

Amirhossein Azimi

Contact Information

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Education

M.Sc. in Aerospace Engineering

[Sharif University of Technology](#), Tehran, Iran

Sep. 2016 -
Jan. 2019

Thesis Title: "Experimental and Numerical Study on Spray Combustion under Hot-Diluted Conditions"

Advisor: [Dr. Amir Mardani](#)

Cum. GPA: 3.89/4.0

B.Sc. in Mechanical Engineering

Tehran Polytechnic ([Amirkabir University of Technology](#)), Tehran, Iran

Sep. 2011 -
Aug. 2016

Studied as Secondary Major

Advisor: [Dr. Hamid Naderan](#)

Cum. GPA: 3.76/4.0

B.Sc. in Aerospace Engineering

Tehran Polytechnic ([Amirkabir University of Technology](#)), Tehran, Iran

Sep. 2011 -
Apr. 2016

Studied as Primary Major

Thesis Title: "Design and Construction of an Atmospheric Gas Turbine Combustor Test Rig"

Advisor: [Prof. Sadegh Tabejamaat](#)

Cum. GPA: 3.89/4.0

Experiences

Graduate Research Assistant

Sharif University Aerospace Advanced Combustion Laboratory (AACL), Tehran, Iran

Under Supervision of [Dr. Amir Mardani](#)

- * Designed and constructed a laboratory-scale test rig to investigate the combustion of liquid fuels under hot-diluted conditions
- * Developed an image processing code for analysis of flame photographs

[\[view doc.s\]](#)

Undergraduate Researcher

Amirkabir University Combustion Laboratory (ACL), Tehran, Iran

Under Supervision of [Prof. Sadegh Tabejamaat](#)

- * Participated in design and construction of a gas turbine combustor test rig
- * Participated in testing of a sample gas turbine combustor for performance optimization
- * Developed a numerical code for heat transfer analysis of gas turbine combustors

[\[view doc.s\]](#)

Publications

- Peer Reviewed Journal Papers:

- Amir Mardani, Amirhossein Azimi, "Design and Construction of MILD-Spray Test Facility and Experimental Investigation on Kerosene Spray Flame in MILD Combustion Regime", *Fuel and Combustion*, 2020. [In Preparation; for details, please view my [website](#)]
- Amir Mardani, Amirhossein Azimi, "An Experimental Study on Spray Combustion under Hot-Diluted Conditions", *Combustion and Flame*, 2019. [To be submitted; for details, please view my [website](#)]
- Amirhossein Azimi, Masoud EidiAttarZade, Sadegh Tabejamaat, "Designing a Gas Turbine Combustor Test Rig and Testing a Sample Combustor at Atmospheric Conditions", *Fuel and Combustion*, Volume 10, Issue 1, Page 87-104, 2017. (In Persian) [[Website](#)]

- Conferences and Presentations:

- Amir Mardani, Amirhossein Azimi, "On the Chemiluminescence of Multiple Species in Combustion of Spray under Conventional and Hot-Diluted Conditions", 8th Iran Fuel and Combustion Conference, 2020. [In Preparation; for details, please view my [website](#)]
- Amir Mardani, Amirhossein Azimi, "Effects of Preheating and Dilution on Kerosene Spray Flame Structure", Iran First International Combustion School Poster Presentation, ICS2019, Tehran, Iran, August 2019. [[Website](#)]
- A. Azimi, S. Tabejamaat, M. Eidi Attarzade, "Design and Construction of an Atmospheric Gas Turbine Combustor Test Section," 6th Iran Fuel and Combustion Conference, Ferdowsi University of Mashhad, Mashhad, Iran, February 2016, Paper No. 92. (In Persian) [[Website](#) | [Proceedings](#)]

Expertise

- ✦ Experimental Research on Combustion of Liquid and Gaseous Fuels
- ✦ Design and Construction of Experimental Facilities (Test Rigs)
- ✦ Project Management, Teamwork, and Technical Report Writing
- ✦ Measurement Techniques in Combustion Zone and Data Analysis
- ✦ Numerical Simulation of Reactive Multiphase (Spray) Flows
- ✦ Heat Transfer Analysis of Combustion Systems and Cooling Techniques
- ✦ HVAC and Refrigeration Systems design

Software | **CAD/CAM:** SolidWorks, AutoCAD
CAE: ANSYS (Fluent, ICEM, Gambit), Tecplot360
Programming: FORTRAN 95, MATLAB, EES

English | **TOEFL ibt:** Exam date: Nov. 2nd 2019
GRE: Exam date: Dec. 15th 2019

Interests

- Experimental Investigation on Reactive Flows
- Numerical Simulation of Reactive Flows
- Turbulent Combustion of Liquid and Gaseous Fuels
- Preliminary Design of Combustion Systems (in particular, low emission combustors)
- Heat Transfer Analysis of Combustors

Interests Continued

- Thermo-Acoustic Coupling
- Cooling and Heating Load Calculation and Design of HVAC Systems

Honors and Awards

- ❖ Select M.S. Thesis of the year in Aerospace Department of Sharif University of Technology (2018)
- ❖ 19th Khwarizmi Youth Award for Design and Construction of Gas Turbine Combustor Test Rig (2017)
- ❖ Awarded Sharif University of Technology Fellowship for M.S. (2016)
- ❖ Selected for graduate studies without the National University Entrance Exam (Konkour) at Sharif University of Technology (2016)
- ❖ Ranked 3rd out of 67 students of Aerospace Department, Amirkabir University of Technology, Class of 2011-2015
- ❖ Distinguished Double Major student at Amirkabir University of Technology (2013)
- ❖ Awarded Amirkabir University of Technology Fellowship for B.S. (2011)
- ❖ Ranked as top 0.2% in the National University Entrance Examination for Undergraduate Studies (Konkour) among more than 300,000 participants (2011)

Selected Coursework and Grades

Graduate	Advanced Fuel and Combustion (A)	Undergraduate	Internal Combustion Engines (A+)
	Combustion Instability (A+)		Air Conditioning Systems (A+)
	Advanced Turbomachinery (A+)		Water and Sewage Piping Systems (A)
	Advanced Gas Dynamics (A+)		Gas Distribution Network (A+)
	Advanced Computational Fluid Dynamics (A+)		Refrigeration Systems (A)

Extracurricular Activities

- ◆ Traveling, Hiking, Mountain Climbing
- ◆ Watching Movies, Watching Documentaries, Listening and Playing Music

References

Dr. Amir Mardani | Assistant Professor, Department of Aerospace Engineering, Sharif University of Technology
(M.Sc. Thesis Advisor) | Homepage: <http://ae.sharif.edu/~web/homepage.php?username=amardani>
Email: amardani@sharif.edu

Prof. Sadegh Tebejamaat | Professor, Department of Aerospace Engineering, Amirkabir University of Technology
(B.Sc. Thesis Advisor) | Homepage: [\[Link\]](#)
Email: sadegh@aut.ac.ir

Dr. Mehran Tadjfar | Associate Professor, Department of Aerospace Engineering, Amirkabir University of Technology
(B.Sc. Educational Advisor) | Homepage: [\[Link\]](#)
Email: mtadjfar@aut.ac.ir