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EDUCATION

Istanbul Technical University Bachelor's degree of Civil Engineering	<i>Aug 2019 - Jun 2024</i> GPA: 3.53
Istanbul Technical University Bachelor's degree of Mechanical Engineering	<i>Aug 2021 - Jun 2025</i> GPA: 3.26
Sabanci University Master's degree of Mechatronic Engineering	<i>Jan 2026-Present</i> GPA: *4.00

EXPERIENCE

Structural Analysis Engineer Internship, Fergani Space Technologies	<i>Jan 2025 - Jul 2025</i>
Engineering Software Developer, Binamod	<i>Aug 2023 - Jun 2024</i>
Long-Term Software Developer Internship, GE Aerospace	<i>Jul 2022 - Jun 2023</i>

ARTICLES & CONFERENCES

*Gayir, C. E., **Ozdilek, E. E.**, Ozdemir, M., Sendur, P., Sendur, G. K., Muhtaroglu, N., Simsek, U. *OpenLattice: An Open-Source Software for Designing Uniform and Functionally Graded Lattice Structures with Homogenization-Based Topology Optimization*. Additive Manufacturing. **Submitted**

Celik, M., **Ozdilek, E. E.**, Gundogdu, E., Demirkan, E., & Artan, R. (2023). *Free Vibration Analysis of Porous Beams Via Numerical and Artificial Neural Network Approach*. 27th International Conference on Composite Structures, ICC'27.

Ozdilek, E. E., Gundogdu, E., Celik, M., & Demirkan, E. (2024). *Vibration Analysis FGM Plate: A Hybrid Analytical and Machine Learning Approach*. ICAME'24, 224.

Ozdilek, E. E., Ozcakar, E., Muhtaroglu, N., Simsek, U., Gulcan, O., & Sendur, G. K. (2024). *A finite element based homogenization code in python: HomPy*. *Advances in Engineering Software*, 194, 103674.

Celik, M., Gundogdu, E., **Ozdilek, E. E.**, Demirkan, E., & Artan, R. (2023). *Artificial Neural Network (ANN) Validation Research: Free Vibration Analysis of Functionally Graded Beam via Higher-Order Shear Deformation Theory and Artificial Neural Network Method*. *Applied Sciences*, 14(1), 217.

THESIS DESIGN PROJECT

Optimizing Thermal Expansion Mitigation in Gas Turbine Blades Through Hierarchical Structural Design. (Thesis Advisor is *Prof. Dr. Mesut Kirca*)

PROJECTS

OpenLattice, OpenLattice Organization *2022-2024*

It is a engineering code developing and Research & Development project about Lattice Design, Topology Optimization, nano-mechanics, and additive manufacturing.

Website: github.com/eminemreozdilek/ol_simple_website.github.io

HomPy, OpenLattice Organization *2022-2023*

It is an open-resource 3D homogenization Python code for strut lattices.

Website: gitlab.com/eminemreozdilek/HomPy

FemRe, *2023-Present*

It is a finite element analysis code with a user interface to work on structural mechanics of hierarchical materials and structures.

Website: github.com/eminemreozdilek/FemRe

HeatSourceModeller, *2025*

It is a movable heat source modeler by using the parameters of Goldak Heat Source Model.

Website: github.com/eminemreozdilek/HeatSourceModeller

PROFESSIONAL EXPERTISE

Skills	3D Modelling, Static and Dynamic Analysis, Finite Element Analysis, Meta-materials, Molecular Dynamic Simulations, software Development
Engineering Tools	ANSYS, Comsol, AutoCAD, Fusion360, SolidWorks, LAMMPS
Programming Languages	MATLAB, Python, Perl/Bash, C++
Languages	Turkish (Native), English (TOEFL: 81/120)