LIMIN WANG

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WORK EXPERIENCE

Nanjing University, Nanjing, China *April 2018 - now*
Professor at Department of Computer Science and Technology
Researcher at State Key Laboratory for Novel Software Technology

ETH Zurich, Zurich, Switzerland *December 2015 - March 2018*
Post-doctoral Research Fellow with Computer Vision Lab, Supervisor: Prof. Luc Van Gool.
Research project: ERC Advanced Grant *VarCity*.

EDUCATION

The Chinese University of Hong Kong, Hong Kong *August 2011 - December 2015*
Ph.D. in Information Engineering with Multimedia Lab, Supervisor: Prof. Xiaoou Tang.
Thesis title: Representing and Modeling Human Actions in Videos.
Awarded by Hong Kong PhD Fellowship.

Nanjing University, Nanjing, China *September 2007 - June 2011*
B.Sc. in Computer Science and Technology.
Thesis title: Multiclass Object Detection by Combining Local Appearances and Context.
Best Bachelor Thesis Team of Jiangsu Province (first author).

RESEARCH INTERESTS

Computer Vision: action recognition and detection, scene recognition
Machine Learning: representation learning, deep learning.

HONORS AND AWARDS

- Talents for the Nanjing Science and Technology Top Experts Gathering Plan *2020*
- WAIC Outstanding Youth Paper Award *2019*
- First Prize of Guangdong Province Technical Invention *2019*
- Wu Wenjun Second Prize of Artificial Intelligence Technology Progress Award *2019*
- Talents for Jiangsu Innovation and Entrepreneurship *2019*
- Young Thousand Talents Program *2018*
- CVPR Outstanding Reviewer *2017*
- CVPR Doctoral Consortium Award (Mentor: Rahul Sukthankar) *2015*
- Hong Kong PhD Fellowship (114 candidates in Hong Kong) *2011*
- Best Bachelor Thesis Team of Jiangsu Province (1 recipient in Nanjing University) *2011*
- Outstanding Graduate of Nanjing University *2011*
- Excellent Undergraduate Innovation Project of Nanjing University *2010*
- Google Scholarship (1 recipient in CS department) *2010*
- National Scholarship (3 recipients in CS department) *2009*
- Province First Prize, China Undergraduate Mathematical Contest in Modeling *2009*
- Tung OOCL (Orient Overseas Container Line) Scholarship (3 recipients in CS department) *2008*
- Outstanding Student of Nanjing University *2008*

CONTESTS

- Person in Context Challenge: **1st place in human-centric st video grounding task**. *2021*
- ActivityNet Challenge: **1st place in Kinetics Self-Supervised task**. *2021*
- Media AI Alibaba Challenge: 1st runner-up in video temporal action localization *2020*
- ActivityNet Challenge: 1st runner-up in video classification and action detection. *2017*
- ImageNet Large Scale Visual Recognition Challenge: 4th place in scene classification. *2016*
- ActivityNet Large Scale Activity Recognition Challenge: **1st place in video classification**. *2016*
- Large-scale Scene Understanding Challenge: **1st place in scene classification**. *2016*
- ImageNet Large Scale Visual Recognition Challenge: 1st runner up in scene classification. *2015*
- ChaLearn Looking at People Challenge, ICCV: 3rd place in cultural event recognition. *2015*
- Large-scale Scene Understanding Challenge: 1st runner up in scene classification. *2015*
- THUMOS'15 Action Recognition Challenge: top performer. *2015*
- ChaLearn Looking at People Challenge: **1st place in action spotting, event recognition.** *2015*
- THUMOS'14 Action Recognition Challenge: 1st runner up in action detection. *2014*
- ChaLearn Looking at People Challenge: **1st place in action spotting.** *2014*
- THUMOS'13 Action Recognition Challenge: 4th place. *2013*
- ChaLearn Multi-Modal Gesture Recognition Challenge: 4th place. *2013*

PUBLICATIONS (GOOGLE CITATION: 11000+, H-INDEX: 35)

Google Scholar: https://scholar.google.com.hk/citations?user=HEuN8PcAAAAJ&hl=en

Journal Papers

[J1] D. Du, **L. Wang**, Z. Li, G. Wu, *Cross-Modal Pyramid Translation for RGB-D Scene Recognition*, in International Journal of Computer Vision (**IJCV**), to appear, 2021.

