Stefan Lee, Ph.D. **computing.ece.vt.edu/∼ steflee**

Contact Information
Bradley Department of Electrical and Computer Engineering
Virginia Tech, Blacksburg, VA steflee@vt.edu

Research Interests
Computer vision, Bayesian modeling, inference in probabilistic graphical models, deep learning, egocentric vision

Education

Indiana University, Bloomington, IN

Ph.D., Computer Science, August 2016

- Advisor: David Crandall

M.S., Computer Science, May 2013

University of West Florida Pensacola, FL

B.S., Computer Science, August 2011

Research Positions

Bradley Postdoctoral Associate August 2016 to Present
Machine Learning & Perception Group
at Virginia Tech with Dhruv Batra

Research Assistant May 2012 to August 2016
School of Informatics and Computing,
at Indiana University with David Crandall

Visiting Research Assistant August 2015 to November 2015
Machine Learning & Perception Group
at Virginia Tech with Dhruv Batra

Visiting Research Assistant May 2014 to August 2014
INRIA - WILLOW Project
at L'cole Normale Superiure and UC Berkley with Josef Sivic and Alexei A. Efros.

Conference Publications

1. Stefan Lee, Senthil Purushwalkam, Michael Cogswell,Viresh Ranjan, David J. Crandall, and Dhruv Batra. Stochastic Multiple Choice Learning for Training Diverse Deep Ensembles. *Neural Information Processing Systems (NIPS)*, 2016.
2. Sven Bambach, Stefan Lee, David Crandall, Chen Yu, Lending A Hand: Detecting Hands and Recognizing Activities in Complex Egocentric Interactions. *IEEE International Conference on Computer Vision (ICCV)*, 2015.
3. Stefan Lee, Nicolas Maisonneuve, David Crandall, Josef Sivic, Alexei A. Efros. Linking Past to Present: Discovering Style in Two Centuries of Architecture. *IEEE International Conference on Computational Photography (ICCP)*, 2015.
4. Stefan Lee, Haipeng Zhang, David Crandall. Predicting Geo-informative Attributes in Large-scale Image Collections using Convolutional Neural Networks. *IEEE Workshop on Applications of Computer Vision (WACV)*, 2015.
5. Stefan Lee, Sven Bambach, David Crandall, John Franchak, and Chen Yu. This Hand Is My Hand: A Probabilistic Approach to Hand Disambiguation in Egocentric Video. *In IEEE Conference on Computer Vision and Pattern Recognition (CVPR), Workshop on Egocentric Vision,* 2014.
6. Stefan Lee, Jerome Mitchell, David Crandall, and Geoffery Fox. Estimating Bedrock and Surface Layer Boundaries And Confidence Intervals In Ice Sheet Radar Imagery Using MCMC. *In International Conference on Image Processing (ICIP),* 2014.

arXiv Submissions

1. Stefan Lee, Senthil Purushwalkam, Michael Cogswell, David J. Crandall, Dhruv Batra. Why M Heads are Better than One: Training a Diverse Ensemble of Deep Networks. arXiv:1511.06314, 2015.
2. Ashwin K Vijayakumar, Michael Cogswell, Ramprasath R. Selvaraju, Qing Sun, Stefan Lee, David Crandall, Dhruv Batra. Diverse Beam Search: Decoding Diverse Solutions from Neural Sequence Models. arXiv:1610.02424, 2016.

Book Chapters

1. David J. Crandall, Yunpeng Li, Stefan Lee, and Daniel P. Huttenlocher. Recognizing Land- marks in Large-Scale Social Image Collections. Large-Scale Visual Geo-Localization. Ed. Amir R. Zamir, Asaad Hakeem, Luc Van Gool, Mubarak Shah, Richard Szeliski. Springer, 2016.

Extended Abstracts & Technical Reports

1. Sven Bambach, Stefan Lee, David Crandall, John Franchak, Chen Yu. Tracking Hands of Interacting People in Egocentric Video. *In IEEE Conference on Computer Vision and Pattern Recognition (CVPR), Workshop on Observing and Understanding Hands in Action*, 2015.
2. Stefan Lee and David Crandall. Learning to Identify Local Floral with Human Feedback. *In IEEE Conference on Computer Vision and Pattern Recognition, Workshop on Computer Vision and Human Computation,* 2014.

Awards

- Heidelberg Laureate Forum Acceptance (HLF Foundation) — April 2015
- Dissertation Development Award (Indiana University) — Spring 2015
- Doctoral Consortium Travel Award (ICCV) — Fall 2015
- HANDS Travel Award (CVPR) — Spring 2016

Teaching Experience

Instructor — Fall 2016
ECE5424 - Introduction to Machine Learning
Bradley Department of Electrical and Computer Engineering - Virgina Tech

Assistant Instructor — Spring 2015
B659 - Image Processing and Recognition
School of Informatics and Computing - Indiana University

Graduate Mentor — Fall 2013
I399 - Research Methods for Informatics and Computing
School of Informatics and Computing - Indiana University

Assistant Instructor — Fall 2011 - Spring 2013
C211 - Introduction to Computer Science
School of Informatics and Computing - Indiana University

Service

Reviewing

- Computer Vision and Pattern Recognition (CVPR)
- International Conference on Learning Representations (ICLR)
- Social Network Analysis and Mining
- Image and Vision Computing

Other

- Co-Organizer of the Diversity Meets Deep Networks - Inference, Ensemble Learning, and Applications tutorial collocated with CVPR 2016