Name: Asmaa Ali Khater

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

Contact Information

Address: Mechanical Power Engineering Department, Faculty of Engineering, Mansoura University El-Mansoura 35516, Egypt.

Email: asmaa_elawadhi@mans.edu.eg

Phone number: +201062508401

FIELDS OF SPECIALIZATION

- Microfluidics
- Renewable energy
- Hydraulics

DEGREES

- **PhD, 2019**, University of Calgary, Canada "Experimental and numerical study of temperature-actuated droplets within microfluidics", GPA =4.0.
- **MSc, 2014,** Faculty of engineering, Mansoura University, Egypt, "Applications of Microfluidics in Biological Cell Separation".
- **BSc, 2010,** Faculty of engineering, Mansoura University, Excellent with honor. Rank: First

ACADEMIC AND INDUSTRIAL POSITIONS

- Assistant professor, Mechanical Power Engineering Department, Faculty of Engineering, Mansoura University, Egypt (September 2019 – present).
- Teaching assistant, Schulich School of Engineering, University of Calgary, Canada (January 2015 - March 2019).
- Teaching assistant, Mechanical Power Engineering Department, Faculty of Engineering, Mansoura University, Egypt (Feb. 2011 - November 2014).

AWARDS AND HONORS

- Dean's International Doctoral Award, University of Calgary | 2015
- The 2018 Peer-Reviewed Journal Award, University of Calgary | 2018

PATENTS, PUBLICATIONS

Journal Papers

[1] Elmarghany, M.R., Radwan, A., Shouman, M.A., **Khater, A.A**., Salem, M.S. and Abdelrehim, O., 2022. Year-long energy analysis of building brick filled with phase change materials. Journal of Energy Storage, 50, p.104605.

[2] Abo-Zahhad, E.M., Memon, S., Radwan, A., Elmarghany, M.R., **Khater, A.**, Ghenai, C. and Abdelrehim, O., 2022. A new fusion-edge sealed vacuum for concentrated photovoltaic/thermal solar collector in comparison to a conventional system. Case Studies in Thermal Engineering, p.102003.

[3] Hegazi, A.A., Abdelrehim, O. and **Khater, A**., 2021. Parametric optimization of earth-air heat exchangers (EAHEs) for central air conditioning. International Journal of Refrigeration, 129, pp.278-289.

[4] **Khater, A.**, Abdelrehim, O., Mohammadi, M., Mohamad, A. and Sanati-Nezhad, A., 2021. Thermal droplet microfluidics: from biology to cooling technology. TrAC Trends in Analytical Chemistry, 138, p.116234.

[5] Radwan, A., Katsura, T., Memon, S., Abo-Zahhad, E.M., Abdelrehim, O., Serageldin, A.A., Elmarghany, M.R., **Khater, A.** and Nagano, K., 2020. Development of a new vacuum-based photovoltaic/thermal collector, and its thermal and exergy analyses. Sustainable Energy & Fuels, 4(12), pp.6251-6273.

[6] **Khater, A.,** Abdelrehim, O., Mohammadi, M., Azarmanesh, M., Janmaleki, M., Salahandish, R., Mohamad, A. and Sanati-Nezhad, A., 2020. Picoliter agar droplet breakup in microfluidics meets microbiology application: numerical and experimental approaches. Lab on a Chip, 20(12), pp.2175-2187.

[7] **Khater, A.**, Mohammadi, M., Mohamad, A. and Nezhad, A.S., 2019. Dynamics of temperature-actuated droplets within microfluidics. Scientific reports, 9(1), pp.1-11.

[8] Abdelrehim, O., **Khater, A.,** Mohamad, A.A. and Radwan, A., 2019. Two-phase simulation of nanofluid in a confined single impinging jet. Case Studies in Thermal Engineering, 14, p.100423.

[9] **Khater, A.,** Sabry, M.N., and Hossam AbdelMeguid, "Application of Deterministic Lateral Displacement in Biological Cell Separation." Mansoura University, Faculty of Engineering, Mechanical Power Dept., Egypt. 39.3 (2014).doi: https://doi.org/10.1016/j.csite.2022.102003.

Conference

Publications

[1] **A. Khater**, A. Mohamad, and A. S. Nezhad, “Droplets Generation in Microfluidics using Flow-focusing Configuration” Poster presented at: 17th Annual Alberta Biomedical Engineering Conference, 2016 October 21-23, Banff, AB, Canada.

[2] **Khater, A.**, Sabry, M.N., and Hossam AbdelMeguid, "Design Parameters for Deterministic Lateral Displacement Separation Technique in Biomems." 4Th European Conference on Microfluidics, Limerick, Ireland (2014).