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Educations

Ph.D., Mechanical Engineering

Sharif University of Technology, Tehran, Iran, 1999

M.Sc., Mechanical Engineering

University of Michigan, Ann Arbor, Michigan, USA, 1979

B.Sc., Mechanical Engineering

Sharif University of Technology, Tehran, Iran, 1975







Academic Positions

<i>April 2008 - Now</i>	Professor, School of Mechanical Engineering, Sharif University of Technology, Tehran, Iran
<i>May 2018- Sept.2020</i>	Professor and Director, Sharif Energy Research Institute(SERI), Sharif University of Technology, Tehran, Iran
<i>Sept. 2014 –Sept.2020</i>	Professor and Director, Center of Excellence in Energy Conversion (CEEC), Sharif University of Technology, Tehran, Iran
<i>Nov. 2013 - Mar. 2016</i>	Professor and Dean, Centre of Languages and Linguistics(CLL), Sharif University of Technology, Tehran, Iran
<i>Sept. 2012 - Sept. 2014</i>	Professor and Vice President of Academic Affairs(VPAA), Sharif University of Technology, Tehran, Iran
<i>Apr. 2008 - Sept. 2011</i>	Professor and Chair, School of Mech. Eng., Sharif University of Technology, Tehran, Iran
<i>Dec. 2003 - Apr. 2008</i>	Associate professor, School of Mech. Eng., Sharif University of Technology, Tehran, Iran
<i>Jul. 2007 - Sept. 2009</i>	Vice–Chairman of Graduate Studies, School of Mech. Eng., Sharif University of Technology, Tehran, Iran
<i>June 2001 - June 2003, and June 2012 - Now</i>	Director of Center of Excellence in Energy Conversion, Sharif University of Technology, Tehran, Iran
<i>Sept. 1999 - June 2003</i>	Director of Thermo-Fluid Group, School of Mech. Eng., Sharif University of Technology, Tehran, Iran
<i>Sept. 1994 - Now</i>	Coordinator of Heat Transfer and Thermodynamic Labs, School of Mech. Eng., Sharif University of Technology, Iran

Honors and Awards








- ❖ Ph.D. thesis advisor to Mohammad Zabetian Toraghi, (co supervisors: Dr. M.S. Saidi, Dr. M.B. Shafiee), Winning the best Ph.D. thesis award in Mechanical Engineering, Selected by the Iranian Society of Mechanical Engineers (ISME)
- ❖ Nationwide Distinguished Professor of Mechanical Engineering, Selected by the Iranian Society of Mechanical Engineers (ISME), 2013
- ❖ Winner of the award of Iran Radiator Industrial Group, 2011
- ❖ Nationwide Distinguished Researcher, Selected in the 12th Festival of the Nomination of the Best Researchers by the Ministry of Science, Research and Technology (MRST), 2011
- ❖ Ph.D. thesis advisor to Saeed Reza Dehghani, (co supervisors: Dr. Akbar Ghafourian and Dr. Ali Asghar Mozafari), Winning the best Ph.D. thesis award in energy conversion, Selected by the Iranian Combustion Institute (ISC)
- ❖ UNIDO Award and Certificate for the Applied Research, 2008
- ❖ Winner of the Khwarizmi International Award (KIA) for the Applied Research, Organized by the Iranian Research Organization for Science and Technology (IROST), 2008
- ❖ B.Sc. thesis advisor to Abolfazl Irani, Winning the Best Bachelor Thesis Award from the 2nd Combustion Conference of National Combustion Institute, Feb., 2008
- ❖ B.Sc. thesis advisor to Hossein Safaei and Sahand Pirouz Panah, Winning the Best B.Sc. thesis award, Ali- Nasab Foundation, ISME, 2006
- ❖ Ph.D. thesis advisor to Amir Farhad Najafi, Winning the best Ph.D. thesis award from Butane Foundation, 2005
- ❖ M.Sc. thesis advisor to Ehsan Farvardin, Winning the best MSc. thesis award from the 1st Combustion Conference of National Combustion Institute, 2005
- ❖ M.Sc. thesis advisor to Saeed Jahangirian and Mahdi Abarham, Winning the best MSc thesis award from Farid-Aalam Foundation, ISME, 2004
- ❖ Distinguished Professor of Sharif University of Technology for the Excellence in Research, 2004
- ❖ M.Sc. thesis advisor to Ala Moradian, Winning the best M.Sc. thesis award from ISME, 2003
- ❖ B.Sc. thesis advisor to Mahmoud Yavari, Winning the best B.Sc. thesis award from Ali-Nasab Foundation, ISME, 2002
- ❖ Distinguished Professor of Mechanical Engineering Department for Excellence in Research, 2001-2002
- ❖ BSc. thesis advisor to Saeed Rahmani, Winning the best B.Sc. thesis award from ISME, 2000
- ❖ Recipient of French Government Scholarship, Sept. 1997-Sept. 1998
- ❖ Distinguished Professor of Mechanical Engineering Department for Excellence in Teaching, 1995-96

