

---

## CURRICULUM VITAE

---

### HADI PASDARSHAHRI

Address: Room 315, Department of Mechanical Engineering, Tarbiat Modares University,  
Tehran, Iran.  
Phone: +98 21 8288 4983  
Email: [pasdar@modares.ac.ir](mailto:pasdar@modares.ac.ir), [hadi.pasdar@gmail.com](mailto:hadi.pasdar@gmail.com)

### EDUCATION

---

- |           |   |
|-----------|---|
| May 2013  | Doctor of Philosophy in Mechanical Engineering, Tarbiat Modares University, Tehran, Iran<br><b>GPA: 18.40/20</b><br>Thesis: Development of More Compatible Sub-Grid Scale Model of Large Eddy Simulation in Compartment Fire<br><b>Grade: Excellent</b> |
| Dec. 2007 | Master of Science in Energy Conversion, Mechanical Engineering, Tarbiat Modares University, Tehran, Iran<br><b>GPA: 17.81/20</b><br>Thesis: Numerical Simulation Of Desiccant Cooling System Performance In Different Climatic Conditions               |
| Feb. 2005 | Bachelor of Science in Heat and Fluid Mechanics, Mechanical Engineering, Islamic Azad University South Unit, Tehran, Iran<br><b>Total GPA: 18.35/20</b><br>Thesis: Optimization of Evaporative Cooling Systems  |

### RESEARCH INTEREST

---

- |  |   |
|--|---|
| • Fire Dynamics and Suppression Modeling | • Industrial and Residential Combustion Application |
| • Turbulent Reactive Flows               | • Energy System Optimization                        |
| • Energy Buildings                       | • Parallel Computing Methods in CFD                 |

### PUBLICATION

---

#### BOOKS

- “**Solar Stills**”, Building and Housing Research Center (BHRC) Publication (in Persian), 2010, Tehran, Iran.  
**Remark:** This book won the “**Best Student Book Award**” in the 18<sup>th</sup> annual student book award in the field of science and technology, Tehran, Iran, 2011.
- “**Absorption Cooling System**”, Building and Housing Research Center (BHRC) Publication (in Persian), 2011, Tehran, Iran.
- “**Floor Heating System**”, Building and Housing Research Center (BHRC) Publication (in Persian), 2011, Tehran, Iran.

#### PUBLISHED JOURNAL PAPERS

- Ghassem Heidarinejad, Maryam Mapar, **Hadi Pasdarshahri**, “A Comprehensive Study of Two Fire Sources in a Road Tunnel: Considering Different Arrangement of Obstacles”, Tunnelling and Underground Space Technology, Accepted for publication.
- Mohammad Hassan Fathollahzadeh, Ghassem Heidarinejad, **Hadi Pasdarshahri**, "Producing a better performance for the under floor air distribution system in a dense occupancy space", Energy and Buildings, Vol. 126, pp. 230–238, 2016
- E. Mohammadian Esfahani, K. Mazaheri, **H. Pasdarshahri**, Investigation of droplet size distribution effect in prediction of liquid and vapor penetration length in the diesel spray, Modares Mechanical Engineering, Vol. 16, No. 2, pp. 189-198, 2016 (In Persian)
- S. Pilva, K. Mazaheri, **H. Pasdarshahri**, “Numerical study of conjugate heat transfer phenomena in a reacting flow”, Modares Mechanical Engineering, Vol. 16, No. 1, pp. 353-360, 2016 (In Persian)

