LIN CONG

hitlyn.github.io
lin.cong@uni-hamburg.de
Gazellenkamp 176, Hamburg, 22527

EDUCATION

RA | *AI & Physics Simulation* Universität Hamburg (UHH)	Mar. 2022 – present Hamburg, Germany
Ph.D. Candidate | *AI & Physics Simulation* Universität Hamburg (UHH)	Oct. 2017 – Feb. 2022 Hamburg, Germany
M.S. | *Robot Control & Simulation* Harbin Institute of Technology (HIT)	Sep. 2015 – Jun. 2017 Harbin, China
B.S. | *Electronics* Harbin Institute of Technology (HIT)	Sep. 2010 – Jun. 2014 Harbin, China

HONORS AND AWARDS

Beijing Second Prize for HICOOL 2023 (9/5705 global candidates, landing reward of 1M RMB)	Aug. 2023 Beijing, China
Munich Second Prize for Innovation & Entrepreneurship International Competition	Aug. 2023 Munich, Germany
Universität Hamburg Full Scholarship from China Scholarship Council (CSC)	Nov. 2017 Hamburg, Germany
Harbin Institute of Technology National Scholarship	Jun. 2016 Harbin, China
Harbin Institute of Technology National Scholarship	Oct. 2015 Harbin, China

PROJECT WEBS

Efficient Human Motion Reconstruction with Physical Consistency
https://hitlyn.github.io/EHMR/

Vision-proprioception Model for Reinforcement Learning
https://hitlyn.github.io/RLVP/

Multimodal Reinforcement Learning in Simulation
https://hitlyn.github.io/MGBRL/

Sim-to-Real Policy Training and Transfer
https://hitlyn.github.io/Pushing/

Self-supervised Attention Mechanism
https://hitlyn.github.io/Attention/

IMU-based Real-time Motion Tracking System
https://hitlyn.github.io/IMUs/

Sim-to-Real Design of a Quadrupedal Robot
https://hitlyn.github.io/Spotmini/

Robot Teleoperation with a VR Headset
https://hitlyn.github.io/Oculus/

Skills

Speciality: Physics Engine, Deep Learning, Graphics
Programming: C++, Python, C#
Software: Tensorflow, Pytorch, ROS, Blender, Unity, Unreal, Mujoco, Bullet
Lauguage: Chinese (Mother Tongue), English (Fluency), Deutsch (Basic)

Job and Interns

Simulation Development for Autonomous Driving System   Dec. 2022 – Mar. 2023
Tsinghua University   Beijing, China

- Multimodal System Integration for Autonomous Driving Simulation
- Human Motion Reconstruction Algorithm Design

Crossmodal Learning and Transfer of Agent Skills from Simulation   Oct. 2017 – present
Universität Hamburg   Hamburg, Germany

- Perform research and experiments on agent skill learning for TRR169 Crossmodal Learning
- Build simulation environment with Mujoco
- Reinforcement learning algorithm design with Pytorch and Tensorflow
- Sim-to-Real transfer research with domain randomization and adaption
- Model deployment on real robot platforms using ROS

Simulation of Exo-Skeleton Robot and Control Algorithm Design   Jul. 2015 – Jul. 2017
Harbin Institute of Technology   Harbin, China

- 3D modelling and simulation environment development
- Design the control system and algorithm for the robot
- Follow-up algorithm design in simulation
- Hardware integration and experiments

Selected Publications

Lin Cong*, Philipp Ruppe*, Xiang Pan, Yizhou Wang, Norman Hendrich and Jianwei Zhang.
Efficient Human Motion Reconstruction from Monocular Videos with Physical Consistency Loss. *Siggraph Asia* , 2023

Lin Cong, Hongzhuo Liang, Philipp Ruppel, Yunlei Shi, Michael Görner, Norman Hendrich and Jianwei Zhang.
Reinforcement Learning with Vision-Proprioception Model for Robot Planar Pushing. *Frontiers in Neurorobotics*, 2022

Lin Cong* , Hongzhuo Liang*, Norman Hendrich, Shuang Li, Fuchun Sun, Jianwei Zhang.
Multifingered Grasping Based on Multimodal Reinforcement Learning. *IEEE Robotics and Automation Letters (RA-L)*, 2021

Lin Cong, Yunlei Shi, Jianwei Zhang.
Self-supervised Attention Learning for Robot Control. *IEEE International Conference on Robotics and Biomimetics (ROBIO)*, 2021

Lin Cong, Michael Görner, Philipp Ruppel, Hongzhuo Liang, Norman Hendrich, Jianwei Zhang.
Self-Adapting Recurrent Models for Object Pushing from Learning in Simulation. *IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)*, 2020

Lin Cong, Dongmei Wu, Yi Long, Zhijiang Du, Wei Dong.
Parameter identification based sensitivity amplification control for lower extremity exoskeleton.
International Conference on Artificial Intelligence, Automation and Control Technologies (AIACT), 2017