

QINGWEI BEN

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EDUCATION

The Chinese University of Hong Kong

Sep. 2024 – Present

Ph.D in Information Engineering at Multimedia Lab (MMLab)

- Advised by Prof. Dahua Lin

Tsinghua University

Sep. 2020 – Jun. 2024

B.Sc. in Mathematics and Physics and B.Eng. in Software Engineering

RESEARCH EXPERIENCE

Research Intern, mentored by Dr. Jiangmiao Pang

Sep. 2023 – Present

OpenRobotLab, Shanghai AI Lab, Beijing & Shanghai, China

Research Assistant, advised by Prof. Huazhe Xu

Mar. 2023 – Mar. 2024

TEA Lab, IIIS, Tsinghua University, Beijing, China

Visiting Researcher, advised by Prof. Chuang Gan

Jun. 2023 – Sep. 2023

Umass Amherst, Amherst, MA, USA

REPRESENTATIVE PUBLICATIONS

(* shows equal contribution)

- [1] **Gallant: Voxel Grid-based Humanoid Locomotion and Local-navigation across 3-D Constrained Terrains** **Qingwei Ben***, Botian Xu*, Kailin Li*, Feiyu Jia, Wentao Zhang, Jingping Wang, Jingbo Wang, Dahua Lin, Jiangmiao Pang. (In submission)
- [2] **HOMIE: Humanoid Mobile Manipulation with Isomorphic Exoskeleton Cockpit** **Qingwei Ben***, Feiyu Jia*, Jia Zeng, Junting Dong, Dahua Lin, Jiangmiao Pang. (RSS 2025, RSS 2025 WCBM Workshop)
- [3] **RoboDuet: Learning a Cooperative Policy for Whole-body Legged Loco-Manipulation** Guoping Pan*, **Qingwei Ben***, Zhecheng Yuan, Guangqi Jiang, Yandong Ji, Shoujie Li, Jiangmiao Pang, Houde Liu, Huazhe Xu. (RA-L+IROS 2025, ICRA 2024 Mobile-Manipulation Workshop)

OTHER PUBLICATIONS

(* shows equal contribution, + shows core contributors)

- [1] **ViRAL: Visual Sim-to-Real at Scale for Humanoid Loco-Manipulation** Tairan He*, Zi Wang*, Haoru Xue*, **Qingwei Ben***, Wenli Xiao, Ye Yuan, Zhengyi Luo, S. Shankar Sastry, Changliu Liu, Guanya Shi, Linxi Fan, Yuke Zhu. (In submission)
- [2] **SONIC: Supersizing Motion Tracking for Natural Humanoid Whole-Body Control** Zhengyi Luo*, Ye Yuan*, Tingwu Wang*, Chenran Li*, Sirui Chen+, Fernando Castañeda+, Zi-Ang Cao+, Jiefeng Li+, David Minor+, **Qingwei Ben+**, Xingye Da+, Runyu Ding, Cyrus Hogg, Lina Song, Edy Lim, Eugene Jeong, Tairan He, Haoru Xue, Wenli Xiao, Zi Wang, Simon Yuen, Jan Kautz, Yan Chang, Umar Iqbal, Linxi Fan, Yuke Zhu. (In submission)
- [3] **TeleOpBench: A Simulator-Centric Benchmark for Dual-Arm Dexterous Teleoperation** Hangyu Li*, Qin Zhao*, Haoran Xu, Xinyu Jiang, **Qingwei Ben**, Feiyu Jia, Haoyu Zhao, Liang Xu, Jia Zeng, Hanqing Wang, Bo Dai, Junting Dong, Jiangmiao Pang. (In submission)
- [4] **SMAP: Self-supervised Motion Adaptation for Physically Plausible Humanoid Whole-body Control** Haoyu Zhao*, Sixu Lin*, **Qingwei Ben**, Minyue Dai, Hao Fei, Jiangmiao Pang, Jingbo Wang, Junting Dong, Hua Zou. (In submission)

- [5] **BeamDojo: Learning Agile Humanoid Locomotion on Sparse Footholds** Huayi Wang, ZiRui Wang, Junli Ren, **Qingwei Ben**, Tao Huang, Weinan Zhang, Jiangmiao Pang. (RSS 2025)
- [6] **Learning Humanoid Standing-up Control across Diverse Postures** Tao Huang, Junli Ren, Huayi Wang, ZiRui Wang, **Qingwei Ben**, Muning Wen, Xiao Chen, Jianan Li, Jiangmiao Pang. (RSS 2025 Best System Paper Finalist)
- [7] **VB-Com: Learning Vision-Blind Composite Humanoid Locomotion Against Deficient Perception** Junli Ren, Tao Huang, Huayi Wang, ZiRui Wang, **Qingwei Ben**, Jiangmiao Pang, Ping Luo. (In submission)
- [8] **GRUtopia: Dream General Robots in a City at Scale** Hanqing Wang*, Jiahe Chen*, Wensi Huang*, **Qingwei Ben***, Tai Wang*, Boyu Mi*, Tao Huang, Siheng Zhao, Yilun Chen, Sizhe Yang, Peizhou Cao, Wenye Yu, Zichao Ye, Jialun Li, Junfeng Long, Zirui Wang, Huijing Wang, Ying Zhao, Zhongying Tu, Yu Qiao, Dahua Lin, Jiangmiao Pang. (In submission)
- [9] **DiffTactile: A Physical-based Differentiable Tactile Simulation for Contact-rich Robotic Manipulation** Zilin Si*, Gu Zhang*, **Qingwei Ben***, Branden Romero, Xian Zhou, Chao Liu, Chuang Gan. (ICLR 2024, RSS 2024 Noosphere Workshop Best Paper)

SKILLS

- *Professional Skills:* Python, C/C++, Java, Javascript, ROS, Pytorch, Docker, Qt, HTML, CSS, SQL, VUE, Flask, Taichi, SolidWorks, Isaac Sim, Isaac Gym, Mujoco
- *Language:* Mandarin (native), English (proficient, TOFEL 107/120)

RESEARCH INTERESTS

Embodied AI, Humanoid, Quadruped, Loco-Manipulation, Tactile, Teleoperation

TEACHING SERVICE

- CUHK IERG 4998: Final Year Project, Autumn 2024 (Teaching Assistant)
- CUHK IERG 4999: Final Year Project, Spring 2025 (Teaching Assistant)
- CUHK IERG 4998: Final Year Project, Autumn 2025 (Teaching Assistant)
- CUHK IERG 4999: Final Year Project, Spring 2026 (Teaching Assistant)

HONORS

- RSS 2024 Noosphere Workshop Best Paper (DiffTactile)
- RSS 2025 Best System Paper Finalist (HoST)

COMMUNITY SERVICE

- Reviewer: IROS 2025, RSS 2025 Workshop WCBM, ICRA 2026, TMECH, CVPR 2026