Seyed Ali Mir Bozorgi

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EDUCATION:

Ph.D. in Mechanical Engineering, Energy Conversion 2000 – 2006
 Ferdowsi University of Mashhad, Mashhad, Iran
 Dissertation: Numerical Analysis of Electro-kinetic Effects on Liquid Micro-Flows
 AWARD: Research Scholarship, University of Waterloo, Ontario, Canada, 2004–2005

Supervisors: Prof. M.R. Modarres-Razavi and Prof. M. Moghiman (Ferdowsi University of Mashhad)

Co-Supervisors: Prof. H. Niazmand (Ferdowsi University of Mashhad) and Prof. M. Renksizbulut (University of Waterloo, Canada)

M.S. in Mechanical Engineering, Energy Conversion 1997 – 2000
 Ferdowsi University of Mashhad, Mashhad, Iran

M.S. Thesis: Three dimensional analysis of external and internal flows with the aid of body fitted coordinates system. Supervisors: Prof. H. Niazmand and Prof. M.R. Modarres-Razavi

B.S. in Mechanical Engineering, Heat and Fluids 1989-1992
 Sistan and Balochestan University, Zahedan, Iran
 B.Sc. Thesis:Designing and manufacturing of a fatigue test machine for metal shafts.
 Supervisor: Prof. A.A. Farzad

RESEARCH INTERESTS

- Micro Electro Mechanical Systems (MEMS)
- Electroosmotic Flows (EOF)
- Computational Fluid Dynamics (CFD)
- Mesh Generation
- Immersed Boundary Methods (IBM)
- Lattice-Boltzmann Method (LBM)
- Two-Phase flows
- Magneto Hydro Dynamic flow (MHD)

CFD EXPERIENCES:

• Developing of a 3-D incompressible code on various internal and external flows

- Developing of a pressure-based 3-D compressible flow code.
- Mesh generation using adaptive grid method based on "Nakahashi and Diewert" scheme.
- Elliptic mesh generation using Laplace and Poison equations.
- Developing of a 3-D incompressible flow code to calculate the electrokinetic effects in micro-flows passing through the microchannels. (EOF)
- Developing of a 2-D incompressible flow code based on Lattice-Boltzmann Method (LBM) to calculate the electrokinetic effects in micro-flows passing through the microchannels.
- Developing of a density-based 2-D Compressible flow code.
- Free Convection flow modeling in the enclosures.
- Magneto hydrodynamic flow modeling. (MHD)
- Aerodynamic shape optimization using the adjoint method.
- Fuel cell modeling
- Simulation of Arc welding
- Developing of Immersed Boundary Methods (IBM)
- Developing of a Two-Phase flow code using CICIT and CSAM methods
- Developing of a Two-Phase flow code with free surface B.C. (VOF Method)
- Heat Analysis of an IVUS probe in Human vessels
- Analyzing the Non-Fourier Heat Transfer in Human Body
- Developing of an incompressible flow solver code based on Projection methods
- Numerical Simulation of Vessel Obstruction in the Blood Flow using IBM
- Application of Lattice-Boltzmann's Pseudo-Potential Model in Numerical Simulation of Multiphase Flow
- Numerical analysis of the destructive and therapeutic effects of extreme cold in living tissues by non-fourier heat conduction approach

TEACHING EXPERIENCES

- Advanced Engineering Mathematics
- Fluid Mechanics I
- Fluid Mechanics II
- Thermodynamics I
- Thermodynamics II
- Turbo machines
- Computational Fluid Dynamics (CFD I), F.V.M., Pressure based-method coding
- Computational Fluid Dynamics (CFD II), F.D.M., Density based-method coding
- Advanced Conduction Heat transfer
- Laboratory of Fluid Mechanics
- Laboratory of Thermodynamics

PROFESSIONAL (INDUSTRIAL) EXPERIENCES:

• Consultant engineer in Jahad Research Center, Tehran, Iran (1993-97)

