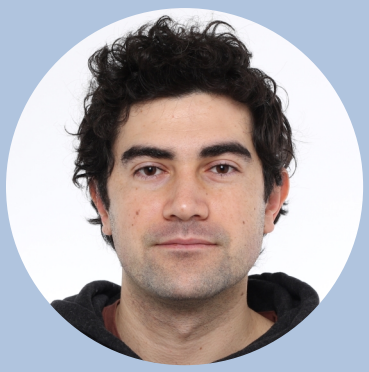

Ogulcan Isitman

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About me

As a Ph.D. candidate at Aalto University, my specialization lies in robotic manipulation and magnetic navigation systems for medical applications. With proficiency in Python, Matlab/Simulink, and C++, I have experience in the design and development of autonomous and intelligent systems. My academic pursuits encompass optimal control, reinforcement learning, and control system design.

Programming Skills

Python	●●●●●
C++	●●●●○
Matlab Simulink	●●●●●
ROS	●●●●○

(*)The skill scale is from 0 (Fundamental Awareness) to 5 (Expert).

Languages

- Turkish (Native)
- English (Fluent)
- Finnish (Beginner)

Hobbies

Piano ,Board Games, Reading

Education

2019- — **Aalto University** — Finland
PhD, Electrical Engineering and Automation

2015-2018 — **Izmir Institute of Technology** — Turkey
M.Sc. Mechanical Engineering / Robotics (CGPA: 3.56/4)

2013-2014 — **Universitat Rovira i Virgili** — Spain
Erasmus Exchange Program

2013-2017 — **Anadolu University, Eskisehir** — Turkey
B.Sc. in Business Administration (CGPA: 3.36/4)

2009-2015 — **Ege University** — Turkey
B.Sc. in Mechanical Engineering (CGPA: 3.05/4)

Experience

2019 - — **Aalto University** — Research Assistant
Focused on magnetic manipulation for medical applications, ranging from macro to nanoscale. I developed an electromagnetic needle system for cellular measurements and manipulation. Building on this, I implemented an optimal controller for magnetic navigation in endoscope pills.
Teaching Duties: Modelling, Estimation and Dynamic Systems

2017 - 2019 — **Izmir Institute of Technology** — Research Assistant
I specialized in the design and deployment of compliant controller algorithms, essential for the safe teleoperation of endoscope robots in pituitary gland surgeries.
Teaching Duties: Numerical Methods and Programming, Control System Design, Haptics and Teleoperation, CAD Design

2015 - 2016 — **Dr.Oetker** — Mechanical Engineer
I took responsibility for planning maintenance to ensure uninterrupted operations.

2015 - 2016 — **Lansinoh Laboratories** — Intern R&D Engineer
Engaged in the design and execution of tests for the prototyping phase.

Research and Area of Interest

- Robotic manipulation , Haptics, Intelligents systems
- An Electromagnetic Actuation System for 3DOF Micromanipulation (BSc Thesis)
- Compliant Control Of A Teleoperated Endoscope Robot (MSc Thesis)
- Robotic Magnetic Needle Characterization of Nanoparticle Uptake in Cells (PhD Thesis)

Certificates

- Mechanism Design for Medical Application (IFToMM)
- ROS Winter School (MCI Austria)
- 3D CAD & Additive Manufacturing (TMMOB)
- Marketing (Ege University)

Publications

- Işıtman, O., Bettahar, H., Zhou, Q. (2021). *Non-contact cooperative manipulation of magnetic microparticles using two robotic electromagnetic needles*. IEEE Robotics and Automation Letters, 7(2), 1605-1611.
- Isitman, O., Kandemir, H., Alcan, G., Cenev, Z., Zhou, Q. (2022, July). *Simultaneous and Independent Micromanipulation of Two Identical Particles with Robotic Electromagnetic Needles.* In 2022 International Conference on Manipulation, Automation and Robotics at Small Scales (MARSS) (pp. 1-6). IEEE. **Best Robotics Paper Award**
- Işıtman, O., Ayit, O., Vardarlı, E., Hanalioğlu, Ş., Işıkay, İ., Berker, M., Dede, M. İ. C. (2019). *Viscoelastic modeling of human nasal tissues with a mobile measurement device*. In New Trends in Medical and Service Robotics: Advances in Theory and Practice (pp. 216-224). Springer International Publishing.
- Işıtman, O., Dede, M. İ. C. (2019). *Control methods for a teleoperated endoscope robot.* In Advances in Mechanism and Machine Science: Proceedings of the 15th IFToMM World Congress on Mechanism and Machine Science 15 (pp. 2077-2086). Springer International Publishing.
- Işıtman, O., Ayit, O., Dede, M.İ.C. (2018). T*he Effects of Admittance Term on Back-Drivability*. In: Dede, M., İtik, M., Lovasz, EC., Kiper, G. (eds) Mechanisms, Transmissions and Applications. IFToMM 2017. Mechanisms and Machine Science, vol 52. Springer, Cham.
- Işıtman, O. (2018). *Compliant control of a teleoperated endoscope robot* (MSc dissertation, Izmir Institute of Technology (Turkey)).