

# Ayberk Sadic

Mechanical Engineer & Robotics Specialist Institute of Science Tokyo, PhD Candidate

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Location: Tokyo, Japan
Date of Birth: 11/11/1992

### WORK EXPERIENCE

## Founder & Systems Architect

Jan. 2018 – Feb. 2024

Mekadermis LLC.

Istanbul, Turkey

- Delivered customized robotics and automation solutions to industrial clients.
- Led R&D for the development of a vibrotactile haptics entertainment device for PCs and mobiles.
- Kinematics & inverse dynamics analysis of mechanisms, mechanical design, prototyping, and testing.
- Control system design and implementations for robotic & mechatronic systems.
- Embedded systems and scalable electronics PCB design and development
- Managed a team of engineers and coordinated product development cycles using SCRUM/Kanban
- Presented financial reports and supervised technical roadmaps to stakeholders and investors.
- Oversaw P&L, corporate performance, and budget planning for long- and short-term strategies.

## Research & Teaching Assistant

Aug. 2016 – Jan. 2018

Koç University - Robotics & Mechatronics Laboratory

Istanbul, Turkey

2018-2021

- Conducted research on Robotics, Haptics, and Human-Machine Interaction.
- Lectured in Control Systems Design and Bachelor's Thesis Courses

#### **EDUCATION**

PhD Candidate (Current) Mechanical Engineering	Apr. 2022 – Mar. 2027
Institute of Science Tokyo, Mechanical Systems Design Laboratory	Tokyo, Japan
Master of Business Administration GPA: 3.88	Sep. 2019 – Mar. 2023
Galatasaray University	Istanbul, Turkey
Bachelor of Science   Mechanical Engineering GPA: 3.15	Aug. 2010 – Jun. 2016
Middle East Technical University	Ankara, Turkey
SELECTED PROJECTS AND RESEARCH	
Biomechanical Research on Human Spine and Assistive Medical Robots	2023-2027
PhD Research Field - Institute of Science Tokyo	
Effects of Financial Anxiety and Financial Literacy on Mental Accounting Pro	cesses 2021-2023

MIDAS Haptic Feedback Platform and Scalable Vibrotactile Actuators Funded by Scientific and Technological Research Council of Turkey

CONFERENCES AND PRESENTATIONS

Master's Thesis - Galatasaray University

# Exploration strategies for tactile graphics displayed by electrovibration on a touchscreen

Sadia, B., Sadic, A., Ayyildiz, M., & Basdogan, C. (2012) International Journal of Human-Computer Studies, 160, 102760.

## Haptic Perception of 2D Equilateral Geometric Shapes via Electrovibration on Touch Screen

Sadic, A., Ayyildiz, M., & Basdogan, C. (2017) 21st National Biomedical Engineering Meeting (BIYOMUT), i-iv.

# Development of a Human Trunk Exoskeleton with Pneumatic Artificial Muscles

Sadic, A., Ohno, A., & Suzumori, K (2015) JSME ROBOMEC 1A1-P01

#### **SKILLS**

**Languages**: English (TOEFL IBT: 109/120 - TOEIC L/R: 980/990), Japanese (Conversational), Turkish (Native) **Programming**: Python, C/C++ (Embedded incl.), MATLAB, SQL

**Platforms & Tools**: ROS, OpenCV, PyTorch, Git, Docker, Linux, USB, Bluetooth, Server Management & Networking, Nvidia Jetson, Raspberry Pi, Arduino, STM, ARM, XBee

Software: Autodesk Inventor, MATLAB & Simulink, Solidworks, EAGLE, Anybody Modelling System

**Tech Skills**: Mechanical Design & Analysis (CAD/CAM/CAE), Controller Design, AI in Robotics, PCB Design, Embedded Software Design, Biomechanics, Motion Capture, Haptics, Data Science