- Manufacturing and balancing of the blades of a high power fan in a cooling tower (1993-96)
- Designing and manufacturing of a pusher-centrifugal separator (1995-97)
- Designing and manufacturing of a small Horizontal Axis Wind Turbine (HAWT) (2012)
- Designing and manufacturing of a Face Mask Machine(2020)

EXECUTIVE EXPERIENCES:

- Refereed International Conference of Mechanical engineering, 2006
- In charge of High-Educated students in Mechanical Engineering Department (2006-2007)
- Supervisor of under-graduated students in Mechanical Engineering Department, entry 2003, for 5 years.
- Group Manager of Mechanical Engineering Department of Engineering Faculty of Birjand University (2008 -2010)
- Secretary of student comity in "the 9th Iranian conference on Manufacturing Engineering" (ICME2009)
- Secretary of the 14th Fluid Dynamics Conference, 01-03 May 2012, The University of Birjand, Birjand
- Associate-Dean for Academic Affairs at Engineering Faculty, (2015 to 2017)
- Vice President for Research and Technology Affairs at University of Birjand (2017 to 2018)
- Director-in-Charge of "Journal of Applied Energy Conversion"(AEC), <u>https://aec.birjand.ac.ir/</u>,

Iranian Journal, Publisher: University of Birjand (2019- up to Now)

• Supervisor of under-graduated students in Mechanical Engineering Department, entry 2019, up to now.

PUBLICATIONS:

BOOK

 O.R. Mohammadipour, S.A. Mirbozorgi, "Fluid Mechanics(1)",2020, https://press.pnu.ac.ir/book_30757, ISBN: 978-964-1408-16-1, in Persian

PATENT

• Vertical axis wind turbine with two cylindrical rotors, 2015, International classification: B63H; H02

INTERNATIONAL JOURNAL PAPERS

- Mirbozorgi, S. A., Niazmand, H. and Renksizbulut, M., "Electro-osmotic flow in reservoirconnected flat micro-channels with non-uniform zeta potential", Journal of Fluids Engineering, November 2006, Vol. 128, pp. 1133 - 1143. ISSN 0098-2202 ISI, Extracted from my Dissertation
- 2) Mirbozorgi, S. A., Niazmand, H. and Renksizbulut, M., "Streaming Electric Potential in Pressure-Driven Flows through Reservoir-Connected Microchannels", Journal of Fluids Engineering, 2007, Vol. 129, pp. 1346 - 1357. ISSN 0098-2202 ISI, Extracted from my Dissertation
- 3) Meigounpoory, M. R., Atefi, GH., Niazmand, H., Mirbozorgi, A., "Numerical Investigation of Slip Effects on the Three-Dimensional Flow Past an Impenetrable Rotating Spherical Nano Particle", Journal of Dispersion Science and Technology, August 2007, Vol. 28, No. 7, pp. 991-1003. ISSN: 0193-2691
- 4) Khozeimeh nejad, H., **Mirbozorgi, S. A.**, "Comparison of Natural Convection around a Circular Cylinder with a Square Cylinder Inside a Square Enclosure", Journal of Mechanical Engineering and Automation , Dec 2012, Vol. 6, No. 2, pp. 176-183. ISSN: 2163-2405 SCOPUS, Published online at http://journal.sapub.org/jmea
- 5) A. Alizadeh , J.K. Wang , S. Pooyan , S.A. Mirbozorgi , M. Wang , "Numerical study of active control of mixing in electro-osmotic flows by temperature difference using lattice Boltzmann methods ", Journal of Colloid and Interface Science, 2013, ad joint Vol. 407, pp. 546-555, Elsevier Inc. www.elsevier.com/locate/jcis, http://dx.doi.org/10.1016/j.jcis.2013.06.026
- 6) Mohammadipoor O. M., Niazmand, H., **Mirbozorgi, S. A.**, "Numerical Simulation of Electroosmotic Flow in Flat Microchannels With Lattice Boltzmann Method", ARABIAN JOURNAL FOR SCIENCE AND ENGINEERING, Feb 2014, Vol. 39, No. 2, pp. 1291-1302, ISSN: 1319-8025

