

CURRICULUM VITAE

Mousa Mohammadpourfard	Born on March 6th 1980 in Tabriz
Nationality	Iranian
Marital Status	Married
Address	Faculty of Chemical and Petroleum Engineering, University of Tabriz, Tabriz- Iran. Zip Code: 5166616471.
Tel/Cell Phone	+984133392599/+989144104683
E-mail	Mohammadpour@tabrizu.ac.ir Mousa.Mohammadpour@gmail.com

Education & Professional Experience

Since Sept. 2016 - Present	**Associate Professor at the University of Tabriz.**
Jan. 2018- Jun. 2019	Director of the Technology Affairs Management (TAM)
Feb. 2017- Apr. 2018	Dean of Faculty of Chemical & Petroleum Engineering
Jan. 2015 – Sept. 2016	Director of the Budget and Planning Office.
Oct. 2014 – Oct. 2016	Member of Academic Promotions Committee
Apr. 2014 - Sept. 2016	Associate Professor at the Azarbaijan Shahid Madani University.
Dec. 2013 – June 2014	Vice Chancellor for Administrative and Financial Affairs.
May 2012 - Dec. 2013	Chair of Tabriz Campus of Azarbaijan Shahid Madani University.
Sept. 2011 - Sept. 2012	Chair of Industrial Collaborations Office.
Oct. 2009 - Sept. 2011	Head of Department of Mechanical Engineering.
Oct. 2009 – Apr. 2014	Assistant Professor at the Azarbaijan Shahid Madani University.
Jan. 2006 - Oct. 2009	PhD Thesis "***Lattice Boltzmann Method for Electrowetting Modeling and Simulation***", University of Tabriz.
Sept. 2008 - Mar. 2009	Visiting PhD Student at the ***Max-Planck Institute***, Department of Micro-Structures Physics and Metal Forming, Düsseldorf, Germany.
Sept. 2002 - Nov. 2004	Master Thesis "Heat Transfer Analysis in the Nuclear Reactor Fuel Assembly", University of Tabriz.
Aug. 1998 - June 2002	Study of Mechanical Engineering at the Azad University of Tabriz.
June 1998	Final High School Exam.

Language Skills

Azeri, Persian, English, Turkish.

https://orcid.org/0000-0002-6098-924X

https://scholar.google.com/citations?user=2n-ynQIAAAAJ&hl=en

Last update: 23/10/2021

Expertise

- Fluid Mechanics
- Heat Transfer
- Modelling in Thermo-Fluid Systems
- Multi-phase Flows
- Renewals & Sustainable Energy Systems

Research Clusters

- Energy
- Environment

Personal Interests

- Study
- Travel
- Sport
- Sudoku

Software Skills

- ANSYS-FLUENT
- MATLAB
- FORTRAN
- C++

Teaching Experiences:

- Advanced Numerical Methods
- Advanced Engineering Mathematics
- Advanced Convective Heat Transfer
- Multiphase Flows
- Heat Transfer
- Differential Equations
- FORTRAN Programming
- Thermodynamics
- Exergy Analyses of Chemical Processes
- Heat Exchangers Design
- Engineering Mathematics
- Computational Fluid Dynamics (CFD)
- Micro and Nano Flows
- Numerical Methods

Academic and Professional Awards

1. Iranian Ministry of Science and Technology Scholarship, 2006-2009.
2. Short Term Researcher Scholarship of Max-Planck Institute (Düsseldorf), 2008.
3. Young Researcher Award, Azarbaijan Shahid Madani University, 2011.
4. Young Researcher Award, Azarbaijan Shahid Madani University, 2012.
5. Excellence Researcher Award, Azarbaijan Shahid Madani University, 2013.
6. Excellence Researcher Award, Azarbaijan Shahid Madani University, 2014.
7. Excellence in Teaching Award, University of Tabriz, 2019.
8. Excellence Researcher Award, University of Tabriz, 2019.

Professional Memberships

1. Iranian Journal of Chemical Engineering (IJChE)
2. Iranian Society of Mechanical Engineers (ISME)
3. Iran Energy Association

Articles in Peer Reviewed Journals

1. H. Aminfar and M. Mohammadpourfard, Heat Transfer Analysis in the Nuclear Reactor Fuel Rod, Journal of Faculty of Engineering, University of Tabriz, Vol. 32,21-32, 2006 (in Persian).
2. H. Aminfar and M. Mohammadpourfard, Lattice Boltzmann BGK Model for Gas Flow in a Microchannel, Journal of Mechanical Engineering Science 222, 1855-1860, 2008 (SAGE).
3. H. Aminfar and M. Mohammadpourfard, Lattice Boltzmann Method for Electrowetting Modeling and Simulation, Computer Methods in Applied Mechanics and Engineering 198, 3852–3868, 2009 (Elsevier).
4. H. Aminfar and M. Mohammadpourfard, Lattice Boltzmann Simulation of Electrowetting Operations, Iranian Journal of Society of Mechanical Engineering 17, 97-128, 2010 (in Persian).

2011

5. H. Aminfar, M. Mohammadpourfard, and Y. Narmani Kahnamouei, A 3D Numerical Simulation of Mixed Convection of a Magnetic Nanofluid in the Presence of Non-uniform Magnetic Field in a Vertical Tube using Two-Phase Mixture Model, Journal of Magnetism and Magnetic Materials 323, 1963-1972, 2011 (Elsevier).
6. M. Fallah and M. Mohammadpourfard, Experimental Investigation of Effects of Engine Cooling temperature, EGR and Injection Timing to Reduce NOx Emissions in the Diesel Engines, Modares Mechanical Engineering 11, 1-9, 2011 (in Persian).
7. M. Fallah and M. Mohammadpourfard, Numerical and Analytical Optimization of EGR Cooling system in the Diesel Engines, Iranian Journal of Society of Mechanical Engineering 21, 36-55, 2011 (in Persian).