Post-Doctoral Students



-  Dr. Hanafizadeh, Pedram: Liquid-Gas Two Phase Flow Modelling in Upward and Downward vertical and Inclined Pipes (*Graduated*)
-  Dr. Sadeghi, Arman: Transport Phenomena in Electroosmotic Flow (*Graduated*)
-  Dr. Alipoor, Alireza: Numerical study of hydrogen-air combustion characteristics in a novel micro-thermophotovoltaic power generator (*Graduated*)
-  Dr. Hoshyargar, Vahid: Transport Phenomena in Diffusioosmotic Flow (*Graduated*)
-  Dr. Ghahramani, Amir Reza: Analytical Investigation of Bio-fuels Blends in the Direct Injection Engine (*Graduated*)
-  Dr. Rabbani, Reza: Viscosity Calculation of Solid-Like Layer around Nanoparticle using Equilibrium Molecular Dynamics Simulations(*Graduated*)

Former Ph.D. Students






-  Reshadi, Milad: Electro-Rheological Investigation of Flows and Transport Phenomena in Micro/Nanofluidic Systems
-  Jani, Saeed: Second Law Based Optimization of Falling Film Single Tube Absorption Generator
-  Najafi, Amir farhad: Boundary Layer Solution for the Turbulent Swirling Decay Flow through a Fixed Pipe: SBR at the Inlet
-  Esfanidiari-Nia, Fatemeh: Heat and Mass Transfer Modeling of Desiccant Wheel for Air Conditioning
-  Majidian, Alireza: Life Prediction of Boiler Tubes Using Fuzzy Logic and Neural Network
-  Ramezani Zadeh, Mahdi: Computational Simulation of Turbulent Film Cooling Using LES Approach and Considering Density Ratio Effects
-  Jafarian Dehkordi, Ali: Analytical – Experimental Modelling of Double Inlet Pulse Tube Refrigerator
-  Asadi, Bahman: Numerical Simulation of Hydrodynamics of Bubble Movement in Stagnant Fluid at Zero Gravity Conditions
-  Dehghani, Saeed Reza: Modeling of Spray Combustion in Vortex Flow
-  Hanafi-Zadeh, Pedram: Experimental and Numerical Modelling of Two-Phase Flow in a Vertical Pipe
-  Chitsaz, Iman: Experimental and Numerical Investigation on the Jet Characteristics of Spark Ignition Direct Injection Gaseous Injector
-  Sajadi, Behrang: Numerical–Experimental Investigation of the Effect of Obstacles on Particles Distribution and deposition in a Clean Room
-  Jalaleddin Abyaneh, Mohammad Hassan: Experimental Modelling of Aqueous LiBr Solution Absorber: Effect of Bundle Geometry
-  Sadeghi, Arman: Transport Phenomena in Electroosmotic Flow
-  Zabetian Toraghi, Mohammad: Laser Induced Flow in Particulate Media
-  Ghaebi, Hadi (Co-supervisor): Reduction of Heating-Cooling Energy Consumption of Large Buildings Employing Aquifer Energy Storage and Seasonal Solar Heat Pumps

