SHAYAN RAMEZANZADEH

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Biography

Dr. Shayan Ramezanzadeh completed his undergraduate education in 2014, majoring in Mechanical Engineering with a focus on Thermal & Fluids, at the University of Azarbaijan. He continued his academic journey by earning a Master of Science (M.Sc.) degree in Mechanical Engineering specializing in Powertrain Systems from the University of Tabriz in 2017. Following his master's studies, he worked as a Lecturer at UCNA University, teaching various courses. Dr. Ramezanzadeh pursued a Doctor of Philosophy (Ph.D.) degree in Manufacturing Engineering at the University of Sabancı. He was granted a six-year Sabancı University full scholarship and served as a teaching and research assistant from 2017 to 2023. As a research assistant, he contributed to a TÜBİTAK-granted project. Following the completion of his Ph.D., he worked as a Postdoctoral Researcher at Sabancı University. He also served as a Senior Expert Research Engineer at the Structural Manufacturing R&D Team in BAYKAR Technologies from 2021 to 2023, contributing to various R&D projects aimed at manufacturing composite parts for the Aerospace industry. In May 2024, Dr. Ramezanzadeh embarked on a new chapter in his academic career by joining Özyeğin University's Faculty of Aviation and Aeronautical Sciences as an Assistant Professor.

Work Experience

Özyeğin University   **Istanbul, Turkey**
Assistant Professor   *May 2024 - Present*
Faculty of Aviation and Aeronautical Sciences

Sabanci University-IMC   **Istanbul, Turkey**
Postdoctoral Researcher   *Dec 2023 - Apr 2024*

BAYKAR Technologies   **Istanbul, Turkey**
Senior Expert Research Engineer   *Dec 2022 - Nov 2023*
Structural Manufacturing R&D Team

BAYKAR Technologies   **Istanbul, Turkey**
Expert Research Engineer   *Dec 2021 - Nov 2022*
Structural Manufacturing R&D Team

SU-IMC   **Istanbul, Turkey**
Research Assistant   *Sep 2017 - Aug 2023*
Contributed to a TUBITAK-funded project (Grant Number 117M091).

Sabanci University   **Istanbul, Turkey**
Teaching Assistant   *Sep 2017 - Aug 2023*
Taught courses: Introduction to Computer Aided Drafting and Solid Modeling (2 semesters), Decision Economics (4 semesters), Graduation Project Design (2 semesters).

University of UCNA   **Tabriz, Iran**
Lecturer   *Sep 2016 - Aug 2017*
Taught courses: Strength of Materials I, Industrial Drawing, Industrial Graphics.

Educational Background

Doctor of philosophy (Ph.D.) in Manufacturing Engineering   **2017-2023**
University of Sabanci   *Istanbul, Turkey*

Dissertation subject: "Advanced Computational Modeling of Wave Energy Converters and Fluid-Structure Interaction: A Smoothed Particle Hydrodynamics Approach".

Under Supervision of **Prof. Mehmet Yildiz**

Master of Science (M.Sc.) in Mechanical Engineering - Powertrain Systems　　2014–2017

University of Tabriz　　　　　　　　　　　　　　　　　　　　　　　　　*Tabriz, Iran*

Thesis subject: "Feasibility study of using an internal combustion engine waste heat in order to run concrete mixer in a concrete mixer Truck". Under Supervision of **Prof. Mortaza Yari**

Bachelor of Science (B.Sc.) in Mechanical Engineering - Thermal & Fluids　　2010–2014

University of Azarbaijan　　　　　　　　　　　　　　　　　　　　　　　*Tabriz, Iran*

Thesis subject: "Design and Manufacturing of Composite UAV".

Under Supervision of **Prof. Yousef Hashemi**

Research Interests

Computational Fluid Dynamics
- Smoothed Particle Hydrodynamics
- Meshless Methods
- Fluid-Structure Interactions
- Computational Modeling of Wave Energy Converters

Aerospace Engineering
- Advanced Composite Manufacturing Techniques
- Composite Manufacturing and Tooling
- Sacrificial Tooling
- Composite Machining and CNC Tools
- Additive Manufacturing

Publications

1. Ramezanzadeh, S, Ozbulut M, Yildiz M. Comprehensive Numerical Study on the Behavior of Floating Structures under Challenging Ocean Conditions using WCSPH (Ready to Submit)
2. Ph.D. dissertation about "Advanced Computational Modeling of Wave Energy Converters and Fluid-Structure Interaction: A Smoothed Particle Hydrodynamics Approach." under the supervision of Prof. M. Yildiz.
3. Ramezanzadeh, S, Ozbulut M, Yildiz M. A Numerical Investigation of the Energy Efficiency Enhancement of Oscillating Water Column Wave Energy Converter Systems. Energies 2022, 15, 8276.
4. Ozbulut M, Ramezanzadeh S, Yildiz M, Goren O. Modelling of wave generation in a numerical tank by SPH method. Journal of Ocean Engineering and Marine Energy. 2020 May;6(2):121-36.
5. Ramezanzadeh S, Ozbulut M, Yildiz M. Simulation of irregular wave motion using a flap-type wavemaker. InMARINE VIII: proceedings of the VIII International Conference on Computational Methods in Marine Engineering 2019 (pp. 783-794). CIMNE.
6. M.Sc. thesis about "Feasibility study of using an internal combustion engine waste heat in order to run concrete mixer in a concrete mixer Truck", under supervision of Prof. M. Yari.

Academic Projects

- Working on a project granted by TUBITAK (Grant Number 117M091) titled "An Investigation of Violent Wave-Floating Body Interactions by Particle Methods," supervised by Prof. Mehmet Yildiz.
- Project: "Design and Manufacturing of Composite UAV," supervised by Prof. Yousef Hashemi, 2014.

Teaching Experience

- **Sabanci University,** Teaching Assistant (Sep 2017-Aug 2023)
- Introduction to Computer Aided Drafting and Solid Modeling (2 semesters)
- Decision Economics (4 semesters)
- Graduation Project Design (2 semesters)
- **University of UCNA, Tabriz,** Lecturer (Sep 2016-Aug 2017)
- Strength of Materials I
- Industrial Drawing
- Industrial Graphic

Honors and Awards

- **Achieved 2nd rank** among students in the graduate program of the Department of Mechanical Engineering-Powertrain Systems Class of 2014, *based on cumulative GPA.*
- **Granted a Six-Year Sabanci University Graduate Fellowship**, covering the period 2017-2023.

Computer Skills

- **Programming Languages:** Fortran, MATLAB, C++, EES.
- **Software:** SOLIDWORKS, CATIA V5, Fluent, Powermill.
- **Typesetting and Publishing Tools:** LaTeX, EndNote, Microsoft Office Package.

Languages

- **English (Fluent)**
- **Turkish (Fluent)**
- **Persian (Native)**
- **Azerbaijani (Native)**
- **Arabic (Basic)**