

# UMUT SERDAR CIVICI

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## EDUCATION

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**Harvard University, Cambridge/United States of America** *Sep 2023 - Present*  
PhD Student  
Materials Science and Mechanical Engineering

**Istanbul Technical University, Istanbul/TURKEY** *Sep 2017 - Aug 2020*  
Master of Science, GPA: 3.27/4.00  
Department of Mechanical Engineering, Minor: Mechanical Design  
Thesis subject: Vacuum Provider Soft Robotic Actuator

**Delft University of Technology, Delft/NETHERLANDS** *Sep 2018 - Feb 2019*  
Master of Science, Erasmus (Exchange) Program  
Department of Mechanical Engineering  
Erasmus+ Grant

**Yildiz Technical University, Istanbul/TURKEY** *Sep 2011 - Jan 2017*  
Bachelor of Science  
Department of Mechanical Engineering, Minor: Material Science and Manufacturing Division

**Otto-Von Guericke University, Magdeburg/GERMANY** *Sep 2015 - Feb 2016*  
Bachelor of Science, Erasmus (Exchange) Program  
Department of Mechanical Engineering  
Erasmus+ Grant

## EXPERIENCE

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**Harvard University/United States, Cambridge Massachusetts** *Oct 2022 - Sep 2023*  
*Research Fellow*

- Working as a full-time research fellow in the Harvard John A. Paulson School of Engineering and Applied Sciences, Biodesign Lab. Working on the design, prototyping, and evaluation of soft wearable robots.

**Carnegie Mellon University/United States, Pittsburgh Pennsylvania** *Sept 2021 - Oct 2022*  
*Research Scholar*

- Worked as a full-time researcher in the School of Computer Science, Human-Computer-Interaction Institute, Morphing Matter Lab. Participated in the robotics research project as a co-first author (shared) as well as led my own project in wearable shock-absorbing metamaterials.

**FEV Turkey** *June 2019 - Sept 2021*  
*Mechanical Design Engineer*

- Worked as a Mechanical Design Engineer in the high-speed diesel marine engine (V20) development project, responsible for gas exchange system design, water-cooled cast exhaust manifold design, and several casted engine components (crankcase cover, engine brackets, air ducts). Product development of the system components, which includes concept to detailed design. Siemens NX, CATIA, and PTC Creo are used in the projects.
- Worked in McLaren hybrid engine development project, designed casted engine components in the valve train.

## **Bosch und Siemens Hausgerate (B/S/H)/Turkey**

*Jul 2016 - Feb 2017*

*Mechanical Design Engineering Intern*

- Worked in the research and development department at refrigerator fabric. Designing new plastic parts for the top panel housing of the refrigerator, cost reduction by optimizing the design of the part. Siemens NX CAD software was used in this project, and the rapid prototyping of the parts was manufactured by a 3D printer.

## **General Electric/Turkey**

*Jun 2015 - Jul 2015*

*Mechanical Engineering Intern*

- Machine shop internship; examination of machining, welding, and metal forming processes in the workshop as well as preparation of 3D models and 2D drawings of manufactured parts.

## **Self Employed/Turkey**

*Jun 2012 - Jul 2016*

*Private Tutor*

- Giving Mathematics, Geometry and Physics lectures to high school students.

## **SKILLS & LANGUAGES**

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**Software & Modelling;** MS Office, Latex, MATLAB, Python, Mathcad

**Design & Simulation;** Siemens NX, Solidworks, CATIA, PTC Creo, ANSYS (Structural), ABAQUS, Hyperworks, Grasshopper-Rhino

**Engineering;** Mechanical Design, Engineering first principles, 3D modelling, 2D drawings, GD&T, DFM, DFMEA, Concept to Detailed Design, Structural Simulation, Rapid Prototyping

**Languages;** Turkish, Native & English, Professional Proficiency, TOEFL IBT 90

## **PUBLICATIONS & CONFERENCES**

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**RevLock: A Reversible Self-Locking Mechanism Driven by Linear Actuators for Interactive Devices and Machines (Under Review), Conference Paper**

Adriane Fernandes Minori, Umut Serdar Civici, Chenyi Shen, Ms. Sophia Paul, Zeynep Temel, Lining Yao

**Design of Vacuum Provider Soft Robotic Actuator (Under Review), Journal Paper**

Civici, U. and Parlar, Z.

**Soft Robot Motion under Surface Texture Effects, Journal Paper**

Civici, U. and Parlar, Z. "Soft Robot Motion under Surface Texture Effects." *Emerging Materials Research* 9.1 (2020): 1-6. doi number: 10.1680/jemmr.19.00072

**Locomotion Control of Soft Robot with Surface Texture, Conference Paper**

Conference Proceeding, ICCESN 2018 Antalya/TURKEY, research project about surface texture of tribological effects on soft robotic system, Advisor: Asst. Prof. Dr. Zeynep Parlar, Istanbul Technical University.

## **REFERENCES**

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Assoc. Prof. Orhan Cakir at Yildiz Technical University, B.Sc. Thesis Advisor

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Asst. Prof. Zeynep Parlar at Istanbul Technical University, M.Sc. Thesis Advisor

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Asst. Prof. Lining Yao at Carnegie Mellon University, Research Scholar Advisor

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Dr. Dinesh Patel at Carnegie Mellon University, Project Collaborator

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