2012

8. H. Aminfar, M. Mohammadpourfard, F. Mohseni, Two-Phase Mixture Model Simulation of the Hydro-Thermal Behavior of an Electrical Conductive Ferrofluid in the Presence of Magnetic Fields, Journal of Magnetism and Magnetic Materials 324, 830–842, 2012 (Elsevier).
9. H. Aminfar and M. Mohammadpourfard, Droplets Merging and Stabilization by Electrowetting: Lattice Boltzmann Study, Journal of Adhesion Science and Technology 26, 1853-1871, 2012 (Taylor & Francis).
10. M. Mohammadpourfard, Numerical Study of Ferrofluid Flow and Heat Transfer in the Presence of Non-uniform Magnetic Field in Rectangular Microchannels, Heat Transfer - Asian Research 41, 302-317, 2012 (John Wiley & Sons).
11. H. Aminfar, M. Mohammadpourfard, M. Sahraro, Numerical Simulation of Nucleate Pool Boiling on the Horizontal Surface for Nano-fluid Using Wall Heat Flux Partitioning Method, Computers and Fluids 66, 29-38, 2012 (Elsevier). *RANKED 8TH ON THE TOP 25 FOR COMPUTERS & FLUIDS – OCTOBER TO DECEMBER 2012*.

12. K. Zamzamian and M. Mohammadpourfard, Electrowetting on Dielectric and Superhydrophobic Surface: Lattice Boltzmann Study, Indian Journal of Physics 86, 889-899, 2012 (Springer).
13. H. Aminfar, M. Mohammadpourfard, A. Eynalvandpour, Eulerian Simulation of Bubble Columns Reactors and Effect of Magnetic Field on the Gas Holdup, Iranian Journal of Society of Mechanical Engineering 13, 37-52, 2012.
14. H. Aminfar, M. Mohammadpourfard, F. Mohseni, Numerical Investigation of Thermocapillary and Buoyancy Driven Convection of Nanofluids in a Floating Zone, International Journal of Mechanical Sciences 65, 147–156, 2012 (Elsevier).

2013

15. H. Aminfar, M. Mohammadpourfard, S. Ahangar, Numerical Study of Ferrofluid Flow and Heat Transfer through a Rectangular Duct in the Presence of a Non-uniform Transverse Magnetic Field, Journal of Magnetism and Magnetic Materials 327, 31–42, 2013 (Elsevier).
16. H. Aminfar, M. Mohammadpourfard, F. Ghaderi, Tow-Phase Simulation of Non-uniform Magnetic Field Effects on Biofluid Flow (Blood) with Magnetic Nanoparticles through a Collapsible Tube, Journal of Magnetism and Magnetic Materials 323, 172–179, 2013 (Elsevier).
17. M. Mohammadpourfard and M. Fallah, Optimized Free Energy-Based Lattice Boltzmann Method for Modeling Micro Drop Dynamics, International Journal of Computational Methods 10, 1350006-17, 2013 (World Scientific).
18. H. Aminfar, M. Mohammadpourfard, R. Maroofiazar, Eulerian Simulation of Subcooled Boiling Flow in Straight and Curved Annuluses, Journal of Mechanical Science and Technology 27, 1295-1304, 2013 (Springer).

2014

19. H. Aminfar, M. Mohammadpourfard, S. Ahangar, Hydro-thermal Behavior of a Ferrofluid in a Corrugated Channel in the Presence of Magnetic Field, Heat Transfer - Asian Research 43, 80-92, 2014 (John Wiley & Sons).
20. H. Aminfar, M. Mohammadpourfard, and Y. Narmani Kahnamouei, Numerical Simulation of Magnetic Field Effects on the Mixed Convection of a Magnetic Nanofluid in a Curved Tube, International Journal of Mechanical Sciences 78, 81–90, 2014 (Elsevier).
21. H. Aminfar, M. Mohammadpourfard, A. Eynalvandpour, Euler-Lagrangian Simulation of Magnetic Field Effects on the Mixed Convection of a Ferrofluid, Heat Transfer - Asian Research 43, 148-166, 2014 (John Wiley & Sons).
22. M. Mohammadpourfard, H. Aminfar, K. Khajeh, Concentration Polarization Effects on the Macromolecular Transport in the Presence of Non-uniform Magnetic Field: a Numerical Study Using a Lumen-Wall Model, Journal of Magnetism and Magnetic Materials 356, 111–119, 2014 (Elsevier).
23. H. Aminfar, M. Mohammadpourfard, S. Ahangar, Numerical Investigation of the Transient Hydro-Thermal Behavior of a Ferrofluid Flowing through Helical Ducts in the Presence of Non-uniform Magnetic Field, Journal of Heat Transfer 136, 061702-12, 2014 (ASME).

