

WENTAO BAO

Luoyu Rd. No. 129 ◇ Wuhan, Hubei, P.R.China, 430079

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EDUCATION

Wuhan University

Expected in June 2019

M.Eng. student in School of Remote Sensing & Information Engineering

Major in Photogrammetry & Remote Sensing

Overall GPA: 3.75/4.00

Wuhan University

Sept. 2012 - June 2016

B.Eng. student in School of Remote Sensing & Information Engineering

Major in Remote Sensing Science & Technology

Overall GPA: 3.77/4.00

PUBLICATION

Wentao Bao, Zhenzhong Chen. Human Scanpath Prediction based on Deep Convolutional Saccadic Model. *IEEE Transactions on Neural Networks and Learning Systems (TNNLS)*, under review, 2018.

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.

Jing Xu, Yaqi Liu, **Wentao Bao**, Xuejing Liu. Vehicle Distance Warning on the Highway Based on Smart Phone Platforms Data Fusion. International Conference on Intelligent Computation Technology and Automation (**ICICTA**), June, 2015.

Zhenzhong Chen, Weihang Liao, Bin Xu, Hongyi Liu, Qisheng Li, He Li, Chao Xiao, Hang Zhang, Yiming Li, **Wentao Bao**, Daiqin Yang. Object Tracking over a Multiple-Camera Network. *IEEE International Conference on Multimedia Big Data (BigMM)*, Apr. 2015.

Jiangping Chen, **Wentao Bao**, Yaqi Liu. Self-adaption Indoor Parking Navigation and Automatic Parking System and Method based on Bluetooth Low Energy (BLE), **China Invention Patent**, Application No. CN201710791726.5, Publication No. CN107605219A, Publication Date 2018.01.19.

RESEARCH EXPERIENCE

3D Object Detection for Autonomous Driving

Apr. 2018 - Present

Graduate Researcher, with Prof. Zhenzhong Chen

Lab. of IIP, WHU

- Aiming at detecting 2D and 3D bounding boxes and corresponding class types of objects with RGB images and LiDAR point cloud data for autonomous driving.
- Designed an end-to-end learning model integrating a two-stage 2D object detector and direct point cloud learning method.
- Proposed a novel region-wise feature fusion scheme for RGB images and point cloud data.

Human Scanpath Prediction

Dec. 2017 - Mar. 2018

Graduate Researcher, with Prof. Zhenzhong Chen

Lab. of IIP, WHU

- Aiming at predicting the human scanpath (sequence of saccades and fixations) under free-viewing condition, which reveals the dynamic visual attention of human eyes.
- Proposed a deep convolutional saccadic model to simulate the widely recognized inhibition of return (IOR) process considering on both temporal dependency and spatial association with image content.
- Experimental results outperform other state-of-the-art methods with large margin on MIT1003 and FIGRIM benchmark.

Style Harmonization for MODIS Satellite Image Mosaicking

Feb. 2017 - Aug. 2017

*Graduate Researcher, with Prof. Zhenzhong Chen**Lab. of IIP, WHU*

- Aiming at unifying the holistic style of all satellite images of the Earth when they are mosaicked to construct a single world satellite map (many-to-one mapping problem).
- Proposed a GAN based style transfer model considering on global colorimetric harmonization and local texture consistency of multiple satellite images.

Band Selection for Hyperspectral Image Classification

Sept. 2016 - Dec. 2016

*Graduate Researcher, with Prof. Daiqin Yang**Lab. of IIP, WHU*

- Aiming at reducing the dimension of hyperspectral data through band selection in application of multi-label hyperspectral image classification.
- Proposed a group lasso based band selection (GLBS) model which is optimized with group lasso regularization and multinomial classification simultaneously.

COMPETITION EXPERIENCES

Grand Prize Winner , ICME 2018 Grand Challenge on Salient360!	July 2018
Third Prize , National Graduate Contest on Smart-City, Abnormal Event Detection.	Aug. 2017
Bronze Award , China College Students "Internet Plus" Competition, Hubei Division.	Dec. 2016
Second Prize , National Graduate Contest on Smart-City, Abnormal Event Detection.	Aug. 2016
First Prize , BigMM 2015 Challenge, Object Tracking over Multiple-Camera Network.	Apr. 2015
Third Prize , National Challenge Cup 2015, special contest on Smart City.	July 2015
Third Prize , National SuperMap Cup 2015, Cloud Platform Development.	Dec. 2015
Meritorious Winner , Mathematical Contest in Modeling (MCM).	Feb. 2015
Second Prize , National SuperMap Cup 2014, Android Application Development.	Dec. 2014

SELECTED HONORS

Outstanding Postgraduate Student, Wuhan University. (2nd of 53 candidates)	Dec. 2017
The First-class Academic Scholarship, Wuhan University. (2nd of 53 candidates)	Dec. 2017
The Second-class Graduate Freshman Scholarship, Wuhan University. (top 10%)	Oct. 2016
Advanced Individual, Wuhan University.	Jan. 2016

SKILLS

Computer Languages	Python, C/C++, Matlab, Java
Libraries	Caffe, TensorFlow, Keras, MatConvNet, OpenCV, GDAL
Standardized Test	TOEFL: 94, GRE: 311+3.5
Other	Latex, Git, Vim

RESEARCH INTERESTS

Computer Vision, Video Analytics, Image Processing, including:

- 2D/3D Object Detection and Tracking, Abnormal Event Detection, Vehicle Retrieval.
- Visual Attention Modeling, Semantic Segmentation, Image Style Transfer.
- Hyperspectral Images Processing, Remote Sensing Image Classification/Retrieval.
- Machine Learning and Deep Learning Theory.