

# Xudong Lin

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## EDUCATION

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**Department of Physics, Tsinghua University**

Aug 2014- Jul 2018

Mathematics and Physics, GPA (Overall): 85/100    Ranking (Total): 11/51

## RESEARCH EXPERIENCE

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**Intelligent Vision Group** | Tsinghua University | Research Assistant

July 2016 - Present

Advisor: Jiwen Lu, A.P. at Department of Automation, Tsinghua University ([http://ivg.au.tsinghua.edu.cn/Jiwen\\_Lu/](http://ivg.au.tsinghua.edu.cn/Jiwen_Lu/))

- Researched the gaze correction problem, collected a new dataset for it, and constructed a model with spatial constraints to generate realistic corrected face pictures, together with a Ph.D. candidate.
- Proposed an end-to-end adversarial network to generate hard negative samples to improve deep metric learning and my implementation performed beyond current state-of-art, submitted to CVPR 2018
- Utilized reinforcement learning to explore relationships among bits of binary descriptors, and significantly improved performance on three widely used tasks, submitted to CVPR 2018

**Vision Research Lab** | University of California, Santa Barbara | Summer intern

June 2017 – Sep 2017

Advisor: B.S. Manjunath, professor in Department of Electrical and Computer Engineering

- Defined a new problem called salient events temporal localization and annotate a new dataset based on a driving video dataset
- Proposed a novel approach which utilizes rich semantic features to temporally localize salient events
- Cooperated with a Ph.D. candidate on video saliency prediction and prepared a paper to be submitted *IEEE Transactions on Intelligent Transportation*

**SenseTime** | Beijing | Research intern

Nov 2017 - Present

Advisor: Dr. Hongwei Qin, Professor. Xiaou Tang

- Improved face detection model by introducing landmark detection

**Institute for Interdisciplinary Information Sciences** | Tsinghua University | Research Assistant

June 2016 – Aug 2016

Advisor: Zhangqi Yin, assistant research fellow at Institute for Interdisciplinary Information Sciences, Tsinghua University

- Investigated quantum image processing and wrote a simple literature review on quantum image representation

## SUBMITTED MANUSCRIPTS

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- Y. Duan, W. Zheng, **Xudong Lin**, J. Lu, J. Zhou. "Deep Adversarial Metric Learning," submitted to *Conference on Computer Vision and Pattern Recognition 2018*;
- Y. Duan, Z. Wang, J. Lu, **Xudong Lin**, J. Zhou. "GraphBit: Mining Bitwise Interaction via Deep Reinforcement Learning," submitted to *Conference on Computer Vision and Pattern Recognition 2018*;
- T. Deng, **Xudong Lin**, B.S. Manjunath. "Video Saliency prediction in traffic driving scenes via U-Net Convolutional Networks," to be submitted to *IEEE Transactions on Intelligent Transportation Systems*;

## ACTIVITIES AND LEADERSHIP

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➤ Undergraduate Overseas Research Training Supporting Program, Tsinghua University, 400/7000

June 2017 – Sep 2017

**Youth League Committee**, Tsinghua University | Vice Supervisor of New Year Gala Group

Sep 2016 - Dec 2016

- Controlled multimedia equipment during the New Year Gala which was webcast and watched by more than 10,000 people

**Student Union**, Department of Physics | Director of Entertainment Department

June 2015 - June 2016

- Designed and led the preparation of the gala for the 90<sup>th</sup> anniversary of Department of Physics, and held it successfully, which consisted of about 20 programs and attracted about 800 students to watch

## SKILLS

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Programming Languages: C/C++, Python, Matlab, Mathematica

Deep learning Library: Pytorch, Tensorflow, Chainer, Caffe    Research related device: Eyelink 1000 Eye-tracking System