Jin Sun

CONTACT INFORMATION

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ACADEMIC POSITION

Cornell University / Cornell Tech, New York, NY USA 2018 - Present
Postdoctoral Associate
- Advisor: Noah Snavely

EDUCATION

University of Maryland, College Park, MD USA 2018
Doctor of Philosophy, Computer Science
- Dissertation Title: "Finding Objects in Complex Scenes"
- Advisor: David Jacobs

Temple University*, Philadelphia, PA USA 2011
Master of Science, Computer and Information Science
- Advisor: Haibin Ling

University of Science and Technology of China (USTC)*, China 2008
Bachelor of Engineering, Automation
* In USTC-Temple DBMD (3+2) Program.

JOURNAL PUBLICATIONS

[1] Scale and Object Aware Image Thumbnailing
Jin Sun and Haibin Ling
International Journal of Computer Vision (IJCV), 2013.

CONFERENCE PUBLICATIONS

[1] Hidden Footprints: Learning Contextual Walkability from 3D Human Trails
Jin Sun, Hadar Averbuch-Elor, Qianqian Wang, and Noah Snavely
The European Conference on Computer Vision (ECCV), 2020.

[2] Visual Chirality
Zhiqiu Lin, **Jin Sun**, Abe Davis, and Noah Snavely
IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2020 (Oral Presentation).
Best Paper Nominee.

[3] WARHOL: Wearable Holographic Object Labeler
Matthew Shreve, Bob Price, Les Nelson, Raja Bala, **Jin Sun**, and Srichiran Kumar
The Engineering Reality of Virtual Reality, Electronic Imaging, 2020.

[4] Label Denoising Adversarial Network (LDAN) for Inverse Lighting of Face Images
Hao Zhou*, **Jin Sun***, Yaser Yacoob, and David Jacobs (*Equal contribution)
IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2018 (Spotlight Presentation).

[5] Seeing What is Not There: Learning Context to Determine Where Objects Are Missing
Jin Sun and David Jacobs
IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2017 (Spotlight Presentation).

[6] Generating Holistic 3D Scene Abstractions for Text-based Image Retrieval
Ang Li, **Jin Sun**, Joe Yue-Hei Ng, Ruichi Yu, Vlad I. Morariu, and Larry S. Davis
IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2017.

[7] Tohme: Detecting Curb Ramps in Google Street View Using Crowdsourcing, Computer Vision, and Machine Learning
Kotaro Hara, **Jin Sun**, Robert Moore, David Jacobs, and Jon Froehlich
27th ACM Symposium on User Interface Software and Technology (UIST), 2014.
"**Notable Books and Articles**", 19th Annual Best of Computing, ACM Computing Reviews.

[8] Mobile multi-flash photography
Xinqing Guo, **Jin Sun**, Zhan Yu, Haibin Ling, and Jingyi Yu
Proc. SPIE 9023, Digital Photography X, 2014.

[9] Scale and Object Aware Image Retargeting for Thumbnail Browsing
Jin Sun and Haibin Ling
13th IEEE International Conference on Computer Vision (ICCV), 2011.

[10] Category Classification Using Occluding Contours
Jin Sun, Christopher Thorpe, Nianhua Xie, Jingyi Yu, and Haibin Ling
6th International Symposium on Visual Computing (ISVC), 2010 (Oral Presentation).

Workshop Publications

[1] Leveraging Vision Pipelines for Satellite Imagery
Kai Zhang, **Jin Sun**, and Noah Snavely
IEEE International Conference on Computer Vision (ICCV) Workshops, 2019.

[2] An Initial Study of Automatic Curb Ramp Detection with Crowdsourced Verification using Google Street View Images
Kotaro Hara, **Jin Sun**, Jonah Chazan, David Jacobs, and Jon Froehlich
Poster Proceedings of HCOMP, 2013.

[3] Exploring Early Solutions for Automatically Identifying Inaccessible Sidewalks in the Physical World Using Google Street View
Kotaro Hara, Victoria Le, **Jin Sun**, David Jacobs, and Jon Froehlich
Human Computer Interaction Consortium, 2013.

