

# WEI TANG

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**CURRENT**            **University of Illinois at Chicago**, Chicago, IL            Aug. 2019 - Present  
Assistant Professor, Dept. of Computer Science

**EDUCATION**        **Northwestern University**, Evanston, IL            Jun. 2019  
Ph.D. in Electrical Engineering  
Advisor: Professor Ying Wu  
Thesis: Unified Compositional Models for Visual Recognition  
(*Best Dissertation Award, Dept. of Electrical and Computer Engineering*)

**Beihang University**, Beijing, China            Jan. 2015  
Master of Engineering in Astronautic Engineering  
Advisor: Professor Zhenwei Shi  
Thesis: Hyperspectral Image Unmixing Based on Sparse Representation  
(*Outstanding Master's Thesis Award*)

**Beihang University**, Beijing, China            Jul. 2012  
Bachelor of Engineering in Detection, Guidance and Control Technology  
Thesis: Hyperspectral Image Unmixing Based on Nonnegative Component Analysis  
(*Outstanding Bachelor's Thesis Award*)

**INTERESTS**        Computer Vision  
Machine Learning and Pattern Recognition  
Human Motion and Action Analysis  
Intelligent Human-Computer Interaction  
Remote Sensing Image Analysis and Applications

**EXPERIENCE**       **Northwestern University**            Sept. 2015 - Jun. 2019  
Research Assistant with Professor Ying Wu            Evanston, IL  
Teaching Assistant (Fall 2018)

**Microsoft Research**            Jun. 2018 - Sept. 2018  
Research Intern with Dr. John Corring and Dr. Gang Hua            Redmond, WA

**Beihang University**            Jan. 2012 - Jan. 2015  
Research Assistant with Professor Zhenwei Shi            Beijing, China

**PUBLICATIONS**    Kenkun Liu, Rongqi Ding, Zhiming Zou, Le Wang and Wei Tang, "A Comprehensive Study of Weight Sharing in Graph Networks for 3D Human Pose Estimation", in *European Conference on Computer Vision (ECCV'20)*, Glasgo, Scotland, UK, Aug. 2020.

Yuanhao Zhai, Le Wang, Wei Tang, Qilin Zhang, Junsong Yuan and Gang Hua, "Two-Stream Consensus Networks for Weakly-Supervised Temporal Action Localization", in *European Conference on Computer Vision (ECCV'20)*, Glasgo, Scotland, UK, Aug. 2020.

Wei Tang and Ying Wu, "Does Learning Specific Features for Related Parts Help Human Pose Estimation?", in *IEEE Conference on Computer Vision and Pattern Recognition (CVPR'19)*, Long Beach, CA, Jun. 2019.

Wei Tang, Pei Yu and Ying Wu, "Deeply Learned Compositional Models for Human Pose Estimation", in *European Conference on Computer Vision (ECCV'18)*, Munich,

Germany, Sept. 2018.

Wei Tang, Pei Yu, Jiahuan Zhou and Ying Wu, "Towards a Unified Compositional Model for Visual Pattern Modeling", in *IEEE International Conference on Computer Vision (ICCV'17)*, Venice, Italy, Oct. 2017.

Jiahuan Zhou, Pei Yu, Wei Tang and Ying Wu, "Efficient Online Local Metric Adaptation via Negative Samples for Person Re-Identification", in *IEEE International Conference on Computer Vision (ICCV'17)*, Venice, Italy, Oct. 2017.

Dan Wang, Zhenwei Shi and Wei Tang, "Collaborative Sparse Unmixing of Hyperspectral Data Using  $\ell_{2,p}$  Norm", in *IEEE International Geoscience and Remote Sensing Symposium (IGARSS'16)*, Beijing, China, Jul. 2016.

Wei Tang, Zhenwei Shi, Ying Wu and Changshui Zhang, "Sparse Unmixing of Hyperspectral Data Using Spectral a Priori Information", *IEEE Transactions on Geoscience and Remote Sensing (T-GRS)*, 2015.

Shuo Yang, Zhenwei Shi and Wei Tang, "Robust Hyperspectral Image Target Detection Using an Inequality Constraint", *IEEE Transactions on Geoscience and Remote Sensing (T-GRS)*, 2015.

Wei Tang, Zhenwei Shi and Ying Wu, "Regularized Simultaneous Forward-backward Greedy Algorithm for Sparse Unmixing of Hyperspectral Data", *IEEE Transactions on Geoscience and Remote Sensing (T-GRS)*, 2014.

Zhenwei Shi, Wei Tang, Duren Zhana and Zhiguo Jiang, "Subspace Matching Pursuit for Sparse Unmixing of Hyperspectral Data", *IEEE Transactions on Geoscience and Remote Sensing (T-GRS)*, 2014.

Wei Tang, Zhenwei Shi and Duren Zhana, "Sparse Hyperspectral Unmixing Using an Approximate  $\ell_0$  Norm", *Optik-International Journal for Light and Electron Optic*, 2014.

Jiao Long, Zhenwei Shi, Wei Tang and Changshui Zhang, "Single Remote Sensing Image Dehazing", *IEEE Geoscience and Remote Sensing Letters (GRSL)*, 2014.

Zhenwei Shi, Jiao Long, Wei Tang and Changshui Zhang, "Single Image Dehazing in Inhomogeneous Atmosphere", *Optik-International Journal for Light and Electron Optic*, 2014.