- 7) Mohammadipoor O. M., Niazmand, H., Mirbozorgi, S. A., "Alternative curved-boundary treatment for the lattice Boltzmann method and its application in simulation of flow and potential fields", PHYSICAL REVIEW E, January 2014, Vol. 89, DOI: 10.1103/PhysRevE.89.013309 · Source: PubMed
- M. R. Nezamdost, M. R. Nekouie Esfahani, S. H. Hashemi and S. A. Mirbozorgi, "Investigation of temperature and residual stresses field of submerged arc welding by finite element method and experiments", Published online 27 February 2016, The International Journal of Advanced Manufacturing Technology, DOI 10.1007/s00170-016-8509-4
- 9) A Doosti Abukheyli, H Hassanzadeh and SA Mirbozorgi, "Pseudo 3D modeling of suction and injection effects on fully developed laminar flow and heat transfer in rectangular fuel cell channels", Journal of Power and Energy, 2018, Vol. 232 NO. 3, pp. 266–281, DOI: 10.1177/0957650917732450

- 10) Javad Rahman Nezhad, **Seyed Ali Mirbozorgi**, "An immersed boundary-lattice Boltzmann method to simulate chaotic micromixers with baffles", Journal of Computers and Fluids, March 2018, Vol. 167, pp. 206–214.
- Morteza Dallakehnejad, Seyed Ali Mirbozorgi and Hamid Niazmand, "A numerical investigation of magnetic mixing in electroosmotic flows", Journal of Electrostatics, 2019, Vol. 100,
 DOI:10.1016/j.elstat.2019.103354
- 12) Javad Rahmannezhad and **Seyed Ali Mirbozorgi,** "CFD analysis and RSM-based design optimization of novel grooved micromixers with obstructions", International Journal of Heat and Mass Transfer, 2019, Vol. 140, pp. 483-497 https://doi.org/10.1016/j.ijheatmasstransfer.2019.05.107
- A. Alimoradi and S. Ali Mirbozorgi, "Numerical Analysis of Flow Geometry in I-Shaped Viscous Micropumps using LB-IBM", Journal of Applied Fluid Mechanics, 2020, Vol. 13, No. 6, pp. 1847-1858
 DOI: 10.47176/jafm.13.06.31238
- 14) Mohammad Mahdi Fakhari and Seyed Ali Mirbozorgi, "Numerical analysis of the effects of roughness on the electroosmotic laminar flow between two parallel plates", Meccanica, 11 March 2021, Vol. 56 https://doi.org/10.1007/s11012-020-01257-4
- Hossein Zangooei, Seyed Ali Mirbozorgi and Seyedabdollah Mirbozorgi, "Thermal Analysis of Heat Transfer from Catheters and Implantable Devices to the Blood Flow", Micromachines, 25 February 2021, Vol. 12 https://doi.org/10.3390/mi12030230
- 16) Mohammad Habiballahi, Hasan Hassanzadeh, Mohammad Rahnama, **Seyed Ali Mirbozorgi** and Ebrahim Jahanshahi Javaran, "Effect of porosity gradient in cathode gas diffusion layer of polymer electrolyte membrane fuel cells on the liquid water transport using lattice Boltzmann method", Journal of POWER AND ENERGY, 2020, Vol. 0, No. 0 DOI: 10.1177/0957650920934312

 M.R. Modarres Razavi, H. Niazmand and S. A. Mirbozorgi, "Three Dimensional Analysis of Flow in Curved Pipes", Journal of Applied and Computational Sciences in Mechanics, 2000, Vol. 12, No. 1 (in Persian) Extracted from my M.S. Thesis

