

## Education

- 2017–2023 **PhD in Computer Science**, *Georgia Institute of Technology*, Atlanta, GA  
Advisor: James Rehg  
Committee: James Hays, Judy Hoffman, Subhansu Maji, Chen Yu  
Thesis: Shape-Biased Representations for Object Category Recognition
- 2013–2017 **B.A. in Computer Science & Mathematics**, *Bard College*, Annandale, NY

## Research Experience

- 2024–present **Stanford University**, *Postdoctoral Scholar, Department of Computer Science*  
Working with Prof. Jiajun Wu and Prof. Dan Yamins.  
Led two research projects from concept to submission at top-tier venues, managing teams of junior researchers. Contributed as co-first author to three paper submissions.  
**Self-supervised Learning to Extract Motion from Video Foundation Models**  
○ Developed a learnable visual prompting technique that advanced counterfactual world models from proof of concept to state-of-the-art in motion estimation.  
**Distilling Object Shape and Function Knowledge from Vision Language Models**  
○ Developed a self-supervised method to discover dense functional object correspondence.
- Summer 2021 **Meta Reality Labs**, *Research Scientist Intern*  
Working with Dr. Abhishek Sharma and Dr. Sachin Talathi  
Improving slip robustness in head-mounted eye tracking by fusing 2D and 3D signals.
- Fall 2018, **Amazon Lab 126**, *Applied Scientist Intern*
- Summer 2019 Working with Dr. Ambrish Tyagi  
Action recognition and unsupervised 3D human object pose estimation.
- 2017–2023 **PhD Student Researcher**, *Georgia Institute of Technology, College of Computing*  
Working with Prof. James Rehg  
Led research on low-shot learning, self-supervised learning, and 3D object shape reconstruction.

## Awards and Honors

- 2024 **HAI Postdoctoral Fellowship**  
One year of funding from Stanford's Human-centered AI institute.
- 2024 **HAI Compute Award**  
\$85K Azure credits awarded to selected project proposals.
- 2021 **Top Reviewer - International Conference on Machine Learning (ICML)**  
Awarded to the top 10% of reviewers.
- 2019 **Best Paper Finalist at CVPR - Computer Vision and Pattern Recognition**  
45 papers from 5,165 submissions – top 0.1% of submitted papers.
- 2017 **Dr. Richard M. Siegel Memorial Prize in Science**  
Awarded to one graduating student at Bard College for academic excellence in science.

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## Publications and Preprints

### Preprints

1. The BabyView Dataset: High-resolution Egocentric Videos of Infants' and Young Children's Everyday Experiences  
Bria Lorelle Long\*, Violet Xiang\*, **Stefan Stojanov\***, Robert Z. Sparks, Zi Yin, Grace Keene, Alvin Wei Ming Tan, Steven Y. Feng, Auddithio Nag, Chengxu Zhuang, Virginia A. Marchman, Daniel LK Yamins, Michael Frank  
<https://arxiv.org/abs/2406.10447>

### Publications

2.  $3 \times 2$ : 3D Object Part Segmentation by 2D Semantic Correspondences  
Anh Thai, Weiyao Wang, Hao Tang, **Stefan Stojanov**, James M Rehg, Matt Feiszli  
In European Conference of Computer Vision (ECCV) 2024  
<https://arxiv.org/abs/2407.09648>
3. ZeroShape: Regression-based Zero-shot Shape Reconstruction  
Zixuan Huang\*, **Stefan Stojanov\***, Anh Thai, Varun Jampani, James M Rehg  
In Computer Vision and Pattern Recognition (CVPR) 2024  
<https://arxiv.org/abs/2312.14198>
4. Low-shot Object Learning with Mutual Exclusivity Bias  
Ngoc Anh Thai, Ahmad Humayun\*, **Stefan Stojanov\***, Zixuan Huang, Bikram Boote, James Matthew Rehg  
In Neural Information Processing Systems - Datasets & Benchmarks (NeurIPS) 2023  
<https://arxiv.org/abs/2312.03533>
5. ShapeClipper: Scalable 3D Shape Learning from Single-View Images via Geometric and CLIP-based Consistency  
Zixuan Huang, Varun Jampani, Anh Thai, Yuanzhen Li, **Stefan Stojanov**, James M. Rehg  
In Computer Vision and Pattern Recognition (CVPR) 2023  
<https://arxiv.org/abs/2304.06247>
6. The Benefits of Depth Information for Head-Mounted Gaze Estimation  
**Stefan Stojanov**, Sachin S Talathi, Abhishek Sharma  
In Eye Tracking Research and Applications (ETRA) 2022  
acm:3517031.3529638
7. Learning Dense Object Descriptors from Multiple Views for Low-shot Category Generalization  
**Stefan Stojanov**, Anh Thai, Zixuan Huang, James M. Rehg  
In Neural Information Processing Systems (NeurIPS) 2022  
<https://arxiv.org/abs/2211.15059>
8. Planes vs. Chairs: Category-guided 3D shape learning without any 3D cues  
**Stefan Stojanov**, Anh Thai, Zixuan Huang, James M. Rehg  
In European Conference of Computer Vision (ECCV) 2022  
<https://arxiv.org/abs/2204.10235>

