## SHAHAB EGHBALI

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Tehran, Iran **Cell Phone:** (+98) 935-1007645

**Date of Birth:** 1992 **Gender:** Male

#### **EDUCATION**

Faculty of Mechanical Engineering, University of Tehran, Tehran, Iran

B.Sc. student of Mechanical Engineering 2010 – 2014\*

**GPA**: 18.25/20

**Last 2 years GPA**: 18.53/20 \*Expected Graduate Date

Shohadaye Badr High School, Tehran, Iran

Diploma of Mathematics & Physics 2006 - 2009

**GPA**: 19.96/20

#### **RESEARCH INTERESTS**

**Turbo machinery**, Hydrodynamics of Turbines, Multiphase Pumping, Pump-Turbines Cavitation, Bubble Dynamics, Hydroacoustics, Flow Induced Noise & Vibration, Flow Instabilities in Turbines & Pumps, Condition Monitoring of Hydraulic Machines

Renewable Energies, Wind Energy, Solar Energy

**Fluid Dynamics** 

Fluid Mechanics, Numerical and experimental studies

**Thermodynamics** 

**Computational Fluid Dynamics** 

**Heat Transfer** 

#### **SELECTED COURSES**

Turbo machinery	<b>Top Mark</b> (18.5/20)	Thermodynamics II	2 <sup>nd</sup> Mark (19/20)
Thermal Power Plants	<b>Top Mark</b> (20/20)	Control Automatic	2 <sup>nd</sup> Mark (18.8/20)
Fluid Mechanics I	<b>Top Mark</b> (20/20)	CFD I	17.5/20
Thermodynamics I	<b>Top Mark</b> (19.1/20)	Heat Transfer	17.6/20
Numerical Computations	<b>Top Mark</b> (20/20)	Renewable Energies	18/20
Fluid Mechanics II	2 <sup>nd</sup> Mark (18.82/20)		

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# HONORS & AWARDS

2013	Awarded for <b>Full Scholarship</b> from University of Tehran for graduate program, granted to <b>top 10 percent</b> of faculty top ranked students.
2013	Ranked 10 <sup>th</sup> among 112 B.Sc. undergraduate students of Mechanical Engineering, Faculty of Engineering, University of Tehran
2012	Winner of <b>HAREKAT FESTIVAL</b> Prize as a member of <b>Best Innovative</b> student scientific association in Iran.
2010	Ranked 182 <sup>nd</sup> in National University Entrance Exam among over 400,000 participants.
2006 - 2010	Top student of Shohadaye Badr High school.

# RESARCH EXPERIENCE

Summer 2013	Operation Analysis of 1MW Industrial multi-stage centrifugal pump, using Numeca Software, as Research Assistant of <b>Prof.A.Nourbakhsh</b>		
Spring 2013	Numerical solution of Velocity-Stream line Function in a Lid Driven Cavity using SOR iterative method over uniform & non-uniform structured grid, using C++ programming language. <b>CFD</b> <i>I</i> , <b>Prof.V.Esfahanian</b>		
Spring 2013	Explicit Numerical solution of 2-D Navier-Stokes & Continuity equations in a Lid-Driven Cavity, using SIMPLE, SIMPLER and SIMPLEC scheme over uniform and non-uniform structured grid, using C++ programming language. <b>CFD</b> <i>I</i> , <b>Prof.V.Esfahanian</b>		
Spring 2013	Numerical solution of Blasius' Boundary Layer equation in free fluid stream upon a flat plate, using Finite-Difference scheme, Keller box method, using C++ & Fortran programming languages. <b>CFD</b> <i>I</i> , <b>Prof.V.Esfahanian</b>		
Spring 2013	Analysis of a case-study Combined-Cycle power plant and approaches to enhance the efficiency. <b>Thermodynamics </b> <i>II</i> , <b>Prof.A.Afshari</b>		
Spring 2013	Design of actuator for Active Controller of suspension system and dynamic controlling of vehicle class C. Control Automatic, Prof.M.Mahjoob		
Fall 2013	Numerical simulation of heat transfer in Heat generating electronic chip under convectional electronic cooling and conduction mechanisms using Finite-Difference scheme, Explicit and Implicit method, using MATLAB programming language. <b>Heat Transfer I, Prof.M.Ashjaee</b>		
Summer 2012	Procedure of design and construction of Wind Turbines. Research, Prof.V.Esfahanian		
Spring 2012	Free convection and industrial applications. Fluid Mechanics I, Prof.V.Esfahanian		

#### **ACADEMIC EXPERIENCES**

Since 2013 Research Assistant at Hydraulic Machinery Research Institute (HMRI).

2012-2013 Official Member of Scientific Association of Mechanical Engineering

Faculty (S.A.M.E), University of Tehran, Iran

Teaching Assistant, Faculty of Mechanical Engineering, University of Tehran, Iran

Spring 2013 "Heat Transfer I" to Instructor: Prof.B.Sajadi

Spring 2013 "Strength of Materials II" to Instructor: Prof. A.Ataei

Fall 2013 "Heat Transfer I" to Instructor: Prof.B.Sajadi

#### COMPUTER SKILLS

• Commercial Softwares: Gambit, Fluent, Numeca, Solid Works, Tecplot, Cycle pad, Maple

• **Programing Softwares**: C++, MATLAB, Fortran

• Utility Softwares: Microsoft Office, Adobe Photoshop, LATEX

#### LANGUAGE SKILLS

Persian (Mother Tongue)

English (IBT TOEFL Score: 99, Reading: 28, Listening: 23, Speaking: 26, Writing: 22)

French (Writing & Reading with medium proficiency)

## HOBBIES

Playing music (Master in playing the Daf & Dayereh, traditional Iranian percussion instruments) Persian Calligraphy & Literature

Sports, Mountain Climbing, Playing Chess, Swimming

### REFREES

• **Prof. Ahmad Nourbakhsh,** Full Professor, Head of Turbo Machinery Department, Head of Hydraulic Machinery Research Institute (HMRI), University of Tehran.

Email: <u>anour@ut.ac.ir</u> Phone: (+98) 21-82084815

• **Prof. Vahid Esfahanian,** Full Professor and Head of Vehicle, Fuel and Environment Research Institute, University of Tehran.

Email: evahid@ut.ac.ir Phone: (+98) 21-88020741

• **Prof. Mehdi Ashjaee,** Full Professor, Head of Energy Department, Head of Laser Diagnosis Lab., University of Tehran.

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