

# Shahabaddin Abbaszadeh

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## Education

- M.Sc. in Mechanical Engineering, Energy Conversion, Sharif University of Technology, Tehran, Iran, GPA **17.26** out of 20 (2014).
- B.Sc. in Mechanical Engineering, Hormozgan University, Bandar Abbas, Iran, GPA **19.23** out of 20 (2011).
- Pre-University in Mathematics, SAMPAD (NODET) High School, Bandar Abbas, Iran, GPA **19.79** out of 20 (2006).
- High School Diploma in Mathematics, SAMPAD (NODET) High School, Bandar Abbas, Iran, GPA **19.41** out of 20 (2005).

\***NODET:** National Organization for Development of Exceptional Talents, a very selective school which accepts only top students in the city annually.

## Project and Thesis

**M.Sc.:** *Large Eddy Simulation of Continuous Density Current impinging on Obstacles*, Supervisors: Prof. B. Firoozabadi and Dr. H. Afshin. Grade: **19.5** out of 20.

**B.Sc.:** *Numerical simulation of viscous air flow over an asymmetric airfoil with different initial conditions*, Supervisor: Dr. S. Niazi, Grade: **19.2** out of 20.

## Research Interests

- Turbulent flow physics and LES modeling
- Computational fluid dynamics and numerical simulation
- Environmental fluid mechanics
- Density and depositional currents
- Hydrodynamics
- Aerodynamics
- Renewable Energies
- Heat Transfer

## Academic Achievements and Honors

- Ranked **1st** amongst all Mechanical Engineering students in Hormozgan University, Undergraduate studies. Also **Best student** for all semesters (2007-2011).
- Ranked **1st** amongst all Engineering students of the same entrance year in Hormozgan University, Undergraduate studies (2007-2011).
- Ranked **93rd** amongst 20000 competitors, National Entrance Exam of public University, Graduate Studies (2011).
- Ranked **2nd** amongst all the province-wide competitors in the national Ayandeh Sazan scientific competitions (2006).

- Selected as a **qualified person** at the first stage of Iranian National Physics Olympiad (2005).
- Selected as a **qualified person** at the first stage of Iranian National Chemistry Olympiad (2005).
- Ranked **2nd** in "Study and Research" part of 22nd annual province-wide Cultural and Art student competitions (2004).

## Publications

### Journal papers

- **Sh. Abbaszadeh**, B. Firoozabadi and H. Afshin, “*Large Eddy Simulation of Continuous Density Current Flows Past Bottom-Mounted Obstacles*”, (in Preparation).

### Conference papers

- **Sh. Abbaszadeh**, N. Najafpour, B. Firoozabadi and H. Afshin, “*Turbulent Structure of Continuous Density Current Propagating over Consecutive Square Obstacles*”, 22nd annual international conference on Mechanical Engineering, Iran (2014).
- **Sh. Abbaszadeh**, S. Yaghubi, B. Firoozabadi and H. Afshin, “*LES Simulation of Continuous Density Current Propagating over Bottom-Mounted Square Cylinders*”, International Conference on Environmental Science and Technology, Turkey (2013). (*also published in Journal of Selcuk University Natural and Applied Science*)
- S. Yaghubi, **Sh. Abbaszadeh**, P. Golchoubian, H. Afshin and B. Firoozabadi, “*Experimental Investigation of the Effect of Two Consecutive Obstacles on Turbidity Current*”, International Conference on Environmental Science and Technology, Turkey (2013). (*also published in Journal of Selcuk University Natural and Applied Science*)
- **Sh. Abbaszadeh**, S. Yaghubi, B. Firoozabadi and H. Afshin, “*Continuous Density Current Propagating over Two Consecutive Rectangular Obstacles*”, 21st annual international conference on Mechanical Engineering, Iran (2013).
- S. Yaghubi, **Sh. Abbaszadeh**, H. Afshin, B. Firoozabadi and E. khavasi, “*Experimental Investigation of Particle-laden Density Current over Obstacles*”, 21st annual international conference on Mechanical Engineering, Iran (2013).

## Teaching experience

### Lecturer

- [Hormozgan University of Applied Science and Technology](#), (*undergraduate*):  
Advanced Engineering Mathematics, Fluid Mechanics and Mechanics of Materials, (2015-2016).
- [Bandar Abbas Technical and Vocational University](#), (*undergraduate*):  
Fluid Mechanics, (2016).

### Peer Tutor

Fluid Mechanics I, II (2010 to 2012).  
Heat Transfer I, II (2010 to 2012).  
Basic physics and mathematics (2007 to 2010).

## Work Experience

- Feasibility study and Design of a 1 MW photovoltaic Solar system, supervisor: [Dr. P. Adibi](#), (2015).
- Cooperation in the project "Simulation and Optimization of thermal cycles in industries" sponsored by Hormozgan University, supervisor: [H AnsariNasab](#), (2009).
- Cooperating with Amin Taban Sepehr Company (2014-2016).
- Cooperating with Sazeh Tadbir Mahan Company (2016-present).

## Related Term Research-projects

### CFD

- Wrote a Matlab code for simulation of 2-D water flow in the channel in the presence of an obstacle, using staggered grid, based on SIMPLE-R algorithm and QUICK method, [Professor M.S. Saidi](#), fall 2011.

### Optic Flow Diagnostic

- Wrote a Matlab code for measurement of particles velocity based on particle image velocimetry (PIV) and determination of flow concentration and temperature by LIF method, [Dr. M.B. Shafii](#), spring 2012.

### Heat Transfer 2

- Simulation of a MED desalination plant using EES software. [H.AnsariNasab](#), 2010.

### Fuel and Combustion

- Prepare a comprehensive report named "Energy and Power Plants" on different types of energy, including both renewable energies and fossil energies and their applications, (Head of authors group), [Dr. P. Adibi](#), 2009-2010.

### Central Heating and Air Conditioning I

- Design and calculation of air conditioning and piping for residential houses, spring 2010, [Dr. Bakhshan](#).

## Computer Skills

- Excellent knowledge of Linux operating system and OpenFOAM code.
- Excellent knowledge of the following computer coding languages: C++ and C, Pascal.
- Knowledge of parallel coding and computing.
- Excellent knowledge of the following programs: Fluent, Tecplot, AutoCAD, Matlab, EES, Microsoft Office.
- Knowledge of the following programs: MikTeX, Maple, CATIA, Carrier HAP.

## Memberships

- Member of ISME (Iranian Society of Mechanical Engineers), (2013 to present).
- Member of Iranian construction engineering organization, (2012 to present).
- Member of MAHAK (Society to Support Children Suffering from Cancer), (2010 to present).

## Language Skills

- Fluent in English, Passed 19 terms in English conversation course at Shokouh English Institute leading to Upper Intermediate level and 4 terms of advanced English in Mehrdad English Institute.
- IELTS test taken at 1st of November 2018, **scored 7.0**.

## Hobbies and Interests

Reading, Music, Movies, Gym, Fishing, Charity activities.

## References

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### **Bahar Firoozabadi**

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