

Li, Chenran

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Educational Background

▪ Harbin Institute of Technology	Harbin, CHINA
B.E. in Mechatronics Engineering	Aug/2016 - Jul/2020(expected)
Average Score: 94.37/100; Ranking: 4/126	
▪ University of California, Berkeley	California, US
Academic Exchange Program & Research Assistant	Jan/2019 - May/2020(expected)
GPA: 4.0/4.0 (all A+)	
▪ University of Pennsylvania	Pennsylvania, US
Entrepreneurship, Innovation and Leadership Development Program	Jul/2017 - Aug/2017
GPA: 4.0/4.0	

Professional Experience

Non-Conservatively Defensive Strategy with Searching Based Motion Planner for On-Road Autonomous Driving

Advised by Prof. Masayoshi Tomizuka, Mechanical Systems Control Lab, University of California, Berkeley

- Realized the A* search based rough motion planner and optimization smoothing program on real autonomous driving experiment.
- Applied the spatially-partitioned environmental representation and planning architecture in multiple obstacles urban environment.
- Achieved successful obstacle avoidance including car and pedestrian on roundabout environment.
- Combined non-conservatively defensive strategy with spatially-partitioned environmental representation and planning architecture in multiple obstacles urban environment.

Real Time Experiment Structure of Self Driving Car

Advised by Prof. Masayoshi Tomizuka, Mechanical Systems Control Lab, University of California, Berkeley

- Applied the *Lanelet* based locating method for autonomous driving in experiment area.
- Constructed wireless internet connection for autonomous driving in experiment area.
- Built up the message communication program structure for sim-car and real car based on ROS and RpcLib.
- Generalized an experiment program structure for all planner.

Erhu Auto-Player

- Designed the timing belt system with linear guide rail and sliding block for movements of finger.
- Designed the music information represent system for the Erhu Auto-Player program.
- Designed the up-layer program based on ROS to control the whole system playing music.
- The video of Erhu playing is linked to <https://www.youtube.com/watch?v=88F4DdLKqmE&feature=youtu.be>

Obstacle Avoidance of Carbon Free Car

- A 3-wheeled carbon free car which uses 400 ± 2 mm gravitational potential energy of a 1kg hammer to move forward and avoids obstacles without electrical element.
- Designed a cam mechanism to control the direction.
- Designed and built up the 3D model of the whole carbon free car.
- Machined and built up the carbon free car based on 3D printing.

Honors & Awards

National Scholarship (2 times)

Oct/2018 and Oct/2017

- The biggest scholarship given to the top 1% students in comprehensive measure

ICISTS - KAIST Gold Prize

May/2018

- ICISTS - KAIST (held in KAIST, South Korea) is a global conference with 300 participants from 20 countries and 60 universities networking in the fields of science, arts, and humanities five-day festival with world-leading

Overseas International Conference Travel Grant (2 times)

Aug/2018 and Aug/2017

- The scholarship given to the top students in expatriate representative selection.

"Remin" Scholarship (4 times)

- The scholarship given to the top 2% students in GPA measure.

Technology Innovation Scholarship (4 times)

- The scholarship given to the University's Innovation Project.

Skills & Interests

- **Software:** Inventor; Solidworks; ROS; CAD; MATLAB; Keil; C++; Python; Photoshop.
- **Hardware:** Mechatronics System Design; Machine Design.

Social Activities

HIT International Communication Association (HICA)

Oct/2016 – Present

Introduction: HICA is an official student organization in Harbin Institute of Technology, authorized for the management of international communications of students. With over 200 active members and an annual budget of more than \$150,000, it is also the largest student organization inside HIT.

Position: President Assistant

Jun/2019– Present

Vice President, Director of Lecture Department

Jun/2018 – Jun/2019

Deputy Director of Lecture Department

Jun/2017 – Jun/2018

Member of Lecture Department

Oct/2016 – Jun/2017

Main Contribution:

- Be in charge of 2016-2017 and 2017-2018 HIT BP debate competition. Successfully attracted nearly 100 participants including undergraduate and graduate students for each year.
- Got the qualifications as HIT representative team to participate in FLTRP Open (the biggest Open Tournaments in China) in 2017-2018.
- Founded the HIT English Debate team with HIT foreign language college. Have gotten HIT official recognition and will represent HIT to participate in nearly all kinds of English debate competition.
- Be in charge of "Hello, Harbin"2017 ASRTU Winter Youth Festival's reception dinner: 3 hours long reception dinner involved more than 100 students coming from those 32 Russian universities.
- Be in charge of 2018 ASRTU Sino-Russian Micro/Nanosat Student camp's Sino-Russian astronaut dialogue lecture delivered by Russian astronaut Pavel Vinogradov and Chinese astronaut Liu Boming with nearly 50 reporters and 150 Sino-Russian students involved.
- Be in charge of 2018 HIT International Week, a one-week festival with 10 lectures, 3 big activities and 180 meters long display board surrounding two campus. Attracted more than 3000 participants.