

Curriculum Vitae

Wei-Hong LI

Nationality: China Date of Birth: 26th July, 1992

Gender: Male Email: liweih3@mail2.sysu.edu.cn / w.h.li@qmul.ac.uk

Homepage: <https://weihonglee.github.io>



Brief Biography

Mr. Wei-Hong Li is currently a master student majoring in *Information and Communication Engineering* in the School of Electronics and Information Technology at the Sun Yat-sen University (one of the **top ten** ones in China) and is a visiting PhD student at the Queen Mary University of London (UK) from 15th Oct. 2017. His research **interests** include Computer Vision and Machine Learning, particularly in Person re-identification, Important people detection, Deep Learning and Reinforcement Learning. During his master program, Mr. Wei-Hong Li worked on **online Metric Learning for person re-identification, person search & automatically inferring the most important people in static images** and he has a wide range of reading in computer vision & machine learning. Recently he involves in the Royal Society Newton Advanced Fellowship on Person Re-Identification In-The-Wild in UK.

Education

◇ **Oct 2017 – Future Apr 2018,**

Visiting PhD student at Queen Mary University of London (UK).

Supervised by [Prof. Sean Gong](#) and [Prof. Wei-Shi Zheng](#)

◇ **June 2015 – present,**

M.Sc. in School of Electronics and Information Technology at Sun Yat-sen University.

Supervised by [Prof. Wei-Shi Zheng](#).

◇ **September 2011 – June 2015, GPA 3.8/4.0,**

B.Sc. in Intelligence Science and Technology, Sun Yat-sen University

Thesis: **Tracking Multiple Targets in Group Activity Scene.**

Supervised by [Prof. Wei-Shi Zheng](#) from January 2015 to May 2015.

Publication List

- ◇ **Wei-Hong Li**, Zhuowei Zhong, Wei-Shi Zheng, “One-pass Person Re-identification by Sketched Online Discriminant Analysis”. (Under reviewed at *IEEE Transactions on Image Processing*)

- ◇ **Wei-Hong Li**, Benchao Li, Wei-Shi Zheng, “PersonRank: Detecting Important People in Images”. (Under reviewed at *International Conference on Automatic Face and Gesture Recognition*.)
- ◇ **Wei-Hong Li**, Yafang Mao, Ancong Wu, Wei-Shi Zheng. " Correlation based Identity Filter: An Efficient Framework For Person Search", Proceedings of *International Conference on Image and Graphics, 2017*. (Best Paper Award)
- ◇ Yuting Mai, **Wei-Hong Li**, Yongyi Tang, Xixi Bi, Wei-Shi Zheng. "Sketch metric learning", Proceedings of *International Joint Conference on Neural Networks, 2016*.
- ◇ Zhaoyu Lu and Ziqi Luo and Huicheng Zheng and Jikai Chen and **Wei-Hong Li**. "A Delaunay-Based Temporal Coding Model for Micro-expression Recognition", Proceedings of *Asian Conference on Computer Vision, 2014*.

Project Experience

- ◇ **January 2015 – September 2017: Research Student in Intelligence Science and System Lab at Sun Yat-sen University**
 - *Research Project on Online Person Re-identification*
 - Goal: Existing person re-id models are dominated by offline learning algorithms. He aims at developing an succinct online person re-identification that can be trained on streaming data and high dimensional feature with high efficiency.
 - Results:

Our proposed method can approximate the performance of the offline method with extremely high speed.
Rigorous theoretical analysis on how SoDA approximates the offline FDA was presented.
A paper is under reviewed at TIP.
 - *Research Project on Important People Detection*
 - Goal: Detecting important people in images is inherent challenging due to the existence of a great variety of variations on pose, action, appearance of persons and occasions. In this project, he proposed to detect important people in images automatically by analyzing interactions among persons, which estimated from different types of cues, including visual and spatial clues.
 - Results:

The PersonRank framework was developed for high accurate important people detection.
Formed two large image-based dataset for important people detection.
A paper is under reviewed at FG 2018.
 - *Research Project on Person Search for Surveillance System*
 - Goal: Towards person re-identification in the wild, identifying the query person in whole gallery images instead of cropped bounding boxes. Existing methods are based on a simple two-stage search strategy. Towards person re-identification in the wild, he developed an efficient person search framework that address pedestrian detection and re-identification simultaneously.

- Results:

- A Correlation Filter based framework for Person Search was proposed.

- A paper was accepted by ICIG 2017.

- Best paper award** by ICIG 2017

- A patent is published: CN107085713A.

- *Research Project on Object Tracking*

- Goal: A sketch matrix learning method for object tracking.

- Results: A paper was accepted by IJCNN 2016.

- ◇ **November 2013 – November 2014: Undergraduate Student at Sun Yat-sen University**

- *National Innovation Project*

- Program: Micro-expression Recognition

- Results: A paper was accepted by ACCV workshop.

- *Robotic Vision Course*

- Goal: Develop a computer vision algorithm to enable a robot, which senses surroundings through the camera on the smart phone, to detect obstacles (e.g., traffic cones in different color and manual bridge) and lines on the track, and to select the shortest path.

- Results:

- The robot is able to navigate fast and smoothly within the lines.

- He learnt some important computer vision models and tools (e.g., OpenCV).

Awards

- ◇ PhD Student Fellowship for **visiting PhD study** from the *Royal Society Advanced Newton Fellowship Program* and the *Natural Science Foundation of China*

- ◇ **Best Paper Award** by *International Conference on Image and Graphics, 2017*

- ◇ Five times Academic Excellence Award at Sun Yat-Sen University (twice in Master and three times in Bachelor)

- ◇ Twice second prize on *Chinese RoboCup Competition, 2014*

- ◇ The first prize on *Chinese RoboCup Competition, 2013*

Academic Activities

- ◇ Conference Attendance

- *Asian Conference on Computer Vision, Singapore, 2014*

- *Chinese Conference on Computer Vision, 2015*

- *International Conference on Image and Graphics, 2017*

Programming/Software/Operation System Skills

- ◇ Matlab programming, C++/Visual Studio, Python
- ◇ Deep learning tools, such as MatConvNet (VLFeat), Tensorflow (Google), Pytorch(Facebook).
- ◇ Linux (Centos, Ubuntu)

Teaching Experience/Language Skills

- ◇ Teaching Assistant
 - March 2017 to July 2017
 - Graphical Theory and Applications.
- ◇ Fitness trainer.
- ◇ Fluent in English. Native speaker of Chinese and Teochew dialect.

Information of Referees

- ◇ Dr. Wei-Shi Zheng, Professor in Sun Yat-sen University, China
Email: wszheng@ieee.org
Homepage: <http://isee.sysu.edu.cn/~zhwshi/>
- ◇ Dr. Jianguo Zhang, Reader in University of Dundee, United Kingdom
Email: j.n.zhang@dundee.ac.uk
Homepage: <http://staff.computing.dundee.ac.uk/jgzhang/>
- ◇ Dr. Xiaohua Xie, Research Professor in Sun Yat-sen University, China
Email: xiexiaoh6@mail.sysu.edu.cn
Homepage: <http://isee.sysu.edu.cn/~xiexh/>

Hobbies

- ◇ Fitness. He is extremely enthusiastic about workout and has been fitness for three years. He enjoys challenging himself every training day and figure out the best training strategy as well as nutrition plan. With 3 years of experience, he is now an amateur bodybuilder and a fitness trainer. He is willing to help persons around him to be in shape.
- ◇ Playing badminton. He enjoys playing badminton every week.
- ◇ Reading. *Harry Potter* and *Children Take Your Time* are his favourite books.