

Hengfei WANG

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EDUCATION

Tsinghua University, Department of Mechanical Engineering , Beijing, China	08/2013 – 07/2020
08/2017 – now Master of Engineering, GPA: 86/100;	
08/2013 – 07/2017 Bachelor of Engineering, GPA: 87.3/100;	
Second Bachelor of Business Administration, GPA: 88.2/100	
The University of Notre Dame , Notre Dame, IN	07/2016 - 08/2016
International Summer Undergraduate Research Experience Program, GPA: 4.0/4.0	

RESEARCH EXPERIENCE

Robot Inspection System and its Control Method for Gas Pipeline	09/2017 – 07/2020
<ul style="list-style-type: none">Designed an integral mechanical structure and finished motion simulation;Designed a real-time embedded system, made control circuit, programmed control code;Proposed a self-control strategy with several laser range finders, solved the robots overturning problem in gas pipeline.	
Neural-network based Control for Self-driving Car	03/2018 - 07/2018
<ul style="list-style-type: none">Designed a self-driving car that has advantages of adaptive obstacle avoidance, intelligent line-following, path planning, visual identity;Mainly contributed to programming three-layer convolutional neural networks for visual identity.	
Testing and Analyzing the Technological Parameters in Hot Stamping of Ultrahigh Strength Steel	04/2017 - 07/2017
<ul style="list-style-type: none">Utilized numerical stimulation of the hot stamping process to explore optimal parameters;Designed and Conducted the hot stamping experiment, compiled a formal degree thesis.	
A Design of a New Accessible Toilet for the Disabled	09/2016 - 01/2017
<ul style="list-style-type: none">Developed a gear structure to lever the toilet seat lid to assist the disabled to stand up;Researched the human body mechanism of standing up, discussed and refined the design proposal to optimize the toilet seat's accessibility;Built 3D model based on this innovative method with team members and won high marks from professors.	
A Sensor for Fluid Dynamical Analysis	07/2016 - 08/2016
<ul style="list-style-type: none">Solved shock tube air leakage issue, allowing the tube's internal air pressure to satisfy the experimental requirement;Examined the measuring position's pressure temperature and checked it using TSP and PSP in order to analyze the fluid model in the shock tube;Designed experimental rig, purchased parts and assembled experimental apparatus independently.	

ACHIEVEMENTS

Hengfei Wang, Zandong Han, and Qingxian Ma, "Robotic system with power line communication for in-pipe inspection of underground urban gas pipeline", International Conference on Robotics and Automation Engineering (ICRAE), 2019.

Zandong Han, **Hengfei Wang**, and Yuangen Wei. 2019. A method for quickly detecting pipeline changes. CN Patent Application 201910519927.9, filed July 2019. (Patent Pending)

AWARDS

Scholarship	Outstanding Social Work Scholarship of School, Department of Mechanical Engineering	10/2018
	China National Encouragement Scholarship, Chinese Government	06/2014
	Science and Technology Innovation Scholarship of School, Tsinghua University	05/2014
Competition	Best Oral Presentation of ICRAE 2019	11/2019
	2 nd prize in Mechanical Innovation Competition, Department of Mechanical Engineering	11/2013

CAMPUS ACTIVITY

Teaching Assistant of Undergraduate Courses	03/2018 - 09/2018
<ul style="list-style-type: none">Laboratory supervision and assignments assessments for two undergraduate courses;Gained excellent feedback from students.	
Comprehensive Winter Study Abroad Program of the University of Tokyo	12/2016 - 01/2017
<ul style="list-style-type: none">Participated in a 4-week mechanical research experience with Dr. Masanori KUNIEDA;Had an international research experience while still making progress towards completing the major.	

SKILLS

- Language: TOFEL: 98 GRE: Verbal 153, Quantitative 168, Writing 3
- Programming languages: C/C++, C#, MATLAB, Python
- Software & Operation Systems: Altium Designer, Solidworks, AutoCAD, Labview, Origin, Abaqus, ROS