Curriculum Vitae
Hossein Khorasanizadeh

Professor, Faculty of Mechanical Engineering, University of Kashan, Iran

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Google Scholar Profile: https://scholar.google.com/citations?user=Zu4SOgIAAAAJ&hl=en

Research areas

(1) Solar Energy, Solar Thermal Systems and Solar Radiation Simulations
(2) Fluid Mechanics and Computational Fluid Dynamics (CFD)
(3) Heat Transfer and Thermal Engineering
(4) Thermal Behavior of Nanofluids
(5) Thermodynamics and Exergy Analysis
(6) Refrigeration and Air Conditioning
(7) Modern Cooling and Heating Systems
(8) Water Networks, Pipelines and Installations

Education

Aug 1993 – May 1997 **University of New South Wales**
PhD, Mech. Eng., Heat Transfer
Feb 1992 – Jul 1993 **University of New South Wales**
Master of Eng. Sc., Mech. Eng., Fluid & Thermal
Jan 1983 – Jan 1988 **Isfahan University of Technology**
B. of Eng. Sc., Mech. Eng., Fluid & Thermal

Academic, Research and Professional Positions

(1994 – 1997)	**Teaching Assistant**
	School of Mechanical and Manufacturing Engineering, University of New South Wales, Kensington, Australia
(1997 – Present)	**Assistant Professor, Associate Professor and Professor**
	Department of Thermal Sciences and Fluid Mechanics, Faculty of Mechanical Engineering, University of Kashan, Kashan, Iran
(1999—2002)	**Head**
	Department of Thermal Sciences and Fluid Mechanics, University of Kashan, Kashan, Iran
(2001—2002 and	**Research Council Member**
2005—2008)	University of Kashan
(from 2001 onward)	**Research Committee Member**
	Kashan Water and Waste Water Co.
(2002—2003)	**Deputy Head**
	Faculty of Engineering, University of Kashan
(2005—2008)	**Research Director**
	University of Kashan
(from 2006 onward)	**Board member**
	Energy Research Institute, University of Kashan
(from 2016 onward)	**Head**

	Research Center for Water, Drought and Climate Change, University of Kashan
(2001—2002	**Council Member**
and from 2016 onward)	University of Kaskan

Honors & Awards

1) Outstanding academic teaching award, University of Kashan, 2013.

2) Outstanding academic research award, University of Kashan, 2013.

3) Outstanding academic research award, University of Kashan, 2015.

4) Outstanding academic teaching award, University of Kashan, 2015.

5) Certificate for the most Highly Cited Research paper during 2014, 2015 up to June 2016; Awarded for the paper titled: "Entropy generation of Cu-water nanofluid mixed convection in a cavity" published in European Journal of Mechanics-B/Fluids 37, pp. 143-152, 2013. DOI: 10.1016/j.euromechflu.2012.09.00

Teaching

Courses Taught

a. Undergraduate:

Fluid Mechanics 1 & 2
Thermodynamics 1 & 2
Internal Combustion Engines
Water Supply and Networks
Fluid Mechanics Laboratory

b. Postgraduate:

Advance Thermodynamics
Solar Energy Thermal Processes
Architecture Technology (Energy concerns)
Mechanical and Electrical Systems in Buildings

Research Productivity

a. Publications in Peer-Reviewed Journals (In descending chronological order)

1- F. Vahidinaia, **H. Khorasanizadeh**, A. Aghaei, "*Comparative energy, exergy and CO_2 emission evaluations of a LS-2 parabolic trough solar collector using Al_2O_3/SiO_2-Syltherm 800 hybrid nanoflui*", Energy Conversion and Management, Volume 245, 1 October 2021, 114596. DOI: 10.1016/j.enconman.2021.114596

2- F. Vahidinaia, **H. Khorasanizadeh**, A. Aghaei, "*Study of thermal and hydrodynamic performances of a parabolic trough solar collector using hybrid MWCNT/Fe_3O_4-Therminol VP-1 nanofluid*", Energy Engineering Management, Accepted July 25, 2021.

3- F Vahidinia, **H. Khorasanizadeh**, "*Development of new algebraic derivations to analyze minichannel solar flat plate collectors with small and large size minichannels and performance evaluation study*", Energy, Vol. 228, pp. 120640, 1 August 2021. DOI: 10.1016/j.energy.2021.120640

4- M. Sepehrnia, **H. Khorasanizadeh**, MB Shafii, "*Effect of transverse and parallel magnetic fields on thermal and thermo-hydraulic performances of Ferro-nanofluid flow in trapezoidal microchannel heat sink*", International Journal of Numerical Methods for Heat & Fluid Flow, Vol. 31 No. 7, pp. 2089-2111, 2021. DOI: 10.1108/HFF-12-2019-0907

5- **H. Khorasanizadeh**, M Sepehrnia, "*Solar exergy evaluation and empirical model establishment; case study: Iran*", Heliyon, 6 (12), pp. e05638, 2020. DOI: 10.1016/j.heliyon.2020.e05638

6- M.R. Arabyarmohammadi, A.R. Rahmati, **H. Khorasanizadeh**, "*Application of lattice Boltzmann method to simulate a pressure-affected electroosmotic pump with hydrophobic thermally-jumped walls and temperature-sensitive operating fluid*", Mathematics and Computers in Simulation, Volume 181, Pages 284-297, March 2021. DOI:10.1016/j.matcom.2020.09.028