Preprints

[1] Semi-supervised Conditional GANs
Kumar Sricharan, Raja Bala, Matthew Shreve, Hui Ding, Kumar Saketh, **Jin Sun**
ArXiv preprint:1708.05789, 2017

Submitted For Review

[1] A Rich Analysis of Factorizing People in Context
Songyin Wu*, **Jin Sun***, Hadar Averbuch-Elor, Baoquan Chen, and Noah Snavely (*Equal contribution)
Under review, 2021.

[2] WikiScenes: Integrating Vision, Language, and 3D for Rich Understanding of 3D-Augmented Image Collections
Xiaoshi Wu*, Hadar Averbuch-Elor*, **Jin Sun**, and Noah Snavely (*Equal contribution)
Under review, 2021.

RESEARCH GRANTS

[1] Principal Investigator: Noah Snavely 2020-2023
Title: Understanding and Synthesizing People in 3D Scenes
Source: **National Science Foundation (NSF)** IIS-2008313, $498,622.00
Role: Co-author. My work on analyzing people in context was the basis for this award. I provided preliminary data and wrote the grant proposal with Prof. Snavely.

[2] Principal Investigators: Noah Snavely, Hadar Averbuch-Elor, Jin Sun 2020
Title: Joint Reasoning over Images, Language, and 3D
Source: **Amazon Research Awards**, $30,000 (Cash), $90,000 (AWS credits)
Role: Co-author and Co-PI.

HONORS AND AWARDS

Dean's Fellowship, University of Maryland 2012-2014

Travel Grant From John D. Gannon Scholarship Fund University of Maryland, 2013

Summer Dean's Research Fellowship University of Maryland, 2013

DBMD Program Scholarship Temple University, 2008-2010

Outstanding Freshman Scholarship University of Science and Technology of China, 2005

INTERNSHIP EXPERIENCE

Palo Alto Research Center (PARC), Interaction and Analytics Lab, Palo Alto, CA USA
Research Internship 2017

National Institute of Health (NIH), Cognitive Neurophysiology and Imaging, Bethesda, MD USA
Summer Internship 2015

Siemens Corporate Research, Imaging & Visualization Department, Princeton, NJ USA
Research Internship 2011 - 2012

PATENTS

[1] System and Method Using Augmented Reality for Efficient Collection of Training Data
Matthew A Shreve, Sricharan Kumar, **Jin Sun**, Gaurang R Gavai, Robert R Price, and Hoda MA Eldardiry
US Patent Application 15826588

[2] System and Method for Semi-Supervised Conditional Generative Modeling Using Adversarial Networks
Sricharan Kumar, Raja Bala, **Jin Sun**, Hui Ding, and Matthew A Shreve
US Patent Application 15826613

[3] Object Shape Regression Using Wasserstein Distance
Jin Sun, Sricharan Kumar, and Raja Bala
US Patent Application 16222062

TEACHING EXPERIENCES

Applied Machine Learning *Course Coordinator*	Cornell University 2020 Spring
Deep Learning *Co-instructor*	Cornell University 2019-2020
Deep Learning Clinic *Instructor*	Cornell University 2019-2020
Deep Learning *Teaching Assistant*	University of Maryland 2016 Fall
Introduction to Computer Vision *Teaching Assistant*	University of Maryland 2013 Fall
Organization of Programming Languages *Teaching Assistant*	University of Maryland 2013 Spring
Object-Oriented Programming II *Teaching Assistant*	University of Maryland 2012 Fall

INVITED TALKS

Finding Objects in Complex Scenes	Cornell Tech, 2018
Finding Objects in Complex Scenes	Johns Hopkins University, 2018
Seeing What Is Not There	University of Pennsylvania, 2017

SERVICES AND PROFESSIONAL ACTIVITIES

Served as a referee for conferences and journals including:
IEEE Conference on Computer Vision and Pattern Recognition (CVPR), IEEE International Conference on Computer Vision (ICCV), European Conference on Computer Vision (ECCV), Asian Conference on Computer Vision (ACCV), British Machine Vision Conference (BMVC), AAAI Conference on Artificial Intelligence (AAAI), Computer Vision and Image Understanding (CVIU), Neurocomputation, IEEE Transactions on Visualization and Computer Graphics (TVCG), IEEE Transactions on Circuits and Systems for Video Technology (TCSVT), and Plant Methods.

Served as Cornell Tech Specialization Project Advisor for Jacobs Institute students.
Duties: Evaluate bi-weekly progress reports, Provide feedback and grades on milestone document, project outputs, and deliverables.