## Osher Azulay

Passionate Roboticist

| Passionate Roboticist  |                |
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| ■ azulayosher@gmail.com  | Scholar        |
| Ph.D., Mechanical Engineering, Tel Aviv University Research Area: Learning in-hand perception and manipulation with adaptive robotic hands                             | 2020–2024      |
| M.Sc., Mechanical Engineering, Ben Gurion University Outstanding Students Program Thesis: Wheel loader scooping controller using deep reinforcement learning           | 2018–2020      |
| B.Sc., Mechanical Engineering, Ben Gurion University  Graduated with honors.   | 2015–2019      |
| Employment   |                |
| Fulbright Postdoctoral Research Fellow<br>CSE, University of Michigan, Ann Arbor   | 2025–present   |
| Visiting Scholar<br>AUTOLab, EECS, University of California, Berkeley  | Winter 2025    |
| Graduate Student Researcher<br>ROB-TAU Robotics Lab, Tel-Aviv University<br>– Researched learning methods for touch-driven in-hand manipulation.                       | 2020–2024      |
| Visiting Graduate Researcher<br>Robot Learning Lab, CS, Rutgers University<br>– Studied visual-tactile-based object insertion and sim-to-real transfer.                | Summer 2023    |
| Robotics Intern Engineer Unlimited Robotics – Explored ROS2 control for a dual-arm robot, from simulation to hardware integration.                                     | Summer 2022    |
| Student Researcher BGU Robotics Control Lab, MechEng, Ben-Gurion University – Researched on sim-to-real autonomous excavation.   | 2018–2020      |
| Research Student Assistant BGU Robotics Control Lab, MechEng, Ben-Gurion University  – Provided technical support for ROS platforms, including arms and mobile robots. | 2016–2018      |
| Teaching Experience  |                |
| Robotics and Control Lab Designed and created course material, Mech Eng., Tel-Aviv University  | Spring 2021–24 |
| Introduction to Control Theory Teaching Assistant, Mech Eng., Tel-Aviv University  | Fall 2020–24   |
| Introduction to Electrical Engineering Teaching Assistant, Mech Eng., Ben-Gurion University  | Spring 2019    |
| C Programming Teaching Assistant, Mech Eng., Ben-Gurion University   | Fall 2019      |
| Introduction to Mechanical Engineering   | Fall 2018      |

Lab Instructor, Mech Eng., Ben-Gurion University

## **Honors & Recognition**

2024 | Awarded the Fulbright Postdoctoral Fellowship.

Awarded the KLA Scholarships for PhD excellence.

Awarded the prestigious ME Graduate Research Award.

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.
- 2019 Awarded Certificate of Achievement for outstanding academic performance.
- 2018 Awarded Certificate of Achievement for outstanding academic performance.

## **Invited Talks**

- 2025 | Invited Talk, ROAM Lab, Department of Mechanical Engineering, Columbia University.
- Invited talk at the Annual Meeting for Motion Control and Automation.

  Invited Colloquium Talk, Department of Computer Science, Bar-Ilan University.

Invited Seminar Talk, Department of Mechanical Engineering, Technion – Israel Institute of Technology.

2022 | Invited talk at the Annual Meeting for Motion Control and Automation.

## **Publications**

2023

- 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).
- 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).
  - 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).
- 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).