7- Kasra Mohammadi, Saber Khanmohammadi, **Hossein Khorasanizadeh**, Kody Powell "*Development of high concentration photovoltaic (HCPV) power plants in the US Southwest: Economic assessment and sensitivity analysis*", Sustainable Energy Technologies and Assessments Volume 42, 100873, December 2020. DOI: 10.1016/j.seta.2020.100873

8- Saeed Nazari, Alimohammad karami, Mehdi Bahiraei, Mohammad Olfati, Marjan Goodarzi, **Hossein Khorasanizadeh**, "*A novel technique based on artificial intelligence for modeling the required temperature of a solar bread cooker equipped with concentrator through experimental data*", Food and Bioproducts Processing, Volume 123, Pages 437-449, September 2020. DOI: 10.1016/j.fbp.2020.08.00

9- Kasra Mohammadi, Saber Khanmohammadi, **Hossein Khorasanizadeh**, Kody Powell, "*A comprehensive review of solar only and hybrid solar driven multigeneration systems: Classifications, benefits, design and prospective*", Applied Energy, Vol. 268, 114940, 15 June 2020. DOI: 10.1016/j.apenergy.2020.114940

10- Saber Khanmohammadi; Shoaib Khanmohammadi; **Hossein Khorasanizadeh**; Masoud Afrand, "*Exergy and exergoeconimic analysis and multi-criteria optimization of 1 MW installed CCHP system (a case study in Kashan*

University)", International Journal of Exergy, Vol. 32 No. 1, pp. 45 – 61, 2020. DOI: 10.1504/IJEX.2020.107743

11- Mojtaba Sepehrnia, **Hossein Khorasanizadeh**, Mohammad Behshad Shafiii, "*Numerical simulation of magnetic field effect on thermal and thermo-hydraulic performance and entropy generation in silicon microchannel heat sink under uniform heat flux*", Amirkabir Journal of Mechanical Engineering, Vol. 53 (1), pp. 13-13, March 2021. DOI: 10.22060/mej.2019.16538.6383

12- Alireza Aghaei, **Hossein Khorasanizadeh**, Ghanbar Ali Sheikhzadeh, "*A numerical study of the effect of the magnetic field on turbulent fluid flow, heat transfer and entropy generation of hybrid nanofluid in a trapezoidal enclosure*", The European Physical Journal Plus, 134: 310, 2019. DOI: 10.1140/epjp/i2019-12681-3

13- Kasra Mohammadi, **Hossein Khotrasanizadeh**, "*The potential and deployment viability of concentrated solar power (CSP) in Iran*", Energy Strategy Reviews, Vol. 24, pp. 358-369, 2019. DOI: 10.1016/j.esr.2019.04.008

14- M. Arabyarmohammadi , A.R. Rahmati , **H. Khorasanizadeh**, "*Implementation of lattice Boltzmann method to study mixing reduction in isothermal electroosmotic pump with hydrophobic walls*", Transport Phenomena in Nano and Micro Scales, Article 1, Volume 7, Issue 1, , Page 28-36, Winter and Spring 2019. DOI: 10.22111/tpnms.2018.25600.1157

15- Mojtaba Seperhrnia, **Hossein Khorasanizadeh,** *"Thermal performance and entropy generation analyses of nanofluid flow in a trapezoidal heat sink with different arrangements",* Amirkabir Journal of Mechanical Engineering, Published online March 2018. (in Persain) DOI: 10.22060/mej.2018.13070.5521.

16- M. Arabyarmohammadi, A.R. Rahmati, **H. Khorasanizadeh,** "*A 3D simulation of thermal mixing on mesoscopic scale in an electromagnetic microchannel containing ionized gas*", Modares Mechanical Engineering, 18 (6) :230-239, 2018. (in Persian) URL: http://journals.modares.ac.ir/article-15-15896-en.html

17- Ali Akbar Azemati, **Hossein Khorasanizadeh**, Behzad Shirkavand Hadavand, Ghanbar Ali Sheikhzadeh, "*Experimental study on thermal conductivity of polyurethane resin filled with modified nanoparticles*", Journal of Computational & Applied Research in Mechanical Engineering (JCARME), 8(1): 97-106, Summer and Autumn 2018. DOI: 10.22061/jcarme.2018.3063.1329

18- **Hossein Khorasanizadeh**, Mojtaba Sepehrenia, "*Three dimensional numerical study on a trapezoidal microchannel heat sink with different inlet/outlet arrangements utilizing variable properties nanofluid*", Transport Phenomena in Nano and Micro Scales, 6(2): 133-151, Summer and Autumn 2018. DOI: 10.22111/tpnms.2018.16509.1100

19- A. Aghaei, **H. Khorasanizadeh,** G.A. Sheikhzadeh, "I*nvesigating the effect of magnetic field on natural convection of variable properties nanofluid in a trapezoidal enclosure*", Aerospace Mechanics Journal, Vol. 51, No. 2, pp. 53-66, 2019. (in Persian) URL: http://journals.modares.ac.ir/article-15-8109-en.html

