

# YANSONG TANG

Sponsored Postdoctoral Researcher, Department of Engineering Science, University of Oxford

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## EDUCATION

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**Department of Automation, Tsinghua University**

*Sep. 2015 - Jun. 2020*

PhD, Computer Vision and Pattern Recognition

Research Interests: Understanding human behaviours from various types of videos, including instructional videos, sport videos, egocentric videos and RGB/depth/skeletal videos.

Advisors: Prof. Jie Zhou and Prof. Jiwen Lu

**Department of Automation, Tsinghua University**

*Sep. 2011 - Jul. 2015*

B.Eng., Automation

## EXPERIENCE

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**Department of Engineering Science, University of Oxford**

*Dec. 2020 - present*

Sponsored Postdoctoral Researcher

Advisor: Prof. Philip H. S. Torr

**Visual Computing Group, Microsoft Research Asia**

*Jun. 2020 - Dec. 2020*

Research Assistant

Mentor: Dr. Han Hu

**Center for Vision, Cognition, Learning, and Autonomy, University of California, Los Angeles**

*Jun. 2016 - Sep. 2016*

Visiting Student

Advisors: Prof. Song-Chun Zhu and Prof. Tianfu Wu

## PUBLICATIONS

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**Conference Papers** (\* indicated equal contribution)

- (1) **Y. Tang\***, Z. Ni\*, J. Zhou, D. Zhang, J. Lu, Y. Wu and J. Zhou. Uncertainty-aware Score Distribution Learning for Action Quality Assessment, *IEEE Conf. on Computer Vision and Pattern Recognition (CVPR)*, pp. 9836-9845, 2020, **oral**.
- (2) **Y. Tang**, D. Ding, Y. Rao, Y. Zheng, D. Zhang, L. Zhao, J. Lu and J. Zhou. COIN: A Large-scale Dataset for Comprehensive Instructional Video Analysis, *IEEE Conf. on Computer Vision and Pattern Recognition (CVPR)*, pp. 1207-1216, 2019.  
Project page: <https://coin-dataset.github.io>
- (3) **Y. Tang\***, Y. Tian\*, J. Lu, P. Li and J. Zhou. Deep Progressive Reinforcement Learning for Skeleton-based Action Recognition, *IEEE Conf. on Computer Vision and Pattern Recognition (CVPR)*, pp. 5323-5332, 2018.
- (4) **Y. Tang**, Z. Wang, P. Li, J. Lu, M. Yang and J. Zhou. Mining Semantics-Preserving Attention for Group Activity Recognition, *ACM Multimedia (MM)*, pp. 1283-1291, 2018, **oral**.

**Journal Papers**

- (1) **Y. Tang**, J. Lu, and J. Zhou. Comprehensive Instructional Video Analysis: The COIN Dataset and Performance Evaluation, *Trans. on Pattern Analysis and Machine Intelligence (TPAMI)*, 2020, in Press, DOI: 10.1109/TPAMI.2020.2980824.

- (2) **Y. Tang**, J. Lu, Z. Wang, M. Yang and J. Zhou, Learning Semantics-Preserving Attention and Contextual Interaction for Group Activity Recognition, *IEEE Trans. on Image Processing (TIP)*, vol. 28, no. 10, pp. 4997-5012, 2019.
- (3) **Y. Tang**, Z. Wang, J. Lu, J. Feng and J. Zhou. Multi-stream Deep Neural Networks for RGB-D egocentric Action Recognition, *IEEE Trans. on Circuits and Systems for Video Technology (TCSVT)*, vol. 29, no. 10, pp. 3001-3015, 2019.  
Project page: [http://ivg.au.tsinghua.edu.cn/dataset/THU\\_READ.php](http://ivg.au.tsinghua.edu.cn/dataset/THU_READ.php)
- (4) **Y. Tang**, Y. Wei, X. Yu, J. Lu, and J. Zhou. Graph Interaction Networks for Relation Transfer in Human Activity Videos, *IEEE Trans. on Circuits and Systems for Video Technology (TCSVT)*, 2020, in Press, DOI: 10.1109/TCSVT.2020.2973301.

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## PROFESSIONAL ACTIVITIES

- Reviewer for CVPR, ICCV, ECCV, AAAI and so on.
- Reviewer for TPAMI, TIP, TCSVT, TMM and so on.

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## AWARDS

- Excellent PhD Graduate of Beijing, 2020
- Excellent Doctoral Dissertation of Tsinghua University, 2020
- Zijing Scholar Fellowship (10 graduates per year), Tsinghua University, 2020
- National Scholarship, Tsinghua University, 2018
- Outstanding Student Cadres, Tsinghua University, 2015
- MC Integrated Merit Scholarship, Tsinghua University, 2014
- Zhang-Mingwei Scholarship, Tsinghua University, 2013
- MC Integrated Merit Scholarship, Tsinghua University, 2012

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## INVITED TALKS

- Alibaba, 11/2020
- TBSI, Tsinghua University, 11/2020
- Sun Yat-Sen University, 11/2020
- University of Oxford, 10/2020
- CVPR, 06/2020
- ACM MM, 09/2018

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## MENTORING

### Undergraduate Research:

**Yi Tian**, honoured with the Top Talent Scholarship of Tsinghua University, currently Ph.D student at MIT

**Zian Wang**, currently Ph.D student at University of Toronto

**Yu Zheng**, currently Ph.D student at Tsinghua University

**Xumin Yu**, currently Ph.D student at Tsinghua University

**Peiyang Li**, currently master student at Tsinghua University

**Danyang Zhang**, Ph.D student at Shanghai Jiaotong University

**Zanlin Ni**, currently the fourth-year undergraduate student at Tsinghua University

**Jiayun Wang**, currently master student at Beihang University, summer visiting student at Stanford University

**Xingyu Liu**, currently the fourth-year undergraduate student at Beihang University