

MEERA S. HAHN

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RESEARCH INTERESTS

Computer Vision, language modeling, reinforcement learning, interpretability, embodied AI.

I am interested in studying human activity understanding using deep networks as well as exploring how to harness linguistic information to assist in visual learning tasks

EDUCATION

Georgia Institute of Technology

2016 - 2021 (*expected*)

PhD in Computer Science, School of Interactive Computing

Presidential PhD Fellow of Georgia Institute of Technology

Advised by Prof. James M. Rehg

Emory College of Emory University

2012 - 2016

Bachelor of Science in Computer Science and Mathematics

Major GPA: 3.9/4.00, Summa Cum Laude

TECHNICAL REPORTS AND PUBLICATIONS

Learning a Visually Grounded Memory Assistant

M. Hahn, K. Ridgeway, K. Carlberg, R. Desai, D. Batra, J. Hillis.

Submitted to AAMAS (2020).

Tripping Through Time: Efficient Localization of Activities in Videos

M. Hahn, A. Kadav, J. M. Rehg, H. Peter Graf.

CVPR Language and Vision Workshop (2019). Submitted to CVPR (2020).

<https://arxiv.org/pdf/1904.09936.pdf>

Action2Vec: A Crossmodal Embedding Approach to Action Learning

M. Hahn, A. Silva, J. M. Rehg.

CVPR Deep Vision Workshop (2018).

<https://arxiv.org/abs/1901.00484>

Learning to Localize and Align Fine-Grained Actions to Sparse Instructions

M. Hahn, N. Ruiz, J. Alayrac, I. Laptev, J. M. Rehg.

CVPR Language and Vision Workshop (2018).

<https://arxiv.org/abs/1809.08381>

Deep Tracking: Visual Tracking Using Deep Convolutional Networks

M. Hahn, S. Chen, A. Deghan, M. Shah.

Grace Hopper Celebration student poster session and ACM student research competition. (2015).

<https://arxiv.org/abs/1512.03993>

ACADEMIC RESEARCH EXPERIENCE

Visual Intelligence Lab, Georgia Institute of Technology

2018 - Present

With Prof. Devi Parikh, Prof. Stefan Lee, Dr. Peter Anderson

Working on language guided navigation in 3D environments.

Behavioral Imaging Lab, Georgia Institute of Technology

2016 - Present

With Dr. James M. Rehg

Worked at intersection of language and vision with the goal of improving activity understanding.

Worked on NIH project to monitor and track the progression of autism using behavioral imaging and

wearable sensors.

Robot Autonomy and Interactive Learning Lab, Georgia Institute of Technology *2016 - 2017*
With Prof. Sonia Chernova

Worked on developing an object recognition and object grounding system for a mobile robot.

Natural Language Processing Research Lab, Emory University *2014 - 2016*
With Prof. Jinho Choi

Worked on novel approach for word embedding for to improve verb representation.

Contributed to the Emory NLP toolkit's Named Entity Recognition system.

NSF Fellow: Research Experience for Undergraduates, University of Central Florida *2014*
With Prof. Mubarak Shah and Dr. Afshin Dehghan

Developed the first deep learning based object tracking system.

INDUSTRY EXPERIENCE

Facebook Reality Labs, Research Intern *2019*
With Dr. James Hillis and Prof. Dhruv Batra

NEC Laboratories America, Research Intern *2018*
With Dr. Asim Kadav and Dr. Hans Peter Graf

Developed reinforcement learning approach to spatio-temporal localization of actions in video via language descriptions.

Amazon, Research Intern *2016*
With Dr. Marshall Tappen and Jonathan Dughi

Developed and deployed shape and material classification system using point cloud and depth images.

Amazon, Software Development Engineer Intern *2015*
Developed and deployed an AB Testing framework to ensure optimality of new versions of code.

ACADEMIC HONORS

Presidential PhD Fellowship at Georgia Institute of Technology *2016-2020*

Highest Honors on Emory Thesis *2016*

Thesis was on improvements in the Word Embedding system, with Dr. Jinho Choi

Emory Honors Program: nominated and selected *2015-2016*

Program involves a written thesis, thesis defense, a GPA above 3.5 and graduate coursework

Computing Research Association Travel Grant recipient *2017*

Anita Borg Scholarship Recipient *2015*

Scholarship to attend the Grace Hopper Celebration

Emory Honor List and Emory Merit List *2012-2016*

COMMUNITY ENGAGEMENT

Invited Talks

Facebook Cognitive Science Symposium: Presented the Visually Grounded Assistant Dataset *2019*

Reviewing

IEEE Conference on Computer Vision and Pattern Recognition (CVPR) *2017, 2018, 2019*

IEEE Winter Conference on Applications of Computer Vision (WACV) *2018, 2019*

IEEE European Conference on Computer Vision (ECCV) *2018*

IEEE International Conference on Computer Vision (ICCV) *2019*

Association for the Advancement of Artificial Intelligence (AAAI) *2019*

Teaching

CS 8001: Machine Learning with Limited Supervision, Georgia Tech
Teaching Assistant with Prof. Judy Hoffman

Fall 2019

CS 8001: Computer Vision, Georgia Tech
Head Teaching Assistant with Prof. Judy Hoffman

Spring 2020

Professional Activities

President and Founder of Women in Computing at Emory

2015 - 2016

This club gave seminars throughout the year on opportunities for Women In Computing and serves as a place for women in tech at Emory to network.