# Haozhi Qi

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| Phone | +1 510-926-5161 |
| Email | hqi@berkeley.edu |
| Homepage | https://haozhi.io/ |
| GScholar | Link |

## Education

**2018 - 2025**  **University of California, Berkeley**
Ph.D. in Electrical Engineering and Computer Science
Advisors: Prof. Yi Ma and Prof. Jitendra Malik
Thesis: Multisensory Dexterity for Robotics

**2013 - 2018**  **Hong Kong University of Science and Technology**
Bachelor of Science in Mathematics
Bachelor of Science in Computer Science

## Industrial Experience

**2025 - Present**  **Meta FAIR**, Research Scientist
Dexterous Manipulation at Embodied AI Group

**2022 - 2025**  **Meta FAIR**, Visiting Researcher
Dexterous Manipulation at Embodied AI Group

**2017 - 2018**  **Microsoft Research Asia**, Research Intern
Object Detection at Visual Computing Group

**2016**  **Microsoft Research Asia**, Research Intern
Object Detection at Visual Computing Group

## Honors and Awards

**2025**  Lotfi A. Zadeh Prize
For outstanding PhD research in soft computing and its applications

**2024**  EECS Evergreen Award for Undergraduate Researcher Mentoring

**2021 - 2023**  Meta AI Research Academic Grant

**2023**  Outstanding Demo Award at NeurIPS Robot Learning Workshop

**2022**  Best Paper Award at CVPR Multimodal Learning Workshop

**2013 - 2017**  HKUST Undergrad Scholarship

**2016**  Winner of Segmentation Track, MS COCO Challenge

## Publications (* indicates equal contribution)

### Peer-reviewed Publications

**2025**  P.1  **Haozhi Qi**, Brent Yi, Mike Lambeta, Yi Ma, Roberto Calandra, Jitendra Malik. From Simple to Complex Skills: The Case of In-Hand Object Reorientation.
International Conference on Robotics and Automation (**ICRA**), 2025

P.2    Himanshu Gaurav Singh*, Antonio Loquercio*, Carmelo Sferrazza, Jane Wu, **Haozhi Qi**, Pieter Abbeel, Jitendra Malik. Hand-Object Interaction Pretraining from Videos. International Conference on Robotics and Automation (**ICRA**), 2025

P.3    Toru Lin, Yu Zhang*, Qiyang Li*, **Haozhi Qi**\*, Brent Yi, Sergey Levine, Jitendra Malik. Learning Visuotactile Skills with Two Multifingered Hands. International Conference on Robotics and Automation (**ICRA**), 2025

P.4    Jessica Yin, **Haozhi Qi**, Jitendra Malik, James Pikul, Mark Yim, Tess Hellebrekers. Learning In-Hand Translation Using Tactile Skin With Shear and Normal Force Sensing. International Conference on Robotics and Automation (**ICRA**), 2025

2024    P.5    Sudharshan Suresh, **Haozhi Qi**, Tingfan Wu, Taosha Fan, Luis Pineda, Mike Lambeta, Jitendra Malik, Mrinal Kalakrishnan, Roberto Calandra, Michael Kaess, Joe Ortiz, Mustafa Mukadam. Neural Feels with Neural Fields: Visuo-Tactile Perception for In-Hand Manipulation. Science Robotics, November 2024

P.6    Jun Wang*, Ying Yuan*, Haichuan Che*, **Haozhi Qi**\*, Yi Ma, Jitendra Malik, Xiaolong Wang. Lessons from Learning to Spin "Pens". Conference on Robot Learning (**CoRL**), 2024

P.7    Toru Lin*, Zhao-Heng Yin*, **Haozhi Qi**, Pieter Abbeel, Jitendra Malik. Twisting Lids Off with Two Hands. Conference on Robot Learning (**CoRL**), 2024

2023    P.8    **Haozhi Qi**, Brent Yi, Sudharshan Suresh, Mike Lambeta, Yi Ma, Roberto Calandra, Jitendra Malik. General In-Hand Object Rotation with Vision and Touch. Conference on Robot Learning (**CoRL**), 2023

