

CONTACT INFORMATION	<p>Room 4218D Main Building, HKUST Clear Water Bay, Hong Kong</p> <p>E-mail: cliubh@connect.ust.hk Tel: (852) 51711845 Web: belindalcc007.github.io</p>
EDUCATION	<p>Hong Kong University of Science and Technology, Kowloon, Hong Kong</p> <p>Ph.D. candidate in Electronic & Computer Engineering. Sep. 2015 - present</p> <ul style="list-style-type: none"> Research Interests: <i>Vision Attention, Computer Vision, Eye Tracking</i> Advisor: Prof. Bertram E. Shi <p>Zhejiang University, Zhejiang, China</p> <p>Bachelor of Information Engineering. Sep. 2011 - Jun. 2015</p> <ul style="list-style-type: none"> GPA: 3.95/4.0 (Ranking: Top 5%) Graduated with honor of Zhejiang Province <p><i>Undergraduate thesis: Real-time multi-face tracking based on a panoramic camera.</i></p>
RESEARCH EXPERIENCE	<p>Learning Attention from Human for Robot Navigation Jan. 2019 - present</p> <ul style="list-style-type: none"> Learned attention from human and incorporated it into RL architectures. <p>Using Eye Gaze to Improve Autonomous Driving Aug. 2018 - Jan. 2019</p> <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. <p>Interaction between Gaze and Physiological Signal Jan. 2017 - Aug. 2018</p> <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. <p>Remote Gaze Tracking System for 3D Environments Sep. 2015 - Dec. 2016</p> <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"> Yuying Chen*, Congcong Liu*, Ming Liu, Bertram Shi, "Navigation in Crowds by Graph Convolutional Networks with Attention Learned from Human Gaze". <i>arXiv preprint arXiv:1909.10400.</i>, 2019. 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. 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. 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. 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, **Congcong 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:
 • *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