

WENTAO BAO

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<http://wentao-bao.com>

EDUCATION

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|---|-----------------------------------|
| Michigan State University , East Lansing, MI, USA
Ph.D. in Computer Science & Engineering
Advisor: Prof. Yu Kong | Aug. 2022 - July, 2024 (Expected) |
| Rochester Institute of Technology , Rochester, NY, USA
Ph.D. in Computing & Information Sciences
Advisors: Prof. Yu Kong and Prof. Qi Yu | Sept. 2019 - Aug. 2022 |
| Wuhan University , Wuhan, China
M.E. in Photogrammetry & Remote Sensing
Advisor: Prof. Zhenzhong Chen and Prof. Daiqin Yang | Sept. 2016 - June 2019 |
| Wuhan University , Wuhan, China
B.S. in Remote Sensing Science & Technology | Sept. 2012 - June 2016 |

WORK EXPERIENCE

1. Research intern at **NEC** Laboratories America, Inc (NEC Lab), NJ, USA, May-August, 2023.
2. Research intern at **OPPO** US Research Center (InnoPeak), CA. USA, June-August, 2022.
3. Research intern at **Apple** (3D Vision at Apple Maps), CA. USA (Remote), June-August, 2021.

RESEARCH INTERESTS

- Computer Vision: Open-world Vision, Video Understanding, 3D Vision, VLM, AIGC.
- Machine Learning: Open-Set/OOD/Zero-Shot learning, Uncertainty, VAE/EBM/Diffusion, DRL.
- Others: Explainable AI, Trajectory Prediction, Human Visual Attention, Remote Sensing.

SELECTED PUBLICATIONS

1. **Wentao Bao**, Lichang Chen, Heng Huang, Yu Kong. Prompting Language-Informed Distribution for Compositional Zero-Shot Learning. (**ECCV**), 2024.
2. Yuxiao Chen, Kai Li, **Wentao Bao**, Deep Patel, Yu Kong, Martin Renqiang Min, Dimitris N. Metaxas. Learning to Localize Actions in Instructional Videos with LLM-Based Multi-Pathway Text-Video Alignment. (**ECCV**), 2024.
3. Yifan Li, Anh Dao, **Wenta Bao**, Yu Kong. Facial Behavior Analysis Using Fine-grained Emotion Instructions. (**ECCV**), 2024.
4. **Wentao Bao**, Lele Chen, Libing Zeng, Zhong Li, Yi Xu, Junsong Yuan, Yu Kong. Uncertainty-aware State Space Transformer for Egocentric 3D Hand Trajectory Forecasting. International Conference on Computer Vision (**ICCV**), 2023.
5. Libing Zeng, Lele Chen, **Wentao Bao**, Zhong Li, Yi Xu, Junsong Yuan, Nima Khademi Kalantari. 3D-aware Facial Landmark Detection via Multiview Consistent Training on Synthetic Data. IEEE/CVF Conference on Computer Vision and Pattern Recognition (**CVPR**), 2023.

6. Yuansheng Zhu, **Wentao Bao**, Qi Yu. Towards Open Set Video Anomaly Detection. European Conference on Computer Vision (**ECCV**), 2022.
7. **Wentao Bao**, Qi Yu, Yu Kong. OpenTAL: Towards Open Set Temporal Action Localization. IEEE/CVF Conference on Computer Vision and Pattern Recognition (**CVPR**), 2022 (**Oral**).
8. Xinmiao Lin, **Wentao Bao**, Matthew Wright, Yu Kong. Gradient Frequency Modulation for Visually Explaining Video Understanding Models. British Machine Vision Conference (**BMVC**), 2021.
9. **Wentao Bao**, Qi Yu, Yu Kong. Evidential Deep Learning for Open Set Action Recognition. International Conference on Computer Vision (**ICCV**), 2021 (**Oral**).
10. **Wentao Bao**, Qi Yu, Yu Kong. DRIVE: Deep Reinforced Accident Anticipation with Visual Explanation. International Conference on Computer Vision (**ICCV**), 2021.
11. Xiwen Dengxiong, **Wentao Bao**, Yu Kong. Multiple Instance Relational Learning for Video Anomaly Detection. International Joint Conference on Neural Network (**IJCNN**), 2021.
12. **Wentao Bao**, Qi Yu, Yu Kong. Uncertainty-based Traffic Accident Anticipation with Spatio-Temporal Relational Learning. 28th ACM International Conference on Multimedia (**MM**), 2020.
13. Junwen Chen, **Wentao Bao**, Yu Kong. Activity-driven Weakly-Supervised Spatio-Temporal Grounding from Untrimmed Videos. 28th ACM International Conference on Multimedia (**MM**), 2020.
14. Junwen Chen, **Wentao Bao**, Yu Kong. Group Activity Prediction with Sequential Relational Anticipation Model. European Conference on Computer Vision (**ECCV**), 2020.
15. **Wentao Bao**, Qi Yu, Yu Kong. Object-Aware Centroid Voting for Monocular 3D Object Detection. IEEE/RSJ International Conference on Intelligent Robots and Systems (**IROS**), 2020.
16. Hanbin Hong, **Wentao Bao**, Yuan Hong, Yu Kong. Privacy Attributes-aware Message Passing Neural Network for Visual Privacy Attributes Classification. International Conference on Pattern Recognition (**ICPR**), 2020.
17. **Wentao Bao**, Zhenzhong Chen. Human Scanpath Prediction based on Deep Convolutional Saccadic Model. **Neurocomputing**, vol. 404, pp. 154-164, Mar. 2020. (IF: 4.438)
18. **Wentao Bao**, Bin Xu, Zhenzhong Chen. MonoFENet: Monocular 3D Object Detection with Feature Enhancement Networks. *IEEE Transactions on Image Processing* (**TIP**), vol. 29, pp. 2753-2765, Nov. 2019. (IF: 9.340)
19. Daiqin Yang, **Wentao Bao**. Group Lasso based Band Selection for Hyperspectral Image Classification. *IEEE Geoscience and Remote Sensing Letters* (**GRSL**), vol. 14, no. 12, pp. 2438-2442, Nov. 2017. (IF: 3.833)

