, 2025, 134480, ISSN 0360 5442, https://doi.org/10.1016/j.energy.2025.134480.

10. Tao Zhang, Mahmoud A Abdelhamid, Mohamed EAE Ahmed, Fatma Shaaban, Sarah O Makram, Zhao Zhang, Tarek Kh Abdelkader, Energy, exergy, environmental, and economic (4E) analysis of an indirect solar cooker, Case Studies in Thermal Engineering, Volume 71, 2025,106249, ISSN 2214-157X, https://doi.org/10.1016/j.csite.2025.106249 .

(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** (high-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 to June 2025.

Courses Assisting in Teaching:

- Renewable energies and environmental protection
- Turbomachinery
- Heat transfer
- Gas dynamics
- Wind Energy
- Economics and Project Management
- Thermo-dynamics
- Solar cells fundamentals
- Solar energy systems
- Water desalination
- Internal Combustion Engines
- Fluid mechanics
- Pipeline network

Contributing to university development in the field of specialization	▪ Contribution to preparing the proposed curricula for the program of mechanical engineering department, as part of the programs for developing and updating the study programs at the Faculty of Engineering in Shoubra, which was approved for study starting from the academic year 2023-2024 (Mechanical power engineering).

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