# MOHAMMAD KALTEH

**Associate Professor**
Department of Mechanical Engineering
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Researchgate: https://www.researchgate.net/profile/Mohammad_Kalteh
Googlescholar: https://scholar.google.com/citations?user=MbQiKXIAAAAJ&hl=en
Linkedin: https://www.linkedin.com/in/mohammad-kalteh-824673172/

## EDUCATION

**Visiting Researcher** — **Eindhoven University of Technology**, Eindhoven, Netherlands, 2009-2010
Department of Applied Physics, Mesoscopic Transport Phenomena Group
Supervisor: Prof. Jens Harting

**Ph.D.** — **Amirkabir University of Technology**, Tehran, Iran, 2010
Ph.D. in Mechanical Engineering
Dissertation: Numerical and Experimental Investigation of Nanofluid Forced Convection in a Microcooler (heat sink)
Supervisors: Prof. Abbas Abbassi- Prof. Majid Saffar-Aval

**M.Sc.** — **Amirkabir University of Technology**, Tehran, Iran, 2006
M.Sc. in Mechanical Engineering- Energy Conversion
Master's Thesis: Numerical Analysis of Thermal Boundary Layer for Laminar Viscous Flow of Narrow Axisymmetric Jet.
Supervisor: Prof. Abbas Abbassi

**B.Sc.** — **Sharif University of Technology**, Tehran, Iran, 2003
B.Sc. in Mechanical Engineering- Thermo/fluids
Final Project: Investigating the Performance of Peugeot 206 HVAC System in Different Climates.
Supervisor: Prof. Bijan Farhanieh

## ACADEMIC EXPERIENCES

**2020-Now** — **Associate Professor**, Department of Mechanical Engineering, Faculty of Engineering, Golestan University, Gorgan, Iran

**2014-2022** — **Associate Professor,** Faculty of Mechanical Engineering**,** University of Guilan, Rasht, Iran

**2010-2014** **Assistant Professor,** Faculty of Mechanical Engineering**,** University of Guilan, Rasht, Iran

**2007-2009** **Lecturer,** Islamic Azad University, Iran

## AWARDS AND HONORS

- Selected as one of the top researchers at Golestan University in the year 2024**.**
- Listed in the World's **top 2% researchers**, published on 3rd November 2022 by Stanford University and Elsevier.
- Listed in the World's **top 2% researchers**, published on 19th October 2021 by Stanford University and Elsevier.
- Two **highly cited papers** extracted from Ph.D. thesis and published in International Journal of Heat and Fluid Flow (Elsevier) and Applied Thermal Engineering (Elsevier) journals based on WEB OF SCIENCE
- 4-year Ph.D. full Scholarship awarded by the Iranian Ministry of Science, Research and Technology

## RESEARCH INTERESTS

Micro/Nanoscale Heat Transfer and Energy Conversion, Rarefied Gas Flows, Nanofluids, Electrokinetic Flows, Lattice Boltzmann and Molecular Dynamics Simulations, Renewable Energy, Thermoelectric devices, Thermophotovoltaic Energy Conversion devices, Thermochemical Energy Storage

## PROFESSIONAL LEADERSHIP AND SERVICES

- **Deputy of Research and Technology**, Faculty of Engineering, Golestan University, May 2025-Now.

- **Scientific Secretary** of the 1st National Conference on Sustainable Development in Mechanical Engineering and Energy, Golestan University, 2026.

- **Head of Graduate Studies Office**, Faculty of Mechanical Engineering, University of Guilan, November 2017-June 2020.
- **Member of the Scientific Committee**, 2nd National Conference on Civil Engineering, Intelligent Development and Sustainable Systems, Golestan University, September 2022.

- **Member of the Scientific Committee**, 3rd Iranian Conference for Heat and Mass Transfer, Babol Noshirvani University of Technology, November 2017.

