

# Qiaomai Liu

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## SUMMARY

I am currently a master student (2021-2024) at the [School of Chemical Engineering and Technology, Xi'an Jiaotong University](#) advised by Prof. [Simin Wang](#). My work is now related to gas combustion of the hydrogen blended fuel combustion, these involves:

- *Focusing* on the experimental and computational research of hydrogen blended fuel combustion.
- *Utilizing* numerical methods, including CFD simulations, to study Hydrogen Blending Combustion.
- *Investigating* the impact of hydrogen blending on emissions and performance.
- *Studying* interactions between hydrogen and other fuel components, particularly natural gas.
- *Developing* novel strategies to optimize hydrogen blending for improved combustion efficiency.

## EDUCATION

### Xinjiang University

- *Bachelor of Pross Equipment and Control Engineering.* Urumqi, Xinjiang | Sep 2017 - Aug 2021
- Cumulative **GPA:** 3.59/5.00 (approx. 3.44/4.00) (Average: 85.92)
- Relevant Coursework: *Process Fluid Machinery* and *Process Equipment Design*.

### Xi'an Jiaotong University

- *Master of Power Engineering and Engineering Thermophysics.* Xi'an, Shaanxi | Sep 2021- Current
- Cumulative **GPA:** 3.47/4.00 (Average:87.20)
- Relevant Coursework: *Numerical Heat Transfer* and *Advanced Engineering Thermodynamics*.

## Experience

- **2017**
  - Worked in the Secretariat of the School of Chemical Engineering, Xinjiang University from Sep 2017 to Jan 2018.
- **2018**
  - Completed a metalworking internship at the Engineering Training Center, Xinjiang University from Nov to Dec 2018.
  - Currently serving as dormitory head and safety officer of Room 402, Building 11, Xinjiang University since Sep 9, 2018.
- **2021**
  - Participated in the 11th National Conference on Fluidization and Particle Technology in 2021, held in Hangzhou, Zhejiang, China.
  - Participated in the study of transfer rules of the fluid catalytic cracking (FCC) oil additives blending zone [*project*].
- **2022**
  - Attended Chemical Engineering Machinery Conference in 2022, held in Xi'an, Shaanxi, China.
  - Completed the analysis of the vibration situation of the pressure pipeline at a certain hydrogenation station.
  - Participated in the construction of the experimental platform for dual-dispersed fluidization and observation of agglomeration characteristics, as well as the renovation of the experimental platform [*project*].
  - Participated in the design and construction of the experimental platform for the submerged combustion crystallizer (SCC) and crystallization device, as well as conducting experiments [*project*].
  - Participated in the construction of the experimental platform for testing hydrogen-enriched combustion in civil use, as well as conducting numerical simulation work [*project*].
- **2023**

- I am currently focused on numerical and experimental work related to hydrogen-blended natural gas (HENG) combustion to facilitate a future where we can achieve carbon neutrality and live sustainable lifestyle.

## SKILLES

Languages	Softwares	Soft Skills
★ Chinese ★ English <ul style="list-style-type: none"> <li>○ CET 4: 526</li> <li>○ CET 6: 456</li> </ul>	★ Microsoft Office ★ 2D design <ul style="list-style-type: none"> <li>○ Adobe Illustrator</li> <li>○ Inkscape</li> </ul> ★ 3D model simulation Fabricating <ul style="list-style-type: none"> <li>○ Solidworks /Inventor</li> <li>○ SketchUp</li> <li>○ Ansys Fluent</li> <li>○ CAESAR II</li> </ul>	★ Critical thinking ★ Negotiation ★ Problem solving ★ Self-motivation

## PUBLICATIONS

### Conferences Paper

- *Study on Flame Characteristics and Pollutant Distribution of Methane-Hydrogen Combustion*

### Journal Papers

- Submitted a scientific paper on *a micro planar combustor that utilizes non-premixed H<sub>2</sub>/air combustion*.

## AWARDS & HONORS

- **2018-2019**
  - Received Certificate of Honor for Xinjiang Uygur Autonomous Region People's Government Scholarship for Motivation at Xinjiang University, Urumqi, Xinjiang, China.
  - Received the title of 'Advanced Individual' in the 'Practice of Educating People through Folk Traditional Toys' thematic activity at Xinjiang University, Urumqi, Xinjiang, China.
  - Received the first prize and certificate of Class C in the national English competition for university students in the autonomous region in Urumqi, Xinjiang, China.
- **2019-2020**
  - Received Certificate of Honor for Xinjiang Uygur Autonomous Region People's Government Scholarship for Motivation at Xinjiang University, Urumqi, Xinjiang, China.
- **2021-2022**
  - Awarded the qualification for direct admission to graduate school without entrance examination during undergraduate studies.
  - Awarded the Paper Certificate for the conference paper "Study on Flame Characteristics and Pollutant Distribution of Methane-Hydrogen Combustion," which was submitted to the Chemical Engineering Machinery Conference in 2022, held in Xi'an, Shaanxi, China.

## OTHER SKILLS & INTERESTS

- I have always had a passion for reading books and writing down my reflections on life experiences.
- Likewise, I enjoy exercising my body through activities such as swimming, jogging, and more.
- Lastly, I have a strong passion for engaging with and contributing towards solving real-world problems that still remain unresolved.