Yuxiang Kang

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EDUCATION

University of California San Diego Sep. 2022 – Dec. 2023

Master of Science – Mechanical Engineering, GPA:4.0

- Coursework: Fluid Mechanics, Mathematics for Engineers, Solid Mechanics and Materials

Tsinghua University Aug. 2018 – Jun. 2022

Bachelor of Engineering - Mechanical Engineering, GPA:3.3

- **Awards**: Nancal Technology Scholarship for excellence
  2nd Prize in the 23rd mechanical innovation design competition of Tsinghua University
  1st Prize in China Undergraduate Physics Contest
  2nd Prize in Beijing Contest District in China Undergraduate Mathematical Contest in Modeling
- Coursework: Machine Design, Finite Element Analysis, Manufacturing Process Design, Automobile culture

SKILLS

- Design Software: SOLIDWORKS, AutoCAD, Creo
- FEA Software: ANSYS, Abaqus, COMSOL
- Programming: C/C++, MATLAB, Python,

EXPERIENCE

NAURA Technology Group Co., Ltd Jun. 2021 - Aug. 2021

Mechanical Engineer Intern *Beijing, China*

- Conducted **gas flow simulation** on Horizontal Furnace, a semiconductor processing equipment, using **ANSYS Fluent**.
- **Simulated the leakage** of combustible gas in the Horizontal Furnace based on SEMI S6 standard.
- **Designed and manufactured** an improved exhaust system **installed on mass production model** based on the simulation result.

PROJECTS

Disc Type Plugging Device for Gas Pipeline Jan. 2022 – Jul. 2022

Individual Graduation Project, Forming Equipment and Automation Lab *Tsinghua University, China*

- Designed a disc type plugging device including more than 30 non-standard parts in SOLIDWORKS.
- This device is the first product to use **pure mechanical structure** to improve plugging ability by axially compressing the plugging rubber disc.
- **Simulated the deformation and contact pressur**e of the rubber disc in **ANSYS**, proving the design's plugging ability.
- Calculated the stress in heavy-duty parts and drew the stress-movement curve of the plugging process via MATLAB
- **Manufactured a prototype** and met the pressure requirement in actual experiments.
- The prototype was accepted by the gas company. **Two papers were accepted** by *Pipeline technology and equipment*.

Bionic Fish Robot Aug. 2021 – Jan. 2022

Project Leader, Department of Mechanical Engineering *Tsinghua University, China*

- Designed a bionic fish robot based on the movement of manta ray.
- Set up an **embedded control system** based on a STM32 MCU and sent instructions via Bluetooth serial part.
- Manufactured custom-made parts and assembled a prototype, which met the design goals **during underwater tests**.
- Won the **2nd Prize** in the 23rd mechanical innovation design competition of Tsinghua University.

Automatic self-tracing electric vehicle Mar. 2021 – Jun. 2021

Individual Project, Department of Mechanical Engineering *Tsinghua University, China*

- Collected road information with a 1×128 pixel **CCD** and identified spatial obstacles with four **ultrasonic sensors**.
- Achieved **pace tracking and obstacle avoidance**.

PUBLICATIONS

1. ZHANG Cheng[1], XING Linlin[1], HUANG Wenyao[1], ZHANG Bo[1], SHEN Ying[1], **KANG Yuxiang** [2], HAN Zandong[2], "On-line Plugging Technique of Urban Gas Pipelines", *Pipeline technology and equipment*, **2022**, accepted.

2. HUANG Wenyao[1], ZHANG Cheng[1], XING Linlin[1], Qi Lirong[1], ZHANG Bo[1], SHEN Ying[1], **KANG Yuxiang** [2], HAN Zandong[2], "Research on an expandable plugging device for gas pipelines", *Pipeline technology and equipment*, **2022**, accepted.