20- **Hossein Khorasanizadeh**, Mojtaba Sepehrenia, "*Performance Evaluation of a Trapezoidal Microchannel Heat Sink with Different Inlet/outlet Arrangements Utilizing Variable Properties*" Journal of Applied Fluid Mechanics, Vol. 10, No. 6, pp. 1547-1559, 2017. DOI: 10.18869/acadpub.jafm.73.243.27099

21- A. Farzanegan, N. Khorasanizadeh**,** G.A. Sheikhzadeh, **H. Khorasanizadeh**, "*Laboratory and CFD investigations of the two-phase flow behavior in flotation columns equipped with vertical baffle*", International Journal of Mineral Processing, Vol. 166, pp. 79-88, September 2017. DOI: 10.1016/j.minpro.2017.07.009

22- A. Aghaei, **H. Khorasanizadeh,** G.A. Sheikhzadeh, "*Measurement of the dynamic viscosity of hybrid engine oil-Cuo-MWCNT nanofluid, development of a practical viscosity correlation and utilizing the artificial neural network*", Heat & Mass Transfer, 54: 151, 2018. DOI: 10.1007/s00231-017-2112-6

23- G.A. Sheikhzadeh, **H. Khorasanizadeh,** A. Aghaei, Soroush Sadripour, "*Simulation of turbulent flow in flat plate solar air heaters*", Naft & Energy Monthly Magazine, Vol. 12, No. 129, June 2017. (in Persian) URL: magiran.com/paper/1710486

24- A.A. Azemati, **H. Khorasanizadeh**, B. Shikavand Hadavand, G.A. Sheikzadeh, "*Study on Radiation Properties of Polyurethane/Nano Zirconium Oxide Nanocomposite Coatings*", Materials Science Forum, Vol. 894, pp. 109-112, 2017. DOI: 10.4028/www.scientific.net/MSF.894.10

25- Mojtaba Seperhrnia, **Hossein Khorasanizadeh,** Reza Sadeghi, "*Investigation of nanofluid flow field and conjugate heat transfer in a MCHS with four different arrangements*", Amirkabir Journal of Mechanical Engineering, 51(2), 113-116, 2019. (in Persian) DOI: 10.22060/mej.2017.12473.5347

26- A. Aghaei, **H. Khorasanizadeh,** G.A. Sheikhzadeh, "*Experimental measurement of the dynamic viscosity of hybrid engine oil -Cuo-MWCNT nanofluid and development of a practical viscosity correlation*", Modares Mechanical Engineering, Vol. 16, Issue 12, pp. 518-524, Winter 2017. (in Persian) URL: http://journals.modares.ac.ir/article-15-12235-en.html

27- **Hossein Khorasanizadeh,** Mojtaba Seperhrnia, Reza Sadeghi, "*Three dimensional investigations of inlet/outlet arrangements and nanofluid utilization effects on a triangular microchannel heat sink performance*", Modares Mechanical Engineering, Vol. 16, Issue 12, pp. 27-38, Feb. 2017. (in Persian) URL: http://journals.modares.ac.ir/article-15-7290-en.html

28- Ghanbarali Sheikhzadeh, Mohammad Mahdi Fakhari, **Hossein Khorasanizadeh**, "*Experimental Investigation of Laminar Convection Heat Transfer of Al2O3-Ethylene Glycol-water Nanofluid as a Coolant in a Car Radiator*", Journal of Applied Fluid Mechanics, Vol. 10, Number 1, January 2017. DOI: 10.13140/RG.2.1.2173.2967

29- **Hossein Khorasanizadeh**, Kasra Mohammadi, Navid Goudarzi, "*Prediction of horizontal diffuse solar radiation using clearness index based empirical models; A case study*", Int. Journal of Hydrogen Energy, Vol. 41, Issue 47, pp. 21888-21898, Dec. 2016. DOI: 10.1016/j.ijhydene.2016.09.198

30- **Hossein Khorasanizadeh,** Mojtaba Seperhrnia, "*Effects of different inlet/outlet arrangements on performance of a trapezoidal porous microchannel heat sink*", Modares Mechanical Engineering, Vol. 16, Issue 8, pp. 269-280, 2016. (in Persian) URL: http://journals.modares.ac.ir/article-15-3550-en.html

31- Ahmadreza Rahmati, **Hossein Khorasanizadeh**, Mohammadreza Arabyarmohammadi, "*Application of Lattice Boltzmann Method for Simulating MGD in a Microchannel under Magnetic Field Effects*", Modares Mechanical Engineering,

Vol. 16, Issue 7, pp. 229-240, 2016. (in Persian) URL: http://journals.modares.ac.ir/article-15-1587-en.html

32- **H. Khorasanizadeh,** S. Sadripour, A. Aghaei, "*Numerical investigation of thermo-hydraulic characteristics of corrugated air-heater solar collectors*", Modares Mechanical Engineering, Vol. 16, Issue 13, pp. 42-46, 2016 (in Persian)", URL: http://journals.modares.ac.ir/article-15-8827-en.html

33- A.A. Azemati, B. Shirkavand Hadavand, **H. Khorasanizadeh**, G.A. Sheikhzadeh, "*A review on heat transfer in nanocomposite coatings and its mathematical models*", Journal of Studies in Color World, Vol. 6, No. 1, pp. 23-37, 2016. (in Persian) URL: http://jscw.icrc.ac.ir/article_76409.html

