Amir Mohammad Jadidi

Personal Information

- Date of birth: February 11, 1981
- Nationality: Iranian
- Faculty of Mechanical Engineering in Semnan University
- Office Phone: +9823-31533350
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Education

Ph.D , Fluid Mechanic- energy conversion
Tarbiat Modares University, Tehran, Iran, December 2014
Supervisor: *Dr. Ghasem Heidarinejad*
Dissertation: **"Wind flow simulation over buildings using DES turbulence modeling "**
Simulated By OpenFoam software using parallel processing in linux environment

Master of Science, Fluid Mechanic- energy conversion
Tarbiat Modares University, Tehran, Iran, December 2009
Supervisor: *Dr. Ghasem Heidarinejad*
Dissertation: **"Merging blobs to reduce computational costs in randeom vortex method"**
Simulated By programming in Fortran and post processing in Techplot

Bachelor of Science, Solid Mechanics
Science and Technology University of Iran, Tehran, Iran, September 2005
Supervisor: *Dr. Majid Ayatollahi*
Dissertation: **"Crack growth in a 2D gear under first and second modes"**
Simulated By Ansys V5.0 software.

Teaching History

- Ventilation and Air Conditioning (Semnan University, 2013-2018)
- Thermodynamics (Semnan University, 2014-2018)
- Fluid Mechanics (Semnan University, 2014-2018)
- Thermodynamics Laboratory (Semnan University, 2014-2018)
- Fluid Mechanic Laboratory (Semnan University, 2015-2016)
- Advanced Thermodynamics (Semnan University, 2015-2016)
- Internal Combustion Engine (Islamic Azad University semnan branch , 2010- 2013)
- Thermodynamics (Islamic Azad University semnan branch , 2010- 2013)
- Fluid Mechanic (Islamic Azad University semnan branch , 2010- 2013)
- Heat Exchanger (Islamic Azad University semnan branch , 2013)
- Advanced Engineering Mathematics (Islamic Azad University semnan

branch , 2013
- Programming (Islamic Azad University semnan branch , 2012)
- Heat Transfer (Islamic Azad University semnan branch , 2012)

Teaching Interests

Undergraduate and Master level:
- Thermodynamics and Advanced Thermodynamics
- Fluid Mechanics and Advanced Fluid Mechanics
- Internal Combustion Engine
- Heating, Ventilation And Air Conditioning (HVAC)
- Fluid Mechanics Laboratory
- Thermodynamic Laboratory
- Programing (basic or advanced)

Skills

Programming languages: Fortran, C++, Matlab
Computational Fluid Dynamics Software: OpenFoam, Fluent, Ansys, Techplot
Parallel Processing: making two clusters to do parallel tasks in CFD lab and biophysics lab of Tarbiat Modares University
Tools: Open Office, Matlab, Maple
Operating Systems: Linux, MS Windows
Working Experience: 11 years, 5 years in radiator and burner test laboratory of Iranian Research Organization for Science and Technology (IROST) and six years research and teaching in university
Experimental skills:
1- Thermodynamics laboratory teacher in Semnan University.
2- Fluid mechanics laboratory teacher in Semnan University.
3- Building a hybrid air conditioner system (Cooling process based on hybrid compression-evaporative cooling and warming process has been done by a DX coils).
4- Making a high efficiency solar flat heat exchanger replete with porous media.
5- Building a subsonic wind tunnel for fluid mechanic laboratory of azad university of Semnan,
6- Trying to make Colorado cooler in middle east for first time (in the process)
7- Building a solar evaporative cooler

Research Assistantship & Experience

- Research in the field of fracture mechanic and crack growth
- Research in the field of corrosion of camshaft
- Research in the field of optimization in fuel consumption in domestic powerhouse
- Research in the field of computational fluid dynamic and optimization of computational time in random vortex method