-  Ghahramani, Alireza: Experimental and Analytical Investigation of Bio-fuels Blends in the Direct Injection Engine (*Graduated*)
-  Kavooosi Balotaki, Hassan: Design and Performance of Multi-purpose Vacuum Solar Collector (*Graduated*)
-  Hosseini Abadshapouri, Mahdi: Two-phase, Two-component Simulation of Nanofluids in Natural Convection Applying Lattice Boltzmann Method (*Graduated*)
-  Biglarian, Hassan (Cosupervisor: Prof. Abbaspour, M.): Modeling of a hybrid ground source heat pump system with solar thermal collector and phase change materials (*Graduated*)
-  Eslami, Jaber: (Cosupervisor); Numerical and experimental investigation of human movement on the ventilation effectiveness in the cleanrooms (*Graduated*)
-  Sadeghi, Morteza (Cosupervisor: Prof. Musavi, M.): Electrokinetic flow in pH-regulated solid-state/soft micro-nanochannels
-  Niroomand, Reza (Cosupervisor: Prof. K. Hannani, S.): A quasi-three-dimensional multiscale model for two-phase simulation of multi-stream plate-fin heat exchangers (*Graduated*)

Ph.D. Students Consulting Supervisor

-  Bohlouli A.: Liquid-Gas Two Phase Flow Modelling of inclined horizontal Channels (*Graduated*)
-  Kabiri- Samani, Abdolreza: Fluctuation of Air- Water Two – Phase Flow in Horizontal and Inclined Water Pipelines (*Graduated*)

Current Ph.D. Students

-  Safari, Ali
-  Keshavarz Mohammadian, Pouria
-  Behzadi Sarokolaei, Mohammad
-  Zamani, Mohammad Amin
-  Kazemi Ranjbar, Sina

Teaching Interests

At Sharif University of Technology, Faculty of Engineering – Tehran University and K.N. Toosi University of Technology, I have taught variety of graduate and undergraduate courses. Some of these courses include:

<i>Graduate Course</i>	<i>Undergraduate Courses</i>
➤ Advanced Thermodynamics	➤ Thermodynamics: Basics and Applied
➤ Convection Heat Transfer	➤ Heat Transfer
➤ Advanced Energy Conversion	➤ Thermal Power plant
➤ Cryogenics	➤ Refrigeration and Air Conditioning
➤ Advanced Power plant	➤ Turbo machinery
➤ Two Phase flow	➤ Heat Transfer Laboratory
	➤ Thermodynamic Laboratory

Research Activities

Research activities in the recent years have been in:

- Micro- Nano Fluidics
- Heat Transfer Enhancement in Boiling and Condensation
- Modeling of Pulse Refrigeration, Vortex tube refrigerator, Indoor Air Quality and Clean Room Technology
- Energy Efficiency in Home Appliances, Desiccant Cooling System
- Engine Cooling System Modeling
- Design of Thermal Desalination Systems

Professional Membership and Editorial Services

- ASME member
- ISME member
- Board of Director: ISHRAE-Iranian Society of Heating, Refrigeration and Air Conditioning Engineers
- Editor-in – Chief (2009-2011): Journal of Engine Research
- Editorial Board Member: Journal of Engine Research
- Editorial Board Member: Journal of Heat and Mass Transfer Research
- Editorial Board Member: Journal of Mech. and Aerospace
- Editorial Board Member: Journal of Research in Engineering Education
- Editor-in-Chief: Journal of Fuel and Combustion
- Chairman of the Board: Iranian Combustion Society (ICI)

