
Pejman Bidad

Department of Mechanical Engineering

University of Houston(UH), Texas, USA

Portfolio Website:

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EDUCATION

- January 2016 **Master of Science in Mechanical Engineering**
University of Houston (**GPA: 3.638**)
Dissertation title: "Cooling System Design for a Fully Superconducting Machine Used in Future Aircrafts"
Thesis Advisor: Dr. Philippe Masson
- Sep 2012 **Bachelor of Science in Mechanical Engineering-Thermal Fluid**
Ferdowsi University of Mashhad, Iran
Dissertation title: "Evaluating Thermostatic Space Heaters' Impact on Energy Efficiency, Emission, and Natural Gas Conservation"
Thesis Advisor: Dr. Mojtaba Mamourian
- June 2006 **High School Diploma in Mathematics and Physics**
Diploma **GPA: 19.51** out of 20

RESEARCH INTERESTS

- **Research and developments in Energy fields and related issues (energy conversion)**
Renewable energies, energy efficiency, energy conservation, optimization, and reliability
- **Computer-aided design and computational simulation and optimization in fluid mechanics**
- **Multi-disciplinary research in medicine advances**
Neuroscience, biology, medicine, and biomedical fields
- **Multi-disciplinary research (economic/finance, management, data science, and machine learning)**

RESEARCH EXPERIENCE AND PROJECTS

- Summer & Fall 2022 **"Launching Linux-based VPN services."**
Providing free uncensored Internet access for Iranian people(using the Telegram robot application) employing various pre-developed VPN codes/configs such as Xray, Trojan, ShadowSocksR, Wireguard, SSH Direct, and SoftEther on Ubuntu OS

Summer & Fall 2022	<p>“the domestic heater research paper”</p> <p>Writing and publishing the journal article on gas-flued domestic heaters, which <i>is in the process</i> of journal submission/publication</p>
2020-2022	<p>“Python, Data Science & Machine Learning”</p> <p>Undertaken several Udemy Python, Data Science, and Machine Learning Courses and python-based projects, including my Python-Flask portfolio website (https://pejmanbidad.com)</p>
2016-2017	<p>“R&D in fountains industry as OPT-extension program”</p> <p>Hired as Researcher in Toba Fountains LLC, California, USA</p>
Spring, Summer, & Fall 2015	<p>“Graduate Research Assistant (RA)”</p> <p><i>Department of Mechanical Engineering, University of Houston</i></p> <ul style="list-style-type: none"> • Design and simulate a cooling system (heat sink) for superconducting machines in future NASA aircrafts • Contribute to a multi-disciplinary project aimed at employing cutting-edge cryogenics methods used in the superconductivity field.
Fall 2014	<p>“Cyclones, Turbulent Concept”</p> <p><i>Department of Mechanical Engineering, University of Houston, USA</i></p> <ul style="list-style-type: none"> • Simulation, research, and presentation were carried out under Dr. Metcalf’s supervision for the “Turbulent Flows” course project.
Fall 2014	<p>“The Fluid Behavior around Different Configurations of Four Cylinders”</p> <p><i>Department of Mechanical Engineering, University of Houston</i></p> <ul style="list-style-type: none"> • Simulation, research, and presentation were carried out under Dr. Metcalf’s supervision for the “CFD 1” course project.
Spring 2014	<p>“Membrane-Protein Interactions in Mechanosensitive Channels”</p> <p><i>Department of Mechanical Engineering, University of Houston</i></p> <ul style="list-style-type: none"> • Presentation & research carried out under the supervision of Dr. Agrawal for the “Mechanics & Physics of Cells” course.
Fall 2013	<p>“Calculating and Analyzing the Forces on Airfoil/Wing with Graphical Output”</p> <p><i>Department of Mechanical Engineering, University of Nevada, Reno</i></p> <ul style="list-style-type: none"> • Programming with MATLAB software for the “Aerodynamics” course under the supervision of Dr. Fu.
Fall 2013	<p>“TIM, Thermal Interface Materials”</p> <p><i>Department of Mechanical Engineering, University of Nevada, Reno</i></p> <ul style="list-style-type: none"> • Research carried out under the supervision of Dr. Park for the “Intermediate Heat Transfer” course.
Summer 2012	<p>“Designing a Complete Refrigerated Warehouse Including Piping Design”</p> <p><i>Department of Mechanical Engineering, Ferdowsi University of Mashhad, Iran</i></p> <ul style="list-style-type: none"> • Project carried out under the supervision of Dr. A. Teymourtash for the “refrigerating systems” course.
2010-2012	<p>“BARSAVA Plug-In Hybrid Vehicle Project”</p>

- IMDC 2010: “Green Formula” National Competition of Hybrid Car Design, Sharif University of Technology, Tehran, Iran**
- One of Two Main Modelers of Car Elements, member of the Design & Manufacturing Body of the Car(Sponsored by Sanabad Khodro Toos & Rad Toos Companies under the supervision of Dr. H. Razavi)
- Spring 2011 **“Water Recycling and Storage System”**
The project was done under the supervision of Dr. Pishbin, Khayyam University, Mashhad, Iran
- Conceptual design
 - Design and model of the pump needed
- Spring 2010 **“Automated Electrical Curtain Design”**
Department of Mechanical Engineering, Ferdowsi University of Mashhad, Iran
- Conceptual design of an automated room curtain triggered and responded to Air ventilation & Heat Transfer Changes for the “Engineering Design Method” Course Project under the supervision of Dr. M. Moavenian.
- Spring 2009 **“Aerial Platform Design”**
Department of Mechanical Engineering, Ferdowsi University of Mashhad, Iran
- Design an aerial platform installed on a crawler or truck for the “Mechanical Engineering Design II” course project under the supervision of Dr. KH. Farhangdoost
- Summer 2011 **“Body design-and-production of BARSAVA project.”**
Air & Solar Research Center, Ferdowsi University of Mashhad, Iran
- Designing and manufacturing the body of the BARSAVA hybrid vehicle(experimental, reachable at: <https://pejmanbidad.com>)
- Spring-Summer 2008 **“PARSEH Robotic Team”**
Attending the 4th National Robotic Competition of Intelligent Mice, the Islamic Azad University of Sabzevar (IAUS), Sabzevar, Iran

