

# FA-TING HONG

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

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## RESEARCH INTERESTS

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- Computer Vision: important people detection, video highlight detection, video understanding
- Apply for 2021 Fall Ph.D. programme under the supervision of Prof. Dan Xu in CSE.

## EDUCATION

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### Sun Yat-sen University

*Aug. 2018 - Jul. 2021*

- M.Sc. in Computer Science and Technology
- Research area: computer vision. Supervisor: Prof. Wei-Shi Zheng.
- Graduate Time: July 2021

### South China University of Technology

*Aug. 2014 - Jul. 2018*

- B.Sc in Computer Science and Technology
- Research area: SLAM of Robots. Supervisor: Prof. Sheng Bi.

## EXPERIENCE

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### Applied Research Center (ARC), PCG, Tencent

*May. 2020 - present*

- Intern, conduct research in action localization and apply to private data
- Supervisor: Dr. Ying Shan

## PUBLICATIONS

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- **Fa-Ting Hong**, Xuan-Teng Huang, Wei-Hong Li and Wei-Shi Zheng, “MINI-Net: Multiple Instance Ranking Network for Video Highlight Detection”, in European Conference on Computer Vision (*ECCV*) 2020, Glasgow, UK.
  - We propose to cast the weakly supervised video highlight detection modeling for a given specific event as a multiple instance ranking network (MINI-Net) learning. Our multiple instance ranking network (MINI-Net) particularly solves the difficulty of localization of highlight segments of a specific event in videos, with the modeling on a bag level.
- **Fa-Ting Hong**, Wei-Hong Li and Wei-Shi Zheng, “Learning to Detect Important People in Unlabelled Images for Semi-supervised Important People Detection”, in Computer Vision and Pattern Recognition (*CVPR*) 2020, Seattle, USA.
  - In this work, we study semi-supervised learning in the context of important people detection, and propose a semi-supervised learning method for this task. Our approach iteratively learns to assign pseudo-labels to individuals in un-annotated images, and learns to update the important people detection model based on data with both labels and pseudo-labels. We also introduce a ranking strategy for pseudo-label estimation to alleviate the pseudo-labeling imbalance problem.
- Wei-Hong Li\*, **Fa-Ting Hong**\*, and Wei-Shi Zheng, “Learning to Learn Relation for Important People Detection in Still Images”, in Computer Vision and Pattern Recognition (*CVPR*) 2019, Long Beach, USA. (\*Equal first author)
  - In this work, we propose a deep imPORtance relatIon NeTwork (POINT) that combines both relation modeling and deep feature learning. In particular, we infer two types of interaction modules: the person-person interaction module that learns the interaction between people, and the event-person

interaction module that learns to describe how a person is involved in the event occurring in an image. We then estimate the importance relations among people from both interactions, and encode the relation feature from the importance relations.

- Ling-An Zeng, **Fa-Ting Hong**, Wei-Shi Zheng, Qi-Zhi Yu, Wei Zeng, Yao-Wei Wang, and Jian-Huang Lai, “Hybrid Dynamic-static Context-aware Attention Network for Action Assessment in Long Videos”, in ACM International Conference on Multimedia (**ACM MM**) 2020, Seattle, USA.
- Yuhong Liang, **Fa-Ting Hong**, Qinjie Lin, Sheng Bi, Liqian Feng, “Optimization of Robot Path Planning Parameters Based on Genetic Algorithm”, in IEEE International Conference on Real-time Computing and Robotics (**RCAR**) 2017, Okinawa, Japan.

## AWARDS

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- First-class Scholarship for Graduate Students, by Graduate School of Sun Yat-sen University, 2019
- Chinese National Scholarship (1/80), by Minister of Education of China, 2017
- Chinese National Inspirational Scholarship(5/80), by Minister of Education of China, 2016
- Chinese National Inspirational Scholarship(3/80), by Minister of Education of China, 2015

## PROJECT

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### National Innovation and Entrepreneurship Project

2016 - 2018

- Title: Research on Robot Autonomous Navigation Based on Lidar
- Role: Team leader
- Duties included: Mainly conducted research on the local path planning of the robot, which makes the robot avoid obstacles, and walk more smoothly in different environments. In particular, we use genetic algorithms to search an optimal parameter set, enabling the robot to act with ideal behaviors in a specific environment.
- Project Acceptance Evaluation: Excellent.

## SKILLS

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- **Program Languages:** most experienced with Python, Matlab; experienced with C/C++; L<sup>A</sup>T<sub>E</sub>X
- **Operating Systems:** Linux (Ubuntu, CentOS), Windows, MacOS
- **Development Platforms and Softwares:** Tensorflow, Pytorch
- **Miscellaneous:** software configuration management, strong verbal and written communication skills, excellent troubleshooting and debugging skills
- **Languages:** Mandarin(native), Cantonese(fluent), English(fluent)

## REFEREES

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Available upon request.