Osher Azulay

Passionate Roboticist

azulayosher@gmail.com Linkedin Github Website Scholar

Education

2020 - 2024 | **Ph.D., Mechanical Engineering, Tel Aviv University**
Research Area: Learning in-hand perception and manipulation with adaptive robotic hands

2018 - 2020 | **M.Sc., Mechanical Engineering, Ben Gurion University**
Outstanding students program
Thesis: Wheel loader scooping controller using deep reinforcement learning

2015 - 2019 | **B.Sc., Mechanical Engineering, Ben Gurion University**
Graduated with honors. Certificate of achievement: 2017-2018, 2018-2019

Employment

2025 - present | **Postdoctoral Researcher**, Electrical Engineering and Computer Sciences, **University of California, Berkeley**
- *Fulbright Scholar*

2020 - 2024 | **Graduate Student Researcher**, ROB-TAU Robotics Lab, **Tel-Aviv University**
- Researched in-hand manipulation via touch sensing, data-driven modeling, and model-based/free planning.

Summer 2023 | **Visiting Graduate Researcher**, Robot Learning Lab, Dept. of Computer Science, **Rutgers University**
- Studied visual-tactile-based object insertion and sim-to-real transfer.

Summer 2022 | **Robotics Intern engineer**, Unlimited Robotics,
- Explored ROS2 control for a dual-arm robot, from simulation to hardware integration.

2018 - 2020 | **Student Researcher**, BGU Robotics Control Lab, **Ben-Gurion University**
- Researched deep RL for autonomous excavation with a custom wheel loader and sim-to-real transfer.

2016 - 2018 | **Research Student Assistant**, BGU Robotics Control Lab, **Ben-Gurion University**
- Provided technical support for ROS platforms, including arms and mobile robots.

Honors & Recognition

2024 | **Awarded the Fulbright Postdoctoral Fellowship**
Awarded the KLA Scholarships for PhD excellence.
Awarded the prestigious ME Graduate Research Award.
Invited to talk at the annual meeting for Motion Control and Automation
Received travel award from the Center for AI and Data Science at Tel Aviv University.

2023 | **Awarded the KLA Scholarships for PhD excellence.**
Received Honorable Mention from the Dean for Excellence in Teaching.
Received travel award from the IEEE Robotics and Automation Society.

2022 | **Awarded the Prof. N.Levtzion Scholarships for outstanding doctoral students.**
Invited to talk at the annual meeting for Motion Control and Automation.

2021 | **BrainStromIL Hackathon First Place**, Awarded 1st among more than 30 teams.

Teaching Experience

Spring 2021-24 | **Robotics and control lab**, Designed and created course material, Mech Eng., Tel-Aviv University

Fall 2020-24 | **Intro to control theory**, Teaching Assistant, Mech Eng., Tel-Aviv University

Spring 2019 | **Intro to Electrical Engineering**, Teaching Assistant, Mech Eng., Ben-Gurion University

Fall 2019 | **C Programming**, Teaching Assistant, Mech Eng., Ben-Gurion University

Publications

2025

1. *Curtis, N., **Azulay, O.** & Sintov, A. Embodiment-Agnostic Navigation Policy Trained with Visual Demonstrations. *Under review* (2025).
2. **Azulay, O.**, Ramesh, D. M., Curtis, N. & Sintov, A. Visuotactile-Based Learning for Insertion With Compliant Hands. *IEEE Robotics and Automation Letters* (2025).

2024

3. **Azulay, O.**, *Arolovitch, J. & Sintov, A. Kinesthetic-based In-Hand Object Recognition with an Underactuated Robotic Hand. *the 2024 IEEE International Conference on Robotics and Automation (ICRA), Yokohama, Japan* (2024).
4. **Azulay, O.**, *Mizrahi, A., *Curtis, N. & Sintov, A. Augmenting Tactile Simulators with Real-like and Zero-Shot Capabilities. *The 2024 IEEE International Conference on Robotics and Automation (ICRA), Yokohama, Japan* (2024).
5. Weinberg, A., Shirizly, A., **Azulay, O.** & Sintov, A. Survey of Learning Approaches for Robotic In-Hand Manipulation. *Frontiers in Robotics and AI* (2024).

2023

6. **Azulay, O.**, Monastirsky, M. & Sintov, A. Haptic-based and SE(3)-aware object insertion using compliant hands. *IEEE Robotics and Automation Letters and the 2023 IEEE International Conference on Robotics and Automation (ICRA), London, UK* (2023).
7. **Azulay, O.** *et al.* AllSight: A Low-Cost and High-Resolution Round Tactile Sensor with Zero-Shot Learning Capability. *IEEE Robotics and Automation Letters and The 2024 IEEE International Conference on Robotics and Automation (ICRA), Yokohama, Japan* (2023).

2022

8. **Azulay, O.**, Ben-David, I. & Sintov, A. Learning Haptic-based Object Pose Estimation for In-hand Manipulation with Underactuated Robotic Hands. *IEEE Transactions on Haptics* (2022).
9. Monastirsky, M., **Azulay, O.** & Sintov, A. Learning to Throw With a Handful of Samples Using Decision Transformers. *IEEE Robotics and Automation Letters* (2022).

2021

10. **Azulay, O.** & Shapiro, A. Wheel Loader Scooping Controller Using Deep Reinforcement Learning. *IEEE Access* (2021).
11. Bamani, E., **Azulay, O.**, Gurevich, A. & Sintov, A. Open-Sourcing Generative Models for Data-driven Robot Simulations. *Data-Centric AI workshop, NeurIPS2021* (2021).

Skills

Programming | Python, C/C++, MATLAB

Tools & libraries | ROS, Physics sims (Isaac, Gazebo, Mujoco), PyTorch, TensorFlow, OpenCV, Git

Engineering | Solidworks, Microcontrollers and Mechatronics