TEACHING EXPERIENCE

- Preparation course for IELTS & GREs for graduate Iranian students(2018-current)
- Mathematics, Analytical Geometry, and Physics (High school students)
- Mathematics and Differential Equations (Undergraduate first-year students of B.Sc.)

HONORS, AWARDS, AND MEMBERSHIPS

- 2008-2009 **Ranked 3rd top student** among all Mechanical Engineering students (Solid Mechanical Engineering Design), Awarded by Ferdowsi University of Mashhad, Mashhad, Iran.
- 2010-2011 Participated in **IMDC 2010 “Green Formula”** Competition as part of the BARSAVA team. **Ranked 1st** among 47 teams in Conceptual Design and **3rd** in Industrial Design.

2007	Among the top 0.5 % of Students in the Iranian Nationwide University Entrance Exam.
2012	Commenced by the Vice President of Research Center of Faculty Engineering, Ferdowsi University of Mashhad, for taking part and achieving 1 st Rank in the Conceptual Design Section of The National Competition of Hybrid Vehicle Design, held at the Sharif University of Technology, Tehran, Iran.
2007-Present	Student Member of ASME (American Society of Mechanical Engineers)
2006	Member of Iran Invention club, Mashhad, Iran

PUBLICATIONS AND PRESENTATIONS

- **“Cooling System Design for a Fully Superconducting Machine Used in Future Aircrafts”** (M.Sc. Dissertation), **P. Bidad** (2015)
- **“Optimal Site Selection for a Power Plant, considering Gas/Electrical Energy Transmission Expenses in Iran”**, **P. Bidad**, S.I. Pishbin (Paper was accepted but not published because of not registering & attending at **ASME 2012 6th** International Conference on **Energy Sustainability** Conference, July 23-26, San Diego, California).
-Conferences recommended publishing the paper: APPEEC 2012, Asia-Pacific Power and Energy Engineering Conference, Shanghai, China (Published by IEEE). The paper was also accepted at International Conference on Advancements in Electronics and Power Engineering [**ICAPEP’2011**], ISEM Society, Bangkok, Thailand, 2011 (for Oral and Poster Presentation).
- **“Evaluating Thermostatic Space Heaters’ Impact on Energy Efficiency, Emission and Natural Gas Conservation”**
P. Bidad, S.I. Pishbin (*In Submission Progress* for **Journal: Energy Sources, Part A, Recovery, Utilization, and Environmental Effects**, Published By: **Taylor & Francis**. (Also, the paper was accepted but not published because of not registering & attending at **ASME 2012 6th** International Conference on **Energy Sustainability** Conference, July 23-26, San Diego, California)
- **“Lasers’ Capability on Finding Heat Transfers’ Parameters and Size of Particles”**
S.I. Pishbin, **P. Bidad** (Published in **3rd National** Conference of Modern Researches in Chemistry & Chemical Engineering, Islamic Azad University of Mahshahr, Iran, 2011 – written in Farsi)
- **“Hybrid Vehicles’ Systems and Corresponding Impacts on Environment”**
P. Bidad, Haseli Rad, H. Kalbasi (*In Progress*)
- **“DMU Kinematics Simulator CATIA V5 Tutorial” Book Edition**, (Written in Persian), Summer 2010 and 2011

PROFESSIONAL EXPERIENCE

- Mechanical Engineer, Consultant, and Researcher at consulting firm(s) :
 - Arvin Dezh Toos Construction Company, Mashhad, Iran (2010-2013)*
 - Toba Fountains LLC, California, USA (2016-2017)*
 - Arman Tadavom Yekta Gaz Company, Mashhad, Iran (2019-current)*

- Mechanical Engineer, Designer, and Supervisor of Mechanical Installations :
-Arvin Dezh Toos Construction Company, Mashhad, Iran (2010-2013)

TECHNICAL SKILLS

Modeling:

- **CATIA V5** - Advanced (Part Design, Generative Shape Design, Assembly)
*Holding **Certifications** from the Ministry of Science of Iran*
- **Solid Works** - Familiar

Mechanism:

- **CATIA V5** – Upper Intermediate (DMU Kinematics)

Finite Element:

- **ANSYS (Fluent)** –Upper-Intermediate
- **COMSOL** - Familiar

Programming:

- **MATLAB** –Intermediate
- **Python** – Passed some courses
*Holding 4 **Certifications** from Udemy (Data Science & Machine Learning) – 2020 to 2022*
- **FORTRAN** – Familiar

Web developing tools:

- **Pycharm**
- **Bootstrap**
- **Atom**
- **Python-Flask**

Other Applications:

- **Microsoft Word, Excel, PowerPoint** – Advanced
- **Linux(Ubuntu)** – Familiar

LANGUAGE SKILLS

- Farsi: Native
- English: Fluent
-**IELTS: 7.5 Overall Score** obtained (August 2017)
-**GRE (General) - Revised: Verbal: 153, Quantitative: 166, and Overall=319** (June 2020)

REFERENCES

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Additional references are available upon request.