34- A. Aghaei, G.A. Sheikhzadeh, **H. Khorasanizadeh**, H.R Ehteram, "*Effect of Magnetic Field on Heat Transfer of Nanofluid with Variable Properties on the Inclined Enclosure*", Iranian Journal of Mechanical Engineering Transaction of ISME, Volume 15, Issue 1, pp. 28-38, March 2014. URL: http://jmee.isme.ir/article_19597.html

35- Shahaboddin Shamshirband, Kasra Mohammadi, **Hossein Khorasanizadeh**, Por Lip Yee, Malrey Lee, Dalibor Petkovic, Erfan Zalnezhad, "*Estimating the diffuse solar radiation using a coupled support vector machine-wavelet transform model*", Renewable and Sustainable Energy Reviews, 56, pp. 428-435, 2016. DOI: https://doi.org/10.1016/j.rser.2015.11.055

36- Alireza Aghaei, **Hossein Khorasanizadeh**, Ghanbarali Sheikhzadeh, Mahmoud Abbaszadeh, *"Numerical study of magnetic field on mixed convection and entropy generation of nanofluid in a trapezoidal enclosure*" Journal of Magnetism and Magnetic Materials, 403, pp. 133-145, 2016. DOI: 10.1016/j.jmmm.2015.11.067

37- Kasra Mohammadi, **Hossein Khorasanizadeh**, Shahab Shamshirband, Chong Wen Tong, "*Influence of introducing various meteorological parameters to the Angström-Prescott model for estimation of global solar radiation*", Environmental Earth Sciences, 75:219, 2016. DOI: 10.1007/s12665-015-4871-z

38- Kasra Mohammadi, Shahaboddin Shamshirband, Dalibor Petković, **Hossein Khorasanizadeh**, *"Determining the most important variables for diffuse solar radiation prediction using adaptive neuro-fuzzy methodology; Case study: City of Kerman, Iran*" Renewable and Sustainable Energy Reviews, 53, pp. 1570-1579, 2016. DOI: 10.1016/j.rser.2015.09.028

39- **Hossein Khorasanizadeh**, Kasra Mohammadi, *Diffuse solar radiation on a horizontal surface: Reviewing and categorizing the empirical models*" Renewable and Sustainable Energy Reviews, 53, 338-362, 2016. DOI: 10.1016/j.rser.2015.08.037

40- **H. Khorasanizadeh,** A. Aghaei, H.R. Ehteram, "*Numerical study of mixed convection and entropy generation in enclosure with two circular heat source filled with nanofluid"*, Journal of Modeling in Engineering, 14:47, 2016. (in Persian) DOI: 10.22075/jme.2017.2480

41- Abdullah Gani, Kasra Mohammadi, Shahaboddin Shamshirband, **Hossein Khorasanizadeh**, Jamshid Piri, "*Day of the year based prediction of horizontal global solar radiation by a neural network auto-regressive model*", Theoretical and Applied Climatology, 125:679, 2016. DOI: 10.1007/s00704-015-1533-8

42- N. Khorasanizadeh, A. Farzanegan, G. A. Sheikjzadeh, **H. Khorasanizadeh**, "*Effect of baffling of flotation column cells using two-phase CFD simulation*", Iranian

Journal of Mining Engineering, Vol. 9, Issue 25, pp. 71-83, 2015. (in Persian) URL: http://ijme.iranjournals.ir/article_12977.html

43- 32- Kasra Mohammadi, Hossein Khorasanizadeh, "*A review of solar radiation on vertically mounted solar surfaces and proper azimuth angles in six Iranian major cities*", Renewable and Sustainable Energy Reviews, 47, pp. 504-518, 2015. DOI: 10.1016/j.rser.2015.03.037

44- **H. Khorasanizadeh**, M. M. Fakhari, S. P. Ghaffari, "*Effects of properties variations of Al2O3–EG–water nanofluid on natural convection heat transfer in a two-dimensional enclosure: Enhancement or deterioration?"*, Heat and Mass Transfer, Volume 51, Issue 5, pp. 671-684, 2015. DOI: 10.1007/s00231-014-1443-9

45- A. Aghaei, **H. Khorasanizadeh**, G.A. Sheikhzadeh, "*Effects of magnetic field on mixed convection heat transfer and entropy generation of Cu-water nanofluid in a trapezoidal enclosure*", Modares Mechanical Engineering, Vol. 14, Issue 9, pp. 183-194, 2014. (in Persian) URL: http://journals.modares.ac.ir/article-15-8109-en.html

46- **Hossein Khorasanizadeh**, Seyyed Mortaza Meschi, "*Determination of the monthly, seasonal, semi-yearly and yearly optimum tilt angles of flat plate solar collectors in Kashan*", Energy Engineering Management, Vol. 3, No. 4, pp. 38-49, 2013. (in Persian) URL: http://energy.kashanu.ac.ir/article-1-85-en.html

47- **Hossein Khorasanizadeh**, Najmeh Hajialigol, Masoume Ebrahimqomi, "*The effects of an enclosure inclination angle and its walls movement direction on variable properties nanofluid mixed* convection", Amirkabir Journal of Science & Research (Mechanical Engineering), Vol. 46, Issue 1, pp. 1-12, 2014. (in Persian) DOI: 10.22060/mej.2014.338

