Behnam Keshavarzian

Department of Mechanical Eng., Islamic Azad University, Boroujerd, Iran

Email:

Behnam.keshavarzian@gmail.com

Behnam.Keshavarzian@iau.ac.ir

Cell: (+98) - 936- 220-9845

Google Scholar

PROFILE

I am Lecturer in Mechanical Engineering department. I am really keen on Fluid Induced Vibration (FIV), Heat Transfer in Porous Media, boundary layer problems, Machine learning, Phase changing materials (PCM), and air conditioning of high-rise buildings.

ACADEMIC BACKGROUND

M.Sc. in Mechanical Engineering – Energy Conversion

Bu-Ali Sina University, Hamedan, Iran. Sep. 2007 – June 2010

B. SC in Mechanical Engineering –Fluid Mechanics and Heat Transfer

Tabriz University, Tabriz, Iran. Sep. 2002 - Sep. 2007

PROFESSIONAL BACKGROUND

Faculty member of Islamic Azad University-Boroujerd Branch, Iran (**2011 up to now**)
Member of the Organization of Construction Engineering System (**2012 up to now**)

Job Duties:

- Qualified to design and supervise residential gas supply.
- Qualified to design and supervise the construction of heating and cooling systems of high-rise buildings.
- Qualified to design and supervise building mechanical facilities.

Academic Projects

- Investigation of the effects of fluid induced vibration (FIV) in heat transfer enhancement by considering the cross flow in heat exchanger.
- Numerical investigation of heat transfer and fluid flow in a channel with square block by Simple method (FORTRAN code).
- Investigation of non-Newton fluid by Smooth particle Hydrodynamics (SPH) method (FORTRAN code).
- Investigation of fluid flow and heat transfer in porous media.
- Numerical simulation of multi component multi-phase flow using Lattice Boltzmann method (FORTRAN code).

- Numerical simulation of high Mach number and shock wave by using ANSYS CFX and MATLAB code.

RESEARCH INTERESTS

- Fluid induced vibration (FIV)
- Computational Fluid Dynamic (Laminar flow)
  - Control Volume Modeling
  - Smoothed- Particle Hydrodynamics (SPH)
  - Finite Element Modeling
- Porous media
- Machine Learning, Artificial intelligent

LANGUAGE PROFOCIENY

- **English** | Proficient
  - IELTS (Academic): Overall 6.5 (L 6.5 – R 6.5 – W 6 – S 6) Date: 2023.9.26
  - Doulingo Grade: Overall: **140** DATED: 2023.2.2

    (Literacy: 150 Comprehension: 150 Conversation: 120 Production:95)
- **Persian** | Native

PUBLICATIONS

1. H. O Sayehvand, S. Khorshidi, **B. Keshavarzian,"** Investigation of sell side overall performance of a novel shell-and-double-concentrate-tube heat exchanger with simple and perforated helical baffles", In. J. of Engineering, vol. 36, p. 1972-1981, **2023**.
2. H. Sayehvand, S. Abolfathi, and **B. Keshavarzian**, "Investigating heat transfer enhancement for PCM melting in a novel multi-tube heat exchanger with external fins," *J. Energy Storage*, vol. 72, no. PE, p. 108702, **2023**, doi: 10.1016/j.est.2023.108702.
3. **B. Keshavarzian**, J. M. N. Abad, M. Mir, M. Keshavarzian, and R. Alizadeh, "The optimization of natural frequency on the cross flow-induced vibration and heat transfer in a circular cylinder with LSTM deep learning model," *J. Taiwan Inst. Chem. Eng.*, vol. 148, p. 104969, **2023**, doi:https://doi.org/10.1016/j.jtice.2023.104969.
4. **B. Keshavarzian** and H.-O. Sayehvand, "Validity of the boundary layer assumptions for natural convection around a cylinder in a porous medium," *Results Eng.*, vol. 18, p. 101069, Jun. **2023**, doi: 10.1016/j.rineng.2023.101069.
5. **B. Keshavarzian** and H.-O. Sayehvand, "Validation of the local thermal equilibrium assumption for free convection boundary layer flow over a horizontal cylinder embedded in an infinite saturated porous medium," *Results Phys.*, vol. 44, p. 106112, Jan. **2023**, doi: 10.1016/j.rinp.2022.106112.

6. **B. Keshavarzian** and H. Sayehvand, "The effect of the flow and solid matrix parameters on the Nusselt number for free convection over horizontal cylinder by considering the boundary layer and local thermal non-equilibrium model," *J. Therm. Anal. Calorim.*, no. 0123456789, Dec. **2022**, doi: https://doi.org/10.1007/s10973-022-11801-x.
7. **B. Keshavarzian**, M. Shamshiri, M. Charmiyan, and A. Moaveni, "Optimization of an Active Electrokinetic Micromixer Based on the Number and Arrangement of Microelectrodes," *J. Appl. Fluid Mech.*, vol. 11, no. 6, pp. 1531–1541, **2018**, doi: 10.29252/JAFM.11.06.28283.
8. **B. Keshavarzian** and M. Khosravi, "Numerical investigation of the structural frequencies effects on flow induced vibration and heat transfer," *J. Mater. Environ. Sci.*, vol. 6, no. 7, pp. 1949–1956, **2015**.

Conferences

9. M. Mekanic, **B. Keshavarzian**, Numerical investigation of flow-induced vibration and heat transfer from a heated light circular cylinder in a cross flow, 2th Fluid Dynamics Conference, Shiraz, Iran, 2010.
10. **B. Keshavarzian**, M. Aghakhani, S. A. Hosseini, Optimization of subcutaneous welding process in steel skeletons using nanotechnology, The first national conference on industrial welding and modern building, Azad University, Malayer, Iran, 2014.
11. **B. Keshavarzian**, S. A. Hosseini, A. Shamivand, E. Mahmoudpour, The importance of eye inspection for metal skeleton welding, The first national conference on industrial welding and modern building, *Azad University*, Malayer, Iran.
12. E. Sori, A. Chang Maryam, A. Hosseini, **B. keshavarzian**, Design and construction of tools for printing three-dimensional, Conference on Advance Machining and machine tools, Tehran, Iran, 2015.
13. **B. keshavarzian**, M. Jodaki, Investigation of the effect of Width Butterfly on efficiency of centrifugal pump, Fourth National Conference new research, Tehran, Iran, 2016.
14. **B. Keshavarzian**, S. A. Hosseini, Investigation of the effects of structural frequencies on flow induced vibration of four circular cylinders in cross flow, International Congress of Interdisciplinary Studies in Science and Engineering, No. 19501, held on 15th to 16th July 2017 in Tehran, Iran.

COMPUTER/SOFTWARE KILLS

- **Software:** ANSYS-CFX, COMSOL, CATIA, SOLID WORKS, AUTOCAD.
- **Programming Language:** MATLAB, FORTRAN, Pascal.
- **MS Office:** Word, Excel, Power Point, Tacplot

REFERENCES

Faculty member of Engineering, Bu-Ali Sina Uni., Hamedan ,Iran.

Academic Reference #01
Associate Professor
Habib Ollah Sayehvand
Contact: hsayeh@basu.ac.ir

Academic Reference #02
Associate Professor
Mohsen Goodarzi
Contact: M.Goodarzi@basu.ac.ir