Lin Cong

Ph.D.

"Anything than can go wrong will go wrong" - Murphs's Law

Education

2017–2021 **PhD Student**, *University of Hamburg*, **Artificial Intelligence and Robotics**.
Specialized in Machine Learning

2015–2017 **Master Student**, *Harbin Institute of Technology*, **Mechatronic Engineering**.
Specialized in Robot Control System Design

2010–2014 **Bachelor Student**, *Harbin Institute of Technology*, **Mechatronic Engineering**.
Specialized in Mechanical Design

Skills

Algorithm

- Reinforcement learning, imitation learning and transfer learning framework optimization and development for real robot tasks and video games.
- Deep neural network structure development for computer vision applications, including image segmentation, object detection, ...
- Robot control algorithm optimization and development for specific tasks, such as trajectory planning, grasping, ...

Software

- Pytorch, Tensorflow, Numpy, Pandas, ...
- Robot Operating System (ROS), Mujoco, Matlab
- SolidWorks, AutoCAD

Language

- Mother tongue in Chinese
- Strong reading, writing and speaking competencies in English

Misc. Strong coordination and organization ability, adapt ability and communication skills.

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Experience

Ph.D. Period

2017–Present **Data Scientist**, *TRR169 Crossmodal Learning*, Hamburg, Germany.
Collaborate with other scientists, develop a framework describing the neural, cognitive and computational mechanisms of crossmodal learning. For futher references go to url: `https://www.crossmodal-learning.org/home.html`

2019.11 **Participant**, *Symposium on Crossmodal Learning in Humans and Robots*, Hamburg, Germany.
`https://www.crossmodal-learning.org/events/2019-11-symposium-hamburg.html`

2019.09 **Participant**, *CML Summer School 2019*, NSFC Building, Beijing.
`https://www.crossmodal-learning.org/events/2019-09-summer-school-beijing.html`

2018.09 **Participant**, *CML Summer School 2018*, Tsinghua University, Beijing.
`https://www.crossmodal-learning.org/events/2018-09-summer-school-beijing.html`

Master Period

2015–2017 **Master Student**, *Build control system for lower extremity exoskeleton*, State Key Laboratory of Robotics and System, HIT.
Complete the hardware integration and build control system for the exoskeleton robot

2016.08 **Session Chair**, *IEEE ICMA 2016*, Harbin, China.
Host the ***Rehabilitation Robot*** session

Bachelor Period

2013–2014 **Bachelor Student**, *Design a Multifuctional Tourbillon Mechanical Watch*, School of Mechatronics Engineering, HIT.
Responsible for the mechanical structure design of the 3D model for the mechanical watch in SolidWorks

2012 **Participant**, *Bio-Robot Design Competition*, School of Mechatronics Engineering, HIT.
Complete the mechanical design and control system test for the robot

Awards

2017–2021 Full Scholarship from China Scholarship Council (CSC)

2016 National Scholarship

2015 National Scholarship

Publications

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

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2017 Yi Long, Zhijiang Du, **Lin Cong**, Weidong Wang, Zhiming Zhang, Wei Dong. Active Disturbance Rejection Control Based Human Gait Tracking for Lower Extremity Rehabilitation Exoskeleton. *ISA Transactions*, 67:389–397, 2017.

Lin Cong, Dongmei Wu, Yi Long, Zhijiang Du, Wei Dong. Parameter Identification Based Sensitivity Amplification Control for Lower Extremity Exoskeleton. *Proceedings of the 2017 International Conference on Artificial Intelligence, Automation and Control Technologies (AIACT)*, 2017.

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