

Curriculum Vitae

PERSONAL INFORMATION


Hongyu Li
Brown University
Department of Computer Science
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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 Padrır](#)
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

* or † represents equal contribution or equal advising, depending on the roles of the authors.

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

- 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.
- 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. $\text{\textcircled{W}}$ *Patent Pending.*
- P.2 Hongyu Li**, Nawid Jamali, Soshi Iba. REPRESENTATION LEARNING OF TAXEL-BASED TACTILE SENSOR. $\text{\textcircled{W}}$ *Patent Pending.*
- P.3 Hongyu Li**, Nawid Jamali, Snehal Dikhale, Soshi Iba. SYSTEMS AND METHODS FOR VISUOTACTILE OBJECT POSE ESTIMATION WITH SHAPE COMPLETION. $\text{\textcircled{W}}$ *Patent Pending.*
- P.4 Hongyu Li**, Nawid Jamali, Soshi Iba. SYSTEMS AND METHODS FOR A SHAPE COMPLETION MODEL. $\text{\textcircled{W}}$ *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. ACM CHI Conference on Human Factors in Computing Systems (**CHI**) 2024
2. IEEE International Conference on Robotics and Automation (**ICRA**) 2024
3. Elsevier **Neurocomputing**

Providence - USA, November 3, 2023