- M.R. Modarres Razavi, H. Niazmand and S. A. Mirbozorgi, "Three Dimensional Analysis of Flow Past a Solid-Sphere at Low Reynolds Numbers with the Aid of Body Fitted Coordinates", ESTEGHLAL Journal of Engineering, Winter 2001, Vol. 20, No. 2, pp. 191-205, ISSN 1025-2851 (in Persian)
 Extracted from my M.S. Thesis
- S.A. Mirbozorgi and H. Niazmand, "Numerical and Analytical Investigation of Induced Voltage in the Liquid Pressure-Driven Micro-Flows", Mechanical Engineering of Amikabir, Fall 2015, Vol. 42, No. 2, pp. 69-77, ISSN 2008-6067 (in Persian)
- 4) Meigounpoory, M. R., Atefi, GH., Niazmand, H., Mirbozorgi, A., "Numerical Investigation of a 3D Flow Past an Impenetrable Rotating Micro Particle at Low and Moderate Reynolds Numbers", Mechanical & Aerospace Engineering Journal, Imam Hosein University, September 2007, Vol. 3, No. 2, pp. 73-84, ISSN:5707-1609
- 5) Hojat Khozeymehnezhad and **Sayed Ali Mirbozorgi**, "Numerical Analysis of Heat Transfer from a Hot Cylinder with Different Diameters to a Cold Square Enclosure", Journal of Modares Mechanical Engineering, Dec. 2013, Vol. 13, No. 9, pp. 92-102, ISSN 1027-5940 (in Persian)
- 6) J. Jamaati, H. Niazmand and S.A. Mirbozorgi, "Investigation the 3D mixing with nonhomogenous surface charges using Helmholtz-Smoluchowski", Journal of Applied and Computational Sciences in Mechanics, ,Winter 2012 Vol. 24, No. 1, pp. 104-122, ISSN: 2008-918X (in Persian)
- 7) Mostafa Bahremandi and Sayed Ali Mirbozorgi, "Numerical Simulation of MHD Body Force Driven Flows Using Adhoc Body-Forces Method", Journal of Modares Mechanical Engineering, Mar. 2013, Vol. 12, No. 6, pp. 1-9, ISSN 1027-5940 (in Persian)
- 8) M.M. Afsari and **Sayed Ali Mirbozorgi**, "Joule heating effects on electroosmotic flow through a microchannel with trapezoidal cross-section", Journal of Modares Mechanical Engineering, Mar. 2013, Vol. 12, No. 6, pp. 136-146, ISSN 1027-59440 (in Persian)
- 9) A. Alizadeh and S.A. Mirbozorgi ,"Numerical Investigation of the Effects of Temperature on the Electro-osmotic Flow in Microchannle Using the Lattice Boltzmann Method", Journal of Modares Mechanical Engineering, Sep. 2012, Vol. 12, No. 3, pp. 68-80, ISSN 1027-5940 (in Persian)
- Mohammadipoor O. M., Niazmand, H., Mirbozorgi, S. A., "A new curved boundary treatment for the lattice Boltzman method", Journal of Modares Mechanical Engineering, Nov. 2013, Vol. 13, No. 8, pp. 28-41 ISSN 1027-5940 (in Persian)

- 11) Mohammadipoor O. M., Niazmand, H., **Mirbozorgi, S. A.**, "Simulation of parallel electroosmotic flows with lattice Boltzmann method", Journal of Modares Mechanical Engineering, Mar. 2014, Vol. 13, No. 15, pp. 83-97, ISSN 1027-5940 (in Persian)
- 12) M. Dallakeh Nedjad and **Sayed Ali Mirbozorgi**, "Numerical analysis of thermodynamic behavior of an MHD micropump by simultaneously changing the length of electric and magnetic fields", Journal of Modares Mechanical Engineering, Aug. 2014, Vol. 14, No. 6, pp. 91-98, ISSN 1027-5940 (in Persian)