- Mohammad Hassan Fathollahzadeh, Ghassem Heidarinejad, **Hadi Pasdarshahri**, "Prediction of thermal comfort, IAQ, and energy consumption in a dense occupancy environment with the under floor air distribution system", Building and Environment, Vol.90, pp. 96-104, 2015
- Ghassem Heidarinejad, Mohammad Hassan Fathollahzadeh, **Hadi Pasdarshahri**, "Effects of return air vent height on energy consumption, thermal comfort conditions and indoor air quality in an under floor air distribution system", Energy and Buildings, Vol.97, pp. 155-161, 2015.
- G. Heidarinejad, M. H. Fathollahzadeh, **H. Pasdarshahri**, Investigating the effect of return air vent height on energy consumption, thermal comfort, and air quality in under floor air distribution system, Modares Mechanical Engineering, Vol. 14, No. 16, pp. 125-133, 2015 (In Persian)
- Ghassem Heidarinejad, Seyed Zia Miri, **Hadi Pasdarshahri**, "Optimization of hybrid cooling system including direct evaporative cooler-cooling tower in order to minimize operation cost using genetic algorithm, Modares Mechanical Engineering, Vol.15, No.4, pp.348-354, 2015 (In Persian).
- H. Fathollahzadeh, G. Heidarinejad, **H. Pasdarshahri**, Investigating the effect of supply air temperature on thermal comfort and indoor air quality for a displacement ventilated room in summer, Modares Mechanical Engineering, Vol. 14, No. 9, pp. 35-44, 2014 (In Persian)
- M. Mapar, G. Heidarinejad, **H. Pasdarshahri**, "Numerical Simulation of Two Simultaneous Fires in a Tunnel and Evaluation of the Obstructive Influence of Vehicles Using FDS", Journal of Modares Mechanical Engineering, Vol. 13, No. 15, pp.10-22, 2014 (In Persian)
- S. Hosseini, G. Heidarinejad, **H. Pasdarshahri**, "Verification of pre-cooling effects on saturation effectiveness of evaporative coolers", Journal of Modares Mechanical Engineering, Vol. 13, No. 13, pp. 188-199, 2014 (In Persian)
- **H. Pasdarshahri**, G. Heidarinejad, K. Mazaheri, "Large Eddy Simulation of Fire-Induced Flow behind a Combustible Vertical Wall", Journal of Fuel and Combustion, Fuel and Combustion Journal, Vol. 6, No. 1, pp. 17-31, 2013. (In Persian)
- **H. Pasdarshahri**, G. Heidarinejad, K. Mazaheri, "Comparison of turbulence sub-grid scale model for modeling of large scale pool fire using LES", Energy Engineering Management, Vol. 3, pp.52-61, 2013 (In Persian)
- **H. Pasdarshahri**, G. Heidarinejad, K. Mazaheri, "Evaluation of Induced-Flow in a Two-Room Compartment Fire Using Large Eddy Simulation", Journal of Modares Mechanical Engineering, Vol. 13, pp. 74-85, 2013 (In Persian)
- Shahram Delfani, **Hadi Pasdarshahri**, Maryam Karami, "Experimental investigation of heat recovery system for building air conditioning in hot and humid areas", Energy and Buildings, Vol. 49, pp. 62-68, 2012
- Farzad Jafarkazemi, S. Ali Saadabadi, **Hadi Pasdarshahri**, "The optimum tilt angle for flat-plate solar collectors in Iran" J. Renewable Sustainable Energy, Vol. 4, 013118, 2012.
- G. Heidarinejad, **H. Pasdarshahri**, "The Potential of Desiccant Cooling Cycles to Achieve Thermal Comfort in a Multi-Climate Country", International Journal of Refrigeration, Vol. 34, pp. 1251-1261, 2011.
- Moien Farmahini-Farahani, **Hadi Pasdarshahri**, Exergy Analysis of Evaporative Cooling for Optimum Energy Consumption in Diverse Climate Conditions, Journal of Mechanical Research and Application, Vol. 3, No. 1, pp. 9-20, 2011
- Ghassem Heidarinejad, **Hadi Pasdarshahri**, "The effects of operational conditions of the desiccant wheel on the performance of desiccant cooling cycles", Energy and Buildings, Vol. 42, pp. 2416-2423, 2010.
- Shahram Delfani, Jafar Esmaeelian, **Hadi Pasdarshahri**, Maryam Karami, "Energy saving potential of an indirect evaporative cooler as a pre-cooling unit for mechanical cooling systems in Iran", Energy and Buildings, Vol. 42, pp. 2169-2176, 2010.
- Shahram Delfani, Maryam Karami, **Hadi Pasdarshahri**, "The effects of climate change on energy consumption of cooling systems in Tehran", Energy and Buildings, Vol. 42, pp. 1952-1957, 2010.
- Shahram Delfani, **Hadi Pasdarshahri**, Maryam Karami, "Experimental investigation of dehumidification process in cooling coil by utilizing air-to-air heat exchanger in humid climate of Iran", Energy and Buildings, Vol. 42, pp. 822-827, 2010.
- G. Heidarinejad, **H. Pasdarshahri**, S. Delfani, "The Effect of Geometrical Characteristics of Desiccant wheel on Its Performance", International Journal of Engineering, Transaction B: Application, Vol. 22, No.1, 2009, pp. 63-75.