Zhenyu An, Zhenwei Shi, Xichao Teng, Xinran Yu and Wei Tang, "An Automated Airplane Detection System for Large Panchromatic Image with High Spatial Resolution", *Optik-International Journal for Light and Electron Optic*, 2014.

Wei Tang, Zhenwei Shi and Zhenyu An, "Nonnegative Matrix Factorization for Hyperspectral Unmixing Using Prior Knowledge of Spectral Signatures", *Optical Engineering (OE)*, 2012.

Jiao Long, Zhenwei Shi and Wei Tang, "Fast Haze Removal for a Single Remote Sensing Image Using Dark Channel Prior", in *International Conference on Computer Vision in Remote Sensing (CVRS'12)*, Xiamen, China, Jan. 2012.

Zhou Zhang, Zhenwei Shi, Wei Tang and Liu Liu, "Hyperspectral Unmixing Using Nonnegative Matrix Factorization with an Approximate  $\ell_0$  Sparsity Constraint", in *International Congress on Image and Signal Processing (CISP'12)*, Chongqing, China, Feb. 2012.

CS 515 *Advanced Computer Vision* (Spring 2020)  
CS 415 *Computer Vision I* (Fall 2019)

- HONORS
- Best Dissertation Award, Dept. of ECE, Northwestern University, 2019
  - Murphy Fellowship, Northwestern University, 2015
  - Outstanding Master's Thesis Award, Beihang University, 2015
  - Top Ten Graduate Students of Beihang University, 2014
  - National Scholarship, 2013
  - Lee Kum Kee Scholarship, 2012
  - Outstanding Bachelor's Thesis Award, Beihang University, 2012
  - Outstanding Graduate Award, Beihang University, 2012
- TALKS
- "Unified Compositional Models for Visual Recognition", University of Buffalo, Oct. 2019.
- ACADEMIC SERVICE
- Reviewer/Program Committee
- IEEE Transactions on Pattern Analysis and Machine Intelligence (T-PAMI)
  - International Journal of Computer Vision (IJCV)
  - IEEE Transactions on Image Processing (T-IP)
  - IEEE Transactions on Geoscience and Remote Sensing (T-GRS)
  - IEEE Transactions on Circuits and Systems for Video Technology (T-CSVT)
  - Computer Vision and Image Understanding (CVIU)
  - Machine Vision and Applications (MVAP)
  - IEEE Conference on Computer Vision and Pattern Recognition (CVPR'17-'20)
  - IEEE International Conference on Computer Vision (ICCV'17'19)
  - European Conference on Computer Vision (ECCV'18'20)
  - AAAI Conference on Artificial Intelligence (AAAI'20)
  - Asian Conference on Computer Vision (ACCV'18)
  - British Machine Vision Conference (BMVC'19'20)
  - IEEE Winter Conference on Applications of Computer Vision (WACV'20)
- INTERNAL SERVICE
- Graduate Advisor
- Zhiming Zou (2019-Present), University of Illinois at Chicago
  - Kenkun Liu (2019-Present), University of Illinois at Chicago
  - Harsh Yadav (2019-Present), University of Illinois at Chicago
  - Ansul Goenka (2019-Present), University of Illinois at Chicago
- Undergraduate Advisor
- Shikan Lian (2020-Present), University of Illinois at Chicago
  - Chengkang Shen (2020-Present), University of Illinois at Chicago
  - Peiyan Wang (2019-Present), University of Illinois at Chicago
- Ph.D. Preliminary Committees
- Yingyi Ma (Advisor: Xinhua Zhang), University of Illinois at Chicago, Apr. 2020.
  - Hongwei Jin (Advisor: Xinhua Zhang), University of Illinois at Chicago, Apr. 2020.
  - Sanket Gaurav (Advisor: Prof. Brian Ziebart), University of Illinois at Chicago, Apr. 2020.

- Abeer Alsaiani (Advisor: Prof. Andy Johnson), University of Illinois at Chicago, Mar. 2020.
- Arthur Nishimoto (Advisor: Prof. Andy Johnson), University of Illinois at Chicago, Dec. 2019.

#### Ph.D. Written Critique and Presentation (WCP) Committees

- Noaman Ahmad, "Is RDMA a Good Match For Distributed Systems", University of Illinois at Chicago, Mar. 2020.
- Gyuhak Kim, "A Review of Catastrophic Forgetting in Continual Learning and a Critique on Existing Approaches", University of Illinois at Chicago, Mar. 2020.
- Awais Jafar, "Follow The Prints: An Analysis of Website Fingerprinting Attacks", University of Illinois at Chicago, Mar. 2020.

#### M.S. Thesis Committees

- Gabriele Aldeghi, "Deep Learning for Retina Detection and Collision Avoidance" (Advisor: Prof. Tanya Berger-Wolf), University of Illinois at Chicago, Dec. 2019.
- Mattia Di Fatta, "Retina Detection in Vitrectomy Surgeries with Computer Vision" (Advisor: Prof. Tanya Berger-Wolf), University of Illinois at Chicago, Dec. 2019.
- Alberto Bellini, "Towards Open-Ended VQA Models Using Transformers" (Advisor: Prof. Natalie Parde), University of Illinois at Chicago, Dec. 2019.

#### Other Service

- Graduate admission committee, 2019-Present
- Faculty search committee, 2019-2020

CITATIONS <https://scholar.google.com/citations?user=GTYYEV0cAAAAJ&hl=en>