- 13) Mostafa Bahremandi and **Sayed Ali Mirbozorgi**, "3-D Analysis of Magnetohydrodynamic Force-Driven Flows Using Linear Pressure Gradients", Journal of Mechanical Engineering of Tabriz University, Jan 2015, Vol. 43, No. 2, pp. 13-20, ISSN 2228-5148 (in Persian)
- M. M. Afsari, Sayed Ali Mirbozorgi and Hamid Niazmand, "Analysis Of Mixing Efficiency In An Electroosmotically Micromixer With Heterogeneous Wall Charge Distribution", Journal of Applied and Computational Sciences in Mechanics, Jan 2015, Vol. 25, No. 2, pp. 97-109, ISSN 2008-918x (in Persian)
- 15) M.M. Afsari and **Sayed Ali Mirbozorgi**, "Numerical investigation of Joule heating effects on electroosmotic flow through a microchannel with triangular cross-section", Mechanical Engineering of Amikabir, Summer 2015, Vol. 47, No. 1, pp. 81-90, ISSN 2008-6032 (in Persian)
- 16) M. Dallakeh Nedjad and **Sayed Ali Mirbozorgi**, "Numerical simulation of the dynamic and thermodynamic an MHD micropump by independently changing the lengths of electric and magnetic fields", Journal of Mechanics of Structures and Fluids, Jan 2016, Vol. 5, No. 3, pp. 271-278, ISSN 2251-9475 (in Persian)
- 17) Javad Rahmannezhad, Seyed Ali Mirbozorgi, "Numerical simulation of free convection around a stationary cylinder with constant heat flux and different diagonal locations using IB-LBM", Journal of Modares Mechanical Engineering, July 2017, Vol. 17, No. 4, pp. 419-430, ISSN 1027-5940 (in Persian)
- 18) Mohammad Habiballahi, Hassan Hassanzadeh, Mohammad Rahnama, Seyed Ali Mirbozorgi and Ebrahim Jahanshahi Javaran, "Investigation characteristics of gas diffusion layers on liquid water transport in polymer electrolyte membrane fuel cells using the lattice Boltzmann method", Journal of Modares Mechanical Engineering, Agu. 2018, Vol. 18, No. 5, pp. 329-340, ISSN 1027-5940 (in Persian)

- 19) Maghsudi P., Mirbozorgi S.A. and Hassanzadeh H., "Modeling of Laminar Fully Developed Flow in the Presence of Mass and Heat Transfer inside the Fuel Cell Channel", Journal of Modares Mechanical Engineering, April. 2019, Vol. 19, No. 6, pp. 1363-1374, ISSN 2476-6909 (in Persian)
- 20) Morteza Dallakehnejad, **Seyed Ali Mibozorgi**, Hamid Niazmand, "Investigation of mixing efficiency in electroosmotic flow with non-uniform wall Zeta potential", Journal of Modares Mechanical Engineering, July. 2018, Vol. 18, No. 4, pp. 552-562, ISSN 1027-5940 (in Persian)
- 21) Morteza Dallakehnejad, Seyed Ali Mirbozorg and Hamid Niazmand "Numerical Analysis of Magnetic Mixing Phenomenon in an Electroosmotic Flow between Two Parallel Plates", Journal of Applied and Computational Sciences in Mechanics, 2021, Vol. 31, No. 1, PISSN 2008918X (in Persian)
- 22) Mohammad Habiballahi, Hasan Hassanzadeh, Mohammad Rahnama, **Seyed Ali Mirbozorgi** and Ebrahim Jahanshahi Javaran,"Lattice Boltzmann simulation of water transfer in gas diffusion layers with porosity gradient of polymer electrolyte membrane fuel cells with parallel processing on GPU", Iranian Journal of Hydrogen & Fuel Cell, 2020, Vol. 1, ISSN 2363-160X, 2363-1618
- 23) Mohammad Mahdi Fakharia and Seyed Ali Mirbozorgi, "Numerical analysis of distinction boundary of surface roughness and wall blocks in laminar pressure-driven flow within the rugged microchannels", Amirkabir Journal of Mechanical Engineering, 2020, Vol. 53, No. 5 (Special Issue), Print ISSN 2008-6032, Online ISSN 2476-3446, DOI: 10.22060/MEJ.2020.18235.6775

CONFERENCE PAPERS:

- H. Niazmand, M.R. Modarres-Razavi and S.A. Mirbozorgi "Numerical Investigation of Three Dimensional Flow Field inside the Curved Pipes", Proceedings of 6th Iranian Conference of Fluid Dynamics, Feb. 22-24, 2000, IUST, Tehran, Iran (in Persian) Extracted from my M.S. Thesis
- H. Niazmand, M.R. Modarres-Razavi, and S.A. Mirbozorgi, "Three Dimensional Analysis of Flow Passed a Solid-Sphere at Low Reynolds Number with the Aid of Body Fitted Coordinates", Proceedings of 6th Iranian Conference of Fluid Dynamics, Feb. 22-24, 2000, IUST, Tehran, Iran (in Persian)
 Extracted from my M.S. Thesis

J. Abolfazli-Esfahani and S. A. Mirbozorgi, "Reducing the Energy P.D.E. to an O.D.E. one 3) for 2-D Flow of Melting Metal on a Flat Plate With a Given Heat Flux Distribution ", Proceedings of 33rd Iranian Conference of Mathematics, Aug. 30- Sept. 2, 2002, Ferdowsi University of Mashhad, Mashhad, Iran (in Persian)

Issued in M.S. Period

- 4) S.A. Mirbozorgi, H. Niazmand, M. R. Modarres-Razavi and M. Moghiman, "Investigation of Reservoir Effects on Electroosmotic Liquid Flow in Planar Microchannels", 10th Fluid Dynamics Conference, 1-3 Oct. 2006, Yazd University, Yazd, Iran, FD2006 (in Persian) Extracted from my Dissertation
- 5) S.A. Mirbozorgi and H. Niazmand, "Numerical and Analytical Investigation of Induced Voltage in the Liquid Pressure-Driven Micro-Flows", 15th Annual International Iranian Mechanical Engineering Conference, 15-17 May 2007, Amirkabir University, Tehran, Iran, **ISME2007** (in Persian) Extracted from my Dissertation
- S.A. Mirbozorgi and H. Niazmand, "Numerical Investigation of Reservoir Effects on 6) Induced Voltage in Pressure-Driven Liquid Microchannels", 11th Fluid Dynamics Conference, 27-29 May 2008, Khajeh Nasiroddin Toosi University, Tehran, Iran, FD2008 (in Persian) Extracted from my Dissertation
- 7) B. Tafazzoli Moghaddam and S. A. Mirbozorgi, "Analysis of Pressure-Driven Flow through a Micropipe with Electrokinetic Effects", 16th Annual International Iranian Mechanical Engineering Conference, 13-15 May 2008, Shahid Bahonar University of Kerman, Kerman, Iran, ISME2008 (in Persian)
- 8) S.Farivar and S.A. Mirbozorgi, "Modelling of Electroosmotic Flow in Planar Microchannel Using COMSOL Software", 12th Fluid Dynamics Conference, 26-28 May 2009, Babol Noshirvani University of Technology, Iran (in Persian)
- 9) O.R. Mohammadipour and S. A. Mirbozorgi, "Numerical Analysis of Electroosmotic Flow between Two Plate with Local Surface Charge Using Lattice-Boltzmann Method", 18th Annual International Iranian Mechanical Engineering Conference, 11-13 May 2010, Sharif University, Tehran, Iran, ISME2010 (in Persian)
- 10) M. Bahremandi and S. A. Mirbozorgi, "Numerical Simulation of Fluid Flow in Hydro Magnetic Micropumps with 2-D Flow Cross Section", 19th Annual Iranian Mechanical Engineering Conference, 10-12 May 2011, University of Birjand, Birjand, Iran, ISME2011 (in Persian)
- K. Nadimi, A. Safavinedzad and S.A. Mirbozorgi, "Analysis of Conduction and Radiation 11) Compound Heat Transfer in Semitransparent Media with Variable Refractive Coefficient", 19th

Annual Iranian Mechanical Engineering Conference, 10-12 May 2011, University of Birjand, Birjand, Iran, ISME2011 (in Persian)