48- G.A. Sheikhzadeh, A.A. Azemati, **H. Khorasanizadeh**, B. Shirkavand Hadavand, A. Saraei, "*The effect of mineral micro particle in coating on energy consumption reduction and thermal comfort in a room with a radiation cooling panel in different climates*", Energy and Buildings, 82, pp. 644-650, 2014. DOI: 10.1016/j.enbuild.2014.07.043

49- **Hossein Khorasanizadeh**, Alireza Aghaei, Hamidreza Ehteram, Reza Dehghani Yazdeli, Narges Hataminesar, "*Attaining Optimum Tilts of Flat Solar Surfaces Utilizing Measured Solar Data: Case Study for Ilam, Iran*", Iranica Journal of Energy and Environment, 5(3): pp. 224-232, 2014. DOI: 10.5829/idosi.ijee.2014.05.03.01

50- **H. Khorasanizadeh**, G.A. Sheikhzadeh, A.A. Azemati, B. Shirkavand Hadavand, "*Numerical study of air flow and heat transfer in a two-dimensional enclosure with floor heating*", Energy and Buildings, 78, pp. 98-104, 2014. DOI: 10.1016/j.enbuild.2014.04.007

51- **Hossein Khorasanizadeh**, Kasra Mohammadi, Alireza Aghaei, "*The Potential and* Characteristics of Solar Energy in Yazd Province, Iran", Iranica Journal of Energy and Environment, 5(2), pp. 173-182, 2014. DOI: 10.5829/idosi.ijee.2014.05.02.09

52- **Hossein Khorasanizadeh**, Kasra Mohammadi, Mahdi Jalilvand, "*A statistical comparative study to demonstrate the merit of day of the year-based models for estimation of horizontal global solar radiation*", Energy Conversion and Management, 87, pp. 37-47, 2014. DOI: 10.1016/j.enconman.2014.06.086

53- **H. Khorasanizadeh**, M. Sabzpooshani, S. Nazari, "*Design, manufacture and testing a solar bread cooker with concentrator*", Modares Mechanical Engineering,

Vol. 13, Issue 13, pp. 1-13, 2014. (in Persian) URL: http://journals.modares.ac.ir/article-15-9857-en.html

54- **Hossein Khorasanizadeh**, Mehdi Fakhari and Payam Ghaffari, "*Investigation of Heat Transfer Enhancement or Deterioration of Variable Properties Al_2O_3-EG-water Nanofluid in Buoyancy Driven Convection*", Transport Phenomena in Nano and Micro Scales, 2, pp. 50-67, 2014. DOI: 10.7508/tpnms.2014.01.005

55- **Hossein Khorasanizadeh**, Kasra Mohammadi, Ali Mostafaeipour, "*Establishing a diffuse solar radiation model for determining the optimum tilt angle of solar surfaces in Tabass, Iran*", Energy Conversion and Management 78, pp. 805-814, 2014. DOI: 10.1016/j.enconman.2013.11.048

56- Majid Sabzpooshani, Kasra Mohammadi, **Hossein Khorasanizadeh**, "*Exergetic performance evaluation of a single pass baffled solar air heater*" Energy 64, pp. 697-706, 2014. DOI: 10.1016/j.energy.2013.11.046

57- **Hossein Khorasanizadeh**, G.A. Shekhzadeh, A.R. Sabonchi, H. Botshekan, "*Study and comparison of effects of ceiling and wall radiant cooling panels on temperature and velocity distributions and heat transfer in a room*", Modares Mechanical Engineering, Vol. 13, Issue 9, pp. 149-160, 2013. (in Persian) URL: http://journals.modares.ac.ir/article-15-5085-en.html

58- Ghanbar Ali Sheikhzadeh, **Hossein Khorasanizadeh**, Payam Ghaffari "*Mixed convection of variable properties Al2O3-EG-water nanofluid in a two-dimensional lid-driven enclosure*", Transport Phenomena in Nano and Micro Scales, Vol. 1, No. 2, pp. 75-92, 2013. DOI: 10.7508/tpnms.2013.02.001

59- **Hossein Khorasanizadeh**, Alireza Aghaei, Hamid Reza Ehteram, Anahita Azimi, "*Study and Exergy Optimization of a Flat Plate Solar Collector in a Closed Circuit Utilized with Reflectors and Lenses Using Experimental Results*", Energy Engineering Management, Vol. 3, No. 1, pp. 40-51, 2013. (in Persian) URL: http://energy.kashanu.ac.ir/article-1-86-en.html

60- G. A. Sheikhzadeh, M. Dastmalchi, **H. Khorasanizadeh**, "*Effects of walls temperature variation on double diffusive natural convection of Al2O3–water nanofluid in an enclosure*", Heat and Mass Transfer, 49;1689, 2013. DOI: 10.1007/s00231-013-1209-9

61- **Hossein Khorasanizadeh**, Kasra Mohammadi, "*Prediction of daily global solar radiation by day of the year in four cities located in the sunny regions of Iran*", Energy Conversion and Management, 76, pp. 385-392, 2013. DOI: 10.1016/j.enconman.2013.07.073

62- **Hossein Khorasanizadeh**, J. Amani, M. Nikfar, M. Hemmat, "*Numerical Investigation of Nanofluid Mixed Convection and Entropy Generation in an Inclined Ventilating Cavity*", Journal of Nanostructures, Vol. 2, pp. 507-516, 2013. DOI: 10.7508/jns.2012.04.015