2022    P.9    **Haozhi Qi**\*, Ashish Kumar*, Roberto Calandra, Yi Ma, Jitendra Malik. In-Hand Object Rotation via Rapid Motor Adaptation. Conference on Robot Learning (**CoRL**), 2022

P.10    Zipeng Fu*, Ashish Kumar*, Ananye Agarwal, **Haozhi Qi**, Jitendra Malik, Deepak Pathak. Coupling Vision and Proprioception for Navigation of Legged Robots. Computer Vision and Pattern Recognition (**CVPR**), 2022

P.11    Kwan Ho Ryan Chan*, Yaodong Yu*, Chong You*, **Haozhi Qi**, John Wright, Yi Ma. ReduNet: A White-box Deep Network from the Principle of Maximizing Rate Reduction. Journal of Machine Learning Research (**JMLR**), accepted in 2022

2021    P.12    **Haozhi Qi**, Xiaolong Wang, Deepak Pathak, Yi Ma, Jitendra Malik. Learning Long-term Visual Dynamics with Region Proposal Interaction Networks. International Conference on Learning Representations (**ICLR**), 2021

2020    P.13    **Haozhi Qi**, Chong You, Xiaolong Wang, Yi Ma, Jitendra Malik. Deep Isometric Learning for Visual Recognition. International Conference on Machine Learning (**ICML**), 2020

2019    P.14    Yichao Zhou, **Haozhi Qi**, Jingwei Huang, Yi Ma. NeurVPS: Neural Vanishing Point Scanning via Conic Convolution. Neural Information Processing System (**NIPS**), 2019

P.15    Yichao Zhou, **Haozhi Qi**, Yuexiang Zhai, Qi Sun, Zhili Chen, Li-Yi Wei, Yi Ma. Learning to Reconstruct 3D Manhattan Wireframes from a Single Image.
International Conference on Computer Vision (**ICCV**), 2019
(*Oral, 4.3% acceptance rate*)

P.16    Yichao Zhou, **Haozhi Qi**, Yi Ma. End-to-End Wireframe Parsing.
International Conference on Computer Vision (**ICCV**), 2019

2017    P.17    Jifeng Dai*, **Haozhi Qi**\*, Yuwen Xiong*, Yi Li*, Guodong Zhang*, Han Hu, Yichen Wei. Deformable Convolutional Networks.
International Conference on Computer Vision (**ICCV**), 2017
(*Oral, 2.1% acceptance rate*)
**ICCV 2017's Most Influential Paper #5**

P.18    Yi Li*, **Haozhi Qi**\*, Jifeng Dai, Xiangyang Ji, Yichen Wei. Fully Convolutional Instance-aware Semantic Segmentation.
Computer Vision and Pattern Recognition (**CVPR**), 2017
(*Spotlight, 8.0% acceptance rate*)

**Pre-prints**

2024    P.19    Mike Lambeta, Tingfan Wu, Ali Sengül, Victoria Rose Most, Nolan Black, Kevin Sawyer, Romeo Mercado, **Haozhi Qi**, Chaithanya Krishna Bodduluri, Alexander Sohn, Byron Taylor, Norb Tydingco, Gregg Kammerer, Dave Stroud, Jake Khatha, Kurt Jenkins, Kyle Most, Neal Stein, Ricardo Chavira, Thomas Craven-Bartle, Eric Sanchez, Yitian Ding, Jitendra Malik, Roberto Calandra. Digitizing Touch with an Artificial Multimodal Fingertip.
Tech Report, November 2024

2023    P.20    Carolina Higuera, Joseph Ortiz, **Haozhi Qi**, Luis Pineda, Byron Boots, Mustafa Mukadam. Perceiving Extrinsic Contacts from Touch Improves Learning Insertion Policies.
Tech Report, September 2023

# Press Coverage

2024    Digitizing Touch with an Artificial Multimodal Fingertip
TechCrunch, VentureBeat, The Robot Report
Twisting Lids Off with Two Hands
The AI Grid

