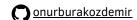
ONUR BURAK ÖZDEMIR









EDUCATION

Munich Technical University, Munich, Germany

MSc in Applied and Engineering Physics (2022-Present)

Thesis: Temporal Modulation of Synthetic Signals in Mammalian Cells at Westmeyer Lab & Simmel Lab

Istanbul Technical University, Istanbul, Turkey

BSc in Engineering Physics (2017-2022)

GPA: 3.54/4.00

Thesis: Smart Ozone Filter Using Reinforcement

Learning at Gali Lab

RESEARCH AND PAPERS

Non-Invasive Glucose Measurement Device

Developing an LED-based portable device to compare the light response of D-glucose in polyacrylamide hydrogel and water in the near-infrared spectral region. Read Paper Here

PVA-based binary-gel electrolytes

Synthesis and characterization of PVA-based binarygel electrolytes that incorporate massive ions, focusing on their potential applications in energy storage devices. Read Paper Here

Gel Electrolyte Supercapacitor Conductive Layer

Investigating the impact of conductive layers on the performance of gel electrolyte-based supercapacitors. Read Paper Here

Antiviral UV Mask Design

Development and testing of a UVC-LED-based face mask designed to inactivate airborne pathogens. Read Paper Here

Forensical Document Analysis

Development of a novel 3D scanning-based image processing technique for analyzing the sequence of questioned document intersecting lines in examination. Read Paper Here

Biomedical 3D Optomechanical Scanner

Determination of permanent facial scars by optomechanical device with 3D scanner.

WORK EXPERIENCE

Student Assistant at Neurobiological Engineering Oct. 2024 - Present

 Production of AAVs and VLPs for mammalian cell transfection.

Student Assistant at Physics of Synthetic Biological Systems | Jan. 2024 - Oct. 2024

 TEM Imaging of DNA Origami structures. Mammalian cell culture work.

Student Assistant at Neurobiological Engineering Feb. 2024 - May 2024

• DNA cloning, plasmid assembly and transient gene expression in mammalian cells.

Student Assistant at Helmholtz Munich

Mar. 2023 - Oct. 2023

Institute of Computational Biology | Theis Lab

Software Engineer at BAYKAR

June 2022 - Aug. 2022

 Created 3D geographical maps from UAV images using Neural Radiance Fields (NeRF)

Turkish National Science Foundation STAR Internship Dec. 2021-July 2022

- Selected amongst many applicants to work on space-qualified solar cells.
- Developed software for dark I-V measurements of solar cells to monitor their health.

Turkish National Science Foundation Internhsip Summer 2021

- Manufactured OLEDs and worked with photovoltaic
- Developed OLED I-V analysis software

Computer Skills With Proficiency: Python(and PyTorch), Matlab, Fortran, Latex, C++, Solidworks, Blender, MS Office Programs

VOLUNTEER WORK & INTERESTS

Volunteer Work & Interests

- High School Tutoring & Lab Work (Funded by Ministry of Youth and Sports) | Summer 2021
- Pars Rocketry Team (Propulsion Group, Hybrid Engines) | 2017
- Rowing, Piano, Aikido