



Mehmet OZGUNOGLU

Date of birth: 09/05/1989 | **Nationality:** Turkish | **Gender:** Male | (+46) 0733381524 |

mozgunoglu@gmail.com | omehmet@chalmers.se |

<https://www.linkedin.com/in/mehmet-ozgunoglu> | Gothenburg, Sweden

● EDUCATION AND TRAINING

01/09/2014 – 01/09/2018 – Istanbul, Turkey
MASTER OF SCIENCE – Istanbul Technical University

- Department of Defense Technologies, Master of Science
- Numerical Investigation of turbulent combustion in a stagnation point reverse flow combustor (Master Thesis)

In this study, turbulent combustion interaction in a SPRF combustor is numerically investigated using LES methodology. Relevant flow and combustion dynamics are examined in both premixed and non-premixed operations. Preliminary thermo-acoustic investigation is studied to evaluate combustion noise in this unique geometry

01/09/2007 – 01/09/2013 – Istanbul, Turkey
BACHELOR DEGREE – Istanbul Technical University

- Astronautical Engineering, Bachelor Degree
- Effect of free stream modifications on flapping foil propulsion (Bachelor Thesis)

This is a graduation project, which has a purpose that observing the vortices around the airfoil related to the freestream modifications, has been done with the supervision of Prof. Dr. M. Fevzi UNAL

● WORK EXPERIENCE

01/09/2013 – 01/07/2020
ENGINEER – GUMUSH AEROSPACE & DEFENSE

- Responsible from Metacomp technologies' CFD softwares technical support
- Istanbul, Turkey

08/08/2020 – CURRENT – Gothenburg, Sweden
MARIE CURIE EARLY STAGE RESEARCHER / PHD STUDENT – CHALMERS UNIVERSITY OF TECHNOLOGY

Simulation for erosion & durability of dual-fuel injection systems within EDEM-ITN Project

● PUBLICATIONS

Publications

Karahan, D.T., Ozgunoglu, M., Karaca, S., Gungor, A.G., 2015. A Large Eddy Simulation Methodology For Complex Flows, 8th Ankara International Aerospace Conference, AIAC-2015-066, Turkey

Ozgunoglu, M. and Gungor, A.G., Large Eddy Simulation of a Stagnation Point Reverse Flow Combustor, JAST, vol. 12, no. 1, pp. 75-85, Jan. 2019.

Ozgunoglu, M., Gungor, A.G., Large eddy simulation of turbulence-combustion interactions in a stagnation point reverse flow combustor, Fuel, Volume 257, 2019, 115988, ISSN 0016-2361, <https://doi.org/10.1016/j.fuel.2019.115988>.

● CONFERENCES AND SEMINARS

Conferences

A Large Eddy Simulation Methodology for Complex Flows

Ankara International Aerospace Conference (conference participant, 2015)

Large Eddy Simulation of a Stagnation Point Reverse Flow Combustor

International Combustion Symposium, Karabuk, Turkey (presenter, 2018)

Numerical investigation of turbulent combustion interaction in SPRF

International Aerospace Conference, Samsun, Turkey (presenter, 2018)

Numerical assessment of cavitation erosion for a nozzle flow configuration

International Symposium on Cavitation, Korea, Virtual Conference (presenter, 2021)

● PROJECTS

Projects

Hydroacoustics of submarine dome

Hydroacoustic performance of submarine dome is investigated via examining pressure probes around the dome with the help of Batten-Goldberg Hybrid RANS/LES turbulence model.

ITU Roket Team – Combustion chamber & Nozzle Design

Combustion chamber and nozzle design is provided to the ITU Roket Team, which got the first place at "International Rocket Week" competition

CEVHER UAV – Gumush Aerospace & Defense Company

Responsible from aerodynamic tests and simulations of the vehicle CEVHER which is a unique unmanned aerial vehicle in which uses Coanda Effects for hover and forward flights. The project is supported by Turkish Science, Industry and Technology Ministry

Aerodynamic group leader – YTU DBF TEAM

Responsible from aerodynamic design and optimization "Gokcen" which is an UAV for the AIAA Student Design/Build/Fly Competition

● JOB-RELATED SKILLS

Job-related skills

OpenFOAM, CFD++, Pointwise, MIME, Enight, Ansys Fluent, Matlab, Linux Environment, C++ Programming