24. M. Mohammadpourfard, H. Aminfar, M. Sahraro, Numerical Simulation of Nucleate Pool Boiling on the Horizontal Surface for Ferrofluid under the Effect of Non-uniform Magnetic Field, Heat and Mass Transfer 50, 1167–1176, 2014 (Springer).
25. H. Aminfar, M. Mohammadpourfard, R. Maroofiazar, Numerical Study of Non-uniform Magnetic Fields Effects on Subcooled Nanofluid Flow Boiling, Progress in Nuclear Energy 74, 232-241, 2014 (Elsevier).
26. H. Aminfar, N. Razmara, M. Mohammadpourfard, On the Flow Characteristics of Liquid-Solid Mixed-Phase Nanofluid inside Nanochannels, Applied Mathematics and Mechanics 35, 1541-1554, 2014 (Springer).
27. H. Aminfar, M. Mohammadpourfard, R. Maroofiazar, Experimental Study of the Effect of Magnetic Field on Critical Heat Flux of Ferrofluid Flow Boiling in a Vertical Annulus, Experimental Thermal and Fluid Science 58, 156-169, 2014 (Elsevier).
28. S. Ahangar, H. Aminfar, M. Mohammadpourfard, 3D Numerical Investigation of Thermal Characteristics of Nanofluid Flow through Helical Pipes using Two-Phase Mixture Model, International Journal for Computational Methods in Engineering Science & Mechanics15, 512–521, 2014 (Taylor & Francis).

2015

29. M. Mohammadpourfard, S. Ahangar, F. Mohseni, Two-Phase Numerical Study on Hydro-Thermal Behavior and Exergy Destruction of Magnetic Nanofluid in Curved Rectangular Microchannels, Heat Transfer Research 46, 795–818, 2015 (Begell House).
30. H. Aminfar, N. Razmara, M. Mohammadpourfard, Molecular Dynamics Study of Ferrofluid Flow inside Nanochannels under Magnetic Fields, Journal of Computational and Theoretical Nanoscience 12, 1-9, 2015 (American Scientific Publishers).
31. M. Mohammadpourfard, Numerical Study of Axial and Transverse Magnetic Fields Effects on the Thermo-hydrodynamics of an Electrical Conducting Non-Newtonian Ferrofluids, Modares Mechanical Engineering 15, 379-389, 2015 (in Persian).
32. H. Aminfar, N. Razmara, M. Mohammadpourfard, Dynamics Study of Aggregation in Nanofluid Flow: Effects of Liquid-Nanoparticle Interaction Strength and Particles Volume Fraction, International Journal of Applied Mechanics 07, 1550010-33, 2015 (World Scientific).
33. S. Ahangar, N. Biglari, M. Mohammadpourfard, H. Safarzadeh, Vortex Suppression behind a Heated Circular Cylinder Placed between Parallel Walls by Applying Magnetic Field on a Magnetic Nanofluid Flow, International Journal of Fluid Mechanics Research 42, 214-226, 2015 (Begell House).

2016

34. H. Aminfar, M. Mohammadpourfard, K. Khajeh, Computational Modeling of Geometry Effects on the LDL Surface Concentration in the Presence of Non-uniform Magnetic Field Links to Atherosclerosis, Journal of Magnetism and Magnetic Materials 398, 38–48, 2016 (Elsevier).
35. M. Mohammadpourfard, H. Aminfar, M. Karimi, Numerical investigation of non-uniform transverse magnetic field effects on the swirling flow boiling of magnetic nanofluid in annuli, International Communications in Heat and Mass Transfer 75, 240–252, 2016 (Elsevier).

36. M. Mohammadpourfard, M. Ghorbani Firouzsalari, Numerical Simulation of Growth of a Vapor Bubble in Magnetic Nanofluid Flow Boiling in a Microchannel, Iranian Journal of Society of Mechanical Engineering 17, 46-68, 2016 (In Persian).
37. M. Mohammadpourfard, H. Aminfar, S. Ahangar, Numerical Investigation of the Magnetic Field Effects on the Entropy Generation and Heat Transfer in a Nanofluid Filled Cavity with Natural Convection, Heat Transfer - Asian Research DOI: 10.1002/htj.21222, 2016 (John Wiley & Sons).

2017

38. H. Aminfar, M. Mohammadpourfard, K. Khajeh, Mechanobiology of LDL Mass Transport in the Arterial Wall under the Effect of Magnetic Field, part I: Diffusion Rate, Journal of Magnetism and Magnetic Materials 426, 569–574, 2017 (Elsevier).
39. M. Mohammadpourfard, H. Aminfar, M. Karimi, Numerical Investigation of Subcooled Boiling characteristics of Magnetic Nanofluid under the Effect of Quadrupole Magnetic Field, Journal of Engineering Thermophysics 26, 1–20, 2017 (Springer).
40. H. Aminfar, M. Mohammadpourfard, S. A. Madayen, Reduction of Cavitation in Refrigerant Fluid Flow through Micro Passages in the Presence of External Transverse Magnetic Fields, Heat Transfer - Asian Research, 1-18, 2017 (John Wiley & Sons).
41. M. Shabgard, M. Seyedzavvar, M. Mohammadpourfard, Experimental Investigation into Lubrication Properties and Mechanism of Vegetable-based CuO Nanofluid in MQL Grinding, The International Journal of Advanced Manufacturing Technology, 1-17, 2017 (Springer).
42. M. Mohammadpourfard and F. Ghaderi, Numerical Study of Magnetic Field Effects on Hydro-Thermal Behavior of Biofluid Flow over a Backward-Facing Step, Journal of Process Mechanical Engineering 231, 800-812, 2017 (SAGE).
43. R. Amirzehni, H. Aminfar, M. Mohammadpourfard, Experimental Study of Magnetic Field Effect on Bubble Lift-Off Diameter in Sub-Cooled Flow Boiling, Experimental Thermal and Fluid Science 89, 62-71, 2017(Elsevier).
44. H. Aminfar, M. Mohammadpourfard, R. Mortazazadeh, Eulerian-Eulerian simulation of non-uniform magnetic field effects on the ferrofluid nucleate pool boiling, Journal of Engineering Thermophysics 26, 580-597, 2017 (Springer).