[J2] Z. Ruan, C. Zou, L. Wu, G. Wu, and **L. Wang**, *SADRNet: Self-Aligned Dual Face Regression Networks for Robust 3D Face Alignment and Reconstruction*, in IEEE Transactions on Image Processing (**TIP**), Vol. 30, 2021.

[J3] Y. Zheng, Z. Liu, T. Lu, and **L. Wang**, *Dynamic Sampling Networks for Efficient Action Recognition*, in IEEE Transactions on Image Processing (**TIP**), Vol. 29, 2020.

[J4] Y. Zhao, Y. Xiong, **L. Wang**, Z. Wu, X. Tang, and D. Lin, *Temporal Action Detection with Structured Segment Networks*, in International Journal of Computer Vision (**IJCV**), Vol. 128, No. 1, 2020.

[J5] **L. Wang**, Y. Xiong, Z. Wang, Y. Qiao, D. Lin, X. Tang, and L. Van Gool, *Temporal Segment Networks for Action Recognition in Videos*, in IEEE Transactions on Pattern Analysis and Machine Intelligence (**T-PAMI**), Vol. 41, No. 11, 2019.

[J6] B. Zhang, **L. Wang**, Z. Wang, Y. Qiao, and H. Wang, *Real-time Action Recognition with Deeply Connected Motion Vector CNNs*, in IEEE Transactions on Image Processing (**TIP**), Vol. 126, No. 2, 2018.

[J7] **L. Wang**, Z. Wang, Y. Qiao, and L. Van Gool, *Transferring Deep Object and Scene Representations for Event Recognition in Still Images*, in International Journal of Computer Vision (**IJCV**), Vol. 126, No. 2-3, 2018.

[J8] **L. Wang**, S. Guo, W. Huang, Y. Xiong, and Y. Qiao, *Knowledge Guided Disambiguation for Large-Scale Scene Recognition with Multi-resolution CNNs*, in IEEE Transactions on Image Processing (**TIP**), Vol. 26, No. 4, 2017.

[J9] Z. Wang, **L. Wang**, Y. Wang, B. Zhang, and Y. Qiao, *Weakly Supervised PatchNets: Describing and Aggregating Local Patches for Scene Recognition*, in IEEE Transactions on Image Processing (**TIP**), Vol. 26, No. 4, 2017.

[J10] S. Guo, W. Huang, **L. Wang**, and Y. Qiao, *Locally Supervised Deep Hybrid Model for Scene Recognition*, in IEEE Transactions on Image Processing (**TIP**), Vol. 26, No. 2, 2017.

[J11] Z. Yuan, H. Wang, **L. Wang**, T. Lu, P. Shivakumara, and C. L. Tan, *Modeling Spatial Layout for Scene Image Understanding via a Novel Multiscale Sum-Product Network*, in Expert Systems With Applications (**ESWA**), Vol. 63, 2016.

[J12] X. Peng, **L. Wang**, X. Wang, and Y. Qiao, *Bag of Visual Words and Fusion Methods for Action Recognition: Comprehensive Study and Good Practice*, in Computer Vision and Image Understanding (**CVIU**), Vol. 150, 2016.

[J13] **L. Wang**, Y. Qiao, and X. Tang, *MoFAP: A Multi-Level Representation for Action Recognition*, in International Journal of Computer Vision (**IJCV**), Vol. 119, No. 3, 2016.

[J14] **L. Wang**, Y. Qiao, and X. Tang, *Latent Hierarchical Model of Temporal Structure for Complex Activity Classification*, in IEEE Transactions on Image Processing (**TIP**), Vol. 23, No. 2, 2014.

CVPR/ICCV/ECCV/ICLR Papers

[C1] **L. Wang**, Z. Tong, B. Ji, G. Wu, *TDN: Temporal Difference Networks for Efficient Action Recognition*, in IEEE Conference on Computer Vision and Pattern Recognition (**CVPR**), 2021

[C2] T. Lu, **L. Wang**, G. Wu, *CGA-Net: Category Guided Aggregation for Point Cloud Semantic Segmentation*, in IEEE Conference on Computer Vision and Pattern Recognition (**CVPR**), 2021

[C3] Z. Wang, Z. Gao, **L. Wang**, Z. Li, G. Wu, *Boundary-aware Cascade Networks for Temporal Action Segmentation*, in European Conference on Computer Vision (**ECCV**), 2020.