- **Executive Manager of the Ph.D. qualifying exam committee** (January 2015- September 2016)

- **Head of Thermo/fluid division** (January 2015- September 2016)

- **Reviewer for scientific Journals:**

International Journal of Heat and Mass Transfer-Elsevier
Microfluidic Nanofluidic-Springer
Applied Thermal Engineering- Elsevier
Energy Conversion & Management-Elsevier
International Journal of Thermal Sciences-Elsevier
Journal of Mechanical Science and Technology-Springer
Heat Transfer-Asian Research-Wiley
Iranian Journal of Science & Technology-Transactions of Mechanical Engineering-Springer
Engineering Applications of Computational Fluid Mechanics, Taylor and Francis
Propulsion and Power Research-Elsevier
Journal of Molecular Liquids-Elsevier
Nanoscale and Microscale Thermophysical Engineering
Scientia Iranica
Combustion Theory and Modelling
Waves in Random and Complex Media
International Journal of Energy Research-Hindawi
International Journal of Engineering
Amirkabir Journal of Science and Research
Transport Phenomena in Nano and Micro Scales
Modares Mechanical Engineering
Journal of Solid and Fluid Mechanics
Mechanical Engineering Journal

## COURSES TAUGHT

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|---|---|
| **University of Guilan** | **Graduate**: Micro and Nano Flows, Advanced Numerical Analysis, Advanced Thermodynamics, Seminar<br>**Undergraduate**: Heat Transfer, Thermodynamics, Refrigeration Systems |
| **Golestan University** | **Graduate:** CFD, Micro and Nano Flows<br>**Undergraduate:** Numerical Analysis, Refrigeration Systems, Fluid Mechanics, Fuel and Combustion, Computer Programming, Engineering Mathematics |
| **Islamic Azad University** | **Graduate:** Advanced Convective Heat Transfer, Advanced |

Thermodynamics
**Undergraduate:** Heat Transfer, Thermodynamics, Fluid Mechanics

## BOOK CONTRIBUTIONS

**Persian Translation of the book "**Heat transfer and fluid flow in minichannels and microchannels**",** Authors:Kandlikar et al. (Elsevier)

**Scientific Editor of:**

- **Molecular Dynamics Simulation**, Authors: Dr. Reza Ansari, Dr. Shahram Ajori, University of Guilan (In Persian)
- **Two-Phase Flow Modelling**, Author: Dr. Ramin Kouhikamali, University of Guilan (In Persian)
- **Industrial Evaporators and Condensers**, Author: Dr. Ramin Kouhikamali, University of Guilan (In Persian)

## JOURNAL PUBLICATIONS

**G.Balgurinejad, M. Kalteh, K. Atashkari, H. Akhlaghi,** "Theoretical assessment of a thermoelectric heat recovery system considering lateral heat rejection and temperature variation of the fluid flow"**,** ***Thermal Science and Engineering Progress*****,** May 2025.

**H.Akhlaghi, M. Kalteh, J. Mahmoudimehr,** "A novel thermoelectric generator equipped with magnetized Ferro-Fluid coolant for automobile exhaust heat Recovery: A numerical study"**,** ***Thermal Science and Engineering Progress*****,** August 2024.

**M.Bagheri, M. Kalteh, S. Srinivasan,** "Investigating the effect of surface roughness size and shape on the nanofluid behavior and nanoparticles aggregation in a square nanochannel by molecular dynamics simulation"**,** ***Korean Journal of Chemical Engineering,*** Feb. 2024.

**M. Kalteh, M. Bagheri, "**Investigating the Effect of Shape, Size and Surface Wettability of a Nanochannel on Fluid Thermal Conductivity Using Molecular Dynamics Simulation"**,** ***Challenges in Nano and Micro Scale Science and Technology***, Jan. 2023.

**M.Hami**, **M. Kalteh**, "Investigating Thermally Developing Gas Slip Flow Inside a Micro-annulus Including Viscous Dissipation and Axial Conduction Effects Using the Lattice Boltzmann Method**"** ***Iranian Journal of Science and Technology, Transactions of Mechanical Engineering***, Apr. 2023.

