

1- Personal Details

Name : Dr. Mohamed Sameh Abdalghany Salem
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2- Area of specialization:

Major	Mechanical Power Engineering
Minor	Desalination, Energy Engineering

3- Education & Qualifications

Date	Degree	University name	Country	Title of the Dissertation
2008	Bachelor	Mansoura University	Egypt	Design of a solar power plant
2016	Master	Mansoura University	Egypt	Dynamic Characteristics of Adsorbed Natural Gas Storage during Charging and Discharging Processes
2020	Ph.D.	Mansoura University	Egypt	Development of A Membrane Distillation System Utilizing Renewable Energy

4- Professional Activities:

Job Title	Place	Country	From	To
Director of Mansoura University Nano Research Center (MuNano)	Mansoura University	Egypt	March 2024	July 2024
Director of FABLAB, Faculty of Engineering	Mansoura University	Egypt	June 2021	July 2024

5- Teaching Experiences

#	Teaching Experiences	University	From	To
1	Assistant professor of mechanical engineering	Majmaah University	August 2025	-----
2	Associate professor of mechanical power engineering	Mansoura university	April 2025	August 2025
3	Assistant professor of mechanical power engineering	Mansoura university	March 2020	April 2025
4	Assistant lecturer of mechanical power engineering	Mansoura university	June 2016	March 2020
5	Demonstrator of mechanical power engineering	Mansoura university	May 2009	June 2016

6- Areas of Specialization

#	Areas of Specialization
1	Water Desalination
2	Energy Engineering
3	Chemical and Petrochemicals Engineering

7- Current membership in professional organizations

#	Membership	ID
1	Egyptian Syndicate of Engineers	-----

8- Publications (most important publications in the last 5 Years)

#	Publications / Presentations	Journal (Conference)	Publishing Year
1	Battery Thermal Management Systems with Dual PCMs for Seasonal Adaptivity and Liquid Cooling for Fast Charging/Discharging	International Journal of Refrigeration	2025
2	Photothermal magnetic Janus fabric vs cast membranes and their application in solar-based desalination	Applied Water Science	2025

3	Maximizing exergy and energy efficiency in PV/TEG hybrid systems through beam splitting under best concentration conditions	Applied Thermal Engineering	2025
4	Integrated Optimization of Multi-Parameter Cooling Strategies in Data Centers Using Numerical Simulation and Response Surface Methodology	International Journal of Refrigeration	2025
5	Exploratory study on electric batteries thermal performance metrics and thermal management systems evaluation	Journal of Energy Storage	2025
6	Advances in thermal management systems for Li-Ion batteries: A review	Thermal Science and Engineering Progress	2024
7	Data centers cooling: A critical review of techniques, challenges, and energy saving solutions	International Journal of Refrigeration	2024
8	Enhancing photovoltaic performance through solar radiation splitting: A beam splitter-assisted hybrid approach with 2-D tracking and PCM integration	Journal of Energy Storage	2024
9	Transient mass and heat transport modeling in a multi-tray packed bed solid desiccant dehumidifier: A parametric analysis	International Journal of Refrigeration	2024
10	New hybrid concentrated photovoltaic/membrane distillation unit for simultaneous freshwater and electricity production	Desalination	2023
11	A modified support pillar design for a flat vacuum-based solar thermal collector	Sustainable Energy Technologies and Assessments	2023
12	Adaptation of the solar spectrum to improve the use of sunlight: A critical review on techniques, applications, and current trends	Advanced Sustainable Systems	2023
13	Performance of a photovoltaic/thermoelectric generator hybrid system with a beam splitter under maximum permissible operating conditions	Energy Conversion and Management	2023
14	Performance evaluation of a novel multi-tray packed bed solid desiccant dehumidification system.	International Journal of Refrigeration	2023
15	Synthesis of Urchin-Shaped Gold Nanoparticles Utilizing Green Reducing and Capping Agents at Different Preparation Conditions: An In Vitro Study	Sustainability	2022
16	Novel Magnetic Mixed Cellulose Acetate Matrix Membranes with Oxygen-Enrichment Potential	Membranes	2022
17	Simulation Assessment of Inlet Parameters and Membrane-Surface-Structure Effects on CO ₂ Absorption Flux in Membrane Contactors	Sustainability	2022
18	Flow characteristics in non-conventional combustion chamber configurations	Physics of Fluids	2022
19	A Micro-Metal Inserts Based Microchannel Heat Sink for Thermal Management of Densely Packed Semiconductor Systems	Sustainability	2022
20	Investigating the performance characteristics of low concentrated photovoltaic systems utilizing a beam splitting device under variable cutoff	Renewable Energy	2022
21	Year-long energy analysis of building brick filled with phase change materials	Journal of Energy Storage	2022
22	Solid desiccant-based dehumidification systems: A critical review on configurations, techniques, and current trends	International Journal of Refrigeration	2022
23	Thermal analysis of a hybrid high concentrator photovoltaic/membrane distillation system for isolated coastal regions	Solar Energy	2021

9- MAJOR RESEARCH PROJECTS

#	Research Project	Status	Funded by
1	Improving photovoltaic conversion efficiency by cooling solar panels using atmospheric water harvesting hydrogel	On hold	Center of Excellence for Energy (COE), US-AID, USA
2	Solar Evaporation Prototype based on a Janus magnetic membrane for a sustainable desalination process	Now	Science, Technology, and Innovation Funding Authority (STDF), Egypt
3	Novel magnetic membranes for gas separation	Finished	Science, Technology, and Innovation Funding Authority (STDF), Egypt