[C4] Y. Li, Z. Wang, **L. Wang**, G. Wu, *Actions as Moving Points*, in European Conference on Computer Vision (**ECCV**), 2020.

[C5] J. Wu, Z. Kuang, **L. Wang**, W. Zhang, G. Wu, *Context-Aware RCNN: a Baseline for Action Detection in Videos*, in European Conference on Computer Vision (**ECCV**), 2020.

[C6] C. Gao, Q. Liu, Q. Xu, **L. Wang**, J. Liu, C. Zou *SketchyCOCO: Image Generation from Freehand Scene Sketches*, in IEEE Conference on Computer Vision and Pattern Recognition (**CVPR**), 2020. (**oral presentation**)

[C7] Y. Li, B. Ji, X. Shi, J. Zhang, B. Kang, **L. Wang** *TEA: Temporal Excitation and Aggregation for Action Recognition*, in IEEE Conference on Computer Vision and Pattern Recognition (**CVPR**), 2020.

[C8] S. Zhang, S. Guo, W. Huang, M. Scott, **L. Wang**, *V4D: 4D Convolutional Neural Networks for Video-Level Representation Learning*, in International Conference on Learning Representations (**ICLR**), 2020

[C9] Z. Gao, **L. Wang**, and G. Wu, *LIP: Local Importance-based Pooling*, in IEEE International Conference on Computer Vision (**ICCV**), 2019.

[C10] J. Wu, **L. Wang**, L. Wang, J. Guo, and G. Wu, *Learning Actor Relation Graphs for Group Activity Recognition*, in IEEE Conference on Computer Vision and Pattern Recognition (**CVPR**), 2019.

[C11] D. Du, **L. Wang**, H. Wang, K. Zhao, G. Wu, *Translate-to-Recognize Networks for RGB-D Scene Recognition*, in IEEE Conference on Computer Vision and Pattern Recognition (**CVPR**), 2019.

[C12] J. Guo, Z. Zhou, and **L. Wang**, *Single Image Highlight Removal with a Sparse and Low-Rank Reflection Model*, in European Conference on Computer Vision (**ECCV**), Munich, Germany, 2018.

[C13] **L. Wang**, W. Li, W. Li, and L. Van Gool, *Appearance-and-Relation Networks for Video Classification*, IEEE Conference on Computer Vision and Pattern Recognition (CVPR), Salt Lake City, Utah, USA, 2018.

[C14] Y. Zhao, Y. Xiong, **L. Wang**, Z. Wu, X. Tang, and D. Lin, *Temporal Action Detection with Structured Segment Networks*, in IEEE International Conference on Computer Vision (**ICCV**), Venice, Italy, 2017.

[C15] **L. Wang**, Y. Xiong, D. Lin, and L. Van Gool, *UntrimmedNets for Weakly Supervised Action Recognition and Detection*, in IEEE Conference on Computer Vision and Pattern Recognition (**CVPR**), Honolulu, Hawaii, USA, 2017.

[C16] J. Song, **L. Wang**, L. Van Gool, and O. Hilliges, *Thin-Slicing Network: A Deep Structural Model for Human Pose Estimation in Videos*, in IEEE Conference on Computer Vision and Pattern Recognition (**CVPR**), Honolulu, Hawaii, USA, 2017. (**oral presentation**)

[C17] **L. Wang**, Y. Xiong, Z. Wang, Y. Qiao, D. Lin, X. Tang, and L. Van Gool, *Temporal Segment Networks: Towards Good Practices for Deep Action Recognition*, in European Conference on Computer Vision (**ECCV**), Amsterdam, Netherlands, 2016.

[C18] **L. Wang**, Y. Qiao, X. Tang, and L. Van Gool, *Actionness Estimation Using Hybrid Fully Convolutional Networks*, in IEEE Conference on Computer Vision and Pattern Recognition (**CVPR**), Las Vegas, Nevada, USA, 2016.

[C19] B. Zhang, **L. Wang**, Y. Qiao, Z. Wang, and H. Wang, *Real-time Action Recognition with Enhanced Motion Vector CNNs*, in IEEE Conference on Computer Vision and Pattern Recognition (**CVPR**), Las Vegas, Nevada, USA, 2016.