**A.Najjarnezami**, **M. Kalteh**, "Examination of the effect of cell thickness on the performance of a tandem nano-gap thermophotovoltaic system***", International Communications in Heat and Mass Transfer*** 143, 106726, 2023.

**A.Najjarnezami**, **M. Kalteh** , "Performance investigation of tandem nano-gap thermophotovoltaic system considering the near-field thermal radiation", ***Renewable Energy*** 206, 838-847, 2023.

**M.H.Shabani, M. Kalteh, "**The electrophoretic motion of cylindrical macroions inside a nanochannel using molecular dynamics simulation**",** ***Journal of Molecular Liquids*****,** Vol. 369, Jan. 2023**.**

**M.H.Shabani, M. Kalteh, "**Electroosmotic motion of aqueous solution containing Mg++ inside a silicon nanochannel using Molecular Dynamics simulation**",** ***Challenges in Nano and Micro Scale Science and Technology*****,** Accepted**.**

V. Mofidian, **M. Kalteh**, M. Hami, "Numerical Investigation of Channel Cross-section Effect on the Performance of Integrated Thermoelectric Power Generator", ***Amirkabir Journal of Science and Research-Mechanical Engineering***, Accepted (In Persian).

S. Assadi, **M. Kalteh**, M. Bagheri, "Investigating convective heat transfer coefficient of nanofluid Couette flow in a nanochannel by molecular dynamics simulation", ***Molecular Simulation***, March 2022, Online

M.A.Yazdanpanah-Jahromi, K. Atashkari, **M. Kalteh**, "Comparison of different woody biomass gasification behavior in an entrained flow gasifier", ***Biomass Conversion and Biorefinery***, Feb. 2021.

M. Bagheri, **M. Kalteh**, "Molecular dynamics simulation of nanofluid convective heat transfer in a nanochannel: Effect of nanoparticles shape, aggregation and wall roughness", ***Molecular Liquids***, Aug. 2020.

M. Sheikhizad, **M. Kalteh**, "Corrigendum to "Heat transfer investigation of combined electroosmotic/pressure driven nanofluid flow in a microchannel: Effect of

heterogeneous surface potential and slip boundary condition" [Eur. J. Mech. B Fluids 80 (2020) 13–25]", ***European Journal of Mechanics-B/Fluids***, June 2020.

M. Bagheri, **M.Kalteh**, "Investigating the wall effect on convective heat transfer in a nanochannel by molecular dynamics simulation", ***International Journal of Thermal Sciences***, Vol. 156 (7), 106472, 2020.

M.A. Yazdanpanah-Jahromi, K. Atashkari, **M. Kalteh**, "Performance Evaluation of a Two-Stage Entrained Flow Coal Gasifier Using Numerical Simulation", ***Chemical Engineering and Technology***, Vol. 43 (7), 1316-1326, 2020.

M.Bagheri, **M.Kalteh**, " Simulating the convective heat transfer of nanofluid Poiseuille flow in a nanochannel by molecular dynamics method", ***Int. Commu. Heat Mass Transfer***, Vol.111, Feb. 2020.

M. Bagheri, **M.Kalteh**, "An investigation on thermal conductivity of fluid in a nanochannel by nonequilibrium molecular dynamics simulations", ***ASME Journal of Heat Transfer***, Vol.142(3): 032503, 2020.

M. Sheikhizad, **M.Kalteh**, "Heat transfer investigation of combined electroosmotic/pressure driven nanofluid flow in a microchannel: Effect of heterogeneous surface potential and slip boundary condition", ***European Journal of Mechanics, B/Fluids***, Vol.80, 13-25, 2020.

A. H. Saberi, **M. Kalteh**, "Two-phase Lattice Boltzmann Simulation of Nanofluid Conjugate Heat Transfer in a Microchannel", ***Thermophysics and Aeromechanics***, Vol. 28(3), 401-419, 2021.