Research and Industry Contracts

- Research Contract- 2020-2021, Know How Knowledge Development in Cryogenic Air Separation Industrial Plants (HATCO Project)
- Research Contract- 2020-2021, Simulating Cooling Process of LED 35 W Street Lights (Contract No. MTR/022/10950 Shahab Tousheh Company)
- Research Contract- 2019-2020, Public Knowledge Enhancement on Energy Efficiency Improvement in Buildings.
- Research Contract- 2019-2020, CNG Fuel Stations Smartification (EPC Services, National Iranian Gas Company).
- Research Contract- 2018-2019, TAC Mechanical Drive Upgrade- Contract No. 98-0110, 1399).
- Research Contract- 2018-2019, Energy Efficiency and Environment in Buildings (EEEB).
- Research Contract- 2018-2019, Investigation and Comparison of Resin and Hardeners Performance Applicable in Wet Aqueous Environments (Marun Petrochemical Complex).
- Research Contract- 2012-2014, Simulation of the Cooling Circuit of Locomotive Diesel Engine considering the Effect of Environmental Conditions on Its Performance (MAPNA Project).
- Research Industry Contract- 2012-2014, Iranian Gas Transmission Corporation: Hardware

and Software Design of Apparatus for Performance Evaluation of Turbine Inlet Air Filters.

- Research Contract- 2012-2014, Ministry of Energy, Regional Power Organization of Khuzestan: Exergy Analysis of Ramin Power Plant for the Means of Efficiency and Performance Enhancement.
- Research Contract- 2011-2013, Ministry of Energy, Regional Power Organization of Tehran: Reduction of Energy Loss of Boiler Air Pre-heaters of Montazer Ghaem Power Plant.
- Industry Contract- 2009-2010, Tahviah Corporation, Tehran: feasibility Study of Design and Fabrication of Heating Cooling Packages for Residential Applications.
- Research Contract- 2010-2012, Ministry of Industry, Industrial Development and Renovation Organization: Design, Fabrication and Know How Documentation of Apparatus for distinguishing and separation of Particles by Laser.
- Research Contract- 2009-2010, Ministry of Energy, Regional Power Corporation of Mazandaran: Comprehensive Heat Balance Analysis of Neka Steam Power Plant.
- Research Contract- 2007-2008, Ministry of Energy, Kerman shah Power Plant: Possibility of Feeding Spray Water of Reheater from Interstages of Feed Water Boiler
- Research Contract 2008-2009, National South Regions Oil Corporation: Application of Desiccant Technology to Increase the Efficiency of Cooling Systems in Wet and Humid Regions.
- Research Contract- 2008-2008, Petrochemical Industry Corporation: Modelling of Two Phase Low in the Airlift Pumps for de-watering of Gas Wells and Pressurizing the Dead Oil Wells.
- Research Contract- 2005-2006, Ministry of Energy, Energy Consumption Criteria and Energy Labelling of Air Handling Units.
- Research Contract- 2005-2006, Ministry of Industry, Industrial Development and Renovation of Organization, Design and Manufacturing of Rotary Wheel Dehumidifier (SBDC project).
- Industry Contract- 2004-2005, Razi Vaccine and Serology Research Centre of Iran, energy distribution project of Hesarak Karaj.
- Research Industry Contract- 2004- 2005, Cara Tehran Nouavar, Coordinator and chairperson in design of clean rooms for Pastour Institute and Razi Research Centre.
- Research Industry Contract- 2004-2005, Atmosphere Industrial Group, design of new low water content, high heat capacity and light weight radiators for home appliances.
- Research Industry Contract- 2003-Now, SABA, Vice Chancellor in Charge of Energy, Ministry of Energy, Energy Labelling of Refrigerators and freezers.
- Research Contract- 2001-2002, SECCO IRAN, an Iranian leading manufacturer of windows and doors. Research program was to design a test chamber for condition monitoring of their products for air permeability, water diffusivity and strength against wind according to international standards.
- Research Contract- 2000 to 2002, Alfam Radiator Manufacturing Co, Tehran, IRAN. Research work was conducted in precise three dimensional modelling of household heating radiators using FLUENT software package. Precise standard test room was designed for experimental validation of numerical results. The work included design and manufacturing new types of radiators having more heating capacity and less weight.
- Research Contract- 2001-2002, Iran Khodro. Research program was to energy audit Iran