- 12) M. Bahremandi and S. A. Mirbozorgi, "Numerical Simulation of Fully Developed Flows in MHD Micropumps using Adhuc Method of Forces", 20th Annual International Iranian Mechanical Engineering Conference, 15-17 May 2012, Shiraz University, Shiraz, Iran , ISME2012-3035 (in Persian)
- 13) S. H. Hashemi, S. A. Mirbozorgi, M. R. Nezamdoust, "Prediction of stress field in submerged arc welding of thermo-mechanical steel", The internasional Conference on Experimental Solid Mechanics and Dynamics (X-Mech-2012), March 6-7, 2012, Center of Excellence in Experimental solid Mechanics and Dynamics, School of Mechanical Engineering, University of Science and Technology ,Tehran, Iran (in English)
- 14) Hojat Khozeymehnezhad and **Sayed Ali Mirbozorgi**, "Numerical Simulation of Natural Convection between a Hot Circular Cylinder and a Cold Enclosure", 14th Iranian Conference of chemical Engineering, 16-18 October, 2012, Sharif University of Technology, Tehran, Iran (in Persian)
- 15) Hojat Khozeymehnezhad and **Sayed Ali Mirbozorgi**, "Comparison of natural convection around a circular cylinder with a square cylinder inside a square enclosure", 1th Iranian Conference on Heat and Mass Transfer, 15-17 September, 2012, University of Sistan and Baluchestan, Zahedan, Iran. 1. ICHMT2012 (in English)
- 16) A. Alizadeh and S.A. Mirbozorgi, "Analysis of Thermal Effects on Electroosmotic Flow Inside a Planar Microchannel Using Lattice-Boltzmann Method", 14th Fluid Dynamics Conference, 1-3 May 2012, University of Birjand, Birjand, Iran FD2012 (in Persian)
- M. M. Afsari and S.A. Mirbozorgi, "Investigation of Joule Heating Effects in Electroosmotic Flow inside a Microchannel with Trapezoidal Cross Section", 14th Fluid Dynamics Conference, 1-3 May 2012, University of Birjand, Birjand, Iran FD2012 (in Persian)
- 18) D. Sezavar, H. Niazmand and S.A. Mirbozorgi, "Investigation of Electroosmotic Mixing Flow Inside the Pasive Micromixers having Obstacles on Internal Surface", 14th Fluid Dynamics Conference, 1-3 May 2012, University of Birjand, Birjand, Iran FD2012 (in Persian)
- 19) O. R. Mohammadipour, H. Niazmand and S.A. Mirbozorgi, "Investigation of the Presence of Obstcles on Mixing Process Inside the Microchannels Using Lattice-Boltzmann Method", 14th Fluid Dynamics Conference, 1-3 May 2012, University of Birjand, Birjand, Iran FD2012 (in Persian)

- 20) A. Alizadeh and **S.A. Mirbozorgi**, "Introduction of System of Lattice Units in Analysis of Pressure-Driven Flow Inside a Planar Microchannel Using Lattice-Boltzmann Method", 14th Fluid Dynamics Conference, 1-3 May 2012, University of Birjand, Birjand, Iran FD2012 (in Persian)
- A. Doosti, S.A. Mirbozorgi and H. Hasanzadeh, "Modelling of Fully Developed Laminar Flow in Fuelcell Channel with One Porous Wall", 14th Fluid Dynamics Conference, 1-3 May 2012, University of Birjand, Birjand, Iran FD2012 (in Persian)
- 22) H. Khozeymeh Nezhad, H. Niazmand, S.A. Mirbozorgi, "Numerical Investigation of Effect of Geometrical Parameters of a Viscous Micropump with two Circular Rotors of Diferent Diameters on Exit Flow Rate", 15th Conference On Fluid Dynamics, FD2013, December, 18-20 The University of Hormozgan, Bandar Abbas, Iran, (in Persian)
- 23) H. Khozeymeh Nezhad, H. Niazmand, S.A. Mirbozorgi, "Numerical Investigation of Presence Effect of two Circular Rotors Inside a Cold Square Enclosure on Heat Transfer", 15th Conference On Fluid Dynamics, FD2013, December, 18-20 The University of Hormozgan, Bandar Abbas, Iran, (in Persian)
- 24) M. Dallakehnezhad and **S.A. Mirbozorgi**, "Numerical Investigation of Simultaneously Length Change of Electric and Magnetic Fields on Dynamic Behavior of an MHD Micropump", 15th Conference On Fluid Dynamics, FD2013, December, 18-20 The University of Hormozgan, Bandar Abbas, Iran, (in Persian)
- 25) H. Khozeymeh Nezhad, H. Niazmand, S.A. Mirbozorgi, "CFD Analysis of Laminar Natural Convection from a Horizontal Circular Cylinder to its Concentric Elliptic Enclosure", 15th Conference On Fluid Dynamics, FD2013, December, 18-20, The University of Hormozgan, Bandar Abbas, Iran, (in English)
- 26) M. Dallakehnezhad and **S.A. Mirbozorgi**, "Numerical Investigation of Pumping Efficiency of an Electrolyte by means of an MHD Micropump", 22th Annual International Conference on Mechanical Engineering, Shahid Chamran University of Ahvaz, Ahvaz, Iran, April 22-24, 2014 ISME2014, (in Persian)
- 27) H. Khozeymeh Nezhad and **S.A. Mirbozorgi**, "Numerical Investigation of Natural Convection Heat Transfer of a Hot Elleptical Cylinder to a Cold Square Enclosure", Joint Convention on Computer Engineering and Mechanics, JCCEM2013, May, 8, The University of Applied Science and Technology (UAST), Miandoab, Iran, (in Persian)