- G. Heidarinejad, S. Delfani, M. Karami, **H. Pashdarshahri**, “Statistical Investigation of the Conditions of Heating and Cooling Systems Installed in New Buildings of Tehran”, Journal of Building Engineering and Housing Sciences, Vol. 12, 2008, 1-14. (in Persian)
- G. Heidarinejad, S. Delfani, **H. Pashdarshahri**, “Experimental Investigation of Desiccant Cooling System for Air-conditioning in Different Climates”. Journal of Building Engineering and Housing Sciences, Vol. 4(10) 2007 1-12. (in Persian)

### CONFERENCE PROCEEDING PAPERS

- Ghassem Heidarinejad, Mohammad Hassan Fathollahzadeh, **Hadi Pashdarshahri**, "Prediction of thermal comfort, IAQ, and Energy consumption in a dense occupancy environment with the under floor air distribution system, Proceedings of the eSIM 2016 Building Performance Simulation Conference, May 3-6 2016, McMaster University, Hamilton, Ontario, Canada.
- E. Mohammadian Esfahani, K. Mazaheri, **H. Pashdarshahri**, Modeling of non-reactive evaporative spray in diesel engine , Proceedings of the 6th Fuel and Combustion Conference of Iran, Mashad, Iran, February 2016. (in Persian)
- M.H. Fatollahzadeh, G. Heidarinejad, **H. Pashdarshahri**, “Investigating the effects of return air flow rate on the thermal comfort and energy consumption of cooling coil”, Proceedings of the 23<sup>rd</sup> Annual International Conference of Mechanical Engineering, 12-14 May 2015, Amir Kabir University of Technology, Tehran, Iran. (in Persian)
- M.H. Fatollahzadeh, G. Heidarinejad, **H. Pashdarshahri**, “Investigating of the exhaust air terminal device on the thermal comfort and IAQ of UFAD system”, Proceedings of the 23<sup>rd</sup> Annual International Conference of Mechanical Engineering, 12-14 May 2015, Amir Kabir University of Technology, Tehran, Iran. (in Persian)
- M.H. Fatollahzadeh, G. Heidarinejad, **H. Pashdarshahri**, “Investigating the effects of the return air vent at the upper boundary of the occupied zone on thermal comfort conditions, IAQ, and energy consumption reduction in a densely occupied space with the UFAD system”, Proceedings of the 6th International Conference of Heating, Ventilating and Air-Conditioning, 26-28 May 2015, Tehran, Iran. (in Persian)
- M.H. Fatollahzadeh, G. Heidarinejad, **H. Pashdarshahri**, "Numerical study on the effect of inlet air flow rate on thermal comfort and indoor air quality in a displacement ventilation system", Proceedings of the 5th International Conference of Heating, Ventilating and Air-Conditioning, 10-12 June 2014, Tehran, Iran. (in Persian)
- S.Z. Miri, G. Heidarinejad, **H. Pashdarshahri**, "Improving hybrid desiccant cooling cycle for tropical areas", Proceedings of the 5th International Conference of Heating, Ventilating and Air-Conditioning, 10-12 June 2014, Tehran, Iran. (in Persian)
- M.H. Fatollahzadeh, G. Heidarinejad, **H. Pashdarshahri**, "Evaluation of turbulence models to simulate air flow in a space with near the floor height air distribution", Proceedings of the 5th International Conference of Heating, Ventilating and Air-Conditioning, 10- 12 June 2014, Tehran, Iran. (in Persian)
- H. Pashdarshahri, G. Heidarinejad, K. Mazaheri, "Evaluations of SGS model of LES on the prediction of doorway flow in a compartment fire", Proceedings of the 5th Fuel and Combustion Conference of Iran, Tehran, Iran, February 2014. (in Persian)
- S. Hosseini, G. Heidarinejad, **H. Pashdarshahri**, "Evaluation of cooling tower effectiveness on the performance of combined cooling tower and direct evaporative cooler", Proceedings of the 15th Annual Conference of Fluid Dynamic, Dec. 2013, University of Hormozgan, Bandar Abbas, Iran. (in Persian)
- **H. Pashdarshahri**, G. Heidarinejad, K. Mazaheri, “A comparison on the effect of SGS in numerical simulation of large scale pool fire using LES ” Proceedings of the Fourth Fuel and Combustion Conference of Iran, Kashan, Iran, February 8-9, 2012. (in Persian)
- **H. Pashdarshahri**, G. Heidarinejad, K. Mazaheri, “Large eddy simulation of one-meter methane pool fire using one-equation sub-grid scale model” proceedings of the Seventh Mediterranean Combustion Symposium, Cagliari, Sardinia, Italy, September 11-15, 2011.
- S. Haghshenaskashani, **H. Pashdarshahri**, “Simulation of Thermal Storage Phase Change Material in Buildings”, proceedings of the International Conference on Mechanical, Industrial and Aerospace Engineering, October 28-30, 2009, Venice, Italy.
- **H. Pashdarshahri**, G. Heidarinejad, M. Karami, S. Delfani, “Thermodynamic Simulation of Hybrid Desiccant Cooling System and Analysis the Effects of Operational Conditions on its Performance”, Proceedings of 17<sup>th</sup>