- Khodro Casting Plant to minimize their energy consumption.
- Research Contract-1998-2000, Sepehr Electric Manufacturing Company, IRAN. Research Contract with Sepehr Electric Manufacturing Company, a leading home appliance manufacturing in Iran, in design and Construction of an automated testing system for quality – control assurance of their Evaporative cooler products.
 - Research Contract-September 1995 to December 1998, Electric Power Research Center (MATN), Research was conducted to Minimize power consumption of Evaporative Coolers.
 - Research Contract-July 1995 to July 1996, Iranian standard and research Institute (ISRI), the research contract was to design test chamber for Evaporative coolers under ISO and EN standards.

Publications (Referred Journal papers)

- [1] **Saidi, M.H.**, Razaghi, R., Zabetian, M., Experimental and analytical investigation of micro-particle velocity domain and particle-wall interaction in microchannel, *International Journal of Nonlinear Analysis and Applications* 15(6) (2024) 173-186.
- [2] Shafiei Souderjani, A., **Saidi, M.H.**, A Simulation study on ionic current in cylindrical hydrophobic nanopores, *Iranian Journal of Mechanical Engineering Transactions of the ISME* (2024).
- [3] Rabiee, P., **Saidi, M.H.**, Implementation of Linear Parameter Varying System to Investigate the Impact of Varying Flow Rate on the Lithium-ion Batteries Thermal Management System Performance, *arXiv preprint arXiv:2403.01334* (2024).
- [4] Taheri, M., Maerefat, M., Zabetian, M., **Saidi, M.H.**, Theoretical and experimental study for enhancement of filtration performance of nonwoven fibrous media by nonuniform compression, *Separation and Purification Technology* 329 (2024) 125198.
- [5] Rabani, R., **Saidi, M.H.**, Rajabpour, A., Joly, L., Merabia, S., Enhanced heat flow between charged nanoparticles and an aqueous electrolyte, *Langmuir* 39(43) (2023) 15222-15230.
- [6] **Saidi, M.H.**, Tohidloo, M., Bakhtiari, M., Investigation and simulation of a cooling cycle based on Misotsenko concept, *Sharif Journal of Mechanical Engineering* 39(1) (2023) 79-88.
- [7] Safari, A., **Saidi, M.H.**, Salavatidezfouli, S., Yao, S., Numerical investigation of the drag reduction effect in turbulent channel flow by superhydrophobic grooved surfaces, *Flow 3* (2023) E27.
- [8] Shafiei Souderjani, A., Bakouei, M., **Saidi, M.H.**, Taghipoor, M., Electrophoretic motion of hydrophobic spherical particles in nanopore: Characteristics, separation, and resistive pulse sensing, *Physics of Fluids* 35(2) (2023).
- [9] Samani, A.K., Borgheie, M., **Saeidi, M.**, Experimental results of pressure fluctuations in a water conduit section due to formation of unstable two-phase air-water flow, *Journal of Advanced Materials in Engineering (Esteghlal)* 24(2) (2022) 69-86.
- [10] Sajadi, B., **Saidi, M.H.**, Ahmadi, G., Soleimani, M., Numerical modeling of particles resuspension due to human stepping, *Energy Equipment and Systems* 10(4) (2022) 401-415.
- [11] Mohammadian, P.K., **Saidi, M.H.**, Mean-line model development for off-design performance prediction of transonic axial compressor of an industrial gas turbine based on computational fluid dynamics database, *Proceedings of the Institution of Mechanical Engineers, Part A: Journal of Power and Energy* 236(8) (2022) 1449-1471.
- [12] Mahboubi, D., Jafari Gavzan, I., **Saidi, M.H.**, Ahmadi, N., Developing an electro-thermal model to determine heat generation and thermal properties in a lithium-ion battery, *Journal of Thermal Analysis and Calorimetry* 147(21) (2022) 12253-12267.
- [13] Ghahremani, A., Aramfard, M., **Saidi, M.H.**, An analytical investigation of transient imperfectly expanded turbulent jet, *Proceedings of the Institution of Mechanical Engineers, Part G: Journal of Aerospace Engineering* (2022) 09544100221077465.
- [14] Alishiri, M., Akbari, A., **Saidi, M.H.**, Thermal performance of a pulsating heat pipe charged