2018

45. A. Shafiei, M. Mohammadpourfard, H. Aminfar, A Numerical Simulation of the Water Vapor Bubble Rsing in Ferrofluid by Volume of Fluid Model in the Presence of a Magnetic Field, Journal of Magnetism and Magnetic Materials 449, 185-196, 2018 (Elsevier).
46. S. Ahangar Zonouzi, H. Safarzadeh, H. Aminfar, M. Mohammadpourfard, Numerical modeling of magnetic nanofluid pumping in a closed cooling loop by using magnetic field and thermomagnetic effect, Modares Mechanical Engineering 17, 109-117, 2018 (in Persian).
47. M. R. Shabgard, M. Seyedzavvar, M. Mohammadpourfard , Mehran Mahboubkhah, Effects of Physical Synergetic Properties of Nanoparticles on Temperature Distribution and Surface Integrity of Workpiece in Nanofluid MQL Grinding Process, The International Journal of Advanced Manufacturing Technology 1-19, 2017 (Springer).

48. H. Aminfar, M. Mohammadpourfard, R. Mortazazadeh, Numerical Simulation of the Influence of Brownian and Gravitational Forces on the Stability of CuO Nanoparticles by the Eulerian–Lagrangian Approach, Heat Transfer - Asian Research 47, 72–87, 2018 (John Wiley & Sons).
49. S. Ahangar Zonouzi, R. Khodabandeh, H. Safarzadeh, H.Aminfar, Y. Trushkina, M. Mohammadpourfard, M. Ghanbarpour, G. Salazar Alvarez, Experimental investigation of the flow and heat transfer of magnetic nanofluid in a vertical tube in the presence of magnetic quadrupole field, Experimental Thermal and Fluid Science 91, 155-165-2018(Elsevier).
50. S. Ahangar Zonouzi, H. Safarzadeh, H. Aminfar, M. Mohammadpourfard, Experimental Study of Subcooled Boiling Heat Transfer of Axial and Swirling Flows inside Mini Annular Gaps, Journal of Applied Fluid Mechanics 11, 225-232, 2018.
51. M. Mohammadpourfard and M. Rostami Dibavar, Numerical investigation of non-uniform magnetic fields effects on heat transfer and development of melting-solidification processes in an enclosure, Amirkabir Mechanical Engineering Journal 50, 405-408, 2018 (in Persian).
52. M. R. Shabgard, A. Gholipoor, M. Mohammadpourfard, Numerical and Experimental Study of the Effects of Ultrasonic Vibrations of Tool on Machining Characteristics of EDM Process, The International Journal of Advanced Manufacturing Technology 1-13, 2018 (Springer).
53. M. H. Taheri, M. Mohammadpourfard, A. K. Sadaghiani, A. Kosar, Wettability Alterations and Magnetic Field Effects on the Nucleation of Magnetic Nanofluids: A Molecular Dynamics Simulation, Journal of Molecular Liquids 260, 209-220, 2018 (Elsevier).
54. S. Ahangar Zonouzi, H. Safarzadeh, H. Aminfar, M. Mohammadpourfard, Experimental and Numerical Study of Swirling Subcooled Flow Boiling of Water in a Vertical Annulus, Experimental Heat Transfer 31, 513-530, 2018 (Taylor & Francis).
55. M. Rostami Dibavar, M. Mohammadpourfard, F. Mohseni, S. Zeinali Heris, Numerical Study on the Effect of Non-uniform Magnetic Fields on Melting and Solidification Characteristics of NEPCMs in an Annulus Enclosure, Energy Conversion and Management 171, 879-889, 2018 (Elsevier).
56. M. R. Shabgard, A. Gholipoor, M. Mohammadpourfard, Study of the Effect of Tools Ultrasonic Vibrations and External Magnetic Field on Machined Surface Integrity at EDM Process, Modares Mechanical Engineering 18, 861-871, 2018 (in Persian).
57. A. Qhafuri, H. Aminfar, M. Mohammadpourfard, R. Maroofiazar, Experimental Study on the Effect of Magnetic Field on Critical Heat Flux of Ferrofluid Flow Boiling in a Vertical Tube, Iranian Journal of Mechanical Engineering Transactions of the ISME 19, 115-126, 2018.

2019

58. M. Saedi, H. Aminfar, M. Mohammadpourfard, R. Maroofiazar, Simulation of ferrofluid flow boiling in helical tubes using two-fluid model, Heat and Mass Transfer 55, 133–148, 2019 (Springer).
59. S. Ahangar Zonouzi, H. Aminfar, M. Mohammadpourfard, A Review on Effects of Magnetic Fields and Electric Fields on Boiling Heat Transfer and CHF, Applied Thermal Engineering 151, 11-25, 2019 (Elsevier).