- Annual International Conference of Mechanical Engineering, May 2009, University of Tehran, Tehran, Iran. (in Persian)
- G. Heidarinejad, **H. Pashdarshahri**, “Investigation of The Effects of Cooling Load and Sensible Heat Ratio on The Performance of Desiccant Cooling Systems”, Proceedings of 1<sup>st</sup> International Conference of Heating, Ventilating and Air-Conditioning (HVAC), May 2009, Olympic Hotel, Tehran, Iran. (in Persian)
  - S. Delfani, **H. Pashdarshahri**, M. Karami, “Experimental Study of Energy Recovery System to Reduce Cooling Load of The Buildings in Various Climate Conditions of Iran, Proceedings of 1<sup>st</sup> International Conference of Heating, Ventilating and Air-Conditioning (HVAC), May 2009, Olympic Hotel, Tehran, Iran. (in Persian)
  - G. Heidarinejad, **H. Pashdarshahri**, M. Karami, “Numerical Simulation of Heat and Mass Transfer Process in Desiccant Wheel”, Proceedings of 12<sup>th</sup> Annual Conference of Fluid Dynamic, May 2008, Khaje Nasir University of Technology, Tehran, Iran. (in Persian)
  - **H. Pashdarshahri**, G. Heidarinejad, S. Delfani, “Thermodynamic Simulation of Desiccant Cooling Cycle and Investigation of Operation Parameters” Proceedings of 15<sup>th</sup> Annual International Conference of Mechanical Engineering, May 2007, Amir Kabir University of Technology, Tehran, Iran. (in Persian)

## HONORS AND AWARDS

---

2014	<b>Top Student Award</b> of Mechanical Engineering Ph.D. Students.
2013	<b>Ranked 1<sup>st</sup></b> among Mechanical Engineering Students Based on GPA, in Ph.D.
2012	<b>Appreciation Plaque</b> , The 4 <sup>th</sup> International Conference on Heating, Ventilating and Air Conditioning (ICHVAC), Tehran, Iran.
2011	<b>“Best Student Book Award”</b> in the 18 <sup>th</sup> annual student book award in the field of science and technology, Tehran, Iran.
2010	<b>Appreciation Plaque</b> , For the Distinguished Workshop Conductor of the Building and Housing Research Center (BRHC) in 2009-2010
2009	Member of <b>National Elites Foundation</b> ( <a href="http://www.bmn.ir">www.bmn.ir</a> ).
2008	<b>Top Student Award</b> of Mechanical Engineering M.Sc. Students.
2007	<b>Ranked 1<sup>st</sup></b> among Mechanical Engineering Students Based on Overall GPA, in M.Sc.
2005	<b>Ranked 1<sup>st</sup></b> among Mechanical Engineering Students Based on Overall GPA in B.Sc.
2004	<b>Appreciation Plaque</b> , 4 <sup>th</sup> Mechanical Engineering Student Conference of the Iranian Society of Mechanical Engineers (ISME), Azad University, South Branch, Tehran, Iran.

## PROJECTS

---

(2014-2015)	Design and fabrication of a test rig for solar collector and solar water heater, Research Institute of Petroleum Industries (RIPI)
(2011-2013)	Design and fabrication of experimental ground source heat pumps, Building and Housing Research Center (BHRC)
(2012-2013)	Development and the technology transfer of the condensing boilers for the installation rooms, Research Institute of Petroleum Industries (RIPI)
(2010-2012)	Energy audit of the buildings for the Research Institute of Petroleum Industries (RIPI)
(2010-2011)	Design of energy efficient system for poultries in cold climate
(2006-2010)	Different technical certification of BHRC for residential water heater packages and polymer pipes, Building and Housing Research Center (BHRC)
(2008)	Codification of help manual for sizing, designing, installing, operating and maintaining of floor heating systems, Building and Housing Research Center (BHRC)
(2008)	Codification of help manual for sizing, designing, installing, operating and maintaining of absorption cooling system, Building and Housing Research Center (BHRC)
(2007)	Chimney and Gas Vent Designing and Installing in Buildings, The Results of The Project Will Be Published as User Guide for Engineers. Building and Housing Research Center (BHRC)