- Research in the field of turbulent flow and large eddy simulation (LES methods)
- Research in the field of turbulent flow and detached eddy simulation
- Research in the field of under floor air distribution (UFAD systems)
- Research in the field of using solar energy in desert climate for domestic house of Iran
- Research in the field of geothermal energy and its application in household consumption
- Research in the field of optimizing energy consumption in water cooler
- Research in the field of optimizing cooling and heating load with genetic algorithm and comparing results with carrier software
- Experience in the field of parallel processing and making two clusters in Tarbiat Modares university of Tehran.
- Experience in the field of laboratory test of radiators and convectors
- Experience in the field of laboratory test of domestic burners in IROST
- Experience in the field of laboratory of thermodynamic and fluid mechanic
- Experience in programming and mechanical engineering software
- Experience in learning of linux operating system (Ubuntu and Redhat)

Language

- English: Fluent in Reading, Writing and Speaking
- German: a little

Publications

[1]. Bahram Rahmati, Ali Heidarian and Amir Mohammad Jadidi "**Investigation in performance of a hybrid under-floor air distribution with improved desk displacement ventilation system in a small office**", Applied Thermal Engineering, Vol. 138, pp. 861-872 (2018)

[2]. Amir Mohammad Jadidi and Mansoor Jadidi "**An algorithm based on predicting the interface in phase change materials**" International Journal of Engineering, Vol. 31, No. 5, pp. 799-804 (2018)

[3] Amir Mohammad Jadidi, Bahram Rahmati and Ali Heidarian **"Effect of opening diffuser and return vent location on air quality, thermal comfort and energy saving in desk displacement ventilation (DDV) system"** Journal of Heat and Mass Transfer Researches, DOI: 10.22075/jhmtr.2018.12784.1193, (2018)

[4]. Amir Mohammad Jadidi, G. Heidarinejad **"Modeling of pollution dispersion behind a building using RANS-LES method",** Modeling Journal of Semnan University, published (2017),

[5]. Iraj Jafari Gavzan and Amir Mohammad Jadidi, "**Investigating the limit behavior of cavitation phenomana around circular cylinder with various diameters at high speed cavitation tunnel**", Journal of solid and fluid mechanics, Vol. 7, No. 1, pp. 147- 156 (2018).

[6]. Amir Mohammad Jadidi, G. Heidarinejad "**Simulation of turbulent wind flow over Tarbiat Modares University campus**", Modares Mechanical Engineering Journal, Vol. 14, No. 13, pp.272- 280 (2014).

[7]. Amir Mohammad Jadidi, G. Heidarinejad "**Evaluating of DES and DDES methods in wind flow over building and comparing with traditional turbulence models**", Modares Mechanical Engineering Journal, Vol. 13, No. 14, pp.81- 93 (2013).

[8]. M. Maerefat, Amir Mohammad Jadidi, D. D. Ganji **"Solution of laminar flow on the wedge using HPM method"** (ISME) Iranian Society of Mechanical Engineering Journal, Vol. 10, No. 2*, pp.82-91* (2009).

[9]. M.Maerefat, A. M. Jadidi, D. D. Ganji "**Application of Approximate Method to boundary layer flow over a flat plate with pressure gradient**", International Journal of Modern Physics B**, accepted** (2009), Manuscript Number: JPB20071454

[10]. Bahram Rahmati, Ali Heidarian and Amir Mohammad Jadidi **"Investigation in performance of a hybrid personalized ventilation (PV) with under-floor air distribution (UFAD) system",** 26th international conference of iranian society of mechanical engineering, 2018, Semnan university, Iran

[11] Seyed Mohammad Mahdavi nasab, Amir Mohammad Jadidi **"Modelling of pollution dispersion around a building with four turbulence models"**, 26th international conference of iranian society of mechanical engineering, 2018, Semnan university, Iran

[12] Ahmad Jourabloo, Amir Mohammad Jadidi, Pezhman Ebadiani, **"Investigation in the number of return vents on energy saving, thermal commfort and air quality in a UFAD system" ,** 25th international conference of iranian society of mechanical engineering, 2017, Tarbiat modares university, Iran

[13] Bahram Rahmati, Ali Heidarian and Amir Mohammad Jadidi, **"Optimization of opening diffuser and return vent location in a DDV system",** 25th international conference of iranian society of mechanical engineering, 2017, Tarbiat modares university, Iran

[14]. M. Riahi, Amir Mohammad Jadidi, M. Jamali, S. khoshnevisan **"Optimization of fuel consumption in domestic powehouses"** , First conference of fuel, energy and environment, Material and Energy Research Center.