[C20] **L. Wang**, Y. Qiao, and X. Tang, *Action Recognition with Trajectory-Pooled Deep-Convolutional Descriptors*, in IEEE Conference on Computer Vision and Pattern Recognition (**CVPR**), Boston, Massachusetts USA, 2015.

[C21] **L. Wang**, Y. Qiao, and X. Tang, *Video Action Detection with Relational Dynamic-Poselets*, in European Conference on Computer Vision (**ECCV**), Zurich, Switzerland, 2014.

[C22] X. Peng*, **L. Wang***, Y. Qiao, and Q. Peng, *Boosting VLAD with Supervised Dictionary Learning and High-Order Statistics*, in European Conference on Computer Vision (**ECCV**), Zurich, Switzerland, 2014. (first two authors contribute equally)

[C23] Z. Cai, **L. Wang**, X. Peng, and Y. Qiao, *Multi-view Super Vector for Action Recognition*, in IEEE Conference on Computer Vision and Pattern Recognition (**CVPR**), Columbus, Ohio, USA, 2014 (**oral presentation**).

[C24] **L. Wang**, Y. Qiao, and X. Tang, *Mining Motion Atoms and Phrases for Complex Action Recognition*, in IEEE International Conference on Computer Vision (**ICCV**), Sydney, Australia, 2013.

[C25] **L. Wang**, Y. Qiao, and X. Tang, *Motionlets: Mid-Level 3D Parts for Human Motion Recognition*, in IEEE Conference on Computer Vision and Pattern Recognition (**CVPR**), Portland, Oregon, USA, 2013.

Other Conference Papers

[C1] Z. Liu, D. Luo, Y. Wang, **L. Wang**, Y. Tai, C. Wang, J. Li, F. Huang, T. Lu, TEINet: Towards an Efficient Architecture for Video Recognition in AAAI Conference on Artificial Intelligence (**AAAI**), 2020.

[C2] S. Zhang, S. Guo, **L. Wang**, W. Huang, M. Scott Knowledge Integration Networks for Action Recognition in AAAI Conference on Artificial Intelligence (**AAAI**), 2020.

[C3] Y. Li, W. Lin, T. Wang, J. See, R. Qian, N. Xu, **L. Wang**, S. Xu, Finding Action Tubes with a Sparse-to-Dense Framework in AAAI Conference on Artificial Intelligence (**AAAI**), 2020.

[C4] Y. Yao, Z. Sun, F. Shen, L. Liu, **L. Wang**, F. Zhu, L. Ding, G. Wu, L. Shao, Dynamically Visual Disambiguation of Keyword-based Image Search in International Joint Conference on Artificial Intelligence (IJCAI), 2019.

[C5] D. He, Z. Zhou, C. Gan, F. Li, X. Liu, Y. Li, **L. Wang**, S. Wen, *StNet: Local and Global Spatial-Temporal Modeling for Action Recognition*, in AAAI Conference on Artificial Intelligence (**AAAI**), Honolulu, Hawaii, USA, 2019.

[C6] Z. Wang, X. Liu, L. Chen, **L. Wang**, Y. Qiao, X. Xie, and C. Fowlkes, *Structured Triplets Learning with Pos-tag Guided Attention for Visual Question Answering*, in IEEE Winter Conference on Applications of Computer Vision (**WACV**), Lake Tahoe, NV/CA, 2018.

[C7] Y. Wang, J. Song, **L. Wang**, L. Van Gool, and O. Hilliges, *Two-Stream SR-CNNs for Action Recognition in Videos*, in British Machine Vision Conference (BMVC), York, UK, 2016.

[C8] Z. Wang, Y. Wang, **L. Wang**, and Y. Qiao, *Codebook Enhancement of VLAD Representation for Visual Recognition*, in IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP), Shanghai, China, 2016.

[C9] X. Peng, **L. Wang**, Y. Qiao, and Q. Peng, *A Joint Evaluation of Dictionary Learning and Feature Encoding for Action Recognition*, in International Conference on Pattern Recognition (ICPR), Stockholm, Sweden, 2014.

