JACOB LEVY

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EDUCATION

Ph.D. in Aerospace Engineering, The University of Texas at Austin — Expected 2027
Advisor: David Fridovich-Keil

M.S. in Aerospace Engineering, The University of Texas at Austin — December 2024
Controls, Autonomy, and Robotics

B.S in Aerospace Engineering, The University of Texas at Arlington — May 2013
Minor in Mechanical Engineering

WORK EXPERIENCE

Graduate Research Fellow — 2023 - Current
Control and Learning for Autonomous Robots (CLeAR) Lab, UT Austin — *Austin, TX*

- NASA Space Technology Graduate Research Fellow
- Research in efficient adaptive learning for robotic operations in unmodeled and uncertain environments.

NSTGRO Intern — 2025
NASA Jet Propulsion Laboratory — *Pasadena, CA*

- Research in online adaptation for steep terrain mobility using a rover with extra degrees of freedom.

NSTGRO Intern — 2024
NASA Jet Propulsion Laboratory — *Pasadena, CA*

- Research in meta-learning online dynamics model adaptation in off-road autonomous driving (see [P2]).

Engineering Lab Manager — 2019 - 2022
Parker Aerospace — *Fort Worth, TX*

- Managed two ISO 17025 accredited test labs (team of 6, $2M annual budget) which conduct all research & development, qualification, and quality testing for the division ($250M annual sales) on aerospace hydraulic products and materials.
- Responsible for incorporating state-of-the-art testing principles, techniques, and procedures through the research, design, automatization, or specification of new equipment, software, or processes.
- Ensured testing meets technical expectations, schedule commitments, and cost requirements through effective leadership, completing technical studies, and assigning staffing and resources.

Engineering Consultant — 2016 - 2022
Aeroblaze Laboratory — *Fort Worth, TX*

- Designed equipment and developed software for conducting flammability testing on aerospace materials

Lab Engineer 2013 - 2019
Parker Aerospace *Fort Worth, TX*

- Designed, assembled, and developed adaptive test stands, sensing systems, and software to automate testing and the acquisition of data.
- Planned, devised, and executed test procedures and trials to verify product by studying test needs, formulating methods, and directing lab technicians.
- Through the analysis of laboratory data, identified critical factors and led improvement projects on processes, systems, and equipment to optimize the reliability and accuracy of test data.

Intern Lab Engineer 2012 - 2013
Parker Aerospace *Fort Worth, TX*

- Within 5 months and with little experience, obtained ISO 17025 accreditation for two test labs by implementing completely revised lab operating procedures, drafted through research of industry standards and best practices.

Intern Manufacturing Engineer 2012
BE Technologies *Carrolton, TX*

- Designed fixtures used to manufacture aerospace structural components and developed AS9100 inspection methods.

HONORS AND AWARDS

Best Poster, RSS 2025 Workshop on Resilient Off-road Autonomous Robotics 2025

NASA Space Technology Graduate Research Opportunities (NSTGRO) Fellowship 2023

PUBLICATIONS

[P1] J. Levy*, T. Westenbroek*, K. Huang, F. Palafox, P. Yin, S. Omidshafiei, D. Kim, A. Gupta, D. Fridovich-Keil. "Simulation Distillation: Pretraining World Models in Simulation for Rapid Real-World Adaptation." *Under review.*

[P2] J. Levy, J. Gibson, B. Vlahov, E. Tevere, E. Theodorou, D. Fridovich-Keil, and P. Spieler. "Meta-Learning Online Dynamics Model Adaptation in Off-Road Autonomous Driving." In *Robotics: Science and Systems*, 2025.

[P3] W. Ward, Y. Yu, J. Levy, N. Mehr, D. Fridovich-Keil, U. Topcu. "Active Inverse Learning in Stackelberg Trajectory Games." In *American Control Conference (ACC)*, 2025.

[P4] J. Levy*, T. Westenbroek*, and D. Fridovich-Keil. Learning to Walk from Three Minutes of Real-World Data with Semi-structured Dynamics Models. In *8th Annual Conference on Robot Learning*, 2024.

[P5] T. Westenbroek, J. Levy, and D. Fridovich-Keil. "Enabling Efficient, Reliable Real-World Reinforcement Learning with Approximate Physics-Based Models." In *7th Annual Conference on Robot Learning*, 2023.

INVITED ORAL PRESENTATIONS

[O1] July 2025, "Meta-Learning Online Dynamics Model Adaptation in Off-Road Autonomous Driving," RSS 2025 Workshop on Resilient Off-road Autonomous Robotics.

[O2] July 2025, "Meta-Learning Online Dynamics Model Adaptation in Off-Road Autonomous Driving," Robotics: Science and Systems.

[O3] October 2024, "Learning to Walk from Three Minutes of Real-World Data with Semi-sructured Dynamics Models," Texas Robotics Seminar.

[O4] October 2023, 'Enabling Efficient, Reliable Real-World Reinforcement Learning with Approximate Physics-Based Models," Texas Robotics Symposium.

[O5] August 2023, 'Feedback is All You Need: Reliable Real-World Reinforcement Learning with Approximate Physics-Based Models," Invited talk, NASA Ames, Intelligent Robotics Group.

TECHNICAL SKILLS

Programming	Python, C/C++, Robot Operating System (ROS), JAX, PyTorch, Julia, LabVIEW, MATLAB, Simulink
Design	CAD design (CATIA, SolidWorks, Autodesk Fusion), hydraulic, pneumatic, and electrical circuit design, drafting, GD&T, Ansys
Other	National Instruments Certified LabVIEW Developer (CLD), PLC programming, fabrication (cutting, grinding, soldering, etc.), Private Pilot's License