- with Fe₃O₄-MWCNTs/DI water hybrid nanofluid: Experimental study and optimization, *Journal of Thermal Analysis and Calorimetry* 147(23) (2022) 13535-13550.
- [15] Sadeghi, M., **Saidi, M.H.**, Kröger, M., Tagliazucchi, M., Stimuli-responsive polyelectrolyte brushes for regulating streaming current magnetic field and energy conversion efficiency in soft nanopores, *Physics of Fluids* 34(8) (2022).
- [16] Mahboubi, D., Gavzan, I.J., **Saidi, M.H.**, Ahmadi, N., State of charge estimation for lithium-ion batteries based on square root sigma point Kalman filter considering temperature variations, *IET Electrical Systems in Transportation* 12(3) (2022) 165-180.
- [17] Hosseini Abadshapoori, M., **Saidi, M.H.**, Numerical simulation of MHD mixed convection flow of Al₂O₃-water nanofluid over two hot obstacles, *Heat Transfer (Wiley Online Library)*, 1-20, 2022; doi:10.1002/htj.22446.
- [18] Niroomand, R., **Saidi, M.H.**, Hannani, S.K., A new multiscale modeling framework for investigating thermally-induced flow maldistribution in multi-stream plate-fin heat exchangers, *International Journal of Heat and Mass Transfer* 180, 121779, 2021.
- [19] Vakili, M.A., Sadeghi, M., **Saidi, M. H.**, Moosavi, A., Ionic transport and selectivity of electrokinetically-actuated non-Newtonian flows within a pH-regulated rectangular nanochannel, *arXiv preprint arXiv:2111.04057*, 2021.
- [20] Rabani, R., **Saidi, M. H.**, Joly, L., Merabia, S., Rajabpour, A., Enhanced local viscosity around colloidal nanoparticles probed by Equilibrium Molecular Dynamics Simulations, *The Journal of Chemical Physics* 155 (17), 174701, 2021.
- [21] Korouyeh, M.M., **Saidi, M. H.**, Najafi, M., Aghanajafi, C., A simplified analytical model for predicting the heating performance of single U-tube underground heat exchangers, *Scientia Iranica* 28 (2), 847-859, 2021.
- [22] Korouyeh, M.M., **Saidi, M. H.**, Najafi, M., Aghanajafi, C., Selection of prime mover to meet heating demand of a single effect absorption chiller based on laws of thermodynamics, *SN Applied Sciences* 3(1), 1-12. 2021.
- [23] Jiryaei, Z., **Saidi, M.H.**, Effect of collision on self-assembly of nanoparticles in zirconia microparticle suspension, *Journal of Dispersion Science and Technology*, 1-9, 2020.
- [24] Sadeghi, M., **Saidi, M.H.**, Moosavi, A., Sadeghi, A., Unsteady solute dispersion by electrokinetic flow in a polyelectrolyte layer-grafted rectangular microchannel with wall absorption, *Journal of Fluid Mechanics*, Vol. 887, A13, 2020.
- [25] Gandomkar, A., Kalan, K., Vandadi, M., Shafii, M.B., **Saidi, M.H.**, Investigation and visualization of surfactant effect on flow pattern and performance of pulsating heat pipe, *Journal of Thermal Analysis and Calorimetry*, Vol. 139 (3), pp. 2099-2107, 2020.
- [26] Mohammadian Korouyeh, M., **Saidi, M.H.**, Najafi, M., Aghanajafi, C., A simplified analytical model to predict heating performance of single U-tube ground heat exchangers, *Scientia Iranica*, 2020, Accepted in Press.
- [27] **Saidi, M.H.**, Sajadi, B., Ahmadi G., Computer modeling of the operating room ventilation performance in connection with surgical site infection, *Scientia Iranica: Transactions on Mechanical Engineering (B)*, Vol. 27 (2), pp. 704-714, 2020.
- [28] Reshadi, M., **Saidi, M.H.**, Tuning the dispersion of reactive solute by steady and oscillatory electroosmotic-Poiseuille flows in polyelectrolyte-grafted micro/nanotubes, *Journal of Fluid Mechanics*, Vol. 880, pp. 73-112, 2019.
- [29] Keshavarz Mohammadian, P., **Saidi, M.H.**, Simulation of startup operation of an industrial twin-shaft gas turbine based on geometry and control logic, *Energy*, Vol. 183 (15), pp. 1295-1313, 2019.
- [30] Sajadi, B., **Saidi, M.H.**, Ahmadi, G., Numerical evaluation of the operating room ventilation performance: ultra-clean ventilation (UCV) systems, *Scientia Iranica*, Vol. 26 (4), pp. 2394-2406, 2019.
- [31] Niroomand, R., **Saidi, M.H.**, Hannani, S.K., A quasi-three-dimensional thermal model for multi-stream plate fin heat exchangers, *Applied Thermal Engineering*, Vol. 157, 2019.
- [32] Balotaki, H.K., **Saidi, M.H.**, Design and Performance of a Novel Hybrid Photovoltaic-