60. M. R. Shabgard, A. Gholipoor, M. Mohammadpourfard, Numerical and Experimental Investigation of Magnetic Field and Ultrasonic Vibrations Assisted EDM Process, Modares Mechanical Engineering 19, 159-169, 2019.
61. K. Ahookhosh, S. Yaqoubi, M. Mohammadpourfard, H. Hamishehkar, H. Aminfar, Experimental Investigation of Aerosol Deposition through a Realistic Respiratory Airway Replica: An Evaluation for MDI and DPI Performance, International Journal of Pharmaceutics 566, 157-172, 2019 (Elsevier).
62. M. R. Shabgard, A. Gholipoor, M. Mohammadpourfard, Investigation the Effects of External Magnetic Field on Machining Characteristics of Electrical Discharge Machining Process: Numerically and Experimentally, The International Journal of Advanced Manufacturing Technology 102, 55–65, 2019 (Springer).
63. E, Shi, F. Jabari, A. Anvari-Moghaddam, M. Mohammadpourfard, B. Mohammadi-Ivatloo, Risk-Constrained Optimal Chiller loading problem Using Information Gap decision Theory, Applied Sciences 9, 1925-1937, 2019 (MDPI).
64. F. Jabari, B. Mohammadi-Ivatloo, M. Mohammadpourfard, Robust Optimal Self-Scheduling of Potable Water and Power Producers under Uncertain Electricity Prices, Journal of Applied Thermal Engineering 162, 114258-13, 2019 (Elsevier) .
65. R. Hamdollahi, H. Aminfar, M. Mohammadpourfard, L. Jahanshaloo, Numerical Study of the Effects of Internal and External Forces on the Nanoparticle Mixing in a Ferrofluid Flow, Journal of Heat Transfer - Asian Research 48, 2007-2028, 2019 (John Wiley & Sons).
66. A. Kamali, H. Aminfar, M. Mohammadpourfard, L. Jahanshaloo, Numerical Investigation of Non-uniform Transverse Magnetic Field Effects on the Flow and Heat Transfer of Magnetic Nanofluid in a Sintered Porous Channel, Journal of Heat Transfer-Asian Research 48, 3790-3811, 2019 (John Wiley & Sons).
67. S. A. Zonouzi, R. Khodabandeh, H. Safarzadeh, H. Aminfar, M. Mohammadpourfard, M. Ghanbarpour, Experimental study of the subcooled flow boiling heat transfer of magnetic nanofluid in a vertical tube under magnetic field, Journal of Thermal Analysis and Calorimetry 45, 1-12 (Springer).

2020

68. F. Jabari, H. Ghaebi, B. Mohammadi-Ivatloo, M. Mohammadpourfard, M. B. Bannae-Sharifian, Design, Worst Case Study, and Sensitivity Analysis of a Net-zero Energy Building for Sustainable Urban Development, *Journal of Sustainable Cities and Society* 54, 101991, 2020 (Elsevier).
69. F. Jabari, M. Mohammadpourfard, B. Mohammadi-Ivatloo, Energy efficient hourly scheduling of multi-chiller systems using imperialistic competitive algorithm, *Computers and Electrical Engineering* 82, 106550 (Elsevier).
70. K. Ahookhosh, O. Pourmehran, H. Aminfar, M. Mohammadpourfard, M. Mohsen Sarafraz, Development of Human Respiratory Airway Models: A Review, *European Journal of Pharmaceutical Sciences* 145, 105233 (Elsevier).
71. M. R. Shabgard, A. Gholipoor, M. Mohammadpourfard, A Novel Approach to Plasma Channel Radius Determination and Numerical Modelling of Electrical Discharge Machining Process, *Journal of the Brazilian Society of Mechanical Sciences and Engineering* 42, 1-10, 2020.

72. E. Shi, X. Zang, C. Jiang, M. Mohammadpourfard, Entropy Generation Analysis for Thermomagnetic Convection of Paramagnetic Fluid Inside a Porous Enclosure in the Presence of Magnetic Quadrupole Field, J*ournal of Thermal Analysis and Calorimetry* 139, 2005–2022 (Springer).

73. K. Khajeh, H. Aminfar, M. Mohammadpourfard, Implementation of magnetic field force in molecular dynamics algorithm: NAMD source code version 2.12, *Journal of Molecular Modeling* 26, 106, 2020 (Springer).

74. N. Nasirpour, M. Mohammadpourfard, S. Zeinali Heris, Ionic liquids: promising compounds for sustainable chemical processes and applications, *Chemical Engineering Research and Design* 160, 264-300, 2020 (Elsevier).

75. K. Ahookhosh, M. Saidi, H. Aminfar, M. Mohammadpourfard, H. Hamishehkar, S. Yaqoubi, Dry Powder Inhaler Aerosol Deposition in a Model of Tracheobronchial Airways: Validating CFD Predictions with In Vitro Data, *International Journal of Pharmaceutics* 587, 119599, 2020 (Elsevier).

76. E. Shi, S. Ahangar Zonouzi, H. Aminfar, M. Mohammadpourfard, Enhancement of the performance of a NEPCM Filled Shell-and-Multi Tube Thermal Energy Storage System Using Magnetic Field: A Numerical Study, *Applied Thermal Engineering* 178, 15604, 2020 (Elsevier).

77. K. Khajeh, H. Aminfar, M. Mohammadpourfard, Molecular dynamics simulation of the magnetic field influence on the oil-water interface, *Fluid Phase Equilibria* 522, 112761, 2020 (Elsevier).

78. H. Pourpasha, Y. Mohammadfam, L, Khani, M. Mohammadpourfard, S. Z. Heris, Thermodynamic and thermoeconomic analyses of a new dual-loop organic Rankine - Generator absorber heat exchanger power and cooling cogeneration system, *Energy Conversion and Management* 224, 113356, 2020 (Elsevier).

2021

79. F. Sattari, M. Tahmasebpoor, J. M. Valverde, C. Ortiz, M. Mohammadpourfard, Modelling of a fluidized bed carbonator reactor for post-combustion CO2 capture considering bed hydrodynamics and sorbent characteristics, *Chemical Engineering Journal* 406, 126762, 2021(Elsevier).

80. P. Khosravifar, S. Ahangar Zonouzi, H. Aminfar, M. Mohammadpourfard, Numerical investigation of the condensation of a rising bubble inside a subcooled liquid under magnetic field, *International Journal of Thermal Sciences* 160, 106674, 2021(Elsevier).