2023    General In-hand Object Rotation with Vision and Touch
New Scientist (UK), TU Dresden News

2022    In-Hand Object Rotation via Rapid Motor Adaptation
MarkTechPost

# Talks

2025    The Atomic Skill Approach to Robotic Dexterity
ELLIIT Symposium and Focus Period on Robot Learning
UT Austin RPL Seminar
UC Berkeley EMBER Seminar Series

2025        Multisensory Dexterity for Robotics

University of Chicago (Department of Computer Science)

UC San Diego (Department of Computer Science and Engineering)

New York University (Electrical and Computer Engineering & Mechanical Engineering)

Rutgers University (Department of Computer Science)

Georgia Institute of Technology (School of Interactive Computing)

Princeton University (Department of Computer Science)

University of Michigan (Computer Science and Engineering Department & Robotics Department)

The University of Hong Kong (School of Computing and Data Science)

2024        Manipulation and Perception with Multisensory Robot Hands

Columbia University (hosted by Prof. Matei Ciocarlie)

Princeton University (hosted by Prof. Jia Deng)

New York University (hosted by Prof. Lerrel Pinto)

Carnegie Mellon University (hosted by Prof. Katerina Fragkiadaki)

University of Pennsylvania (hosted by Prof. Mark Yim)

University of Illinois Urbana-Champaign (hosted by Prof. Justin Yim)

Stanford University (Stanford Vision and Learning Lab)

2023        General In-hand Object Rotation with Vision and Touch

Columbia University (hosted by Prof. Matei Ciocarlie)

UC San Diego (hosted by Prof. Xiaolong Wang)

Bay Area Computer Vision Day

# Teaching

**Guest Lectures**

2024        Reinforcement Learning and Sim-to-Real

[UC Berkeley] [CS294-277] "Robots That Learn" by Prof. Jitendra Malik

Manipulation with Multi-fingered Hands

[UIUC] [CS598YL] "Deep Learning for Robotic Manipulation" by Prof. Yunzhu Li

[UC Berkeley] [EECS106B] "Robotic Manipulation and Interaction" by Prof. Shankar Sastry

**Teaching Assistant**

2021 Spring    Robotic Manipulation and Interaction

Teaching Assistant with Prof. Yi Ma and Prof. Shankar Sastry

2020 Spring    Designing, Visualizing and Understanding Deep Neural Networks

Teaching Assistant with Prof. John Canny

2019 Fall      High-dim Data Analysis with Low-dim Models

Teaching Assistant with Prof. Yi Ma

# Service

**Workshop Organizer**

2025        [CoRL] Dexterous Manipulation: Learning and Control with Diverse Modalities

[RSS] Dexterous Manipulation: Learning and Control with Diverse Data

[ICRA] Handy Moves: Dexterity in Multi-Fingered Hands

| 2024 | [NeurIPS] Touch Processing: From Data to Knowledge |
| | [CoRL] Learning Robot Fine and Dexterous Manipulation: Perception and Control |
| | [RSS] Dexterous Manipulation: Design, Perception and Control |
| 2023 | [NeurIPS] Touch Processing: a New Sensing Modality for AI |

## Reviewer

| Robotics | ICRA 21/24-26, CoRL 24-25, RSS 24-25, IROS 24-25, RA-L 23-25, T-RO 24-25, IJRR 24 |
| | Humanoids 24, Science Robotics 24-25 |
| Vision | CVPR 19-26, ICCV 19/21/23/25, ECCV 20/22/24, T-PAMI 20-22, IJCV 20-21 |
| Learning | ICLR 22-23/25-26, ICML 21-25, NeurIPS 20-25, TMLR 22-25, AAAI 20-23 |

## Community Service

| 2024 | **Faculty Hiring Student Committee**, UC Berkeley |
| 2021 - 2023 | **Mentor**, Undergrad from Underrepresented Backgrounds |
| 2020 | **Graduate Admissions Committee**, UC Berkeley |