YUANDONG TIAN

RESEARCH INTEREST

Theory and practice of Deep Learning, Reinforcement Learning, Optimization, Computer Vision.

WORK EXPERIENCE

Jan.2015-present	**Research Scientist** Facebook Artificial Intelligence Research (FAIR) *Perform research on next generation Artificial Intelligence.*
Sep.2013-Dec.2014	**Robotics Researcher / Software Engineer** Vision and Learning Group, Driverless Car Team, Google X Lab *Real-time object recognition for autonomous driving car.*
Jun.2011-Sep.2011	**Research Intern** with C. Lawrence Zitnick Microsoft Research, Redmond, WA
Aug.2005-Oct.2007	Multiple **Research Intern** with Xiaoou Tang and Rong Xiao Microsoft Research Asia, Beijing, China

EDUCATION

Sep.2008-Sep.2013	**Ph.D** in Robotics Carnegie Mellon University, Pittsburgh PA GPA: 4.07/4.33 Advisor: Srinivasa G. Narasimhan
Sep.2005-Jun.2008	**Master** in Computer Science & Engineering Shanghai Jiao Tong University, Shanghai, China GPA (major): 3.91/4.00
Sep.2001-Jun.2005	**Bachelor** in Computer Science & Engineering Shanghai Jiao Tong University, Shanghai, China GPA (major) 3.95/4.00

PATENT

Dec.2014	Undisclosed patent, *Google Self-driving Car*

AWARDS AND SCHOLARSHIP

Dec.2013	Recipient of ICCV 2013 **Marr Prize Honorable Mentions**.
Feb.2011	Recipient of **Microsoft Research PhD Fellowship** (2011-2013)
Nov.2004	First-class award in China Undergraduate Mathematical Contest in Modeling.
Mar.2005	Meritorious Winner award in MCM (*The Mathematical Contest in Modeling*).
Jun.2005	Outstanding graduate of Colleges and Universities in Shanghai.

TEACHING

Teaching Assistant	Computer Vision, Carnegie Mellon University, Fall 2010

PAPER REVIEWS

Reviewers	CVPR, ICCV, ECCV, Eurographics, ICCP, ACM SIGCHI, AAAI PAMI, IJCV, TIP, ICML, NIPS, UAI

SKILLS

Software	C/C++, Python, LUA/torch, Matlab
Languages	Mandarin Chinese (Native), English, Japanese

PERSONAL INTEREST

Badminton, Jogging, Swimming, Reading, Novel Writing

ARXIV

[1] Bolei Zhou, **Yuandong Tian**, Sainbayar Sukhbaatar, Arthur Szlam, Rob Fergus, Simple Baseline for Visual Question Answering, arXiv, 2016.

JOURNAL PUBLICATIONS

[1] **Yuandong Tian**, Srinivasa G. Narasimhan: Theory and Practice of Hierarchical Data-driven Descent for Optimal Deformation Estimation, International Journal of Computer Vision (IJCV), Jul. 2015.

[2] **Yuandong Tian**, Srinivasa G. Narasimhan: Globally Optimal Estimation of Nonrigid Image Distortion, International Journal of Computer Vision (IJCV), Nov. 2011.

[3] Mohit Gupta, **Yuandong Tian**, Srinivasa G. Narasimhan, Li Zhang: A Combined Theory of Defocused Illumination and Global Light Transport, International Journal of Computer Vision (IJCV), Sep. 2011.

CONFERENCE PUBLICATIONS

[1] **Yuandong Tian**, An Analytical Formula of Population Gradient for two-layered ReLU network and its Applications in Convergence and Critical Point Analysis. International Conference on Machine Learning (ICML), 2018.

[2] Yan Zhu, **Yuandong Tian**, Dimitris Mexatas, Piotr Dollr, Semantic Amodal Segmentation, Computer Vision and Pattern Recognition (CVPR), 2017.