**M. Kalteh**, H. Akhlaghi, "Investigating the influence of Thomson effect on the performance of a thermoelectric generator in a waste heat recovery system", ***International Journal of Green Energy***, Vol. 16, No. 12, 917-929, 2019.

M.A. Yazdanpanah-Jahromi, K. Atashkari, **M. Kalteh**, "Development of a High Temperature Two-Stage Entrained Flow Gasifier Model for the Process of Biomass Gasification and Syngas Formation", ***International Journal of Energy Research***, Vol.43, No.11, 5864-5878, 2019.

M.A. Yazdanpanah-Jahromi, K. Atashkari, **M. Kalteh**, "Simulation and comparing the effect of oxidizing gas and different devolatilization models in an entrained-flow coal gasifier", ***Modares Mechanical Engineering***, Accepted (In Persian).

A.H. Saberi, **M. Kalteh**, "Numerical investigation of nanofluid convection heat transfer in a microchannel using two-phase lattice Boltzmann method", ***Journal of Thermal Analysis and Calorimetry***, Vol. 138, 1761-1777, 2019

A.Alipour, **M. Kalteh**, “Lattice Boltzmann simulation of nanofluid conjugate heat transfer in a wide microchannel: Effect of temperature jump, axial conduction and viscous dissipation”, ***Meccanica***, Vol. 54, 135-153, 2019.

M. Sheikhizad, **M. Kalteh**, “Investigating the heat transfer of periodic electroosmotic/pressure driven nanofluid flow in a microchannel using the Lattice Boltzmann method”, ***Modares Mechanical Engineering***, Vol. 19, No.3, 765-776, 2019. (In Persian)

S. Ghadirzadeh, **M. Kalteh**, “Lattice Boltzmann simulation of temperature jump effect on the nanofluid heat transfer in an annulus microchannel”, ***International Journal of Mechanical Sciences***, Vol. 133, 524-534, 2017.

**M. Kalteh**, Sh. Abedinzadeh, “Numerical investigation of MHD nanofluid forced convection in a microchannel using lattice Boltzmann method”, ***Iranian Journal of Science and Technology-Transactions of Mechanical Engineering (IJSTM)***, Vol. 42, No. 1, 23-34, 2018.

A. Alipour, **M. Kalteh**, “Investigating the effect of velocity slip and temperature jump on heat transfer of nanofluid in a microchannel under constant heat flux with lattice Boltzmann method”, ***Amirkabir Journal of Science and Research-Mechanical Engineering***, Vol. 50, No.2, 255-270, 2018. (in Persian)

A.H. Saberi, **M. Kalteh**, "Numerical Investigation of Nanofluid Flow and Conjugated Heat Transfer in a Micro-heat-exchanger Using Lattice Boltzmann Method", ***Numerical Heat Transfer Part A: Applications***, Vol. 70, No. 12, 1390-1401, 2016

H. Jahani, A., Abbassi, **M. Kalteh**, M. Azimifar, "Semi-Analytic Solution of Nanofluid and Magnetic Field effects on the Heat Transfer from a Porous Wall", ***Amirkabir Journal of Science and Research-Mechanical Engineering***, Vol.49, No.1, 161-170, 2017. (in Persian)

**M.Kalteh**, R. Kouhikamali, S. Akbari, "Numerical simulation of nanofluid heat transfer in a double-layered microchannel heat sink using two phase mixture model", ***Journal of Nanofluids***, Vol. 5, No.1, 139-147, 2016

**M.Kalteh**, M. Razavi Nouri, M.R. Akef, "Performance evaluation of conventional and sloped solar chimney power plants in different climates of Iran", ***Journal of Solid and Fluid Mechanics*** (In Persian), Vol.4, 137-146, 2015.

