Tianmin Shu

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EDUCATION

University of California, Los Angeles, Los Angeles, CA, USA   Expected: 06/2019

Ph.D. student in Statistics
- Advisor: Song-Chun Zhu
- Areas of focus: human activity recognition, video event detection, human-robot interaction

Fudan University, Shanghai, China   09/2010 - 06/2014

B.S. in Electronic Engineering

RESEARCH EXPERIENCE

Salesforce Research, MetaMind Group, Palo Alto, CA, USA   06/2017 - present
Research Intern
- Communicative learning in dialogue systems using reinforcement learning

Center for Vision, Cognition, Learning and Art, UCLA   09/2014 - present
Graduate Student Researcher   *Advisor: Song-Chun Zhu*
- Group activity recognition: learning deep structured models of group activities in videos
- Human-robot interaction: learning social affordances from RGB-D videos of human activities and transferring the learned knowledge to a humanoid (e.g., Baxter) to enable socially appropriate human-robot interactions

Center for Vision, Cognition, Learning and Art, UCLA   07/2013 - 09/2013
Research Intern   *Advisor: Song-Chun Zhu*
- Inferring group events and roles in aerial videos; released an aerial video dataset for activity recognition and tracking

Digital Signal Processing and Transmission Lab, Fudan University   06/2012 - 06/2014
Research Assistant   *Advisor: Bo Hu*
- Real-time surveillance video stitching system; multi-object tracking and event detection in surveillance videos

PUBLICATIONS

(* indicates equal contribution)

T. Shu*, Y. Peng*, L. Fan, H. Lu and S.-C. Zhu. Inferring Human Interaction from Motion Trajectories in Aerial Videos. *39th Annual Meeting of the Cognitive Science Society (CogSci), 2017.* (**Oral presentation, acceptance rate: 255/873 = 29%**) **Computational Modeling Prize**

T. Shu, S. Todorovic and S.-C. Zhu. CERN: Confidence-Energy Recurrent Network for Group Activity Recognition. *IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2017.* (**Acceptance rate: 783/2680 = 29%**)

T. Shu, X. Gao, M. S. Ryoo and S.-C. Zhu. Learning Social Affordance Grammar from Videos: Transferring Human Interactions to Human-Robot Interactions. *IEEE International Conference on Robotics and Automation (ICRA), 2017.* (**Acceptance rate: 939/2289=41%**)

D. Xie, **T. Shu**, S. Todorovic and S.-C. Zhu. Modeling and Inferring Human Intents and Latent Functional Objects for Trajectory Prediction. *arXiv:1606.07827 (under review for T-PAMI)*

T. Shu*, S. Thurman*, D. Chen, S.-C. Zhu and H. Lu. Critical Features of Joint Actions that Signal Human Interaction. *38th Annual Meeting of the Cognitive Science Society (CogSci), 2016.*

T. Shu, M. S. Ryoo and S.-C. Zhu. Learning Social Affordance for Human-Robot Interaction. *25th Internation Joint Conference on Artificial Intelligence (IJCAI), 2016.* (**Acceptance rate: 558/2294= 24%**)

T. Shu, D. Xie, B. Rothrock, S. Todorovic and S.-C. Zhu. Joint Inference of Groups, Events and Human Roles in Aerial Videos. *IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2015.* (**Oral presentation, acceptance rate: 71/2123 = 3.3%**)

MEDIA COVERAGE	"Robots taught to work alongside humans by giving high fives." *New Scientist.* April 27, 2017

PROFESSIONAL SERVICE

Conference Reviewer:
- IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2017
- IEEE International Conference on Computer Vision (ICCV), 2017
- IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), 2017

TEACHING EXPERIENCE

University of California, Los Angeles, Department of Statistics

STATS 232A: Statistical Modeling and Learning in Vision and Cognition   01/2016 - 03/2016
- Teaching Assistant
- Graded homework and held office hours

STATS 130: Getting up to Speed with SPSS, Stata, SAS, and R   03/2015 - 06/2015
- Teaching Assistant
- Organized weekly discussion sessions, graded homework and held office hours
- Evaluation: 8.2 / 9.0

SELECTED HONORS AND AWARDS

Computational Modeling Prize (Perception/Action Category), Cognitive Science Society	2017
Outstanding Bachelor Thesis of Fudan University	2014
Shanghai Outstanding Graduate Award, Shanghai Municipal Education Commission, China	2014
National Scholarship of China, Ministry of Education, China	2013
UCLA Cross-disciplinary Scholars in Science and Technology Scholarship	2013
Outstanding Student of Fudan University	2011, 2012, 2013
Tencent Innovative Scholarship for Outstanding Students at Fudan University	2012
First Prize of the Scholarship for Outstanding Students at Fudan University	2011
China Undergraduate Mathematical Contest in Modeling, Second Prize	2011
The ACM-ICPC Asia Regional Contest Harbin Site, Silver Prize	2010

SKILLS

- Programming: C/C++, Python, ROS, MATLAB, R, Perl, Java
- Statistics Softwares: SAS, STATA, SPSS
- Operating Systems: Linux, Mac OS X, Windows.