

# Shaoxiong Wang

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## EDUCATION

- June 2019 **Massachusetts Institute of Technology**, Cambridge, MA  
– Current
- Ph.D. Candidate in Computer Science
  - Computer Science and Artificial Intelligence Laboratory (CSAIL)
  - Advisor: Edward H. Adelson
- August 2017 **Massachusetts Institute of Technology**, Cambridge, MA  
– May 2019
- M.S. in Computer Science
  - Computer Science and Artificial Intelligence Laboratory (CSAIL)
  - GPA: **5.0/5.0**
  - Advisor: Edward H. Adelson
- August 2013 **Tsinghua University**, Beijing, China  
– July 2017
- B.E. in Computer Science & Technology
  - GPA: **91/100** Ranking: **13<sup>th</sup>/127**
  - Advisor: Jie Tang

## RESEARCH INTERESTS

Fields Tactile Perception & Manipulation, Computer Vision, Machine Learning

## PUBLICATIONS

- Oct. 2020 **SwingBot: Learning Physical Features from In-hand Tactile Exploration for Dynamic Swing-up Manipulation**  
Chen Wang\*, [Shaoxiong Wang\\*](#), Brandon Romero, Filipe Veiga, Edward H. Adelson  
(\* indicates equal contribution)  
*IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS'20 **Best Paper Award**)*.  
[\[Project\]](#)
- July 2020 **Cable Manipulation with a Tactile-Reactive Gripper**  
Yu She\*, [Shaoxiong Wang\\*](#), Siyuan Dong\*, Neha Sunil, Alberto Rodriguez, Edward H. Adelson  
*Robotics: Science and Systems (RSS'20 **Best Paper Award Finalist**)*. [\[Project\]](#)
- Oct. 2018 **3D Shape Perception from Monocular Vision, Touch, and Shape Priors**  
[Shaoxiong Wang\\*](#), Jiajun Wu\*, Xingyuan Sun, Wenzhen Yuan, William T. Freeman, Joshua B. Tenenbaum, Edward H. Adelson  
IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS'18) [\[Project\]](#)
- May 2018 **Active Clothing Material Perception using Tactile Sensing and Machine Learning**  
Wenzhen Yuan, Yuchen Mo, [Shaoxiong Wang](#), Edward H. Adelson  
IEEE International Conference on Robotics and Automation (ICRA'18) [\[Project\]](#)
- July 2017 **Connecting Look and Feel: Associating the visual and tactile properties of physical materials**  
Wenzhen Yuan\*, [Shaoxiong Wang\\*](#), Siyuan Dong, Edward H. Adelson  
Proceedings of the IEEE Conference on Computer Vision and Pattern Recognition (CVPR'17 **Oral**) [\[Project\]](#)
- Nov. 2016 **Active Zero-Shot Learning**  
Sihong Xie, [Shaoxiong Wang](#), Philip S. Yu  
Proceedings of the 25th ACM International on Conference on Information and Knowledge Management (CIKM'16)

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## RESEARCH EXPERIENCE

- Sep. 2017 – **Perceptual Science (Persci) Group**, MIT, Advisor: Prof. Edward H. Adelson  
Current Study tactile perception, tactile servoing, and tactile sensor design.
- May 2020 – **Facebook AI Research**, Facebook Inc., Advisor: Dr. Roberto Calandra  
Aug. 2020 Study fast optical simulation for vision-based tactile sensors.
- Sep. 2015 – **State Key Laboratory of Intelligent Technology and Systems**, Tsinghua University, Advisor:  
June 2016 Prof. Xiaolin Hu  
Study automatic melody generation with recurrent neural networks.
- July 2015 – **Big Data and Social Computing (BDSC) Lab**, University of Illinois at Chicago, Advisor: Prof.  
Aug. 2015 Philip S. Yu  
Study similarity metrics learning from heterogeneous networks with meta-paths.
- July 2014 – **Research Intern**, Sogou Inc., Mentor: Feng Shi  
Sep. 2014 Study recommendation system based on user behavior.
- Jan. 2014 – **Knowledge Engineering Group (KEG)**, Tsinghua University, Advisor: Prof. Jie Tang  
June 2016 Study data processing and mining for Weibo activity extraction.

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## HONORS

- Sep 2020 **Best Paper Award**, IROS'20  
SwingBot: Learning Physical Features from In-hand Tactile Exploration for Dynamic Swing-up Manipulation
- July 2020 **Best Paper Award Finalist**, RSS'20  
Cable Manipulation with a Tactile-Reactive Gripper
- May 2017 **Grand Prize of Challenge Cup**, Tsinghua University  
Ranking top 6 out of 381 teams; Award for the project *DeepMusic*.
- Aug. 2016 **1<sup>st</sup> Place in Microsoft Campus Elite Competition**, Microsoft Research Asia  
Ranking 1<sup>st</sup> out of 280 teams; Award for the project *DeepMusic*.
- Oct. 2016 **Sohu Scholarship**, Sohu Inc.
- Oct. 2016 **Outstanding Academic Scholarship**, Tsinghua University
- Oct. 2014 **Technological Innovation Scholarship**, Tsinghua University
- July 2011 **Gold Medal in National Olympiad in Informatics (NOI)**, China Computer Federation (CCF)  
Ranking 27<sup>th</sup> out of 57000.

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## SKILLS

- Languages Python, C/C++, Matlab, Java
- Frameworks PyTorch, Keras, Flask, Qt
- Tools git, shell, L<sup>A</sup>T<sub>E</sub>X, Final Cut Pro, Adobe {Ps, Pr, Ae}, SolidWorks/Onshape, Eagle
- Fabrication 3D Printing, Laser Cutting, Waterjet, PCB Milling

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## TEACHING

- Fall 2019 6.819/6.869, Advances in Computer Vision, MIT, Teaching Assistant