9. The Surprising Positive Knowledge Transfer in Continual 3D Object Shape Reconstruction  
Anh Thai, **Stefan Stojanov**, Zixuan Huang, Isaac Rehg, James M Rehg  
In International Conference on 3D Vision (3DV) 2022 - Oral  
<https://arxiv.org/abs/2101.07295>
10. 3D Reconstruction of Novel Object Shapes from Single Images  
Anh Thai, **Stefan Stojanov**, Zixuan Huang, Isaac Rehg, James M Rehg  
In International Conference on 3D Vision (3DV) 2021  
<https://arxiv.org/abs/2006.07752>
11. Using Shape to Categorize: Low-Shot Learning with an Explicit Shape Bias  
**Stefan Stojanov**, Anh Thai, James M Rehg  
In Computer Vision and Pattern Recognition (CVPR) 2021  
<https://arxiv.org/abs/2101.07296>
12. Incremental Object Learning from Contiguous Views  
**Stefan Stojanov**, Anh Thai, James M Rehg  
In Computer Vision and Pattern Recognition (CVPR) 2019  
Oral Presentation - **Best Paper Finalist - 45 papers from 5,165 submissions**  
CVF Open Access URL
13. Unsupervised 3d Pose Estimation with Geometric Self-supervision Views  
Ching-Hang Chen, Amrith Tyagi, Amit Agrawal, Dylan Drover, Rohith MV, **Stefan Stojanov**, James M. Rehg  
In Computer Vision and Pattern Recognition (CVPR) 2019 - Oral Presentation  
<https://arxiv.org/abs/1904.04812>

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## Posters and Talks

- November 2024 Self-supervised Learning of Motion Concepts by Optimizing Counterfactuals  
Lightning talk and poster  
Google Workshop on Theory and Practice of Foundation Models
- February 2023 University of California San Diego - Research presentation
- January 2023 Brown University - Research Presentation
- January 2023 Stanford University - Research presentation
- January 2023 Columbia University - Research presentation
- July 2022 Instance to category generalization: A self-supervised model inspired by infant learning  
Poster at International Congress of Infant Studies (ICIS2022)
- July 2020 The success of continual machine learning in an infant-inspired setting  
Poster at Virtual International Congress of Infant Studies (vICIS2020)

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## Professional Activities

### Reviewing

- Computer Vision and Pattern Recognition (CVPR) '20, '21, '22, '23, '24
- Neural Information Processing Systems (NeurIPS) '20, '21, '22
- International Conference of Machine Learning (ICML) '21 (top 10%), '22, '23, '24
- International Conference of Computer Vision (ICCV) '21
- International Conference on Learning Representations (ICLR) '24

### Organization

- 2022 Developmental Machine Learning: From Human Learning to Machines and Back  
Dagstuhl Workshop - Student volunteer for seminar organization - webpage

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## Mentorship

- David Wendt**, *Stanford MS* → *Global Liquid Markets SWE*
- Linan (Frank) Zhao**, *Stanford MS*, *Stanford MS* → *Meta SWE*
- Seungwoo (Simon) Kim**, *Stanford BS*
- Auddithio Nag**, *Stanford BS*
- Johnathan Xie**, *Stanford BS*
- Anh Thai**, *Georgia Tech BS* → *Georgia Tech PhD Student*
- Samarth Mishra**, *Georgia Tech MS* → *Boston University PhD Student*

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## Skills

- Programming languages:** Python, MATLAB, C, C++, Bash, Java
- Tools:** Pytorch, Blender, Unity, OpenCV, NumPy, Trimesh, AWS, GCP, Azure, SLURM