

CONTACT INFORMATION	Room 4218D Main Building, HKUST Clear Water Bay, Hong Kong	E-mail: cliubh@connect.ust.hk Tel: (852) 51711845 Web: belindalcc007.github.io
EDUCATION	Hong Kong University of Science and Technology , Kowloon, Hong Kong Ph.D. candidate in ECE. Sep. 2015 - Aug. 2020 (expected) <ul style="list-style-type: none">• Research Interests: <i>Vision Attention, Computer Vision, Eye Tracking</i>• Advisor: Prof. Bertram E. Shi Zhejiang University , Zhejiang, China Bachelor of Information Engineering. Sep. 2011 - Jun. 2015 <ul style="list-style-type: none">• GPA: 3.95/4.0 (Ranking: Top 5%)• Graduated with honor of Zhejiang Province <i>Undergraduate thesis: Real-time multi-face tracking based on a panoramic camera.</i>	
RESEARCH EXPERIENCE	Learning Attention from Human for Robot Navigation Jan. 2019 - present <ul style="list-style-type: none">• Learned attention from human and incorporated it into RL architectures. Using Eye Gaze to Improve Autonomous Driving Aug. 2018 - Jan. 2019 <ul style="list-style-type: none">• Learned a task-driven attention model and incorporated it into autonomous driving.• Proposed gaze modulated dropout for imitation learning in driving scenarios. Interaction between Gaze and Physiological Signal Jan. 2017 - Aug. 2018 <ul style="list-style-type: none">• Quantifying subjects' responses to viewing a garden scene at various stages.• Analyzed differential response for different stages based on sequential modelling. Remote Gaze Tracking System for 3D Environments Sep. 2015 - Dec. 2016 <ul style="list-style-type: none">• Proposed a non-intrusive 3D gaze tracking system in real environment which is robust to head motion.	
SELECTED PUBLICATIONS	<ol style="list-style-type: none">1. Yuying Chen*, Congcong Liu*, Ming Liu, Bertram Shi, "Navigation in Crowds by Graph Convolutional Networks with Attention Learned from Human Gaze". <i>IEEE Robotics and Automation Letters (RA-L)</i>, 2020.2. Congcong Liu*, Yuying Chen*, Lei Tai, Haoyang Ye, Ming Liu, Bertram Shi, "A Gaze Model Improves Autonomous Driving". <i>ACM Symposium on Eye Tracking Research & Applications (ETRA)</i>, 2019.3. Lei Tai, Peng Yun, Yuying Chen, Congcong Liu, Haoyang Ye, Ming Liu, "End-to-end Driving Deploying through Uncertainty-Aware Imitation Learning and Stochastic Visual Domain Adaptation". <i>IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)</i>, 2019.4. Yuying Chen*, Congcong Liu*, Lei Tai, Ming Liu, Bertram Shi, "Gaze Training by Modulated Dropout Improves Imitation Learning". <i>IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)</i>, 2019.5. Congcong Liu*, Yuying Chen*, Lei Tai, Ming Liu, Bertram Shi, "Utilizing Eye Gaze to Enhance the Generalization of Imitation Network to Unseen Environments". <i>International Conference on Machine Learning (ICML) Workshop</i>, 2019.	

6. **Congcong Liu**, Yawen Zhang, Karl Herrup, Bertram Shi, “On the Interaction between Gaze Behavior and Physiological Responses when Viewing Garden Scenes”. *International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC)* , 2018.
7. **Congcong Liu**, Yawen Zhang, Seiko Goto, Minkai Sun, Karl Herrup, Bertram Shi “Quantifying Interactions between Gaze Behavior and Physiological Responses When Viewing Japanese Style Gardens”. *Alzheimer’s & Dementia: The Journal of the Alzheimer’s Association*, 2018.
8. **Congcong Liu**, Karl Herrup, Bertram Shi, “Remote gaze tracking system for 3D environments”. *International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC)* , 2017.
9. Yawen Zhang, **Congcong Liu**, Karl Herrup, Bertram Shi, “Physiological Responses of the Youth Viewing a Japanese Garden”. *International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC)* , 2018.
10. Minkai Sun, Karl Herrup, Bertram Shi, Yutaka Hamano, **Concong Liu**, Seiko Goto, “Changes in visual interaction: Viewing a Japanese garden directly, through glass or as a projected image”. *Journal of Environmental Psychology*, 2018.
11. Seiko Goto, Thomas J Gianfagia, John P Munafo, Eijiro Fujii, Xuting Shen, Minkai Sun, Bertram Emil Shi, **Congcong Liu**, Hiroshi Hamano, Karl Herrup, “The power of traditional design techniques: The effects of viewing a Japanese garden on individuals with cognitive impairment”. *HERD: Health Environments Research & Design Journal*, 2016.

SELECTED
HONORS AND
AWARDS

SENG Academic Award (Top RPG Award) School of Engineering, HKUST 2019
Hong Kong PhD Fellowship Hong Kong Research Grants Council 2015
Outstanding Graduates of Zhejiang Province Zhejiang University 2015
Scholarship for Outstanding Students (First Class) Zhejiang University, 2012, 2014
Excellent Student Awards Zhejiang University, 2012-2014
Scholarship for Outstanding Merits Zhejiang University, 2012-2014
The National Optical Design Competition (Third Prize) Optical Society of China, 2014
Scholarship for Outstanding Students (Second Class) Zhejiang University, 2013
Physical Competition of Zhejiang Province (Second Prize) Physical Society of Zhejiang Province, 2012

TEACHING
EXPERIENCE

Teaching Assistant Spring 2016
 ELEC 1200: A System View of Communications: from Signals to Packets
 Instructor: Prof. Danny Hin-Kwok TSANG
 ECE Department, Hong Kong University of Science and Technology

Teaching Assistant Fall 2016
 ELEC 5300: Stochastic Processes
 Instructor: Prof. Wai Ho MOW
 ECE Department, Hong Kong University of Science and Technology

ACADEMIC
ACTIVITIES

Oral Presentations:

- *IROS 2019, Macau, China*
- *Asian Deans Forum 2019, Seoul, Korea*
- *ETRA 2019, Denver, USA*
- *ICML 2019, Long Beach, USA*
- *EMBC 2018, Hawaii, USA*

- *EMBC 2017, Jeju, South Korea*

Referee Services:

- *International Conference on Robotics and Automation (ICRA), 2020*

SKILLS

Programming: Experienced in Python, C, Matlab

Deep Learning: Pytorch, TensorFlow, Keras

Language: Native in Mandarin; Fluent in English; Basic in Cantonese