

Heng Fan

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RESEARCH INTERESTS

Computer Vision, Machine Learning and Medical Image Analysis

EDUCATION

Ph.D., Department of Computer Science, Stony Brook University, Stony Brook, NY, USA, 2021

- Dissertation: “Algorithms and Benchmarks for Robust Visual Object Tracking”
- Advisor: Professor Haibin Ling

B.S., College of Informatics, Huazhong Agricultural University, Wuhan, Hubei, China, 2013

- Major in Computer Science and Technology

EMPLOYMENT HISTORY

- Assistant Professor, University of North Texas
Department of Computer Science and Engineering
- Denton, TX USA, 2021–now

HONORS AND AWARDS

- CVPR Outstanding Reviewer Award, 2019
- National Scholarship (graduate level), Huazhong Agricultural University, 2015
- National Motivational Scholarship (undergraduate level), Huazhong Agricultural University, 2012
- National Scholarship (undergraduate level), Huazhong Agricultural University, 2011

PUBLICATIONS

Google Scholar profile: <https://scholar.google.com/citations?user=MVQYJiMAAAAJ>

Selected Journal Articles

- [1] Heng Fan*, Hexin Bai*, Liting Lin, Fan Yang, Peng Chu, Ge Deng, Sijia Yu, Harshit, Mingzhen Huang, Juehuan Liu, Yong Xu, Chunyuan Liao, Lin Yuan, and Haibin Ling, “LaSOT: A High-quality Large-scale Single Object Tracking Benchmark,” *International Journal of Computer Vision (IJCV)*, 129: 439–461, 2021.
- [2] Ying Liu, Heng Fan, Fuchuan Ni, and Jinhai Xiang, “ClsGAN: Selective Attribute Editing Based On Classification Adversarial Network,” *Neural Networks (NN)*, 133: 220-228, 2021.
- [3] Qin Zhou, Heng Fan, Hua Yang, Hang Su, Shibao Zheng, Shuang Wu, and Haibin Ling, “Robust and Efficient Graph Correspondence Transfer for Person Re-identification,” *IEEE Transactions on Image Processing (T-IP)*, 30: 1623-1638, 2021.
- [4] Heng Fan and Haibin Ling, “Parallel Tracking and Verifying,” *IEEE Transactions on Image Processing (T-IP)*, 28(8): 4130-4144, 2019.
- [5] Heng Fan, Xue Mei, Danil Prokhorov, and Haibin Ling, “Multi-level Contextual RNNs with Attention Model for Scene Labeling,” *IEEE Transactions on Intelligent Transportation Systems (T-ITS)*, 19(11): 3475-3485, 2018.
- [6] Heng Fan and Jinhai Xiang, “Robust Visual Tracking with Multitask Joint Dictionary Learning,” *IEEE Transactions on Circuits and Systems for Video and Technology (T-CSVT)*, 27(5): 1018-1030, 2017.

Selected Conference Articles

- [7] Heng Fan and Haibin Ling, “CRACT: Cascaded Regression-Align-Classification for Robust Visual Tracking,” *IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)*, 2021, accepted.
- [8] Heng Fan, Fan Yang, Peng Chu, Yuewei Lin, Lin Yuan, and Haibin Ling, “TracKlinic: Diagnosis of Challenge Factors in Visual Tracking,” *IEEE Winter Conference on Applications of Computer Vision (WACV)*, 2021.
- [9] Heng Fan and Haibin Ling, “MART: Motion-Aware Recurrent Neural Network for Robust Visual Tracking,” *IEEE Winter Conference on Applications of Computer Vision (WACV)*, 2021.
- [10] Fan Yang, Heng Fan, Peng Chu, Erik Blasch, and Haibin Ling, “Clustered Object Detection in Aerial Images,” *IEEE International Conference on Computer Vision (ICCV)*, 2019.
- [11] Heng Fan and Haibin Ling, “Siamese Cascaded Region Proposal Networks for Real-Time Visual Tracking,” *IEEE International Conference on Computer Vision and Pattern Recognition (CVPR)*, 2019.
- [12] Heng Fan*, Liting Lin*, Fan Yang*, Peng Chu*, Ge Deng, Sijia Yu, Hexin Bai, Yong Xu, Chunyuan Liao, and Haibin Ling, “LaSOT: A High-quality Benchmark for Large-scale Single Object Tracking,” *IEEE International Conference on Computer Vision and Pattern Recognition (CVPR)*, 2019.
- [13] Heng Fan, Peng Chu, Longin Jan Latecki, and Haibin Ling, “Scene Parsing via Dense Recurrent Neural Networks with Attentional Selection,” *IEEE Winter Conference on Applications of Computer Vision (WACV)*, 2019.
- [14] Peng Chu, Heng Fan, Chiu C. Tan, and Haibin Ling, “Online Multi-Object Tracking with Instance-Aware Tracker and Dynamic Model Refreshment,” *IEEE Winter Conference on Applications of Computer Vision (WACV)*, 2019.
- [15] Qin Zhou, Heng Fan, Shibao Zheng, Hang Su, Xinzhe Li, Shuang Wu, and Haibin Ling, “Graph correspondence transfer for person re-identification,” *AAAI Conference on Artificial Intelligence (AAAI)*, 2018.
- [16] Heng Fan and Haibin Ling, “Parallel Tracking and Verifying: A Framework for Real-Time and High Accuracy Visual Tracking,” *IEEE International Conference on Computer Vision (ICCV)*, 2017.
- [17] Heng Fan and Jinhai Xiang, “Robust Visual Tracking via Local-Global Correlation Filter,” *AAAI Conference on Artificial Intelligence (AAAI)*, 2017.
- [18] Heng Fan and Haibin Ling, “SANet: Structure-Aware Network for Visual Tracking,” *IEEE International Conference on Computer Vision and Pattern Recognition (CVPR) Workshops*, 2017.

