

85 5th Street, NW, Atlanta, GA, 30332-0760
☎ 404-956-6044 🌐 yinli.cvpr.net ✉ yli440@gatech.edu

Research Interest

First Person Vision, Computer Vision, Mobile Health,
Machine Learning, Wearable Computing.

Education

- 2011-2017 **Ph.D. Student in Computer Science**, Advisor: Prof. James M. Rehg,
(Expected) *Georgia Institute of Technology*
Thesis: Learning Embodied Models of Actions from First Person Video.
- 2008-2011 **M.S. in Pattern Recognition and Machine Intelligence**,
Shanghai Jiaotong University.
- 2004-2008 **B.S. in Information Science**,
Nanjing University of Posts and Telecommunications.

Work Experience

- Spring 2016 **NSF Innovation Corps**,
Entrepreneur Lead.
- Explored commercialization potential of first person visual analytics
- Summer 2015 **Facebook AI Research**,
Research Intern with Dr. Piotr Dollár and Manohar Paluri.
- Unsupervised learning from video
- 2011–Present **School of Interactive Computing, College of Computing, Georgia Tech**,
Research Assistant with Prof. James M. Rehg.
- Summer 2010 **National Laboratory of Pattern Recognition, CASIA**,
Visiting Student with Dr. Kaiqi Huang and Dr. Tieniu Tan.
- Visual attention for scene recognition

Awards

- 2015 **Best Student Paper Award**, *FG*, 2015, 1 out of 84.
IEEE International Conference on Automatic Face and Gesture Recognition
- 2014 **Best Student Paper Award**, *MobiHealth*, 2014, 1 out of 120.
International Conference on Wireless Mobile Communication and Healthcare

Press Coverage

- 2014 [!\[\]\(467d80e979964f7f8c752fb22248b5b7_img.jpg\) Google Glass can now track your stress level, *MIT Tech Review*, 2014.](#)
- 2014 [!\[\]\(b71552d33dbf62adf5e5199a70ee02bf_img.jpg\) Google Glass, now in tune with your emotions, *New Scientist*, 2014.](#)
- 2014 [!\[\]\(03134b765d1473836ff001925b1b0550_img.jpg\) Researchers turn Google Glass into health sensor, *WIRED UK*, 2014.](#)

Publications

[!\[\]\(99f58673407353e96a019fbca558fd72_img.jpg\) Total of 920 citations with h-index 15](#)

Peer-reviewed journal articles

- JADD'17 **Using a Point-of-view Camera to Measure Eye Gaze in Young Children with Autism Spectrum Disorder During Naturalistic Social Interactions: A Pilot Study**,
Sarah R. Edmunds, Agata Rozga, Yin Li, Elizabeth A. Karp, Lisa V. Ibanez, James M. Rehg, Wendy L. Stone, *Journal of Autism and Developmental Disorders*, 2017 (accepted).

Peer-reviewed conference papers

- CVPR'16 **Unsupervised Learning of Edges**,
Yin Li, Manohar Paluri, James M. Rehg, Piotr Dollár, *IEEE Conference on Computer Vision and Pattern Recognition*, 2016 **Oral Presentation (Acceptance Rate 3.9%)** .
- CVPR'16 **Learning Deep Structure-Preserving Image-Text Embeddings**,
Liwei Wang, Yin Li, Svetlana Lazebnik, *IEEE Conference on Computer Vision and Pattern Recognition*, 2016.
- CVPR'15 **Delving into Egocentric Actions**,
Yin Li, Zhefan Ye, James M. Rehg, *IEEE Conference on Computer Vision and Pattern Recognition*, 2015.
- CVPR'15 **Gaze-enabled Egocentric Video Summarization via Constrained Submodular Maximization**,
Jia Xu, Lopamudra Mukherjee, Yin Li, Jamieson Warner, James M. Rehg, Vikas Singh, *IEEE Conference on Computer Vision and Pattern Recognition*, 2015.
- FG'15 **Detecting Bids for Eye Contact using a Wearable Camera**,
Zhefan Ye, Yin Li, Yun Liu, Chanel Bridge, Agata Rozga, James M. Rehg, *IEEE Conference on Automatic Face and Gesture Recognition*, 2015 **Best Student Paper Award** .
- MobiHealth'14 **BioGlass: Physiological Parameter Estimation Using a Head-mounted Wearable Device**,
Javier Hernandez, Yin Li, James M. Rehg, Rosalind W. Picard, *International Conference on Wireless Mobile Communication and Healthcare*, 2014 **Best Student Paper Award** .
- ECCV'14 **Graduated Consistency-Regularized Optimization for Multi-Graph Matching**,
Junchi Yan, Yin Li, Wei Liu, Hongyuan Zha, Xiaokang Yang, *European Conference on Computer Vision*, 2014.
- ECCV'14 **Joint Semantic Segmentation and 3D Reconstruction from Monocular Video**,
Abhijit Kundu, Yin Li, Frank Dellaert, Fuxin Li, James M. Rehg, *European Conference on Computer Vision*, 2014.