**M. Kalteh**, S. Ghorbani, T. Khademinejad, "Viscous dissipation and thermal radiation effects on the magnetohydrodynamic (MHD) flow and heat transfer over a stretching slender cylinder", ***Journal of Applied Mechanics and Technical Physics***, Vol.57, No.3, 463-472, 2016

B. Fani, **M. Kalteh**, A. Abbassi, "Investigating the effect of Brownian motion and viscous dissipation on the nanofluid heat transfer in a trapezoidal microchannel heat sink", ***Advanced Powder Technology***, Vol. 26, 83-90, 2015

H. Safikhani, A. Abbassi, A. Khalkhali, **M. Kalteh**, "Multi-Objective Optimization of Nanofluid Flow in Flat Tubes Using CFD, Artificial Neural Networks and Genetic Algorithms", ***Advanced Powder Technology***, Vol.25 (5), 1608-1617. 2014

**M. Kalteh**, K. Javaherdeh, T. Azarbarzin, "Numerical solution of nanofluid mixed convection heat transfer in a lid-driven square cavity with triangular heat source", ***Powder Technology***, Vol. 253, 780-788, 2014

**M. Kalteh**, H. Hasani, "Lattice Boltzmann simulation of nanofluid free convection heat transfer in an L-shaped enclosure", ***Superlattices and Microstructures***, Vol. 66, 112-128, 2014, **Selected as one of the 25 Hottest Papers in the Journal, Jan-Mar. 2014**

H. Safikhani, A. Abbassi, **M. Kalteh**, "Numerical simulation and parametric study of laminar mixed nanofluid flow in flat tubes using two phase mixture model", ***Thermal Science***, Vol. 20, No. 2, 415-428, 2016

K. Javaherdeh, **M. Kalteh**, T. Azarbarzin, "Mixed convection heat transfer of a nanofluid in a lid – driven triangular enclosure with triangular heat source", ***Journal of Nanofluids***, Vol.3, No.2, 172-180, 2014

H. Safikhani, A. Abbassi, A. Khalkhali, **M. Kalteh**, "Modeling and Optimization of Nanofluid Flow in Flat Tubes Using Combination of CFD and Response Surface Methodology, ***Heat Transfer-Asian Research***, Vol. 44, No. 4, 377-395, 2015

J. Rahmannezhad, **M. Kalteh,** **"**Moving lids direction effects on MHD mixed convection in a two-sided lid-driven enclosure using nanofluid", ***Transport Phenomena in Nano and Micro Scales***, Vol. 1, No. 2, 93-102, 2013

J.Rahmannezhad, A. Ramezani, **M. Kalteh**, "Numerical investigation of magnetic field effects on mixed convection flow in a nanofluid-filled lid-driven cavity", ***International Journal of Engineering***, Vol. 26, No. 10, 1213-1224, 2013.

**M. Kalteh**, "Investigating the effect of various nanoparticle and base liquid types on the nanofluids heat and fluid flow in a microchannel", ***Applied Mathematical Modelling***, Vol.37, No. 18-19, 8600-8609, 2013

B. Fani, A. Abbassi, **M. Kalteh**, "Effect of Nanoparticles Size on Thermal Performance of Nanofluid in a Trapezoidal Microchannel-Heat-Sink", ***International Communications in Heat and Mass Transfer***, Vol. 45, 155-161, 2013

**M. Kalteh**, A. Abbassi, M. Bahrami, "An approximate model for slug flow heat transfer in channels of arbitrary cross section", ***Journal of Solid and Fluid Mechanics***, Vol. 2, No. 3, 1-7, 2012

**M. Kalteh**, A. Abbassi, M. Saffar-Avval, A. Frijns, A. Darhuber, J. Harting, "Experimental and numerical investigation of nanofluid forced convection inside a wide microchannel heat sink", ***Applied Thermal Engineering***, Vol. 36, 260-268, 2012

**M. Kalteh**, A.abbassi, M. Saffar-Avval, J. Harting, "Eulerian-Eulerian two-phase numerical simulation of nanofluid laminar forced convection in a microchannel", ***International Journal of Heat and Fluid Flow***, Vol.32, 107-116, 2011

**M. Kalteh**, A. Abbassi, "Similarity solution of laminar axisymmetric jets with effect of viscous dissipation", ***ASME Journal of Heat Transfer***, Vol.128, 2006

## CONFERENCE PAPERS AND PRESENTATIONS

M.Mobasher Amini, **M. Kalteh**, "Numerical investigation of a pure water cooled solar thermophotovoltaic system", ***8th National Conference of Applied Researches in Electrical, Mechanical and Mechatronics Engineering***, Tehran, Iran, 2024.