TEACHING

- CSCE 3110, *Data Structures and Algorithms*, University of North Texas, Department of Computer Science and Engineering, Fall 2021.

PROFESSIONAL ACTIVITIES

Conference Organizing Committee

- Area Chair, IEEE Winter Conference on Applications of Computer Vision (**WACV**), 2022
- Co-organizer, International Workshop on Computer Vision for UAVs in **ECCV**, 2020

Conference Program Committee or Reviewers

- Neural Information Processing Systems (**NeurIPS**) - Datasets and Benchmarks Track, 2021
- IEEE Winter Conference on Applications of Computer Vision (**WACV**), 2021, 2022
- European Conference on Computer Vision (**ECCV**), 2020
- AAAI Conference on Artificial Intelligence (**AAAI**), 2020, 2021

- IEEE International Conference on Computer Vision (**ICCV**), 2019
- IEEE Conference on Computer Vision and Pattern Recognition (**CVPR**), 2019, 2020, 2021
- IAPR International Conference on Machine Vision Applications (**MVA**), 2016

Journal Reviewers

- IEEE Transactions on Pattern Analysis and Machine Intelligence (**T-PAMI**)
- IEEE Transactions on Circuits and Systems for Video Technology (**T-CSVT**)
- Journal of Visual Communication and Image Representation (**JVCI**)
- IEEE Transactions on Intelligent Transportation Systems (**T-ITS**)
- IEEE Transactions on Image Processing (**T-IP**)
- Robotics and Autonomous Systems (**RAS**)
- IEEE Signal Processing Letters (**SPL**)
- ACM Computing Surveys (**CUSR**)
- The Visual Computer (**TVC**)
- Knowledge-Based Systems
- Pattern Recognition (**PR**)
- Signal Processing
- Neurocomputing

TALKS

- “Algorithms and Benchmark for Robust Visual Object Tracking”, in Department of Computer Science, University of Alabama at Birmingham, Birmingham, AL USA, 2021. (Virtual)
- “Algorithms and Benchmark for Robust Visual Object Tracking”, in Department of Computer Science and Engineering, University of North Texas, Denton, TX USA, 2021. (Virtual)
- “Algorithms and Benchmark for Robust Visual Object Tracking”, in Department of Computer Science, University of North Carolina Wilmington, Wilmington, NC USA, 2021. (Virtual)
- “Algorithms and Benchmark for Robust Visual Object Tracking”, in Department of Computer Science, The University of Texas at El Paso, El Paso, TX USA, 2021. (Virtual)
- “Algorithms and Benchmark for Robust Visual Object Tracking”, in Department of Computer Science, Kennesaw State University, Kennesaw, GA USA, 2021. (Virtual)
- “Towards Real-Time and High Accuracy Visual Object Tracking”, in Department of Computer Science, Rowan University, Glassboro, NJ USA, 2019.
- “SANet: Structure-Aware Network for Visual Tracking”, in Deep Vision workshop at CVPR, Honolulu, HI USA, 2017.