- Thermal Collector with Pulsating Heat Pipe (PVTPHP), *Iranian Journal of Science and Technology, Transactions of Mechanical Engineering*, Vol. 43 (2), pp. 1-11, 2019.
- [33] Biglarian, H., **Saidi, M.H.**, Abbaspour, M., Economic and environmental assessment of a solar-assisted ground source heat pump system in a heating-dominated climate, *International Journal of Environmental Science and Technology*, Vol. 16 (7), pp. 3091-3098, 2019.
- [34] Ghaebi, H., Bahadori, M.N., **Saidi, M.H.**, Different operational alternatives of aquifer thermal energy storage system for cooling and heating of a residential complex under various climatic conditions in Iran, *Scientia Iranica*, Vol. 26 (3), 1281-1292, 2019.
- [35] Mohammadian Korouyeh, M., **Saidi, M.H.**, Najafi, M., Aghanajafi, C., Evaluation of desiccant wheel and prime mover as combined cooling, heating, and power system, *International Journal of Green Energy*, Vol. 16 (3), 256-268, 2019.
- [36] Akbari, A., **Saidi, M.H.**, Experimental investigation of nanofluid stability on thermal performance and flow regimes in pulsating heat pipe, *Journal of Thermal Analysis and Calorimetry*, vol. 135 (3), 1835-1847, 2019.
- [37] Khademi, A. **Saidi, M.H.**, Darbandi, M., Schneider, G.E., Numerical Study of Patient Respiration Effect on Bacterial Dispersion in a Surgery Room, *Journal of Fluid Flow, Heat and Mass Transfer*, Vol. 6, pp. 49-59, 2019.
- [38] Reshadi, M., **Saidi, M.H.**, The role of ion partitioning in electrohydrodynamic characteristics of soft nanofluidics: Inclusion of EDL overlap and steric effects, *Chemical Engineering Science*, Vol. 190, 443-458, 2018.
- [39] Hosseini Abadshapoori, M., **Saidi, M.H.**, 3D investigation of natural convection of nanofluids in a curved boundary enclosure applying lattice Boltzmann method, *International Journal of Numerical Methods for Heat & Fluid Flow*, Vol. 28 (8), pp. 1827-1844, 2018.
- [40] Hosseini Abadshapoori, M., **Saidi, M.H.**, Lattice Boltzmann simulation of TiO₂-water nanofluid in a curved boundary domain at high Rayleigh numbers, *Computers & Fluids*, Vol. 168, pp. 159-169, 2018.
- [41] Ghahremani, A.R., Jafari, M., Ahari, M., **Saidi, M.H.**, Hajinezhad, A., Mozaffari, A.A., Spray characteristics and atomization behavior of bio-diesel (Norouzak) and diesel fuel blends, *Particulate Science and Technology*, Vol. 36 (3), pp. 270-281, 2018.
- [42] Reshadi, M., **Saidi, M.H.**, A Ebrahimi, Pure axial flow of viscoelastic fluids in rectangular microchannels under combined effects of electro-osmosis and hydrodynamics, *Theoretical and Computational Fluid Dynamics*, Vol. 32 (1), pp. 1-21, 2018.
- [43] Biglarian, H., Abbaspour, M., **Saidi, M.H.**, Evaluation of a transient borehole heat exchanger model in dynamic simulation of a ground source heat pump system, *Energy*, Vol. 147, pp. 81-93, 2018.
- [44] Aghakashi, V., **Saidi, M.H.**, Turbulent decaying swirling flow in a pipe, *Heat Transfer Research*, Vol. 49 (16), 2018.
- [45] Schneider, G.E., Ghafourizadeh, M., Darbandi, M., **Saidi, M.H.**, Exhaust Soot Investigation in a JP Combustor Working at Various Wall Temperature Considerations, *AIAA Aerospace Sciences Meeting*, No. 1414, 2018.
- [46] Sadeghi, M., **Saidi, M.H.**, Moosavi, A., Sadeghi, A., Geometry effect on electrokinetic flow and ionic conductance in pH-regulated nanochannels, *Physics of Fluids*, Vol. 29 (12), 122006, 2017.
- [47] Ghaebi, H., Bahadorinejad, M., **Saidi, M.H.**, Energy efficiency in a building complex through seasonal storage of thermal energy in a confined aquifer, *Energy Equipment and Systems*, Vol. 5 (4), pp. 341-348, 2017.
- [48] Helisaz, H., **Saidi, M.H.**, Sadeghi, A., Reduction of production rate in Y-shaped microreactors in the presence of viscoelasticity, *Analytica chimica acta*, Vol. 990, pp. 121-134, 2017.
- [49] Alipoor, A., **Saidi, M.H.**, Numerical study of hydrogen-air combustion characteristics in a novel micro-thermophotovoltaic power generator, *Applied Energy*, Vol. 199, pp. 382-399, 2017.