COMPETITIONS

1st Prize, Core Member , Salient360! Visual Attention Modeling for 360° Content.	July 2018
3rd Prize, Team Leader , The 4th National Graduate Contest on Smart-City.	Aug. 2017
Bronze Award , Team Leader , The 2nd China "Internet Plus" Competition (Hubei).	Dec. 2016
2nd Prize, Core Member , The 3rd National Graduate Contest on Smart-City.	Aug. 2016
1st Prize, Core Member , BigMM 2015 Challenge, Multiple-Camera Object Tracking.	Apr. 2015
3rd Prize, Team Leader , The 14th National "Challenge Cup" on Smart-City Track.	July 2015
3rd Prize, Core Member , The 14th National "SuperMap Cup" on GIS Contest.	Dec. 2015

Meritorious Winner, Core Member , Mathematical Contest in Modeling (MCM).	Feb. 2015
2nd Prize, Team Leader , The 13th National "SuperMap Cup" on GIS Contest.	Dec. 2014

HONORS & AWARDS

CVPR 2024 Travel Award for CVPR'24 Doctoral Consortium at Seattle, USA,	Jun. 2024
CVPR 2022 Travel Award for In-person Conference at New Orleans, USA.	Apr. 2022
Academic Innovation Award for Postgraduate Student, Wuhan University.	Dec. 2020
AAAI 2020 Travel Award for In-person Conference at New York, USA.	Dec. 2019
Excellent Graduated Student, Wuhan University. (top 5%)	May, 2019
China National Scholarship for graduate students.	Oct. 2018
The First-class Academic Scholarship, Wuhan University. (top 10%)	Oct. 2017 & 2018
Outstanding Postgraduate Student, Wuhan University. (top 10%)	Dec. 2017 & 2018
Excellent Graduate Freshman Scholarship, Wuhan University. (top 10%)	Oct. 2016
Advanced Individual, Wuhan University.	Jan. 2016

ACADEMIC SERVICES

Conference Reviewer:

- **CVPR** (2024 & 2023 & 2022 & 2021), **ECCV** (2022,2024), **ICCV** (2021), **IJCAI** (2023), **WACV** (2024 & 2023), **ICRA** (2021), **ACM MM** (2023 & 2022 & 2021 & 2020 & 2019), **ICWS** (2021), **MFI** (2020).

Journal Reviewer:

- IEEE Transactions on Pattern Analysis and Machine Intelligence (**TPAMI**).
- IEEE Transactions on Image Processing (**TIP**).
- IEEE Transactions on Multimedia (**TMM**).
- IEEE Transactions on Circuits and Systems for Video Technology (**TCSVT**).
- IEEE Transactions on Cognitive and Developmental Systems (**TCDS**).
- IEEE Transactions on Service Computing (**TSC**).
- IEEE Transactions on Instrumentation and Measurement (**TIM**).
- IEEE Robotics and Automation Letters (**RA-L**).
- ELSEVIER Pattern Recognition (**PR**).
- ELSEVIER Journal of Visual Communication and Image Representation (**JVCI**).

Memberships:

- IEEE Student Member
- ACM Student Member.

Volunteers:

- 34th AAAI Conference on Artificial Intelligence (AAAI-20), Feb. 7-12, 2020, New York, USA.