Curriculum Vitae

Personal Information

Hongyu Li
Brown University
Department of Computer Science
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Providence, RI, USA, 02912

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Homepage: https://lhy.xyz/
GitHub: https://github.com/lhy0807

Education

08/2023–05/2028 **Ph.D., Computer Science**
Brown University, Providence, RI, USA
Advisor: Professor Srinath Sridhar

08/2021–05/2023 **M.Sc., Computer Science**
Northeastern University, Boston, MA, USA
Thesis: Toward Stereo-based Obstacle Detection using Efficient Deep Neural Network
Advisor: Professor Taşkın Padır
Advisor: Professor Huaizu Jiang

08/2018–12/2020 **B.Sc., Computer Science**
Rensselaer Polytechnic Institute, Troy, NY, USA
Second Major: Economics
Honors: Cum Laude, Dean's Honor List

Experience

05/2023–08/2023 **Research Intern**
Honda Research Institute, San Jose, CA
Researched visuotactile perception under the supervision of Dr. Nawid Jamali and Dr. Soshi Iba. Paper in progress. Filed patents **P.1** and **P.2**.

09/2022–12/2022 **Research Intern**
Honda Research Institute, San Jose, CA
Researched in-hand object 6D pose estimation using visuotactile perception under the supervision of Dr. Nawid Jamali and Dr. Soshi Iba. Published paper **J.2**. Filed patents **P.3** and **P.4**.

09/2021–05/2023 **Graduate Research Assistant**
Robotics and Intelligent Vehicles Research Lab, Northeastern University, Boston, MA
PI: Professor Taşkın Padır
Researched in the fields of robot perception.

03/2021–06/2021 **Artificial Intelligence Intern**
KPMG China, Nanjing, China
Developed the speech processing modules for KPMG AI Factory Platform.

Publications

Journals

J.1 Linfeng Zhao*, **Hongyu Li***, Taşkın Padır, Huaizu Jiang†, Lawson L.S Wong†. E(2)-Equivariant Graph Planning for Navigation. Under Review.

J.2 **Hongyu Li**, Snehal Dikhale, Soshi Iba, Nawid Jamali. *ViHOPE: Visuotactile In-Hand Object 6D Pose Estimation with Shape Completion.* Accepted by IEEE Robotics and Automation Letters (RA-L) 2023.

Conferences

C.1 **Hongyu Li**, Zhengang Li*, Neşet Ünver Akmandor*, Huaizu Jiang, Yanzhi Wang, Taşkın Padır. *StereoVoxelNet: Real-Time Obstacle Detection Based on Occupancy Voxels From a Stereo Camera Using Deep Neural Networks.* Accepted by IEEE International Conference on Robotics and Automation (ICRA) 2023. Project homepage: https://lhy.xyz/stereovoxelnet

C.2 Neşet Ünver Akmandor, **Hongyu Li**, Gary M. Lvov, Eric Dusel, Taşkın Padır. *Deep Reinforcement Learning based Robot Navigation in Dynamic Environments using Occupancy Values of Motion Primitives.* Accepted by IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS) 2022.

Presentations

1. **Hongyu Li**, Huaizu Jiang, Taşkın Padır. *StereoNavNet: Learning to Navigate using Stereo Camera with Auxiliary Occupancy Voxels.* Spotlight Talk at CVPR 2023 Workshop on 3D Vision and Robotics.
2. **Hongyu Li**, Zhengang Li*, Neşet Ünver Akmandor*, Huaizu Jiang, Yanzhi Wang, Taşkın Padır. *StereoVoxelNet: Real-Time Obstacle Detection Based on Occupancy Voxels From a Stereo Camera Using Deep Neural Networks.* Presented at IROS 2022 workshop "Agile Robotics: Perception, Learning, Planning, and Control," Kyoto, Japan, October 2022.

Awards

1. ICRA 2023 Travel Grant ($1,300)

Patents

P.1 **Hongyu Li**, Nawid Jamali, Soshi Iba. SYSTEMS AND METHODS FOR TAXEL HYPER-RESOLUTION THROUGH MULTI-CONTACT LOCALIZATION. *Patent Pending.*

P.2 **Hongyu Li**, Nawid Jamali, Soshi Iba. REPRESENTATION LEARNING OF TAXEL-BASED TACTILE SENSOR. *Patent Pending.*

P.3 **Hongyu Li**, Nawid Jamali, Snehal Dikhale, Soshi Iba. SYSTEMS AND METHODS FOR VISUOTACTILE OBJECT POSE ESTIMATION WITH SHAPE COMPLETION. *Patent Pending.*

P.4 **Hongyu Li**, Nawid Jamali, Soshi Iba. SYSTEMS AND METHODS FOR A SHAPE COMPLETION MODEL. *Patent Pending.*

Teaching

09/2021–05/2022 **Graduate Teaching Assistant**
Khoury College of Computer Science, Northeastern University, Boston, MA
CS 7610 Foundations of Distributed Systems
DS 2500 Intermediate Programming with Data

09/2019–07/2020 **Teaching Assistant**
Department of Computer Science, Rensselaer Polytechnic Institute, Troy, NY
CSCI 1190 Beginning Programming for Engineers

Services

Reviewer

1. Elsevier **Neurocomputing**

Boston - USA, September 24, 2023