

# QINGYANG TAN

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## RESEARCH INTERESTS

Computer Graphics, Computer Vision, Machine Learning

## EDUCATION

**University of Maryland, College Park (UMD), MD, U.S.** 2018 – Present

*Ph.D. Student* in Computer Science Advisor: Prof. Dinesh Manocha

**University of Chinese Academy of Sciences (UCAS), Beijing, China** 2014 – 2018

*B.Eng.* in Computer Science and Technology GPA: 3.9/4.0 Rank: 1/61

**Massachusetts Institute of Technology (MIT), MA, U.S.** 2017

*Special Student* in EECS GPA: 5.0/5.0

## EXPERIENCE

### Cloth Simulation through Neural Network

UMIACS, UMD MD, U.S.

June 2018 – Present

*Research Assistant* Advisor: Prof. Dinesh Manocha

- Implemented feature to vertex neural network layer to enhance accuracy
- Added physics-based loss to achieve more deformation details
- Tested application on dynamics cloth simulation

### Recognition of Isolated and Continuous Sign Language

Institute of Computing Technology (ICT), CAS Beijing, China

Sept. 2017 – June 2018

*Bachelor Thesis* Advisors: Prof. Xilin Chen, Prof. Xiujuan Chai

- Developed end-to-end and multi-task framework to classify sign language video
- Designed spatial and temporal attention residual learning

### Geometry Deep Learning on Shape Deformation

ICT, CAS Beijing, China

May 2016 – Sept. 2017

*Research Assistant* Advisors: Prof. Lin Gao, Prof. Yu-Kun Lai, Prof. Shihong Xia

- Combined neural network and intrinsic mesh feature to analysis and generate 3D data
- Defined new tunable parameters for network to capture most important deformations in certain dimensions
- Applied graph-based Convolutional Neural Networks (CNN) on irregular 3D mesh surface
- Added distance-based sparsity constraint to autoencoder framework

### Machine Learning Application in Startup Success

MIT Sloan School of Management MA, U.S.

Feb. 2017 – May 2017

*UROP Project* Advisor: Prof. Christian Catalini

- Developed code and tools to predict startup growth
- Processed large-scale dataset of startup funding and growth events
- Acquired and cleaned raw public data from website including LinkedIn and Github

## PUBLICATIONS

### Variational Autoencoders for Deforming 3D Mesh Models

Qingyang Tan, Lin Gao, Yu-Kun Lai, and Shihong Xia

IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2018

### Mesh-based Autoencoders for Localized Deformation Component Analysis

Qingyang Tan, Lin Gao, Yu-Kun Lai, Jie Yang, and Shihong Xia

AAAI Conference on Artificial Intelligence (AAAI) (Spotlight), 2018

## SKILLS

- Hands on experience of Machine Learning and Neural Network libraries including TensorFlow, PyTorch, scikit-learn, Theano, Caffe
- Fluent in C, Matlab, Python
- Knowledge of SQL, Verilog, HTML

## ♡ HONORS AND AWARDS

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<i>Beijing Excellent Graduate</i>	June 2018
<i>UCAS Excellent Graduate</i>	June 2018
<i>UCAS Excellent Bachelor Thesis</i>	June 2018
<i>UCAS First-Class Academy Fellowship</i>	Oct. 2015 / Oct. 2016 / Oct. 2017
<i>UCAS Excellent Undergraduate Research-Intern Report</i>	Nov. 2015 / Apr. 2016

## ❖ MISCELLANEOUS

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- Languages: English - Fluent, Mandarin - Native speaker
- Hobbies: Swimming, Science Fiction
- Extracurricular Activities:
  - Asian International Model United Nations, Peking University, Beijing, China Apr. 2016
  - Editor for UCAS Undergraduate Social Platform, UCAS, Beijing, China Sept. 2015 – June 2016
  - Volunteer Science Teacher, Hua-Ao School, Beijing, China Oct. 2014 – Jan. 2015