[C10] X. Wang, **L. Wang**, and Y. Qiao, *A Comparative Study of Encoding, Pooling and Normalization Methods for Action Recognition*, in Asian Conference on Computer Vision (ACCV), Daejeon, Korea, 2012.

[C11] **L. Wang**, Y. Wu, T. Lu, and K. Chen, *Multiclass Object Detection by Combining Local Appearances and Context*, in ACM Conference on Multimedia (ACM MM), Scottsdale, Arizona, USA, 2011.

[C12] **L. Wang**, Y. Wu, Z. Tian, Z. Sun, and T. Lu, *A Novel Approach for Robust Surveillance Video Content Abstraction*, in Pacific-Rim Conference on Multimedia (PCM), Shanghai, China, 2010.

STUDENTS

2018-now

- Masters: Jianchao Wu, Ziteng Gao, Tianhao Li, Yixuan Li, Zixu Wang, Zhengzhi Wang, Yao Teng, Jing Tan, Jiaqi Tang, Liang Zhao, Jintao Lin
- PhD: Dapeng Du, Tao Lu, Zuxuan Huang, Jun Tu, Yutao Cui, Yuan Zhi, Ming Yang, Tao Wu

2014-2018

- Jie Song, now PhD student at ETH Zurich.
- Yifan Wang, now PhD student at ETH Zurich.
- Bowen Zhang, now PhD student at University of Southern California.
- Zhe Wang, now PhD student at University of California, Irvine.
- Zhuowei Cai, now working at Google.

TALKS

- *Video-based temporal modeling and action recognition method*
  Invited talk at Workshop on Human-centric visual understanding, VALSE, 2019

- *Towards Efficient End-to-End Architectures for Action Recognition and Detection in Videos*
  Invited talk at Workshop on Frontiers of Video Technology, Adobe Research, 2017
- *Object-Scene Convolutional Neural Networks for Event Recognition in Images*
  Talk at ChaLearn Looking at People Challenge, CVPR Workshop, 2015
- *Exploring Fisher Vector and Deep Networks for Action Spotting*
  Talk at ChaLearn Looking at People Challenge, CVPR Workshop, 2015

ACADEMIC SERVICE

Journal Reviewer

- Reviewer of International Journal of Computer Vision (**IJCV**)
- Reviewer of IEEE Transactions on Pattern Analysis and Machine Intelligence (**T-PAMI**)
- Reviewer of IEEE Transactions on Image Processing (**T-IP**)
- Reviewer of IEEE Transactions on Neural Networks and Learning Systems (**T-NNLS**)
- Reviewer of IEEE Transactions on Multimedia (**T-MM**)
- Reviewer of IEEE Transactions on Circuits and Systems for Video Technology (**T-CSVT**)
- Reviewer of Computer Vision and Image Understanding (**CVIU**)
- Reviewer of Image and Vision Computing (**IVC**)
- Reviewer of Pattern Recognition (**PR**)
- Reviewer of Pattern Recognition Letter (**PRL**)
- Reviewer of Machine Vision and Applications (**MVA**)
- Reviewer of Journal of Visual Communication and Image Representation (**JVCI**)

Area Chair, Program Committee and Conference Reviewer

- Area Chair of the 30th International Joint Conference on Artificial Intelligence (**IJCAI**), 2021
- Senior Program Committee of AAAI Conference on Artificial Intelligence (**AAAI**), 2021
- Reviewer of Conference on Neural Information Processing Systems (**NeurIPS**), 2020
- Reviewer of IEEE Conference on Computer Vision and Pattern Recognition (**CVPR**), 2017, 2018, 2019, 2020, 2021
- Reviewer of IEEE International Conference on Computer Vision (**ICCV**), 2017, 2019, 2021
- Reviewer of European Conference on Computer Vision (**ECCV**), 2016, 2018, 2020
- Reviewer of Asian Conference on Computer Vision (**ACCV**), 2016, 2018, 2020
- Reviewer of International Conference on Automatic Face and Gesture Recognition (**FG**), 2017, 2018
- Reviewer of International Conference on Pattern Recognition (**ICPR**), 2016
- Program Chair of workshop on visual understanding by learning from web data, 2017, 2018, 2019, 2020
- Program Committee of CVPR15, ICCV15 workshop on ChaLearn LAP
- Program Committee of ECCV16 workshop on TASK-CV