63- Ahmad saberi, **Hossein Khorasanizadeh**, Ghanbar Ali Sheikhzadeh, "*Numerical study of effects of thickness and thermal conductivity of fouling on the flow field and heat transfer in a double pipe heat exchanger"*, Journal of Heat Exchanger, Vol. 6, No. 36, pp. 2-18, 2011. (in Persian)

64- G.A. Sheikhzadeh, M. Dastmalchi, **H. Khorasanizadeh,** "*Effects of nanoparticles transport mechanisms on Al2O3–water nanofluid natural convection in*

a square enclosure", International Journal of Thermal Sciences 66, pp. 51-62, 2013. DOI: 10.1016/j.ijthermalsci.2012.12.001

65- **H. Khorasanizadeh**, K. Mohammadi, "*Introducing the best model for predicting the monthly mean global solar radiation over six major cities of Iran*", Energy 51, pp. 257-266, 2013. DOI: 10.1016/j.energy.2012.11.007

66- **H. Khorasanizadeh**, M. Nikfar, J. Amani, "*Entropy generation of Cu–water nanofluid mixed convection in a cavity*", European Journal of Mechanics-B/Fluids 37, pp. 143-152, 2013. DOI: 10.1016/j.euromechflu.2012.09.00

67- **H. Khorasanizadeh**, J. Amani, M. Nikfar, "*Numerical investigation of Cu-water nanofluid natural convection and entropy generation within a cavity with an embedded conductive baffle*", Scientia Iranica 19, pp. 1996-2003, 2012. DOI: 10.1016/j.scient.2012.07.018

68- **Hossein Khorasanizadeh**, Majid Sabzpooshani, Reza Abdollahi Taheri, "*Numerical analysis of wind effect on performance of unglazed transpired solar collector*", Energy Engineering Management, Vol. 1, No. 1, pp. 57-65, 2011. (in Persian) URL: http://energy.kashanu.ac.ir/article-1-27-en.html

69- G. Rasoolifard, **H. Khorasanizadeh**, G.A. Sheikhzadeh, "*Study and computer simulation of the effect of utilizing liquid pressure amplification (LPA) in refrigeration cycles*", The Monthly Air Conditioning Magazine, No. 68, pp. 10-19, 2008. (in Persian)

b. Selected Papers Presented in Conferences (Only those presented in English in descending chronological order)

1- M. Sepehrnia, **H. Khorasanizadeh**, S. Mohammadi, "3D simulation of water flow in porou heat sink with trapezoidal microchannel", The 26th Annual International Conference of Iranian Society of Mechanical Engineers-ISME2018 24-26 April, 2018, Semnan University, Semnan, Iran.

2- A.A. Azemati, **H. Khorasanizadeh**, B. Shirkavand Hadavand, G.A. Sheikhzadeh: *Study on radiation properties of polyurethane/nano zirconium oxide nanocomposite coatings*, International Conference on Frontiers of composite Materials, Auckland, New Zealand, Nov. 19-21, 2016.

3- A. Farzanegan, N. Khorasanizadeh, Gh.A. Sheikhzadeh, **H. Khorasanizadeh**: *Characterization of Vertical Baffling Effect on Flow Behavior in Flotation Columns Using Two-Phase CFD*, XV. INTERNATIONAL MINERAL PROCESSING SYMPOSIUM AND EXHIBITION, Istanbul-Turkey, OCTOBER 19-21, 2016.

4- A.A. Azemati, B. Shirkavand Hadavand, **H. Khorasanizadeh** & G.A. Sheikhzadeh: *Thermo-mechanical behavior of urethane/nano aluminum oxide composite*, The 6th international

color and coating congress, Inst. for color science and technology, Tehran, Iran, 10-12 November 2015.

5- Hossein Khorasanizadeh, Naderi Beni M.: *Simulation of forced convection heat transfer in solar air heater with different aspect ratio*. 21st Annual International Conf. on Mechanical Engineering, K. N. Toosi University of Technology, Tehran, Iran; 05/2013.

6- Hossein Khorasanizadeh, Roshanbin A., Bahreini S.: *Effect of nanofluid and moving wall location on the characteristics of mixed convection flow in a lid-driven square cavity*. 7th Students Conference on Mechanical Engineering, University of Tehran; 02/2013.

7- Hossein Khorasanizadeh, Bahreini S., Roshanbin A., Ghorbani M., Khosrojerdi M.R.: *Numerical study of mixed convection of a variable properties nanofluid in C-shaped enclosures*. International Congress on Nanoscience & Nanotechnology (ICNN2012), Kashan, Iran; 09/2012.

8- Hossein Khorasanizadeh, Amani J., Hemmat M.: *Numerical Study of Cu-water Nanofluid Mixed Convection and Entropy Generation in an Inclined Square Cavity with Inlet and Outlet Ports*. International Conference on Modern Applications of Nanotechnology, Minsk, Belarus; 06/2012.

9- Hossein Khorasanizadeh, Ghanbar Ali Sheikhzadeh, Najmeh Hajialigol, Masoumeh Ebrahim Qomi, Roghayeh Heydari: *Effect of aspect ratio on entropy generation in a lid-driven enclosure using nanofluid*. International Conference on Mechanical Engineering; 05/2012.

