

# Xiangteng He

Alibaba DAMO Academy

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## Current Appointment

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2020.07-present     **Senior Algorithm Engineer, Alibaba DAMO Academy, Hangzhou, China**

- Research Interests: Video Retrieval, Multi-modal Content Analysis

## Education

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2014.09-2020.07     **Ph.D. in Computer Application, Peking University, Beijing, China**

- Advisor: Prof. [Yuxin Peng](#)
- Research Interests: Fine-grained Visual Categorization, Deep Learning
- Thesis: Discriminative Feature Learning and Its Application to Fine-grained Analysis

2010.09-2014.07     **B.Eng. in Computer Science, Nankai University, Tianjin, China**

- Advisor: Prof. [Jufeng Yang](#) and Prof. [Yuxin Peng](#)
- Thesis: Design and Implementation of A Video Retrieval Method based on Query Instance

## Publications

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1. Peng Wu, **Xiangteng He**, Mingqian Tang, Yiliang Lv and Jing Liu, HANet: Hierarchical Alignment Networks for Video-Text Retrieval, *ACM Multimedia Conference (ACM MM)*, 2021. (Accepted)
2. Zhen Han, **Xiangteng He**, Mingqian Tang and Yiliang Lv, Video Similarity and Alignment Learning on Partial Video Copy Detection, *ACM Multimedia Conference (ACM MM)*, 2021. (Accepted)
3. **Xiangteng He\***, Yulin Pan\*, Mingqian Tang and Yiliang Lv, Self-supervised Video Retrieval Transformer Network, *arXiv Preprint*, 2021.
4. **Xiangteng He** and Yuxin Peng, Fine-grained Visual-textual Representation Learning, *IEEE Transactions on Circuits and Systems for Video Technology (TCSVT)*, Vol. 30, No. 2, pp. 520-531, Feb. 2020.
5. **Xiangteng He** and Yuxin Peng, Unsupervised Fine-grained Video Categorization via Adaptation across Domains and Modalities, *Journal of Software*, 2020. (Accepted, in Chinese)
6. Junjie Zhao, Yuxin Peng and **Xiangteng He**, Attribute Hierarchy based Multi-task Learning for Fine-grained Image Classification, *Neurocomputing*, Vol. 395, pp. 150-159, Jun. 2020.
7. **Xiangteng He**, Yuxin Peng and Junjie Zhao, Which and How Many Regions to Gaze: Focus Discriminative Regions for Fine-grained Visual Categorization, *International Journal of Computer Vision (IJCV)*, Vol. 127, No. 9, pp. 1235-1255, Sep. 2019.
8. **Xiangteng He**, Yuxin Peng and Junjie Zhao, Fast Fine-grained Image Classification via Weakly Supervised Discriminative Localization, *IEEE Transactions on Circuits and Systems for Video Technology (TCSVT)*, Vol. 29, No. 5, pp. 1394-1407, May. 2019.
9. **Xiangteng He**, Yuxin Peng and Liu Xie, A New Benchmark and Approach for Fine-grained Cross-media Retrieval, *ACM Multimedia Conference (ACM MM)*, pp. 1740-1748, Nice, France, Oct. 21-25, 2019.
10. Yuxin Peng, **Xiangteng He**, and Junjie Zhao, Object-Part Attention Model for Fine-grained Image Classification, *IEEE Transactions on Image Processing (TIP)*, Vol. 27, No. 3, pp. 1487-1500, Mar. 2018.
11. **Xiangteng He** and Yuxin Peng, Only Learn One Sample: Fine-Grained Visual Categorization with One Sample Training, *ACM Multimedia Conference (ACM MM)*, pp. 1372-1380, Seoul, Korea, Oct. 22-26, 2018.
12. **Xiangteng He**, Yuxin Peng and Junjie Zhao, StackDRL: Stacked Deep Reinforcement Learning for Fine-grained Visual Categorization, *International Joint Conference on Artificial Intelligence (IJCAI)*, pp. 741-747, Stockholm, Sweden, Jul. 13-19, 2018.
13. **Xiangteng He** and Yuxin Peng, Multi-attention Guided Activation Propagation in CNNs, *1st Chinese Conference on Pattern Recognition and Computer Vision (PRCV)*, pp. 16-27, Guangzhou, China, Nov. 23-26, 2018.

