

Elad Sharony

PH.D. STUDENT - ELECTRICAL AND COMPUTER ENGINEERING | (RL)²

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Research Interests

My research focuses on reinforcement learning and optimization for dynamical systems. I leverage vision-language models (VLMs) and large language models (LLMs) to enhance data efficiency, exploration, and decision-making, enabling robust perception, reasoning, and generalization in robotics, autonomous systems, and high-dimensional environments.

Publications and Preprints

Learning Multiple Initial Solutions to Optimization Problems

ELAD SHARONY, HENG YANG, TONG CHE, MARCO PAVONE, SHIE MANNOR, PETER KARKUS

Under Review, ICRA '26

See, Score, Sample: VLM-Guided Experience Replay

ELAD SHARONY, TOM JURGENSON, ORR KRUPNIK, DOTAN DI CASTRO, SHIE MANNOR

Under Review, ICML '26

Research / Industry Experience

Bosch Center for Artificial Intelligence (BCAI)

RESEARCH INTERNSHIP

Apr 2024 - Oct 2024

- Developed a novel method using Vision-Language Models to optimize reinforcement learning through enhanced replay buffer prioritization

Intel Corporation

CONTROL ENGINEER

Apr 2021 - Jan 2023

- Designed and integrated a data-driven autotune pipeline for thermal controllers. Additionally, developed, and deployed a pneumatic control system to ensure stable and reliable thermal contact.

Education

Technion - Israel Institute of Technology

PH.D., ELECTRICAL AND COMPUTER ENGINEERING (DIRECT TRACK)

Mar' 22 - Present (Expected 2027)

- Integrating fast (System 1) and slow (System 2) thinking into RL and optimization for robotics and autonomy.
- Advisor: Prof. Shie Mannor
- GPA: 92.0

Technion - Israel Institute of Technology

BACHELOR OF SCIENCE, MECHANICAL ENGINEERING

Oct' 18 - Mar' 22 (Early Bird)

- Non-contact topographic sensing using vibration and machine learning to predict the distance between surfaces.
- Advisors: Prof. Itzhak Bucher and Dr. Yoav Vered
- GPA: 94.9 (Summa Cum Laude)

Teaching and Mentoring

Teaching Assistant Control Theory, Control System Design, Control Systems 1

Project Supervision CRML: Developing Robotic Knot-Tying Skills, Reinforcement Learning Related Issac Simulator

Honors and Awards

Reamim – Selective Program Supporting Outstanding Research-oriented Students Oct' 18 – Mar' 22

President's List for Academic Excellence

Fall 21/22, Spring 20/21, Fall 20/21

Dean's List for Academic Excellence

Spring 19/20, Fall 19/20, Spring 18/19

Services

Reviewer CoRL (2025), ICLR (2026)

Technical Editor Mannor, Shie, Yishay Mansour, and Aviv Tamar. "Reinforcement Learning: Foundations."

Skills

Programming Python, MATLAB, C

Physics Simulators Nvidia Isaac Lab, DeepMind MuJoCo, PyBullet, Simulink