- CVPR'14 **The Secrets of Salient Object Segmentation**,
*Yin Li**, Xiaodi Hou*, Christof Koch, James M. Rehg, Alan L. Yuille (* = equal contribution),
 IEEE Conference on Computer Vision and Pattern Recognition, 2014.
- ICCV'13 **Learning to Predict Gaze in Egocentric Video**,
Yin Li, Alireza Fathi, James M. Rehg, International Conference on Computer Vision, 2013
[Oral Presentation \(Acceptance Rate 2.5%\)](#) .
- CVPR'13 **Decoding Children's Social Behavior**,
James M. Rehg, Gregory D. Abowd, Agata Rozga, Mario Romero, Mark A. Clements, Stan Sclaroff, Irfan Essa, Opal Y. Ousley, Yin Li, Chanho Kim, Hrishikesh Rao, Jonathan C. Kim, Liliana Lo Presti, Jianming Zhang, Denis Lantsman, Jonathan Bidwell, Zhefan Ye, IEEE Conference on Computer Vision and Pattern Recognition, 2013.
- ECCV'12 **Learning to Recognize Daily Actions using Gaze**,
Alireza Fathi, Yin Li, James M. Rehg, European Conference on Computer Vision, 2012.
- CVPR'12 **Learning Sparse Covariance Patterns for Natural Scenes**,
Liwei Wang, Yin Li, Jiaya Jia, Jian Sun, David P. Wipf, James M. Rehg, IEEE Conference on Computer Vision and Pattern Recognition, 2012.
- ECCV'10 **Optimum Subspace Learning and Error Correction for Tensors**,
Yin Li, Junchi Yan, Yue Zhou, Jie Yang, European Conference on Computer Vision, 2010.
- ICIP'10 **Tensor Error Correction for Corrupted Values in Visual Data**,
Yin Li, Yue Zhou, Junchi Yan, Jie Yang, Xiangjian He, IEEE International Conference on Image Processing, 2010.
- ICIP'10 **Visual Saliency Detection via Rank-Sparsity Decomposition**,
Junchi Yan, Jian Liu, Yin Li, Zhibin Niu, Yuncai Liu, IEEE International Conference on Image Processing, 2010.
- ICIP'09 **Incremental Sparse Saliency Detection**,
Yin Li, Yue Zhou, Lei Xu, Jie Yang, Xiaochao Yang, IEEE International Conference on Image Processing, 2009 [Oral Presentation](#) .
- ACCV'09 **Visual Saliency Based on Conditional Entropy**,
Yin Li, Yue Zhou, Junchi Yan, Zhibin Liu, Jie Yang, Asian Conference on Computer Vision, 2009 [Oral Presentation](#) .
- ACCV'09 **An Accelerated Human Motion Tracking System Based on Voxel Reconstruction under Complex Environments**,
Junchi Yan, Yin Li, Enliang Zheng, Xuncai Liu, Asian Conference on Computer Vision, 2009.
- [Abstracts and workshop papers](#)
- IMFAR'16 **A Novel Method for Quantifying Eye-to-Eye Gaze during Naturalistic Social Interactions Finds Preliminary Differences Between ASD and TD Toddlers**,
Sarah R. Edmunds, Agata Rozga, Yin Li, Lisa V. Ibanez, Elizabeth A. Karp, James M. Rehg, Wendy L. Stone, International Meeting for Autism Research, 2016.
- IMFAR'14 **Real-Time Eye Contact Detection System**,
Yun Liu, Yin Li, Fernando De la Torre, James M. Rehg, International Meeting for Autism Research, 2014.

UbiComp- **Detecting Eye Contact using Wearable Eye-Tracking Glasses,**
W'12 Zhefan Ye, **Yin Li**, Alireza Fathi, Yi Han, Agata Rozga, Gregory D. Abowd, James M. Rehg,
2nd International Workshop on Pervasive Eye Tracking and Mobile Eye-Based Interaction,
2012.

Patents

2015 **Methods and Apparatus for Physiological Parameter Estimation,**
Javier Hernandez, **Yin Li**, James M. Rehg, Rosalind W. Picard , US 20150265161.

Demos

ICCV'13 **A Real-time System for Face Detection, Facial Analysis and Eye Contact
Detection on a Glass,**
International Conference on Computer Vision, 2013.

ISMAR'12 **Gaze Tracking and Eye Contact Detection using Wearable Glasses,**
International Symposium on Mixed and Augmented Reality , 2012.

