Dr. Krishnan Srinivasan — *Curriculum Vitae*

Contact Information

Toyota Research Institute
4440 El Camino Real
Los Altos, CA

408-367-9193
krshna@stanford.edu
cs.stanford.edu/∼ksrini

Research Interests

My research centers on developing dexterous generalist robot policies by advancing methods in reinforcement learning, foundation models, and large-scale simulation. During my PhD, I pioneered approaches in *object-centric motion task representations*, *differentiable simulation*, and *student-teacher distillation* to enable robust tool-use policies. Currently as a Research Scientist at TRI, I am investigating co-training policies with simulated and real-world trajectories from a variety of sources to perform robustly in real-world tasks.

Education

Stanford University, Stanford, CA
PhD, Computer Science — *June 2025*
Dissertation: Learning Dexterous Manipulation Policies for Tool-Use
PhD Advisors: Jeannette Bohg, Animesh Garg
PhD Committee: Jeannette Bohg, Animesh Garg, Karen Liu, Sanjay Lall, Silvio Saverese

Yale University, New Haven, CT
B.S., Computer Science and Mathematics — *May 2017*
Senior Thesis: *Unsupervised Learning on ScRNASeq with Autoencoders*
Thesis Advisor: Smita Krishnaswamy

Research Experience

Research Scientist — *Oct 2024 – Current*
Toyota Research Institute, Cambridge, MA USA
Large Behavior Models, Learning Multi-Task Dexterous Manipulation Policies With Robot Foundation Models
Supervisor: Russ Tedrake

Research Intern — *Oct 2023 – June 2024*
NVIDIA, Seattle, WA USA
Seattle Robotics Lab (SRL), Learning multi-task policies for manipulating articulated objects.
Mentor: Jie Xu, Dieter Fox

Research Intern — *Jun 2023 – Oct 2023*
Tesla Motors, Palo Alto, CA, USA
Optimus Tesla Bot, Manipulation and Learning
Mentor: Julian Ibarz

Research Intern — *Jun 2022 – Oct 2022*
Vector Institute for AI, Toronto, ON, Canada
Differentiable Simulation for efficient learning of tool-use with dexterous manipulation.
Mentor: Animesh Garg

Research Intern — *Jun 2019 – Sept 2019*
Google Brain Robotics, Mountain View, CA
Safe exploration for continuous robotics tasks via learned safety-critics for offline reinforcement learning.
Mentor: Chelsea Finn

Selected Publications

1. **TRI Large Behavior Models Group**, "A Careful Examination of Large Behavior Models for Multitask Dexterous Manipulation." *arXiv preprint arXiv:2507.05331*, 2025. *Preprint.*

2. **Srinivasan, K.**, Sud, B., Garg, A., Bohg, J. "Behavior Cloning from Suboptimal Demonstrations with Robust World Models." *In submission*, Neural Information Processing Systems (NeuRIPS) 2025.

3. **Srinivasan, K.**, Xu, J., Ang, H., Heiden, E., Fox, D., Bohg, J., Garg, A. "ACGD: Visual Multitask Policy Learning with Asymmetric Critic Guided Distillation." International Conference on Intelligent Robots and Systems (IROS), 2025

4. Lum, T. G. W., Li, A. H., Culbertson, P., **Srinivasan, K.**, Ames, A. D., Schwager, M., Bohg, J. (2024). "Get a grip: Multi-finger grasp evaluation at scale enables robust sim-to-real transfer." Conference on Robot Learning (CoRL) 2024.

5. **Srinivasan, K.**, Heiden, E., Bohg, J., Garg, A. "Object-Centric Task-Space Policy Learning for Contact-Rich Dexterous Manipulation." International Symposium of Robotics Research (ISRR), 2024.

6. Georgiev, I, **Srinivasan, K.**, Heiden, E., Xu, J., Garg, A. "Adaptive Horizon Actor-Critic for Policy Learning in Contact-Rich Differentiable Simulators." International Conference on Machine Learning, 2024.

7. Vuong, Q. et al. "Open x-embodiment: Robotic learning datasets and RT-x models." International Conference on Robotics and Automation (*ICRA*), 2024. *Preprint.*

8. Karamcheti, S., Chen, A., Mirchandani, S., Nair, S., **Srinivasan, K.**, Hsu, K., Bohg, J., Sadigh, D., Finn, C. "On the Opportunities and Risks of Foundation Models. §2.3 Robotics." August 2021, *Preprint.*

9. Claire Chen*, **Srinivasan, K.***, Zhang, J., Zhang, J., Shao, L., Yuan, S., Culbertson, P., Dai, H., Schwager, M., Bohg, J. "Dexterous manipulation primitives for the real robot challenge." **2nd Place in Real Robot Challenge**, Challenge Webpage, January 2021. *Preprint.*

10. Thananjeyan, B., Balakrishna, A., Nair, S., Luo, M., **Srinivasan, K.**, Hwang, M., Gonzalez, J., Ibarz, J., Finn, C., Goldberg, K. "Recovery rl: Safe reinforcement learning with learned recovery zones." IEEE Robotics and Automation Letters, 2021. *Journal.*