(2007)	Evaluation of various heating and cooling systems in various structures and architectures of buildings, Building and Housing Research Center (BHRC)
(2007)	Experimental study of heat recovery systems in various climate conditions, Building and Housing Research Center (BHRC)
(2006)	Statistical investigation of the conditions of heating and cooling systems installed in new buildings of Tehran, Building and Housing Research Center (BHRC)
(2006)	Experimental investigation of active multi-stage solar desalination system, Building and Housing Research Center (BHRC)
(2006)	Experimental investigation of desiccant cooling cycles in different climate conditions. Building and Housing Research Center (BHRC)

## TEACHING COURSES

---

2013-Now	Energy and Flow Analysis in Buildings, Tarbiat Modares University
2013-Now	Advanced Numerical Analysis, Tarbiat Modares University
2013-Now	Parallel Computing Methods, Tarbiat Modares University
VISITING PROFESSOR (FALL 2013)	Energy Conversion and Storage Technologies, Thermal System Design, Azad University

## WORK EXPERIENCES

---

ASSISTANT PROFESSOR (2013-Now)	Tarbiat Modares University (TMU), Tehran, Iran
TECHNICAL ADVISOR (2010-2012)	Research Institute of Petroleum Industries (RIPI), Tehran, Iran
RESEARCHER (2006-2012)	Mechanical Installation Department of Building and Housing Research Center (BHRC) in Tehran, Iran, a Leading Heating and Cooling System Research in Iran.

## PROFESSIONAL EXPERIENCES

---

MANAGING EDITOR	Journal of Modares Mechanical Engineering (2015-Now)
MANAGING EDITOR (2010-2013)	International Journal of Energy and Environmental Engineering (IJEEE)
HEAD (AND CHIEF ASSISTANT TO THE CONFERENCE CHAIRMAN) (2010-2015)	Scientific Services Committee of International Conference on Heating, Ventilating and Air-Conditioning (ICHVAC) <a href="http://www.hvac-conference.ir/index_e.aspx">http://www.hvac-conference.ir/index_e.aspx</a> A UNEP cosponsored event
SPECIALIST EDITOR	Journal of Modares Mechanical Engineering
REVIEWER	Applied Thermal Engineering International Journal of Exergy Renewable Energy Journal of Heat and Mass Transfer Asia-Pacific Journal of Chemical Engineering International Journal of Engineering (IJE) International Journal of Energy and Environmental Engineering (IJEEE) International Conference on Heating, Ventilating and Air-Conditioning (ICHVAC) Journal of Modares Mechanical Engineering, Tarbiat Modares University (in Persian) Journal of Energy Management, Kashan (in Persian)
BOARD OF DIRECTORS	Iranian Combustion Institute (ICI)
MEMBER	International Association of Fire Safety Science (IAFSS) Iranian Combustion Institute (ICI) Iran Gas Institute (IGI) Iranian Society of Heating, Refrigerating and Air-Conditioning Engineers (ISHRAE)

## INVITED TALKS AND WORKSHOPS

---

MAY 2015	Flow and Energy Analysis in Buildings Using Airpak, ICHVAC-6 (Workshop)
FEBRUARY 2015	Engineering Applications of Parallel Computing, Tarbiat Modares University, Tehran, Iran. (Invited Talk)
APRIL 2014	Computational Modeling of Reactive Flow Using OpenFOAM, Tarbiat Modares University, Tehran, Iran. (Workshop)
FALL 2009	“An Introduction to New Cooling Technologies in Buildings”, New Technologies in Building Industry, Iran University of Science & Technology, Tehran, Iran.
SUMMER 2009	Sizing, Designing, Installing, Operating and Maintaining of LiBr-H <sub>2</sub> O Absorption Cooling System, Building and Housing Research Center (BHRC), Tehran, Iran
SPRING 2009	“Natural Air Cooling Using Wind Towers”, 2 <sup>nd</sup> Conference on Iranian Traditional Technologies, Iran University of Science & Technology, Tehran, Iran.
FALL 2008	Designing and Sizing of Buildings Chimney, Building and Housing Research Center (BHRC), Tehran, Iran

## PROFESSIONAL SKILLS

---

**Specific Computer Software:** OpenFOAM, ANSYS-Fluent, Gambit, CEA, Chemkin, AutoCAD, SolidWorks, Engineering Equation Solver (EES), HAP 4, Airpak, EnergyPlus, SketchUp, OpenStudio

**Application and General Software:** Maple, Microsoft Office (Word, Excel, PowerPoint, Publisher, etc)

**Operation System:** DOS, Windows, Linux

**Programming Languages:** FORTRAN, C++

## LANGUAGE SKILLS

---

- **English:** Fluent in Speaking, Writing, Listening and Reading
- **Farsi:** is my native language

## PERSONAL INFORMATION

---

- Date and Place of Birth: 17 Sep. 1982 in Tehran, Iran
- Marital Status: Married