- [50] Shirinzadeh, F., **Saidi, M.H.**, Davari, A., Experimental investigation of slip velocity and settling distribution of micro-particles in converging–diverging microchannel, *Microsystem Technologies*, Vol. 23, pp. 3361-3370, 2017.
- [51] Eslami, J., Abbassi, A., **Saidi, M.H.**, Numerical simulation of the effect of visitor’s movement on bacteria-carrying particles distribution in hospital isolation room, *Scientia Iranica: Transaction B, Mechanical Engineering*, Vol. 24 (3), 2017.
- [52] Sadeghi, M., **Saidi, M.H.**, Sadeghi, A., Electroosmotic flow and ionic conductance in a pH-regulated rectangular nanochannels, *Physics of Fluids*, Vol. 29 (6), 2017.
- [53] Gandomkar, A., **Saidi, M.H.**, Shafii, M.B., Vandadi, M., Kalan, K., Visualization and comparative investigations of pulsating ferro-fluid heat pipe, *Applied Thermal Engineering*, Vol. 116, pp. 56-65, 2017.
- [54] Biglarian, H., Abbaspour, M., **Saidi, M.H.**, A numerical model for transient simulation of borehole heat exchangers, *Renewable Energy*, Vol. 104, pp. 224-237, 2017.
- [55] Ghaebi, H., Bahadori, M.N., **Saidi, M.H.**, Economic and environmental evaluation of different operation alternatives to aquifer thermal energy storage in Tehran, Iran, *Scientia Iranica: Transaction B, Mechanical Engineering*, Vol. 24 (2), 2017.
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