Qi, Chen

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Education Background

Chongqing University-University of Cincinnati Joint Co-op Institute
09/2022 – 06/2027 Major: Mechanical Design, Manufacturing, and Automation | GPA: 84%
Core Courses: Engineering Drawing, Solid Mechanics, Thermodynamics, Mechanical Principles, Engineering Modeling

Awards Experience

- Won the Meritorious Winner (M Prize, top 6%-10%) in the Mathematical Contest in Modeling (MCM), 2025
- Awarded the **2nd Prize** (Chongqing Division) in the National Undergraduate Mathematical Contest in Modeling, 2024
- Won the **1st Prize** in the Chongqing University Mathematical Modeling Competition, 2024
- Achieved the National **3rd Prize** in the RoboCup China Open - UAV Challenge at the China Robot Competition, 2024
- Earned **Excellent Completion** for the 18th National College Student Innovation Training Program (Project: Innovative Design and Research on On-Orbit Disposal Solutions for Non-Cooperative Space Targets), 2024
- Won the **2nd Prize** in the Chongqing University English Speech Contest, 2023
- Received the **Honorable Mention** in the "FLTRP Cup" English Speech Competition, 2024

Paper & Patent

- Co-authored an invention patent**:** *A Kinetic Energy-Based On-Orbit Countermeasure Device (or An In-Orbit Countermeasure Device Based on Kinetic Energy*
- **Chen Qi**, *Kinematic Analysis and Noise Optimization of ForkArm Glass Elevators for Automobiles Based on MATLAB and ADAMS,* 2025 5th IEEE Asia-Pacific Conference on Communications Technology and Computer Science (ACCTCS 2025)

Project Experience

Electric Field-Induced Inkjet 3D Printer, Prof. Yi Hao at Chongqing University **02/ 2024 – 04/2024**

- Designed and improved the outlet shape of a printer nozzle using SolidWorks, and simulated the working process of the medium inside the nozzle via finite element analysis (FEA) with ANSYS.
- Analyzed simulation data using MATLAB; derived analytical solutions for medium flow rate and velocity at the nozzle outlet using neural networks and fitting tools.
- Predicted nozzle performance based on the obtained data and optimized the structure accordingly to identify the best configuration and optimal solution.

Innovative Design of On-orbit Disposal for Uncooperative Space Targets **11/2023-11/2024**

- Orbital Payload Model Structure: Proposed and designed a novel satellite payload device solution capable of efficiently handling on-orbit non-cooperative targets under microgravity or zero-gravity conditions.
- Modeled and designed the solution using SolidWorks, and conducted simulation verification of its mechanical structure and operational performance based on ADAMS.
- The project was awarded national-level excellence upon completion, and the results were filed for a national invention patent: "A Kinetic Energy-Based On-Orbit Countermeasure Device."

2024 China Robot Competition RoboCup China Open - Drone Challenge **02/2024 – 05/2024**

- Participated in the development of autonomous obstacle avoidance control algorithms for UAVs.
- Implemented distributed search missions for UAVs in unknown environments using C++ and ROS, integrating DWA (Dynamic Window Approach) and RRT (Rapidly-exploring Random Tree) algorithms.
- Led the team won a National Third Prize in the competition.

Beijing Siemens Siebolus Electronics Co., LTD, Beijing China 2025. 5–2025. 9 / 2024. 9–2024. 12

- Designed and updated critical component models using SolidWorks to meet product and production requirements.
- Created operational simulations and animations using Blender for visual troubleshooting, developed modification plans based on simulation analysis.
- Collaborated on replacing manual sorting processes with automated solutions, led part design, 3D printing, and solution optimization for automation projects.

Personal Skills

- Proficient in common industrial software such as MATLAB, UG NX, and SolidWorks, with strong programming skills in C++ and MATLAB.
- Excellent learning ability, strong mathematical modeling, and abstraction skills, capable of quickly acquiring new skills.
- Outstanding English proficiency with strong oral and communication skills.