81. R. Nazerifard, L. Khani, M. Mohammadpourfard, B. Mohammadi-Ivatloo, G. Gökçen Akkurt, Design and thermodynamic analysis of a novel methanol, hydrogen, and power trigeneration system based on renewable energy and flue gas carbon dioxide, *Energy Conversion and Management* 233, 113922, 2021(Elsevier).

82. E. Shi, K. Li, C. Jiang, Y. He, M. Mohammadpourfard, Non-uniform magnetic field impact on thermomagnetic convection of paramagnetic air in a permanent magnet-inserted horizontal annulus, *The European Physical Journal Plus* 136, 157, 2021 (Springer).

83. L. Khani, F. Jabari, M. Mohammadpourfard, B. Mohammadi-Ivatloo, Design, evaluation, and optimization of an efficient solar-based multi-generation system with an energy storage option for Iran's summer peak demand, accepted for publication in *Energy Conversion and Management* 242, 114324, 2021 (Elsevier).

84. H. Jafari Zandabad, L. Jahanshaloo, H. Aminfar, M. Mohammadpourfard, Experimental study of the effects of quadrupole magnetic field and hydro-thermal parameters on bubble departure diameter and frequency in a vertical annulus, accepted for publication in *Experimental Heat Transfer*, 2021 (Taylor & Francis).
85. M. H. Taheri, L. Khani, M. Mohammadpourfard, H. Aminfar, Multi-objective optimization of a novel biomass-based multigeneration system consisting of liquid natural gas open cycle and proton exchange membrane electrolyzer, accepted for publication in *International Journal of Energy Research* 2021(John Wiley).
86. F. Jabari, H. Arasteh, A. Sheikhi-Fini, H. Ghaebi, M. Bannae-Sharifian, B. Mohammadi-Ivatloo, M. Mohammadpourfard, A Biogas-Steam Combined Cycle for Sustainable Development of Industrial-Scale Water-Power Hybrid Microgrids: Design and Optimal Scheduling, accepted for publication in *International Journal of Biofuels, Bioproducts and Biorefinin* 2021(John Wiley).
87. H. Hosseinnia, B. Mohammadi-Ivatloo, M. Mohammadpourfard, Biogas-Steam Combined Cycle for Sustainable Development of Industrial-Scale WOptimal Techno-Economic Planning of a Smart Parking Lot -Combined Heat, Hydrogen and Power (SPL-CHHP)-Based Microgrid in the Active Distribution Network, *Applied Sciences* 11, 8043, 2021 (MDPI).

2022

88. H. Hosseinnia, B. Mohammadi-Ivatloo, M. Mohammadpourfard, Multi-objective Configuration of an Intelligent Parking lot and Combined Hydrogen, Heat and Power (IPL-CHHP) based Microgrid, *Sustainable Cities and Society* 76, 103433, 2022 (Elsevier).

Manuscripts under Review/Work in Progress

1. Experimental investigation of the effect of magnetic field on bubble lift-off diameter and frequency during subcooled flow boiling of a magnetic fluid inside an annulus, *Revised.*
2. Study of the Taylor-Couette flow of a magnetic nanofluid with axial flow under quadrupole magnetic field, *Submitted.*
3. Numerical modeling of a magnetic-boiling driven heat transport device, *Submitted.*
4. Numerical Investigation of Blood Flow and Red Blood Cell Rheology: The Magnetic Field Effect, *Submitted.*
5. , *Submitted.*
6. Thermodynamic and environmental analysis of a combined power, heating, cooling and hydrogen generation system based on solid oxide fuel cell, *Submitted*.
7. Experimental investigation and optimization of Tetracycline photocatalytic degradation using hybrid of TiO2 nanoparticles and ZnO microparticles in the presence of solar light, *Submitted*.

Selected Articles in Conference Proceedings

1. H. Aminfar and M. Mohammadpourfard, Numerical Study of Heat Transfer in the Nuclear Reactor Fuel Assemble, Fluid Dynamics Conference, Shiraz, Iran, 2004.

2. H. Aminfar and M. Mohammadpourfard, Numerical Study of Heat Transfer of the Tube Banks in Cross-Flow of Air, ISME, Esfahan, Iran, 2005.
3. H. Aminfar and M. Mohammadpourfard, Numerical Investigation of Triangular Impingement Jets Efficiency in the Heat Transfer, ISME, Kerman, Iran, 2008.
4. H. Aminfar, Y. Narmani Kahnamouei, M. Mohammadpourfard and A. Esmaeilnejad, Numerical Investigation into Heat Transfer Enhancement of Water-Al2O3 Nanofluid in a Curved Tube Using Two-Phase Mixture Model, International Congress on Nanoscience and Nanotechnology, Shiraz, Iran, 2010.
5. H. Aminfar, A. Esmaeilnejad, M. Mohammadpourfard and Y. Narmani Kahnamouei, Simulation of Convective Heat Transfer of Water-Al2O3 Nanofluids as Non-Newtonian Fluids in Microchannels, International Congress on Nanoscience and Nanotechnology, Shiraz, Iran, 2010.
6. M. Mohammadpourfard, Micro Droplets Merging by Electrowetting: Lattice Boltzmann Study, 19th International Conference on Computer Methods in Mechanics, May 2011, Warsaw, Poland.
7. M. Mohammadpourfard, Analytical and Numerical Investigation of Micro Droplets Stability, 19th International Conference on Computer Methods in Mechanics, May 2011, Warsaw, Poland.
8. M. Mohammadpourfard and M. Fallah, Numerical Study of Ferrofluid Flow and Heat Transfer in the Presence of Non-uniform Magnetic Field in Rectangular Microchannels, 1st National Conference on MEMS, November 2011, Khoy, Iran.
9. H. Aminfar, M. Mohammadpourfard, K. Khajeh, A Numerical Simulation of Arterial Mass Transport in Presence of Magnetic Field- Links to Atherosclerosis, 18th International Conference on Computational Biomechanics, January 2016, Zurich, Switzerland.
10. Y. Aryanfar, M. Mohammadpourfard, A review on the water sector in Iran: Current forecasts, scenario and sustainability issues, 24th Annual International Conference on Mechanical Engineering-ISME 2016, Yazd, Iran.
11. M. H. Taheri, L. Khani, M. Mohammadpourfard, A. S. Konukman, Thermodynamic and exergoeconomic analysis of a new Biomass based multigeneration system with hydrogen production and LNG regasification, World Energy Strategies Congress and Exhibition 2019, Istanbul, Turkey.
12. L. Khani, M. Mohammadpourfard and G. Gökçen Akkurt, Thermodynamic Investigation of a New Multigeneration System Based on a Fuel Cell, Proceedings of ICEESEN2020, Kayseri-Turkey.