14. **Xiangteng He** and Yuxin Peng, Fine-grained Image Classification via Combining Vision and Language, *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, pp. 5994-6002, Honolulu, Hawaii, USA, Jul. 21-26, 2017.
15. **Xiangteng He**, Yuxin Peng and Junjie Zhao, Fine-grained Discriminative Localization via Saliency-guided Faster R-CNN, *ACM Multimedia Conference (ACM MM)*, pp. 627-635, Mountain View, CA, USA, Oct. 23-27, 2017.
16. **Xiangteng He** and Yuxin Peng, Weakly Supervised Learning of Part Selection Model with Spatial Constraints for Fine-grained Image Classification, *AAAI Conference on Artificial Intelligence (AAAI)*, pp. 4075-4081, San Francisco, California, USA, Feb. 4-9, 2017.
17. Junjie Zhao, Yuxin Peng and **Xiangteng He**, Attribute Hierarchy based Multi-task Learning for Fine-grained Image Classification, *China National Conference on Multimedia (ChinaMM)*, Nanjing, Jiangsu, China, Sep. 15-17, 2017.

## Patents

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1. Yuxin Peng and **Xiangteng He**, A Data Augment and Image Classification Approach based on Selection and Generation, Chinese Patent Application, 201811183994.X. (Patent Pending)
2. Yuxin Peng and **Xiangteng He**, A Specific Video Detection Approach based on Convolutional Neural Network, Chinese Patent Application, 201610045369.3. (Patent Pending)

## Honors

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| 2020.12 | <a href="#">CCF (China Computer Federation) Outstanding Doctoral Dissertation Award</a> (10 in total) |
| 2020.08 | Excellent Doctorate Dissertation Award of Peking University   |
| 2020.06 | Excellent Graduates of Beijing  |
| 2020.06 | Excellent Graduates of Peking University  |
| 2019.10 | Huawei Scholarship  |
| 2018.12 | <a href="#">Baidu Scholarship</a> (6 in China, 10 in total of the World)                              |
| 2018.12 | Excellent Student and Paper Award of Wangxuan Institute of Computer Technology, Peking University     |
| 2018.05 | Top 10 Outstanding Academic Students, School of EECS, Peking University                               |
| 2018.11 | National Scholarship (Top 1)  |
| 2018.06 | Chancellor's Scholarship of Peking University   |
| 2018.05 | Top 10 Outstanding Academic Students, School of EECS, Peking University                               |
| 2017.10 | Huawei Scholarship  |

## Competitions

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| 2014.11 | As a member of ICST team to participate in <b>TRECVID 2014</b> , achieving <b>first place</b> in interactive instance search task.  |
| 2015.11 | As a member of ICST team to participate in <b>TRECVID 2015</b> , achieving <b>first place</b> in instance search task.  |
| 2016.11 | As a member of ICST team to participate in <b>TRECVID 2016</b> , achieving <b>first place</b> in instance search task.  |
| 2016.10 | Participate in <b>The First Network Public Opinion (Audio and Video) Analysis Technology Invitational Contest</b> , achieving <b>third place</b> in specific video recognition and video caption detection. |

## Media Coverage

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| 2020.12 | CCF (China Computer Federation) Outstanding Doctoral Dissertation Award. <a href="#">[CCF News]</a> <a href="#">[CCF CV News]</a> <a href="#">[FITEE News]</a> |
| 2020.08 | Excellent Doctorate Dissertation Award of Peking University. <a href="#">[PKU WICT News]</a>   |
| 2019.12 | Science and Technology Youth. <a href="#">[Duxinshu News]</a>  |

- 2019.10      PKU FG-XMedia: A New Benchmark for Fine-grained Cross-media Retrieval. [\[Synced News\]](#)
- 2018.12      Baidu Scholarship. [\[Baidu News\]](#) [\[PKU News\]](#)

## **Professional Services**

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### **Conference (Senior) Program Committee Member / Reviewer**

ACM Multimedia Conference (ACM MM)  
International Joint Conference on Artificial Intelligence (IJCAI)  
Asian Conference on Computer Vision (ACCV)

### **Journal Reviewer**

IEEE Transactions on Image Processing (TIP)  
IEEE Transactions on Neural Networks and Learning Systems (TNNLS)  
IEEE Transactions on Multimedia (TMM)  
IEEE Transactions on Circuits and Systems for Video Technology (TCSVT)  
Pattern Recognition Letters (PRL)  
Multimedia Systems