



CURRICULUM VITÆ

BATUHAN TOKER

“Batuhan Toker is an experienced engineer and researcher specializing in mechatronics, robotics, and human-machine interaction. With expertise in prosthetics, robotics, and haptic interfaces, he has conducted research in physical human-machine interaction.”

M.Sc. Mechatronics Engineering

B.Sc. Mechanical Engineering

1 Biography

Batuhan Toker is an experienced engineer and researcher with a solid background in mechatronics, robotics, and human-machine interaction. He has gained valuable experience through his work in academia and industry, specializing in prosthetics, robotics, and haptic interfaces.

At the Technical University of Munich, Batuhan served as a Research Associate at the Neuroprosthetics and Human-Centered Robotics Laboratory. During his tenure, he focused on developing novel impedance control algorithms leveraging EEG and EMG for enhanced prosthetic efficiency and user comfort. His expertise in model-based system engineering played a crucial role in developing precise modeling, control, and simulation tools for prostheses. Additionally, Batuhan designed and led graduate-level courses in Rehabilitation Robotics, Artificial Limbs Design and Control, and Neuroprosthetics, imparting valuable knowledge to over 100 students. He supervised numerous theses and student projects, fostering interdisciplinary expertise and practical skill development.

Prior to his role in Munich, Batuhan worked as a Research Associate at Sabanci University's Human Machine Interaction Laboratory in Istanbul, Turkey. Here, he conducted research in physical human-machine interaction, focusing on dynamic system vibration and control, human-centered design, and haptic interfaces. His hands-on prototyping and experimentation led to advancements in haptic interfaces, force control, and compliant actuation. Batuhan also taught various courses, including Mechatronic System Design and Autonomous Mobile Robotics, to over 350 students.

Batuhan holds a Master of Science degree in Mechatronics Engineering from Sabanci University, where his research project involved developing an innovative suspended-load backpack design that demonstrated a 10% reduction in wearer strain and metabolic energy consumption during testing. He graduated with the highest GPA in the Mechanical Engineering department at Abdullah Gul University, where he designed and tested a passive prosthetic hand with a patent-pending mechanism and co-authored publications on advanced applied mathematics.

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