Presentations

1. Convective Boiling Heat Transfer Enhancement with Nanoparticles. Invited oral presentation, School of Science and Engineering, Khazar University, Baku, Azerbaijan, June 3, 2019.
2. Advanced Heat Transfer, Changsha University of Science and Technology, Changsha, China, October 13-17, 2019.

Books and Book Chapters

1. F. Jabari, M. Mohammadpourfard, B Mohammadi-Ivatloo, Implementation of Demand Response Programs on Unit Commitment Problem, Demand Response Application in Smart Grids, Springer 37-54, 2020.
2. F. Jabari, M. Mohammadpourfard, B Mohammadi-Ivatloo, AC Optimal Power Flow Incorporating Demand-Side Management Strategy, Demand Response Application in Smart Grids, Springer 147-165, 2020.
3. Multiphase Flows and Magnetic fields, S. Ahangar Zonouzi, H. Aminfar, M. Mohammadpourfard, 2020, University of Tabriz Press, Iran.
4. F. Jabari, B. Mohammadi-Ivatloo, M. Mohammadpourfard, Integration of Clean and Sustainable Energy Resources and Storage in Multi-Generation Systems - Design, Modeling and Robust Optimization, 2020, Springer.

Funded Projects

1. CFD Simulation of Compressor C-701 of Olefin Unit, Funded by Morvarid Petrochemical Company, Assaluyeh, Iran, 2020.
2. Investigation and Optimization of Targeted Inhalable Drug Delivery Using Biosynthetic Iron Oxide Nanoparticles for Lung Cancer Therapy, Funded by Iran National Science Foundation (INSF), 2020.
3. Thermodynamic Design and Robust Performance Optimization of a Novel Combined Cooling, Portable Water and Power Generation System based on Solar Panels and Molten Salt Heat Storage, Funded by Iran National Science Foundation (INSF), 2020.

Patent

1. Design of a new system for simultaneous generation of electricity, hydrogen, and methanol using renewable solar energy and refinery flue gases, National Patent.
2. Design of Thermoelectric Fanned Gas Heater, National Patent.

Selected MS Students Supervisor and Co-supervisor

1. Farhang Mohseni, 2011, Numerical Study of Magnetic Field Effects on the Thermo-hydrodynamics of an Electrical Conducting Magnetic Nano Fluid, University of Tabriz, Iran.
2. Milad Sahraro, 2011, Numerical Investigation of Magnetic Field Effects on the Boiling Heat Transfer of Nanofluids, University of Tabriz, Iran.
3. Amir Eynalvandpour, 2012, Numerical Study of Magnetic Field Effect on the Thermal Hydrodynamics of Nanofluid using Eulerian-Lagrangian Method, University of Tabriz, Iran.
4. Sajjad Ahangar, 2012, Numerical Study of Flow and Heat Transfer of a Magnetic Nanofluid in Helical Pipes in Presence of Magnetic Field, University of Tabriz, Iran.
5. Faezeh Ghaderi, 2012, Numerical Investigation of Magnetic Field Effects on Magnetic Nanofluid Flow in Elastic Tube, University of Tabriz, Iran.
6. Saber Gheshlag, 2013, Numerical Investigation of Magnetic Field Effects on Magnetic Annular Nanofluid Flow, University of Tabriz, Iran.