Talks

2017 **Attention and Activities in First Person Vision.**

- University of Wisconsin—Madison
- Carnegie Mellon University
- Massachusetts Institute of Technology

2016 **Activity and Attention in First Person Vision.**

- Forum for Oversea Young Researchers, China Computer Federation (CCF), China
- Shanghai Jiaotong University, Shanghai, China

Jun 2016 **Unsupervised Learning of Edges.**

- IEEE Conference on Computer Vision and Pattern Recognition, Las Vegas, NV, US

Mar 2014 **Egocentric Analysis of Activities and Attention.**

- Institute of Deep Learning at Baidu, Beijing, China

Aug 2013 **Predicting Gaze in Egocentric Video.**

- Intel Science and Technology Center for Pervasive Computing, Seattle, US

Sep 2012 **Detecting Eye Contact using a Single Pair of Glasses.**

- Engineering and Autism: A National Workshop, Los Angeles, US

Sep 2009 **Visual Saliency Based on Conditional Entropy.**

- Asian Conference on Computer Vision, Xi'an, China

Teaching and Mentoring Experiences

Fall 2014 **Teaching Assistant of CS7495: Advanced Computer Vision,**
College of Computing, Georgia Tech.

- Supervised team-based projects

Spring 2014 **Teaching Assistant of CS8803: Probabilistic Graphical Model,**
College of Computing, Georgia Tech.

- Designed course projects

- Fall 2014 **Teaching Assistant of CS4495: Computer Vision**,
College of Computing, Georgia Tech.
- Covered one lecture and one Matlab tutorial
- 2013-2015 **Zhefan Ye**, *Undergraduate and Master's student, Georgia Tech*,
Project: Detecting Eye Contact in First Person Videos.
- Won the best student paper award at IEEE FG'15
 - 2nd place in the UROC Competition, College of Computing, Georgia Tech
- 2013-2014 **Yun Liu**, *Master's student, Georgia Tech*,
Project: Real-time Eye Contact Detection System.
- Technical demo at the International Conference on Computer Vision (ICCV), 2013
 - Poster presentation at the International Meeting for Autism Research (IMFAR), 2014
- 2013-2014 **Rakshya Khatri**, *Undergraduate student, Georgia Tech*,
Project: Tools for Annotating First Person Video.
- Created annotations for GTEA Gaze+ dataset used in our ICCV'13 and CVPR'15 papers.
- 2013 **Licheng Yu**, *Master's student, Georgia Tech*,
Project: Skill Measurement in Egocentric Vision .

Academic Services

- Workshop 4th Workshop on Egocentric (First-Person) Vision, with CVPR'16
- Organization IEEE Workshop on Decoding Subtle Cues from Social Interactions, with ICCV'13
- Technical Workshop on Human Activity Analysis with Highly Diverse Cameras, with WACV'17
- Committee Robotics: Science and System (RSS), 2016
- Workshop on Wearable and Ego-vision Systems for Augmented Experience, with ICME'15
- 6th Pacific-Rim Symposium on Image and Video, 2013
- Journal International Journal of Computer Vision (**IJCV**)
- Reviews IEEE Transactions of Pattern Analysis and Machine Intelligence (**TPAMI**)
- IEEE Transactions on Imaging Processing (**TIP**)
- IEEE Transactions on Multimedia (**TMM**)
- IEEE Journal of Selected Topics in Signal Processing (**J-STSP**)
- IEEE Transactions on Knowledge and Data Engineering (**TKDE**)
- Computer Vision and Image Understanding (**CVIU**)
- IEEE Transactions on Cybernetics (**TCYB**)
- IEEE Transactions on Circuits and Systems for Video Technology (**TCSVT**)
- Machine Vision and Applications (**MVA**)
- IEEE Transactions on Neural Networks and Learning Systems (**TNNLS**)
- IEEE Transactions on Circuits and Systems II: Express Briefs (**TCAS-II**)
- IEEE Signal Processing Letters (**SPL**), Pattern Recognition Letters (**PRL**)
- IEEE Access, IET Image Processing, IET Computer Vision
- Signal Processing: Image Communication
- Pattern Analysis and Applications, Multimedia Tools and Applications

Conference Robotics: Science and System (**RSS**)
Reviews International Conference on Computer Vision(**ICCV**)
IEEE Conference on Computer Vision and Pattern Recognition (**CVPR**)
ACM International Conference on Ubiquitous Computing (**UbiComp**)
ACM User Interface Software and Technology Symposium (**UIST**)
IEEE Winter Conference on Applications of Computer Vision (**WACV**)

References

Ph.D. Advisor **James M. Rehg**, *Professor*,
School of Interactive Computing, College of Computing, Georgia Tech.

Thesis **Kristen Grauman**, *Associate Professor*,
Committee Department of Computer Science, University of Texas at Austin.

Research **Alan L. Yuille**, *Bloomberg Distinguished Professor*,
Mentor Departments of Cognitive Science and Computer Science, Johns Hopkins University.

Research **Piotr Dollár**, *Research Scientist*,
Mentor Facebook AI Research.

Research **Svetlana Lazebnik**, *Associate Professor*,
Mentor Department of Computer Science, University of Illinois at Urbana-Champaign.