10- Hossein Khorasanizadeh: *Entropy generation in a lid-driven cavity filled with copper-water nanofluid*. The 7th International Conference on Computational Heat and Mass Transfer, Istanbul, Turkey; 07/2011.

11- H. Khorasanizadeh, M. Nikfar, J. Amani: *Entropy generation in a lid-driven cavity filled with copper-water nanofluid*. The 7th International Conference on Computational Heat and Mass Transfer, Istanbul, Turkey; 06/2011.

12- Hosseini Reza, Hosseini Naghmeh, **Hossein Khorasanizadeh**: *An Experimental Study of Combining a Photovoltaic System with a Heating System*. World Renewable Energy Congress, Linkoping, Sweden; 05/2011.

13- Hossein Khorasanizadeh, Ghanbar Ali Sheikhzadeh, Yashar Bolfe Teymoori: *Numerical Modelling of Flow Field and Heat Transfer of Nanofluid in a Trapezoidal Microchannel*. 3rd Annual & 2nd International Fluid Dynamics Conference, Shiraz University, Iran, 10/2010.

14- Hossein Khorasanizadeh, Leonardi e, John A. Reizes: *A Numerical Study of Stability of Squares in Rayleigh-Benard Convection*. International Symposium on Advances in Computational Heat Transfer, Cesme, Turkey; 05/1997.

15- H. Khorasanizadeh, E. Leonardi, J. Reizes: *Effect of Large Viscosity Variation on Heat Transfer in Rayleigh-Benard Convection*. Sixth Australasian Heat and Mass Transfer Conference, Sydney, AUSTRALIA; 12/1996.

16- H. Khorasanizadeh, G.L. Morrison, M. Behnia: *Effect of an Incoming Jet on Thermal Stratification of Hot Water Tanks*. Fifth Australasian Heat and Mass Transfer Conference, Brisbane, Australia; 11/1992.

c. Book

Hossein Khorasanizadeh, "Optimum slope of flat solar surfaces in Iran; with emphasis on climate", University of Kashan Press, 2017.

d. Referee of Peer-Reviewed Journals

- Renewable and Sustainable Energy Reviews, Elsevier
- Energy, Elsevier
- Renewable Energy, Elsevier
- Energy Conversion & Management, Elsevier
- Applied Energy, Elsevier
- Solar Energy, Elsevier
- Alexandria Energy Journal, Elsevier
- Scientia Iranica, Elsevier
- European Journal of Mechanics-B/Fluids, Elsevier
- Energy and Buildings, Elsevier
- International Journal of Ambient Energy, Taylor and Francis

- Journal of Computational & Applied Research in Mechanical Engineering, Scopus Indexed
- International Energy Journal, Asian Institute of Technology
- Journal of Renewable Energy and Environment
- Iranian Journal of Mechanical Engineering, Transaction of the ISME
- Journal of Iranian Architecture Studies
- Energy Engineering and Management
- Transport phenomena in Nano and Micro Scales
- Modares Mechanical Engineering
- Iranian (Iranica) Journal of Energy and Environment
- Amirkabir Journal of Mechanical Engineering
- Scientific Journal of Mechanical Engineering (MMEP)

Academic/Industrial Research Grants

(1) Design and construction of a standard test rig for measuring the air leakage rate and water tightness of building doors and windows

(2) Development of an Iranian national standard test method for measuring the air leakage rate from building doors and windows:

Building exterior doors, curtain walls and windows – Determining air leakage rate, Test method, Institute of Standards and Industrial Research of Iran, ISIRI NUMBER 7822.

(3) Development of an Iranian national standard test method for testing the water tightness of building doors and windows:

Building exterior doors, curtain walls and windows – Determining water tightness, Test method, Institute of Standards and Industrial Research of Iran, ISIRI NUMBER 7821.

(4) Designing a system for reducing and eliminating the pollutants produced by car engines

(5) Design and construction of a solar desalination system

(6) Investigating the effects of building orientation and windows shading on reducing energy consumption

(7) Studying the status of underground water reservoir in Kashan plain and the amount of water extraction for different needs

(8) Evaluation of using solar energy for heating up the poultry houses in different climatic conditions of Iran

(9) Studying practical methods for reducing water consumption in evaporative coolers and enhancing their performance

(10) Numerical examination of floor heating and local heating and comparison

(11) Design and construction of a solar bread cooker for domestic usage

(12) Gathering data for estimating solar radiation in Kashan and defining optimum slope angle of solar collectors

(13) Establishing a proper diffuse solar radiation model and determining the optimum tilt of solar surfaces in Tabass

(14) Numerical study of variable property nanofluid flow, heat transfer and entropy generation as a result of mixed convection in an enclosure with two circular heat sources

(15) Development of new clearness based diffuse solar radiation models for Kerman, Iran

(16) Utilizing exergy method to study the potential of solar energy in Iran

(17) Studying the latest situation and quantitative and qualitative changes in Kashan plain aquifer and determining the perspective of drinking and sanitary water and providing remedial solutions

(17) Development of algebraic relations for performance evaluation of flat plate minichannel collectors

Selected Master and PhD Projects Supervised

a. PhD Candidates

(1) Application of lattice-Boltzman method for three dimensional study of electro magneto gas dynamic microflows