7. Mohammad Nasiri, 2013, Heat Transfer Enhancement Using Magnetic Nanofluid in Microchannels with Slip Flow Regime, University of Tabriz, Iran.
8. Kosar Khajeh, 2013, Numerical Simulation of Magnetic Field Effects on the Nanofluid through a Pipe with Porous and Elastic Boundary Condition, University of Tabriz, Iran.
9. Amir Qhafuri, 2013, Experimental Investigation of Magnetic Nanofluid Flow Boiling, University of Tabriz, Iran.
10. Mahdi Ghorbani, 2014, Numerical Simulation of Vapor Bubble Growth During Magnetic Nanofluid Flow Boiling in a Microchannel, Azarbaijan Shahid Madani University, Iran.
11. Ali Madayen, 2014, Numerical study of magnetic Field Effects on Flow and Heat Transfer Characteristics of Non-Newtonian Ferrofluid with Electrical Conductivity in an Elastic Channel, University of Tabriz, Iran.
12. Masoud Karimi, 2014, Numerical Investigation of Magnetic Field Effects on the Swirling Flow Boiling of Magnetic Nanofluid in an Annulus, University of Tabriz, Iran.
13. Alireza Divanbagie, 2015, Numerical Study of Thermally Developing Two-Phase Flow at the Presence of Magnetic Field Gradient in Microtubes, Azarbaijan Shahid Madani University, Iran.
14. Ramin Mortazazadeh, 2015, Numerical Analysis of Magnetic Nanofluid Stability and Sedimentation, University of Tabriz, Iran.
15. Javad Siyahi, 2015, Numerical Study of Effects of Non-uniform Magnetic Field on Heat Transfer and Moving of Interfacial During the Solidification, Azarbaijan Shahid Madani University, Iran.
16. Ayat Shafiei, Numerical Study of Magnetic Field Effect on Thermo-Hydrodynamics Behaviour of Two-Phase Flow with Different Magnetic Permeability, University of Tabriz, Iran.
17. Nazli Javadi, Numerical Study of Magnetic Field Effects on Red Blood Cell Motion and Deformation in Microvessel, University of Tabriz, Iran.
18. Rana Amirzehni, Experimental Study of Magnetic Field Effects on Bubble Departure Diameter in Pool and Flow Boiling in a Vertical Annulus, University of Tabriz, Iran.
19. Hossein Moattali, Numerical Study of Electrowetting Effects on Incipient Cavitation Flow in a Nozzle of Fuel Injector, University of Tabriz, Iran.
20. Reza Hamdollahi, 2016, Numerical Study of Effects of Internal and External Forces on Mixing of Nanoparticle in a Ferrofluid, University of Tabriz, Iran.
21. Mostafa Saedi, 2016, Numerical Study of Magnetic Field Effects on Nanofluid Flow Boiling in Helical Tubes, University of Tabriz, Iran.
22. Amin Kamali, 2016, Numerical Study of Magnetic Field Effects on the Heat Transfer of Transient Two-phase Flow in a Porous Media, University of Tabriz, Iran.
23. Hadi Taheri, 2016, Molecular Dynamics Simulation of Boiling and Evaporation in Nanofluid on Solid surface by Applying Magnetic Field, Azarbaijan Shahid Madani University, Iran.
24. Mortaza Rostami Dibavar, 2017, Numerical study of effects of non-uniform magnetic field on solidification of NEPCM inside an annulus container, Azarbaijan Shahid Madani University, Iran.

25. Behnam Sattari, 2018, Experimental Evaluation and Simulation of Fast Pyrolysis Process and Its Environmental Effects in Wood Conversion to Liquid Fuel, University of Tabriz, Iran.
26. Paria Halimi, 2019, Experimental Study of Magnetic Field Effects on Pure Water Boiling Condition on Microreactor Temperature for Ficsher-Tropsch in Microchannel Reactor, University of Tabriz, Iran.
27. Shadi Esahghi, 2019, Numerical Study of Magnetic Fields Effects on the Hydrodynamics and Heat Transfer in Falling FIlm Microreactor, University of Tabriz, Iran.
28. Habil Jafari, 2020, Experimental Study of the Effects of Quadrupole Magnetic Field and Hydro-Thermal Parameters on Bubble Departure Diameter and Frequency in a Vertical Annulus, University of Tabriz, Iran.
29. Ata Haidarpour Tabrizi, 2020, Experimental Study of the Effects of Magnetic Field and Hydro-Thermal Parameters on Bubble Departure and Frequency of Nanofluid in a Vertical Annulus, University of Tabriz, Iran.
30. Mahsa Mohammadpour, 2020, Thermodynamic and Environmental Analysis of a Combined Power, Heating, Cooling and Hydrogen Generation System based on Solid Oxide Fuel Cell University of Tabriz, Iran.
31. Paria Khosarvifar, 2020, Numerical Investigation of Magnetic Field Effects on the Bubble Condensation in Subcooled Boiling under Temperature Gradient in the Direction of the Bubble Movement, University of Tabriz, Iran.

PhD Students Co-supervisor

1. Rasol Maroofiazar, 2014, Numerical and Experimental Investigation of Magnetic Nanofluid Flow Boiling, Faculty of Mechanical Engineering University of Tabriz, Iran.
2. Nayyer Razmara, 2014, Molecular Dynamics Study of Ferrofluid Flow inside Nanochannels under Magnetic Fields, Faculty of Mechanical Engineering University of Tabriz, Iran.
3. Mirsadegh Seyedzavvar, 2017, Finite Difference Simulation and Experimental Investigation: Effects of Physical Synergetic Properties of Nanoparticles on Temperature Distribution and Surface Integrity of Work-piece in Nanofluid MQL Grinding Process, Faculty of Mechanical Engineering University of Tabriz, Iran.
4. Ahad Gholipoor, 2018, A novel Approach to Plasma Channel Radius Determination and Numerical Modeling of Electrical Discharge Machining Process, Faculty of Mechanical Engineering University of Tabriz, Iran.
5. Sajjad Ahangar Zonouzi, 2018, Experimental and Numerical Study of the Subcooled Flow Boiling Heat Transfer of Magnetic Nanofluid in a Vertical Tube under Magnetic Field, Razi University, Kermanshah, Iran.
6. Kosar Khajeh, 2020, Molecular Dynamics Simulation of the Magnetic Field Influence on the Oil-Water Interface, Faculty of Mechanical Engineering University of Tabriz, Iran.

Reviewing Activities (selected)

- International Journal of Thermal Sciences
- International Journal of Heat and Fluid Flow
- International Journal of Heat and Mass Transfer
- Applied Thermal Engineering

- Energy Conversion and Management