ATA OTARAN (he/him)

Ph.D. Computer Science

Specialized in human-machine interaction, with expertise in design, kinematic and dynamic modeling, control theory, haptic interaction, and virtual reality. Experienced in interactive systems development and evaluations.

ata.otaran@gmail.com
+49 157 355 321 46
Portfolio website
aotaran
ataotaran
Google scholar
Richard-Wagner-Str. 68
66111 Saarbrücken
01.08.1992
Turkish

EDUCATION

09/2017 – 02/2022

Ph.D. in Computer Science

Queen Mary University of London

- Thesis: Ankle-Actuated Human-Machine Interface for Walking in Virtual Reality

Advisor: Dr. Ildar Farkhatdinov

09/2015 – 07/2017

M.Sc. in Mechatronics

Sabanci University, Istanbul

- GPA: 3.90/4
- Thesis: Design and Control of Series Elastic Actuated Educational Devices

Advisor: Prof. Volkan Patoglu

09/2011 – 06/2015

B.Sc. in Mechatronics with Minors in Mathematics

Sabanci University, Istanbul

- GPA: 3.58/4 (4th out of 38)
- Thesis: Design and Control of a Ballbot

Advisor: Prof. Volkan Patoglu

EXPERIENCE

02/2022 – 10/2024

Postdoctoral researcher at HCI Group

Saarland University, Saarbrücken

- Collaborating on multiple HCI research projects on shape changing interfaces, wearable robotics and haptics
- Teaching Assistant at HCI Course for Winter semesters of ’22 and ’23:
- Supervision of three thesis projects and five project-based seminar groups

03/2019 – 12/2021

Development works for various projects during PhD degree (Part-time salary)

Queen Mary University of London

- Developer for a virtual 3D laboratory learning environment for biomechanics courses in the Humanoid project (supervised by Dr. Aleksandra Birn-Jeffery)
- Research assistant for developing a VR locomotion interface
- Research assistant in NCNR Project on user interfaces for robot teleoperation

09/2011 – 07/2021

Teaching assistance during PhD and MSc degrees (Part-time salary)

Queen Mary University, London & Sabanci University, Istanbul

- Course topics: linear algebra, robotics, computer-aided design and Python programming

09/2015 – 06/2017

TUBITAK (Scientific and Technological Research Council of Turkey) funded project member

Sabanci University

- Implementation of a series elastic actuator for a gait rehabilitation robot

09/2011 – 06/2015

Moderator in the Academic Support Program (Part-time)

Sabanci University, Istanbul

- Group learning sessions moderator for calculus and linear algebra courses

SKILLS

Programming

- MATLAB & Simulink
- Labview
- C++ & C#
- Python

CAD, FEA & Simulation

- Solidworks, Inventor
- Comsol, Ansys
- Unity
- Blender

Controllers and DAQs

- TI C2000, Arduino
- BeagleBone, Raspberry Pi
- NI-DAQ, Quanser

Robotics & other

- ROS
- Gazebo
- Linux, Windows, Git

LANGUAGES

German

English

Turkish

AWARDS AND FUNDINGS

03/2021 **XR4ALL European Commission funding (10K£) for commercialization of VR locomotion interface design**

09/2015 – 07/2021 **Full scholarship and stipend during Masters and PhD degree studies**

REFERENCES

Prof. Jürgen Steimle
Postdoctoral Research Supervisor,
Saarland University
Email: steimle@cs.uni-saarland.de

Dr. Ildar Farkhatdinov
Ph.D. Degree Supervisor,
Kings College London
Email: ildar.farkhatdinov@kcl.ac.uk

Dr. Ozan Tokatli
Project Collaborator,
United Kingdom Atomic Energy Authority (UKAEA), Culham
Email: ozan.tokatli@gmail.com

ACADEMIC PRESENTATIONS (FIRST AUTHOR)

Journal Articles:
- IEEE TCGV (2021)
- IEEE TOH (2021)

Conference Articles:
- TEI '25
- HCII '24
- Humanoids '20
- Taros '19
- CRAS '18
- Eurohaptics '16 & '18

Demos:
- TEI '25
- WorldHaptics '19
- CRAS '18
- Eurohaptics '16 & '18

SELECTED PUBLICATIONS

A full list of publications is available on my Github Pages and Google Scholar.

- **S. Abadian, Y. Liao, A. Otaran, R. Dabral, M. Muehlhaus, C. Theobalt, M. Schmitz, J.Steimle**
  3HANDS Dataset: Learning from Humans for Generating Naturalistic Handovers with Supernumerary Robotic Limbs
  CHI conference on Human Factors in Computing Systems 2025
- **Ata Otaran, Yu Jiang and Jürgen Steimle**
  Sparsely actuated modular metamaterials for shape-changing interfaces
  International Conference on Tangible, Embedded, and Embodied Interaction (TEI) 2025
- **Nihar Sabnis, Ata Otaran, Dennis Wittchen, Johanna Didion, Jürgen Steimle and Paul Strohmeier**
  Foot Pedal Control: The Role of Vibrotactile Feedback in Performance and Perceived Control
  International Conference on Tangible, Embedded, and Embodied Interaction (TEI) 2025
- **Artin Saberpour Abadian, Ata Otaran, Martin Schmitz, Marie Muehlhaus, Rishabh Dabral, Diogo Luvizon, Azumi Maekawa, Masahiko Inami, Christian Theobalt, and Jürgen Steimle**
  Computational Design of Personalized Wearable Robotic Limbs
  ACM Symposium on User Interface Software and Technology (UIST) 2023
- **Ata Otaran and Ildar Farkhatdinov**
  Haptic Ankle Platform for Interactive Walking in Virtual Reality
  IEEE Transactions on Visualization and Computer Graphics (TVCG) 2021
- **Ata Otaran and Ildar Farkhatdinov**
  Walking-in-Place Foot Interface for Locomotion Control and Telepresence of Humanoid Robots
  2020 IEEE-RAS 20th International Conference on Humanoid Robots (Humanoids) 2021
- **Ata Otaran, Ozan Tokatli and Volkan Patoglu**
  Physical Human-Robot Interaction Using HandsOn-SEA: An Educational Robotic Platform with Series Elastic Actuation
  IEEE Transactions on Haptics (TOH) 2021
- **Umut Caliskan, Ardan Apaydin, Ata Otaran and Volkan Patoglu**
  A series elastic brake pedal to preserve conventional pedal feel under regenerative braking
  In 2018 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS) 2018
- **Ata Otaran, Ozan Tokatli and Volkan Patoglu**
  HandsOn-Computing: Promoting Algorithmic Thinking Through Haptic Educational Robots
  EuroHaptics 2018
- **Ata Otaran, Ozan Tokatli and Volkan Patoglu**
  Hands-On Learning with a Series Elastic Educational Robot
  EuroHaptics 2016