A. Salehinia, **M. Kalteh**, H. Hosseini, "Numerical investigation of nanofluid heat transfer in a microchannel heatsink with secondary channels and rectangular ribs", ***The 6th National Conference on Computational and Experimental Mechanics***, Tehran, Iran, 2024.

S. Ghadirzadeh, **M. Kalteh**, "Investigating the developing flow of rarefied gas in a micro-annular channel via LBM"***25th Annual International Conference on Mechanical Engineering*** (ISME 2017), Tehran, Iran, May 2017, In Persian

M. Arzpeyma, **M. Kalteh**, M. Bagheri, "Numerical investigation of the wind effect on the solar chimney powerplant performance", ***25th Annual International Conference on Mechanical Engineering*** (ISME 2017), Tehran, Iran, May 2017, In Persian

R. Sabzi Khoshraftar, **M. Kalteh**, " Numerical investigation of nanofluid heat transfer in a double-layered microchannel heat sink with considering the Brownian motion using two-phase Eulerian-Eulerian approach", ***24th Annual International Conference on Mechanical Engineering*** (ISME 2016), Yazd, Iran, May 2016, In Persian

E.Rahimi, S. Torfeh, R. Kouhikamali, **M. Kalteh**, "Numerical simulation of co-current and counter current desuperheaters with Eulerian-Lagrangian method", ***24th Annual International Conference on Mechanical Engineering*** (ISME 2016), Yazd, Iran, May 2016, In Persian

H. Jahani, **M. Kalteh**, M. Azimifar, S. Tavakoli, "Semi-analytic solution of nanoparticle and magnetic field effects on the heat transfer from a permeable Plate",

***23rd Annual International Conference on Mechanical Engineering (ISME 2015)***, Amirkabir University of Technology, Tehran, Iran, May 2015, In Persian.

S.A. Mirahmadi, **M. Kalteh**, "Energy and Exergy analysis of a two-stage Rankine Cycle with regenerator", ***2nd Conference on Heat and Mass Transfer***, November 2014, Semnan, Iran, In Persian

**M.Kalteh**, M.H. Pourahmadi, "Numerical investigation of nanofluid laminar heat transfer in a triangular channel with circular central core", ***2nd Process Engineering Conference***, May 2014, Tehran, Iran, In Persian

**M. Kalteh**, S. Mehrzad, "Numerical investigation of nanofluid flow and heat transfer in a squre channel with circular central core", ***5th Conference on Heat Exchanger Applications in Oil and Energy Industries***, November 2013, Tehran,Iran., In Persian.

H. Jahani, A. Abbassi, **M. Kalteh**, S. Tavakkoli, "Semi-analytic solution of non-Darcian flow and free convection of a nanofluid over a vertical permeable plate", ***21st Annual International Conference on Mechanical Engineering (ISME 2013)***, Tehran, in Persian.

B. Fani, A.Abbassi, **M.Kalteh**, "Numerical simulation of nanofluid flow and heat transfer in a trapezoidal microchannel heat sink using Eulerian-Eulerian two-phase approach", ***21st Annual International Conference on Mechanical Engineering (ISME 2013)***,Tehran, in Persian.