11. **Srinivasan, K.**, Eyesenbach, B., Ha, S., Tan, J., Finn, C. "Learning to be Safe: Deep RL with a Safety Critic." October 2020, *Preprint.*

12. Losey, D., **Srinivasan, K.**, Mandlekar, A., Garg, A., Sadigh, D. "Controlling assistive robots with learned latent actions." International Conference on Robotics and Automation (*ICRA*), 2020. *Journal.*

13. Li, T., **Srinivasan, K.**, Meng, M.Q.H., Yuan, W., Bohg, J. "Learning hierarchical control for robust in-hand manipulation." International Conference on Robotics and Automation (*ICRA*), 2020. *IEEE.*

14. Lee, M.*, Zhu, Y.*, **Srinivasan, K.**, Shah, P., Saverese, S., Li, F.F., Garg, A., and Bohg, J. "Making Sense of Vision and Touch: Self-Supervised Learning of Multimodal Representations for Contact-Rich Tasks." International Conference on Robotics and Automation (*ICRA*), **Best Conference Paper Award**, 2019. *Journal.*

15. Amodio, M.*, **Srinivasan, K.***, van Dijk, D., Mohsen, H., Moon, K.R., Moon, G., and Krishnaswamy, S. "SAUCIE: Sparse Autoencoder for Unsupervised Clustering, Imputation, and Embedding." Nature Methods, 2019. *Journal.*

16. Spiers, A., Morgan, A., **Srinivasan, K.**, Calli, B., and Dollar, A. "Using Variable-Friction Finger Surfaces and Proprioception to Classify Objects During Robotic Within-Hand Manipulation." IEEE Transactions on Haptics, 2019.

Awards and Fellowships

- IEEE ICRA Best Conference Paper Award *May 2024*
  For *Open X-Embodiment: Robotic Learning Datasets and RT-X.*
- Wu Tsai Neuroscience MBCT Trainee Fellowship *May 2020*
- NSF GRFP Honorable Mention *April 2020*
- ICRA Best Paper Award *May 2019*
  For *Making Sense of Vision and Touch: Self-Supervised Learning of Multimodal Representations for Contact-Rich Tasks.*
- ICRA Best Paper in Robot Manipulation Award Finalist May 2018
  Nominated for *Learning Modes of In-Hand Manipulation.*

Invited Talks and Workshops

- Toyota Research Institute URP Workshop *March 2024*
  DexMOTS: Object Centric Task-Space Policy Learning for Contact-Rich Dexterous Manpulation
- Organizer: NeurIPS Robot Learning Workshop *Dec 2023*
- Organizer: ICRA Workshop RL for contact-rich manipulation *May 2022*
- SAIL Workshop, Stanford, CA *Sept 2021*
  Designing Structured Policies for Real-World Dexterous Manipulation
- Cold Spring Harbor NYQB17, Cold Spring Harbor, NY *Aug 2017*
  Autoencoders for Imputing, Clustering, and Embedding Single-Cell Data

Teaching Experience

Teaching Assistant

- CS 231A - Computer Vision: 3D Reconstruction to Recognition *Winter 2021–24*
  Instructor: Jeannette Bohg, Ph.D
  Department of Computer Science, Stanford University
- CS 448P - Hacking the Pandemic *Spring 2020*
  Instructor: Doug James, Ph.D
  Department of Computer Science, Stanford University
- CPSC 477 - Natural Language Processing *Spring 2018*
  Instructor: Dragomir Radev, Ph.D
  Department of Computer Science, Yale University

Course Assistant

- CPSC 365 - Design and Analysis of Algorithms *Spring 2016*
  Instructor: Daniel Spielman, Ph.D
  Department of Computer Science, Yale University
- STAT 365 - Machine Learning *Spring 2017*
  Instructor: Susan Wang, Ph.D
  Department of Statistics, Yale University

Service and Activities

CURIS Research Mentor *Summer 2021*

- Mentoring promising undergraduates from other schools and preparing them for careers in research and academia.

SAIL Undergraduate Mentor *Winter 2018 – Fall 2019*

- Mentoring promising undergraduates from underrepresented groups and helping them become involved in research in the future.

Wu Tsai Advisory Committee and Seminar Committee *Since Winter 2020*

- Hosted department town-halls and guest lectures with faculty and alumni for students

Computer Science Student Advisory Committee *Since Fall 2020*

- Coordinated Department of Computer Science student groups, and planned annual Admitted Student Visit Day events

SAIL Undergraduate Mentor *Since January 2019*

- Mentoring promising undergraduates from underrepresented groups and helping them become involved in research at Stanford.

SAIL Salon Organizer, Blog Editor *August 2018 – June 2019*

- Organized the bi-weekly Stanford AI Salon, which hosted speakers to discuss topics at the intersections of AI and other areas.