Yansong Tang

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

✉ yansong.tang@eng.ox.ac.uk • 🌐 https://andytang15.github.io

Education

Department of Automation, Tsinghua University Sep. 2015 - Jun. 2020
Ph.D. in Computer Vision *with **Excellent Graduate and Thesis Award***
Thesis: *Video-based Human Action Recognition and Assessment in Complex Scenes*
Supervisor: Prof. Jie Zhou, *IAPR Fellow*
Co-supervisor: Prof. Jiwen Lu, *IAPR Fellow*

Department of Automation, Tsinghua University Sep. 2011 - Jul. 2015
B.E. in Automation

School of Economics and Management, Tsinghua University Sep. 2013 - Jul. 2015
B.Ec. in Economics (second bachelor's degree)

Academic Experience

Department of Engineering Science, University of Oxford Dec. 2020 - present
Sponsored Postdoctoral Researcher
Funded by Zijing Scholar Fellowship of Tsinghua University (**10 graduates per year**)
Advisor: Prof. Philip H. S. Torr, *Fellow of the Royal Society and Royal Academy of Engineering*

Visual Computing Group, Microsoft Research Asia Jun. 2020 - Dec. 2020
Research Assistant
Advisor: Dr. Han Hu

Center for Vision, Cognition, Learning, and Autonomy, UCLA Jun. 2016 - Sep. 2016
Research Assistant
Advisor: Prof. Song-Chun Zhu, *IEEE Fellow*

Publications

* indicates equal contribution

Peer-Reviewed Conference Publications

[1] **Yansong Tang***, Zanlin Ni*, Jiahuan Zhou, Danyang Zhang, Jiwen Lu, Ying Wu and Jie Zhou.
Uncertainty-aware Score Distribution Learning for Action Quality Assessment
IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR), pp. 9836-9845, 2020 oral

[2] **Yansong Tang**, Dajun Ding, Yongming Rao, Yu Zheng, Danyang Zhang, Lili Zhao, Jiwen Lu, Jie Zhou
COIN: A Large-scale Dataset for Comprehensive Instructional Video Analysis
IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR), pp. 1207-1216, 2019

[3] **Yansong Tang***, Yi Tian*, Jiwen Lu, Peiyang Li, and Jie Zhou
Deep Progressive Reinforcement Learning for Skeleton-based Action Recognition
IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR), pp. 5323-5332, 2018

[4] **Yansong Tang**, Zian Wang, Peiyang Li, Jiwen Lu, Ming Yang, and Jie Zhou
Mining Semantics-Preserving Attention for Group Activity Recognition
ACM Multimedia (MM), pp. 1283-1291, 2018 oral

[5] **Yansong Tang**, Yi Tian, Jiwen Lu, Jianjiang Feng, and Jie Zhou
Action Recognition in RGB-D Egocentric Videos
IEEE International Conference on Image Processing (ICIP), pp. 3410-3414, 2018

Peer-Reviewed Journal Publications

[6] **Yansong Tang**, Jiwen Lu, and Jie Zhou
Comprehensive Instructional Video Analysis: The COIN Dataset and Performance Evaluation
IEEE Transactions on Pattern Analysis and Machine Intelligence (**TPAMI**, *IF: 17.73*), 2020, in Press, DOI: 10.1109/TPAMI.2020.2980824.

[7] **Yansong Tang**, Jiwen Lu, Zian Wang, Ming Yang and Jie Zhou
Learning Semantics-Preserving Attention and Contextual Interaction for Group Activity Recognition
IEEE Transactions on Image Processing (**TIP**, *IF: 6.79*), vol. 28, no. 10, pp. 4997-5012, 2019

[8] **Yansong Tang**, Zian Wang, Jiwen Lu, Jianjiang Feng and Jie Zhou
Multi-stream Deep Neural Networks for RGB-D egocentric Action Recognition
IEEE Transactions on Circuits and Systems for Video Technology (**TCSVT**, *IF: 4.05*), vol. 29, no. 10, pp. 3001-3015, 2019

[9] **Yansong Tang**, Yi Wei, Xumin Yu, Jiwen Lu, and Jie Zhou
Graph Interaction Networks for Relation Transfer in Human Activity Videos
IEEE Transactions on Circuits and Systems for Video Technology (**TCSVT**, *IF: 4.05*), 2020, in Press, DOI: 10.1109/TCSVT.2020.2973301.

Talks

Understanding Human Actions in Instructional Videos
Invited Presentation at VALSE Student Webinar *Mar. 2021*

Self-supervised Learning from Video
Invited Presentation at University of Oxford *Mar. 2021*

Video-based Human Action Recognition and Assessment in Complex Scenes
Invited Presentation at Alibaba *Nov. 2020*
Invited Presentation at TBSI, Tsinghua University *Nov. 2020*
Invited Presentation at Sun Yat-Sen University *Nov. 2020*
Invited Presentation at University of Oxford *Oct. 2020*
Invited Presentation at Ningxia University *Aug. 2020*

Uncertainty-aware Score Distribution Learning for Action Quality Assessment
CVPR'2020 Oral Presentation *Jun. 2020*

Mining Semantics-Preserving Attention for Group Activity Recognition
ACM MM'2020 Oral Presentation *Sep. 2018*
Invited Presentation at Beijing University Academic Forum on Artificial Intelligence *Apr. 2019*

Honors and Awards

o Excellent PhD Graduate of Beijing City (**Top 1%**) *2020*

o Excellent Doctoral Dissertation of Tsinghua University (**Top 1%**) *2020*

o Zijing Scholar Fellowship, Tsinghua University (**10 graduates per year**) *2020*

o National Scholarship, Tsinghua University (**Top 1%**) *2018*

o Outstanding Student Cadres, Tsinghua University (**Top 1%**) *2015*

Academic Services

Journal Reviewer

o IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI)

o IEEE Transactions on Image Processing (TIP)

o IEEE Transactions on Circuits and Systems for Video Technology (TCSVT)

o IEEE Transactions on Multimedia (TMM)

o IEEE Transactions on Cognitive and Developmental Systems (TCDS)

Conference Reviewer

o IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR)

- International Conference on Computer Vision (ICCV)
- European Conference on Computer Vision (ECCV)
- AAAI Conference on Artificial Intelligence (AAAI)
- IEEE International Conference on Multimedia and Expo (ICME)
- International Conference on Pattern Recognition (ICPR)
- IEEE International Conference on Image Processing (ICIP)

Teaching and Mentoring

- Teaching Assistant, Numerical Analysis and Algorithm, Tsinghua University, Winter 2017, 2018
- Undergraduate Mentoring Program, Tsinghua University, 2015-2017
- Graduate Mentoring Program, Tsinghua University, 2019-2020

Advising

- Zhao Yang, DPhil student at University of Oxford
- 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, Currently 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, visiting student at Stanford University
- Xingyu Liu, Currently the fourth-year undergraduate student at Beihang University

References

Available upon request