**M.Kalteh**, M. Arghand, "Investigating the performance of an automobile air-conditioning system using the first and second law of Thermodynamics", ***3rd National Industrial Ventilation & Hygiene Conference***, Tehran, December 2012, in Persian

**M. Kalteh**, K. Golmohammadi, "Determining the appropriate model for effective thermal conductivity and investigating the heat transfer of nanofluids", ***The 4th national conference on CFD applications in chemical and petroleum industries***, Tehran, May 2012 ,in Persian

**M. Kalteh**, A. Abbassi, M. Saffar-Avval, J. Harting, "Nanoparticle size effect on the convective heat transfer of a nanofluid inside a microchannel", ***28th UIT Heat Transfer Congress***, 21-23 June 2010, Brecia, Italy

**M. Kalteh**, A. Abbassi, M. Bahrami, "Laminar forced convective heat transfer in noncircular microchannels",***16th Annual International Conference on Mechanical Engineering (ISME 2008)***, Kerman, Iran, May 2008

**M. Kalteh**, A. H. Kakaee, B. Farhanieh, "Investigation of the Peugeot 206 air conditioning performance in different environments", ***12th Annual International Conference on Mechanical Enginnering (ISME 2004)***, Tehran, Iran, May 2004, in Persian

## CURRENT PHD STUDENTS

- Hossein Akhlaghi, "Numerical simulation of Thermoelectric generator with CFD and Machine Learning", Supervisors: Dr. J.Mahmoodimehr, Dr. M.Kalteh

## FORMER PHD STUDENTS

- Hamed Safikhani (Ph.D student in Amirkabir University of Technology), "Modeling and Numerical Simulation of Metal Oxide Nanofluid Flow in Flattened Tubes", Supervisor: Prof. Abbas Abbassi
  Advisors: Dr. A. Khalkhali and Dr. M. Kalteh

- Amirhossein Saberi, "Numerical Investigation of Nanofluid Flow and conjugated Heat Transfer in a Microchannel Using Two-Phase Lattice Boltzmann Method", Supervisor: Dr. M. Kalteh

- Mohammad-Ali Yazdanpanah, "Numerical simulation of entrained flow biomass gasifier", Supervisors: Dr. Kazem Atashkari and Dr. M. Kalteh

- Mohammad Bagheri, "Investigating the nanofluid heat transfer in a rough nanochannel via molecular dynamics", Supervisor: Dr. M. Kalteh

- Mohammad Hossein Shabani, "simulation of the electrophoretic motion in a nanochannel via molecular dynamics", Supervisor: Dr. M. Kalteh

- Amin Najar Nezami, "Performance investigation of nano-gap thermophotovoltaic system considering the near-field thermal radiation", Supervisor: Dr. M. Kalteh

## CURRENT MSC STUDENTS

- M.Ghanbari, "MD simulation of evaporation in a nanochannel"
- M. Sadeghi, "MD simulation of pool boiling in a nanochannel"
- H.Jalaee, "CFD simulation of a DL-MCHS using OpenFOAM"

## FORMER MSC STUDENTS

- Salehinia, "CFD simulation of double-layered microchannel heat sinks"
- Kaveh Hashemipour, "LBM simulation of nanofluid flow in a micro-heat exchanger"
- Nastran Salimi, "Numerical simulation of solar chimney powerplant"
- Ghazaleh Balgurinezhad, "Analysis of a combined thermoelectric power generator and a gasifier"

