

Xu Zhang

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Education

- Sep. 2013 – **Ph.D.**, *Tsinghua University*, Beijing.
 - Jul. 2016 Information and Communication Engineering, Supervised by Prof. Shengjin Wang
- Nov. 2014 – **Visiting Scholar**, *Columbia University*, New York.
 - May 2015 Supervised by Richard Dicker Professor Shih-Fu Chang
- Sep. 2010 – **M.S.**, *Tsinghua University*, Beijing.
 - Jul. 2013 Information and Communication Engineering, Supervised by Prof. Shengjin Wang
- Sep. 2006 – **B.S.**, *Tsinghua University*, Beijing, Score: 89.1/100, rank: 37/267.
 - Jul. 2010 Electronic Engineering. Recommended without test to graduate school

Experience

- Jul. 2016 – **Postdoctoral Research Scientist**, *Digital Video and Multimedia Laboratory*, Columbia University, New York.
 - Present
 - **DARPA MediFor, Provenance Task**
 - Given a manipulated image, find out possible sources in million scale world image set
 - Build plausible genealogy graph
 - **IARPA CORE3D**
 - Generate accurate object 3D models with real physical properties from commercial satellite imagery.
- Nov. 2015 – **Internship**, *Tencent, Inc.*, Beijing.
 - May. 2016 ○ **Advertisement Approval System**
 - Automatically approval system for image Ads.
- Nov. 2014 – **Visiting Scholar**, *Digital Video and Multimedia Laboratory*, Columbia University, New York.
 - May. 2015
 - **Localization Object with Specific Attribute**
 - Deep neural network, Learning from weakly supervised images.
 - **Fast Orthogonal Projection Based on Kronecker Product**
 - Hamming embedding, Orthogonal Procrustes analysis, Cartesian k-means.
 - Project page: https://github.com/spongezhang/Kronecker_Projection.git
- Sep. 2010 – **Research Assistant**, *Center for Intelligent Image and Document Information Processing*, Tsinghua University, Beijing.
 - June. 2016
 - **Virtual Glasses Wearing System**
 - Developed a virtual glasses wearing system on iOS for JD.com, Inc.
 - http://jjckb.xinhuanet.com/2013-12/02/content_479724.htm.
 - **Driver States and Activities Monitoring and Early Warning System**
 - Driver fatigue detection system on multiple platforms.

- Aug. 2015 – **Internship**, *JD.com*, Beijing.
Nov. 2015 ○ **Virtual Wearing System**
- Body shape estimation algorithm for the virtual wearing system.
- Stitched puppet human model, ICP, Particle-based max-product algorithm.
Dec. 2008 – **Internship**, *Center for Intelligent Image and Document Information Processing*,
Jul. 2010 Tsinghua University, Beijing.
○ **Pedestrian Detection and Tracking for Hewlett-Packard Co., Ltd.**

Research

- Jun. 2018 **Co-Organizer**, 1st and 2nd Landmark workshops in CVPR 2018 and 2019. <https://landmarkworkshop.github.io/CVPRW2019>
Feb. 2019 **Panel Chair**, DARPA MediFor 30-month PI meeting provenance session.

Software Copyrights

- Jul. 2013 2013SR076696, THIVS Smart Surveillance System V1.0
Sep. 2013 2013SR102664, Virtual Glasses Wearing System V1.0

Awards

- Nov. 2014 Second Prize Guanghua Scholarship
Jun. 2013 Outstanding Masters Thesis of Department of Electronic Engineering
Dec. 2012 Friends of Tsinghua Mingwei Zhang Scholarship
Jun. 2010 Outstanding Bachelors Thesis of Department of Electronic Engineering

Publications

Xu Zhang, Fei He, Lu Tian, and Shengjin Wang. Cognitive pedestrian detector: Adapting detector to specific scene by transferring attributes. *Neurocomputing*, 2015.

Xu Zhang, Felix X. Yu, Shih-Fu Chang, and Shengjin Wang. Deep transfer network: Unsupervised domain adaptation. *arXiv preprint arXiv:1503.00591*, 2015.

Xu Zhang, Felix X. Yu, Ruiqi Guo, Sanjiv Kumar, Shengjin Wang, and Shih-Fu Chang. Fast orthogonal projection based on kronecker product. In *ICCV*, 2015.

Xu Zhang, Felix X. Yu, Svebor Karaman, and Shih-Fu Chang. Learning discriminative and transformation covariant local feature detectors. In *CVPR*, 2017.

Xu Zhang, Felix X. Yu, Svebor Karaman, Wei Zhang, and Shih-Fu Chang. Heated-up softmax embedding. In *arXiv preprint arXiv:1809.04157*, 2018.

Xu Zhang, Felix X. Yu, Sanjiv Kumar, and Shih-Fu Chang. Learning spread-out local feature descriptors. In *ICCV*, 2017. **Spotlight**.