

Name: Mohamed Mostafa Hassan Tawfik

Current Title: Assistant Professor, Mechanical Power Engineering Department, Faculty of Engineering, Mansoura University

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FIELDS OF SPECIALIZATION

Concentrated Solar Power (CSP)

Photovoltaic (PV) temperature control

Spectral filtration of solar spectrum

Solar simulation

DEGREES

- **Ph.D.**, in New and Renewable Energy Engineering from the School of Aerospace Transport and Manufacturing, Cranfield University, Cranfield, Bedford, Bedfordshire, UK, 2018, Thesis topic: Concentrated Solar Power (CSP).
- **M.S.**, in Mechanical Power Engineering from Faculty of Engineering, Mansoura University, Mansoura, Egypt, 2014, Thesis topic: Water Hammer
- **B.S.E.E.**, with an excellent degree with an Honor in Mechanical Power Engineering from the Faculty of Engineering, Mansoura University, Mansoura, Egypt, 2008.

ACADEMIC AND INDUSTRIAL POSITIONS

21/09/2022 – 20/09/2023, Manager of Undergraduate Projects Unit, Faculty of Engineering, Mansoura University

Responsibilities:

- Supervising funding of all undergraduate students' projects
- Encouraging students to entrepreneurship

21/09/2021 – 20/09/2022, Manager of Undergraduate Projects Unit, Faculty of Engineering, Mansoura University

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- Supervising funding of all undergraduate students' projects
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27/08/2019 – 26/08/2020, Deputy Director at Center of Renewable Energy (CORE), Mansoura University

Responsibilities:

- Organizing renewable energy research activity in the Faculty of Engineering, Science, and Agriculture

RESEARCH PROJECTS

- N/A

CONSULTANT

- N/A

AWARDS

Best Poster Presentation Award on 07/09/2017 from Ph.D. Poster Presentation Day at Cranfield University.

Best Poster Presentation Award on 26/04/2017 from Manufacturing Doctoral Community at Cranfield University.

PROFESSIONAL RECOGNITION

PATENTS, PUBLICATIONS

Patents and disclosures: N/A

Journal papers:

1. M. Allam, **M. Tawfik**, M. Bekheit, E. El-Negiry, "Experimental Investigation on Performance Enhancement of Parabolic Trough Concentrator with Helical Rotating Shaft Insert," *Sustainability*, Vol. 14, pp. 14667, **2022**.
2. **M. Tawfik**, "A review of directly irradiated solid particle receivers: Technologies and influencing parameters," *Renewable and Sustainable Energy Reviews*, Vol. 167, pp. 112682, **2022**.
3. M. Allam, **M. Tawfik**, M. Bekheit, E. El-Negiry, "Heat transfer enhancement in parabolic trough receivers using inserts: A review," *Sustainable Energy Technologies and Assessments*, Vol. 48, pp. 101671, **2021**.
4. RY Mokhtar, **MM Tawfik**, MN Sabry, "Semi-Analytic modeling of laminar forced convection in a rectangular duct for arbitrary boundary conditions and inlet temperature profile," *Mansoura Engineering Journal*, Vol. 45, pp. 9-18, **2020**.
5. **M. Tawfik**, X. Tonnellier, C. Sansom, "Light source selection for a solar simulator for thermal applications: A review," *Renewable and Sustainable Energy Reviews*, Vol. 90, pp.

802–813, **2018**.

6. C. Sansom, **M. Tawfik**, X. Tonnellier, "Numerical study of lens geometry and material effects on allowed concentration ratio of a lens-lens beam generator solar concentrator," in the Proceedings of the *2nd Renewable Energy Sources - Research and Business RESRB 2017 Conference*, **2017**.
7. **M. Tawfik**, "Experimental studies of nanofluid thermal conductivity enhancement and applications: A review," *Renewable and Sustainable Energy Reviews*, Vol. 75, pp. 1239–1253, **2017**.
8. **M. Tawfik**, X. Tonnellier, C. Sansom, "Parameters Influencing the Output Precision of a Lens-Lens Beam Generator Solar Concentrator," *International Journal of Energy and Power Engineering*, Vol. 11, pp. 428-436, **2017**.
9. H. Mansour, M.S. Mohamed, B. Djebedjian, **M. Tawfik**, "Simulation of Water Hammer in Viscoelastic Pipes," *Mansoura Engineering Journal*, Vol. 38, pp. 54-65, **2013**.

Conference publications:

1. M. Essam, M. Mansour, M. El-Sheikh, **M. Tawfik**, "Design of a Closed Parabolic Trough Solar Concentrator Test Facility," The International Undergraduate Research Conference, Vol. 5, pp. 66-70, **2021**.
2. **M. Tawfik**, M. Salem, "Key Parameters Affecting Concentration Ratio of a Solar Concentrator Based on Lens-Lens Beam Generator Configuration," in the Proceedings of the *43rd ASES National Solar Conference 2014, SOLAR 2014*, **2014**.
3. M. Salem, **M. Tawfik**, A. Hamed, "Analysis and Performance of Solar Concentrating-Tracking System," in the Proceedings of the *7th General International Engineering Conference*, **2010**.

