

# WENTAO BAO

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<https://cogito2012.github.io/homepage>

## EDUCATION

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**Rochester Institute of Technology**, Rochester, NY, USA Sept. 2019 - Present

Ph.D. in Computing & Information Sciences

Advisors: Prof. Yu Kong and Prof. Qi Yu

**Wuhan University**, Wuhan, China Sept. 2016 - June 2019

M.E. in Photogrammetry & Remote Sensing

Advisor: Prof. Zhenzhong Chen and Prof. Daiqin Yang

Overall GPA: 3.75/4.0

**Wuhan University**, Wuhan, China Sept. 2012 - June 2016

B.S. in Remote Sensing Science & Technology

Overall GPA: 3.72/4.0

## RESEARCH INTERESTS

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- Computer Vision: Video Understanding, 2D/3D Object Detection, Explainability, 3D Vision.
- Machine Learning: Open Set Recognition, Uncertainty Quantification, Reinforcement Learning.
- Others: Human Visual Attention, Remote Sensing.

## SELECTED PUBLICATIONS

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1. Yuansheng Zhu, **Wentao Bao**, Qi Yu. Towards Open Set Video Anomaly Detection. European Conference on Computer Vision (**ECCV**), 2022.
2. **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**).
3. Xinmiao Lin, **Wentao Bao**, Matthew Wright, Yu Kong. Gradient Frequency Modulation for Visually Explaining Video Understanding Models. British Machine Vision Conference (**BMVC**), 2021.
4. **Wentao Bao**, Qi Yu, Yu Kong. Evidential Deep Learning for Open Set Action Recognition. International Conference on Computer Vision (**ICCV**), 2021 (**Oral**).
5. **Wentao Bao**, Qi Yu, Yu Kong. DRIVE: Deep Reinforced Accident Anticipation with Visual Explanation. International Conference on Computer Vision (**ICCV**), 2021.
6. Xiwen Dengxiong, **Wentao Bao**, Yu Kong. Multiple Instance Relational Learning for Video Anomaly Detection. International Joint Conference on Neural Network (**IJCNN**), 2021.
7. **Wentao Bao**, Qi Yu, Yu Kong. Uncertainty-based Traffic Accident Anticipation with Spatio-Temporal Relational Learning. 28th ACM International Conference on Multimedia (**MM**), 2020.
8. Junwen Chen, **Wentao Bao**, Yu Kong. Activity-driven Weakly-Supervised Spatio-Temporal Grounding from Untrimmed Videos. 28th ACM International Conference on Multimedia (**MM**), 2020.
9. Junwen Chen, **Wentao Bao**, Yu Kong. Group Activity Prediction with Sequential Relational Anticipation Model. European Conference on Computer Vision (**ECCV**), 2020.

10. **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.
11. 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.
12. **Wentao Bao**, Zhenzhong Chen. Human Scanpath Prediction based on Deep Convolutional Saccadic Model. *Neurocomputing*, vol. 404, pp. 154-164, Mar. 2020. (IF: 4.438)
13. **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)
14. 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)

## WORK EXPERIENCE

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1. Research intern at OPPO US Research Center (**Innopeak**), CA. USA, June-August, 2022.
2. Research intern at **Apple**, 3D Vision at Apple Maps, CA. USA (Remote), June-August, 2021.

## COMPETITIONS

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<b>1st Prize, Core Member</b> , Salient360! Visual Attention Modeling for 360° Content.	July 2018
<b>3rd Prize, Team Leader</b> , The 4th National Graduate Contest on Smart-City.	Aug. 2017
<b>Bronze Award, Team Leader</b> , The 2nd China "Internet Plus" Competition (Hubei).	Dec. 2016
<b>2nd Prize, Core Member</b> , The 3rd National Graduate Contest on Smart-City.	Aug. 2016
<b>1st Prize, Core Member</b> , BigMM 2015 Challenge, Multiple-Camera Object Tracking.	Apr. 2015
<b>3rd Prize, Team Leader</b> , The 14th National "Challenge Cup" on Smart-City Track.	July 2015
<b>3rd Prize, Core Member</b> , The 14th National "SuperMap Cup" on GIS Contest.	Dec. 2015
<b>Meritorious Winner, Core Member</b> , Mathematical Contest in Modeling (MCM).	Feb. 2015
<b>2nd Prize, Team Leader</b> , The 13th National "SuperMap Cup" on GIS Contest.	Dec. 2014

## HONORS & AWARDS

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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
<b>China National Scholarship</b> 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

## TECH SKILLS

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### **DL/CV Tools**

PyTorch, TensorFlow, Keras, Caffe, MXNet, OpenAI Gym, OpenCV

### **Programing Languages**

Python, Java, C/C++, MATLAB, Android, Linux Shell

## ACADEMIC SERVICES

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### **Conference Reviewer:**

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

### **Journal Reviewer:**

- IEEE Transactions on Image Processing (TIP).
- IEEE Transactions on Circuits and Systems for Video Technology (TCSVT).
- IEEE Transactions on Instrumentation and Measurement (TIM).
- IEEE Robotics and Automation Letters (RA-L).
- Pattern Recognition (Elsevier).
- Journal of Visual Communication and Image Representation (JVCI, Elsevier).
- Information Sciences (Elsevier).
- Journal of Measurement (Elsevier).
- Multimedia System Journal (MMSJ, Springer).
- The Computer Journal (Oxford Academic).

### **Memberships:**

- IEEE Student Member
- ACM Student Member.

### **Volunteers:**

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