(2) Numerical study of turbulent flow field, heat transfer and entropy generation of oil-copper oxide-multiwall carbon nanotube hybrid nanoflluid in a trapezoidal chamber under the influence of magnetic field along with its viscosity measurement

(3) Experimental and numerical study of mechanical and thermal performance of polymer nanocomposite coatings as building insulation

(4) Numerical study of thermo-hydraulic behavior and entropy generation of nanofluid and Ferro-nanofluid flow in trapezoidal microchannel heat sink under the influence of transverse and parallel magnetic fields

b. Master of Eng. Science Candidates

(1) Evaluating the possibility of utilizing underground as a reservoir for HVAC systems

(2) Two dimensional study of flow and temperature fields in a floor heated place and comparison with those of local heating

(3) Investigation of natural convection by hexagonal cells in shallow water layers in desert

(4) Three dimensional simulation of heat transfer and temperature distribution in a floor heated room

(5) An analytical and numerical study of natural convection and radiation for a shallow water layer with different boundary conditions

(6) Computer simulation of refrigeration cycles with liquid pressure amplification (LPA)

(7) Three dimensional simulation of air flow and temperature distribution in a ventilating space in summer season

(8) Numerical simulation of flow field and heat transfer in a room with radiative cooling panels

(9) Two-dimensional numerical simulation of flow field and heat transfer of nanofluid in a trapezoidal micro-channel

(10) Study and performance simulation of air heating systems utilizing unglazed transpired solar collector

(11) Experimental and analytical feasibility study of combining photovoltaic systems with heating systems

(12) An analytical and experimental study on effects of utilizing concentrators and reflectors on performance of flat plate collectors

(13) Design of a solar system for producing herbal essences and its economical evaluation

(14) Numerical study of effects of thickness and thermal conductivity of fouling on the flow field and heat transfer in a double pipe heat exchanger

(15) Design, manufacture and test of a solar bread cooker with concentrator

(16) Numerical study of nanofluid mixed convection with variable properties in a moving wall enclosure

(17) Investigating the effect of windows overhang shadings on reducing building annual energy consumption

(18) Effects of magnetic field on variable properties nanofluid flow, heat transfer and entropy generation in a trapezoidal enclosure

(19) A numerical study of heat transfer and entropy generation in natural convection of variable properties nanofluid in a triangular enclosure

(20) Evaluation of solar energy potential and determining the optimum tilt angle of solar collectors in Arak

(21) Numerical study of utilizing a U-shaped conductive fin on mixed convection and entropy generation of variable properties Al_2O_3-water nanofluid

(22) Solar radiation and clearness index assessments and defining the optimum tilt angle of solar collectors in Hamadan

(23) Developing new models for estimating diffuse solar radiation in two provinces of Isfahan and Fars

(24) Three dimensional nanofluid flow and thermal fields in a triangular micro-channels heat sink

(25) Three dimensional nanofluid flow and thermal fields in a trapezoidal micro-channels heat sink

(26) Research to propose a proper place in Iran to install a 100 MW concentrating solar power plant

(27) A numerical and experimental study for estimation of leakage flow rate from holes due to rupture in natural gas pipelines

(28) Three dimensional numerical investigation of nanofluid flow and heat transfer in trapezoidal microchannels with different input and output arrangements

(29) Three dimensional numerical investigation of nanofluid flow and heat transfer in Equilateral triangle microchannels with different input and output arrangements

(30) Optimization of shell and tube heat exchangers for energy recovery in Bandar Abbas oil refinery using Genetic Algorithm

(31) Study for locating the installation of a 100 MW solar concentrating power plant in Iran

(32) A Numerical three-dimensional study of the effect of natural gas transmission line pressure and wall thickness on the leakage rate from a leaking hole

(33) Investigating the effect of a 2D chamber aspect ratio on natural convection of R141-Al2O3 nano-refrigerant

(34) Numerical study on comparison of commercial flat plate solar collectors nd mini-channel flat plate collectors utilizing Water-MWCNT nanofluid

(35) Calculation of optimal slope angle of solar surfaces in all provincial centers and several important cities of Iran using long-term data and climate dependent diffuse radiation models

(36) Development and testing of a new system for cooling photovoltaic panels

(37) Establishing proper solar radiation models and determining the optimum tilt angle of solar surfaces for Baghdad, Iraq

(38) Evaluation of the existing hourly global solar radiation models for Kerman, Iran and development of a suitable new model

(39) Simulating the effect of using different cooling and heating systems on energy consumption in a typical building

(40) 3D simulation and analysis of velocity, temperature, humidity and distribution of gas contaminants in laying hen house equipped with evaporative cooling pad ventilation system

(41) Three dimensional numerical study of air flow through underground cha considering the effect of the surrounding wet walls

(42) Comparison of the effect of single and multiphase numerical models on flow field and heat transfer of hybrid nanofluid in heat exchanger tube equipped with twisted tape

(43) Investigating the effects of utilizing twisted tapes instead of wire coils as turbulators in heaters of city gas stations

(44) Numerical investigation of the effects of utilization of twisted tape turbulater with hexagonal holes on heat transfer and hybrid nanofluid flow domain in a heat exchanger

(45) Wind energy potentiometric and energy, exergy and economic analysis of wind turbines for some places in south of Iran

(46) Thermo-economic assessment and optimization of crude oil distillation unit 2 of Shazand Imam Khomeini refinery relying on total product cost