Curriculum Vitae

Mehdi Kiyasatfar

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Objective

Scientific and technical research with special interests in following areas:

Renewable Energy Systems, Fluid Flow, Microfluidics, Nano-Bio, Theranostics, FSI, Soft Robotics

Current Positions

- Head of Mechanical Engineering Department, Khazar University, Baku, Azerbaijan (since 2021)
- Supervisor of Society of Mechanical Engineering (SME), Khazar University, Baku, Azerbaijan (since 2020)

Education

- Ph.D. in Mechanical Engineering - Energy Conversion (2012-2016)
  Urmia University, Iran (*Rank 1*)
- B.Sc. & M.Sc. in Mechanical Engineering (2002-2010)
  Urmia University, Iran (*Rank 1*)

Work Experience

- Assistant professor and Head of Mechanical Engineering Department, Khazar University, Baku, Azerbaijan, 2018-present
- Head of Mechanical Engineering Lab, Khazar University, Baku Azerbaijan, 2019-present
- Researcher, Nanotechnology Lab, Khazar University, Baku, Azerbaijan, 2018-present
- Adjunct faculty, Urmia University of Technology, Iran, 2010-2016
- Adjunct faculty, Technical and vocational University, Iran, 2012-2016

- Director of the Heat Transfer Lab, Urmia University, Iran, 2008-2016
- Professional Engineer (PE) - West Azerbaijan Construction Engineering Organization, Iran

Computer and Programming Skills

- Conversancy in working with: COMSOL, SOLIDWORKS, ANSYS Fluent, OpenFOAM
- Programming Language: MATLAB, C++, Python
- Computer Literacy: Photoshop, Microsoft Office, Linux, and Windows

Selected Publications

- M. Serpoush, M. Kiyasatfar, J. Ojaghi, “Impact of Fe3O4 Nanoparticles on Wheat and Barley Seeds Germination and Early Growth” Materials Today: Proceedings (2022).
- M. Seyedzavvar, H. Abbasi, M. Kiyasatfar, R. Najati, "Investigation on tribological performance of CuO vegetable-oil based nanofluids for grinding operations", International Journal of Advances in Manufacturing 8 (2020) 344-360.
- AR Haghighi, N Aliashrafi, M Kiyasatfar, "Mathematical Modeling of Micropolar Blood Flow in a Stenosed Artery Under the Body Acceleration and Magnetic Field", International Journal of Industrial Mathematics 11 (2019) 1-10.
- M. Kiyasatfar, "Convective heat transfer and entropy generation analysis of non-Newtonian power-law fluid flows in parallel-plate and circular microchannels under slip boundary conditions", International Journal of Thermal Science 128 (2018) 15-27.
- M. Kiyasatfar, N. Nama, "Particle manipulation via integration of electroosmotic flow of power-law fluids with integrated standing surface acoustic waves (SSAW)", Wave motion 80 (2018) 20-36.
- J. Mosayebi, M. Kiyasatfar, S. Laurent, "Synthesis, Functionalization, and Design of Magnetic Nanoparticles for Theranostic Applications", Adv. Healthcare Mater (2017) 1700306.
- M. Kiyasatfar, N. Pourmahmoud, "Laminar MHD flow and heat transfer of non-Newtonian fluids in square microchannels", International Journal of Thermal Sciences 99 (2016) 26-35.

- A. R. Haghighi, M. Shahbazi-Asl, M. Kiyasatfar, "Numerical Investigation of Pulsatile Blood Flow in Stenosed Artery", Int. J. Appl. Comput. Math, 2 (2016) 649–662.
- A. R. Haghighi, M. Shahbazi-Asl, M. Kiyasatfar, "Mathematical modeling of unsteady blood flow through elastic tapered artery with overlapping stenosis", J Braz. Soc. Mech. Sci. Eng., 37 (2015) 571–578.
- M. Kiyasatfar, N. Pourmahmoud, I. Mirzaee, "Investigation of thermal behavior and fluid motion in DC magnetohydrodynamic pumps", THERMAL SCIENCE, volume 18, S 2, (2014) A.
- M. Kiyasatfar, N. Pourmahmoud, I. Mirzaee, "Thermal behavior and entropy generation rate analysis of a viscous flow in MHD micropumps", J Mech Sci Technol ,26 (6) (2012) 1-9.
- M. Kiyasatfar, N. Pourmahmoud, M. M. Golzan, I. Mirzaee, "Effect of Magnetic Flux Density and Applied Current on Temperature, Velocity and Entropy Generation Distributions in MHD Pumps", Sensors & Transducers Journal, Vol. 124, Issue 1, (2011) 72-82.
- M. Kiyasatfar, N. Pourmahmoud, M. M. Golzan, M. Eskandarzade, "Distributed Point Source Technique in Modeling Surface-Breaking Crack in a MFL Test", *Sensors & Transducers Journal*, Vol. 133, Issue 10, October (2011) 108-114.

Research Projects

- Electroosmotic flow of power-law fluids in a hydrophobic microfluidic channel with integrated standing surface acoustic waves (SSAW) for particle/cell manipulation.

  Pennsylvania State University, USA.

- Synthesis, Functionalization, and Design of Magnetic Nanoparticles for Theranostic Applications.

  University of Mons, Mons, Belgium.

- Synthesis of Magnetic Oxide Nanoparticles for Biomedical Applications (Experimental work).

  Nano technology research center, Urmia University, Iran.

Key Achievement

- **Patent**

Smart comprehensive system for record and management of fleet heavy equipment.

Reviewer

- International Journal of Mechanical Sciences
- International Journal of Thermal science
- Thermal Science and Engineering Progress
- Crystal Growth & Design
- Theranostics
- Chemistry Select
- Small

Languages

- Azerbaijani (Mother tongue)
- English (Fluent)
- Turkish (Native)
- Persian (Native)

Skills

- Mathematical Modeling / Numerical simulations / CFD Methods
- Experimental Laboratory