- 28) H. Khozeymeh Nezhad and S.A. Mirbozorgi, "Numerical Investigation of Non-Wall Cylinder Barrier Effect with Circle Cross Section on Electroosmotic Flow Inside a Flat Microchannel" Joint Convention on Computer Engineering and Mechanics, JCCEM2013, May, 8, The University of Applied Science and Technology (UAST), Miandoab, Iran, (in Persian)
- 29) H. Khozeymeh Nezhad and S.A. Mirbozorgi, "CFD Simulation of Laminar Natural Convection Around a Hot Circular Cylinder Inside a Cold Rhombic Enclosure by Finite Volume Method", Joint Convention on Computer Engineering and Mechanics, JCCEM2013, May, 8, The University of Applied Science and Technology (UAST), Miandoab, Iran, (in Persian)
- H. Khozeymeh Nezhad and S.A. Mirbozorgi, "Numerical Investigation of Effect of Rotating Hot Circular Cylinder on Mixed Convection Heat Transfer from a Cold Square Enlosure", National Conference on Mechanical Engineering, May, 30, 2013, The University of Malayer, Iran, (in Persian)
- H. Khozeymeh Nezhad and S.A. Mirbozorgi, "Numerical Simulation of Natural Convection Heat Transfer from a Hot Cylinder to a Cold Square Enclosure by Fintie Volume Method", National Conference on Mechanical Engineering, May, 30, 2013, The University of Malayer, Iran,
 (in Porsian)

(in Persian)

- 32) S. Allahyari, **S.A. Mirbozorgi** and M. Naeimipoor, "Simulation of Circulatory System in Human Body by supposing Continuous Flow using Temporary Replacement Method", 16th Fluid Dynamics Conference, FD2015, Razi University, Kermanshah, Iran, 17-19 November 2015, (in Persian)
- 33) M.H. Orjloo and S.A. Mirbozorgi, "Numerical Analysis of Free Convection Flow around the Hot Cylinder inside of a Cold Enclouser using IB-LBM", 16th Fluid Dynamics Conference, FD2015, Razi University, Kermanshah, Iran, 17-19 November 2015, (in Persian)
- 34) M.R. Choopan and S.A. Mirbozorgi, "Mixing Analysis in Electroosmotic Flow using Nernest-Plank and Boltzmann Models inside of the Microchannels", 16th Fluid Dynamics Conference, FD2015, Razi University, Kermanshah, Iran, 17-19 November 2015, (in Persian)
- 35) M. Dallakehnezhad and **S.A. Mirbozorgi**, "Numerical Simulation of Behavior of an MHD Micropump with Independence Length Change of Electromagnetic Fields", 24th Annual

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