[3] Yuxin Wu, **Yuandong Tian**, Training Agent for First-Person Shooter Game with Actor-Critic Curriculum Learning, International Conference on Learning Representations (ICLR), 2018.

[4] Jiajun Wu, Tianfan Xue, Joseph JLim, **Yuandong Tian**, Joshua BTenenbaum, Antonio Torralba, William TFreeman, Single Image 3D Interpreter Network, European Conference on Computer Vision (ECCV), 2016 (Oral presentation).

[5] **Yuandong Tian**, Yan Zhu, Better Computer Go Player with Neural Network and Long-term Prediction, International Conference on Learning Representations (ICLR), 2016.

[6] **Yuandong Tian**, Srinivasa GNarasimhan: Hierarchical Data-Driven Descent for Efficient Optimal Deformation EstimationInternational Conference on Computer Vision (ICCV), 2013 (**Marr Prize Honorable Mentions**).

[7] Nan Li, **Yuandong Tian**, William WCohen, Ken Koedinger: Integrating perceptual learning with external world knowledge in a simulated studentProceedings of the 16th International Conference on Artificial Intelligence in Education, 2013.

[8] **Yuandong Tian**, CLawrence Zitnick, Srinivasa GNarasimhan: Exploring the Spatial Hierarchy of Mixture Models for Human Pose Estimation, European Conference on Computer Vision (ECCV), 2012

[9] **Yuandong Tian**, Jun Zhu: Learning from Crowds in the Presence of Schools of Thought, ACM International Conference on Knowledge Discovery and Data Mining (SIGKDD), 2012.

[10] **Yuandong Tian**, Srinivasa GNarasimhan, Alan JVannevel: Depth from Optical Turbulence, Computer Vision and Pattern Recognition (CVPR) 2012.

[11] **Yuandong Tian**, Srinivasa GNarasimhan: Rectification and 3D reconstruction of Curved Document Images, Computer Vision and Pattern Recognition (CVPR) 2011, (**Oral Presentation**), 3.5% acceptance).

[12] Dong Huang, **Yuandong Tian**, Fernando De la Torre, Local Isomorphism to Solve the Pre-image Problem in Kernel Methods, Computer Vision and Pattern Recognition (CVPR) 2011.

[13] **Yuandong Tian**, Srinivasa GNarasimhan: A Globally Optimal Data-Driven Approach for Image Distortion Estimation, Computer Vision and Pattern Recognition (CVPR) 2010, (**Oral Presentation**, 4% acceptance).

[14] **Yuandong Tian**, Srinivasa GNarasimhan: Seeing through water: Image restoration using model-based tracking, International Conference on Computer Vision (ICCV) 2009.

[15] Mohit Gupta, **Yuandong Tian**, Srinivasa GNarasimhan, Li Zhang: (De)Focusing on Global Light Transport for Active Scene Recovery, IEEE Conference on Computer Vision and Pattern Recognition (CVPR) 2009, (**Oral Presentation**, 3.5% acceptance).

[16] Shifeng Chen, **Yuandong Tian**, Fang Wen, Ying-Qing Xu, Xiaoou Tang: Easytoon: an easy and quick tool to personalize a cartoon storyboard using family photo album, ACM Multimedia 2008.

[17] **Yuandong Tian**, Wei Liu, Rong Xiao, Fang Wen, Xiaoou Tang: A Face Annotation Framework with Partial Clustering and Interactive Labeling, IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2007.

[18] Jingyu Cui, FangWen, Rong Xiao, **Yuandong Tian**, Xiaoou Tang: EasyAlbum: An Interactive Photo Annotation System Based on Face Clustering and Re-ranking, ACM Conference on Human Factors in Computing Systems (CHI) 2007.

[19] Rong Xiao, Wu-Jun Li, **Yuandong Tian**, Xiaoou Tang: Joint Boosting Feature Selection for Robust Face Recognition, IEEE Conference on Computer Vision and Pattern Recognition (CVPR) 2006.