- Sadegh Feili, “numerical simulation of hybrid PVT- integrated thermoelectric system”
- Mehrdad Ahmadi, “LBM simulation of rarefied gas flow and conjugate heat transfer in a rough microchannel”
- Mehdi Mobasher Amini, “Numerical simulation of thermophotovoltaic system using nanofluids”
- Saeed Assadi, “Investigating the convective heat transfer coefficient of nanofluid Couette flow in a nanochannel by molecular dynamics simulation”
- Mohammad Zarbini, “experimental and numerical investigation on viscosity of melted metals”
- Masoud Hami, “Numerical investigation of the slip flow and conjugated heat transfer of a rarefied gas in an annular microchannel using the lattice Boltzmann method”
- Vahid Mofidian, “Numerical investigation of channel cross-section effect on the integrated thermoelectric power generation performance”
- Nastran Najafi, “Numerical investigation of the collector roof inclination effect on the performance of a solar chimney power plant under cross wind”
- Tayyebe Ahmadnasab, “Numerical simulation of Nanofluid heat transfer for electroosmotic and pressure driven flow in a flat microchannel with heterogeneous surface potential via the Lattice Boltzmann method”
- Mehdi Sheikhizad, “Investigating the heat transfer of periodic electroosmotic/pressure driven nanofluid flow in a microchannel using the Lattice Boltzmann method”
- Farzam Karnia, “Numerical simulation of Nanofluid Forced Convection Heat Transfer Between Two Confocal Elliptical Cylinders”
- Sona Ghadirzadeh, “Numerical investigation of nanofluid slip flow and heat transfer in an annulus microchannel”
- Ali Alipour Lalami, “Numerical investigation of nanofluid conjugate heat transfer in a microchannel”
- Mazdak Arzpeyma, “Numerical investigation of the stack configuration effect on the performance of a solar chimney power plant”
- Mohammadreza Akef, “Investigating the thermal performance of electroosmotic/pressure driven nanofluid flow in a microchannel via the Lattice Poisson-Boltzmann method”
- Sina Ghadamkheir, “Investigating the heat transfer of electroosmotic/pressure driven nanofluid flow in a microtube using the lattice poisson-Boltzmann method”
- Elham Rahimi, “Numerical study of a counter flow evaporative cooler with an Eulerian-Lagrangian method”, Supervisor: Dr. Ramin Kouhikamali, Advisor: Dr. Kalteh
- Samaneh Akbari, “Numerical investigation of nanofluid heat transfer in a double-layered microchannel heat sink using two-phase mixture method”, Supervisors: Dr. Kalteh - Dr. Ramin Kouhikamali
- Reza Sabzi Khoshraftar, “Numerical investigation of nanofluid heat transfer in a DL-MCHS considering the Brownian motion effects using Eulerian – Eulerian two-phase method”

- Touraj Azarbarzin, “Numerical Solution of Nanofluids Mixed Convection in a Triangular Lid-Driven Cavity with Heat Source”, Supervisor: Dr. Kourosh Javaherdeh, Advisor: Dr. Kalteh
- Shayan Abedinzadeh, “Numerical investigation of nanofluid MHD forced convection heat transfer in a microchannel using lattice Boltzmann method”
- Mehdi Deyhim, “Numerical simulation of nanofluid forced convection heat transfer in a rhombic channel”
- Hosein Hasani, “Numerical simulation of nanofluid free convection heat transfer in an L-shaped cavity using Lattice Boltzmann Method”
- Mayam Hasani, “Numerical investigation of the effect of Non-Condensable Gas on condensation heat transfer coefficient”, Supervisor: Dr. Ramin Kouhikamali, Advisor: Dr. Kalteh

## INDUSTRIAL EXPERIENCES

**Pars Ara Co.,** Tehran, Iran, May 2006-July 2006
Design of Fuel, Oil, Compressed Air and Industrial Water Piping Networks for Cement Plants

**Qeshm Cement Co., Central Office,** Tehran, Iran, May 2004-May 2006
Mechanical Engineer

**Negar Andish Consulting Engineers Co.,** Tehran, Iran, Nov. 2003-May 2004
Consultant Engineer in Project Control & Feasibility Studies

**Sapco Co.,** Tehran, Iran, Summer 2002
Investigating the Standards for Air Conditioning Systems of Automobiles in Iran

**Mega Motor Co**., Tehran, Iran, Feb.2000-May 2002
Quality Control, Involving in Production Line for Engine and Gear Box, Engine Testing

## LANGUAGE SKILLS

English: Excellent

Dutch: Good

Turkish: Good

## COMPUTER SKILLS

Python, C++, FORTRAN

OpenFOAM, LAMMPS, Star CCM+, Fluent

Linux