



Tao Zixu He

Computer Science @ UNSW Sydney

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[Homepage](#)

RESEARCH INTEREST

Algorithm, Computational Complexity Theory, and Computational Social Choice.

EDUCATION

Bachelor (Honours) | *Computer Science*

University of New South Wales

- WAM: 90/100.

Sep 2021 – Aug 2025

Sydney, Australia

WORK EXPERIENCE

Research Assistant

University of New South Wales

Jan 2024 – Jan 2025

Sydney, Australia

Casual Academic

University of New South Wales

- Tutor for COMP3821 (Extended Algorithm Design and Analysis)

Feb 2024 – May 2024

Sydney, Australia

Software Engineer

h2x Engineering

- Developed a web application using **TypeScript**, **Vue** and **PostgreSQL**, as part of a part-time job.
- Gained hands-on experience in software engineering and teamwork development.

Mar 2023 – Dec 2023

Sydney, Australia

PUBLICATIONS

A Faster FPT Algorithm for Vertex Cover on Subcubic Graphs: A Randomized Automated Approach

2024

with Katie Clinch, Serge Gaspers, Simon Mackenzie, and Tiankuang Zhang

Fair Railway Network Design

2024

with Sirin Botan, Jérôme Lang, Abdallah Saffidine, Florian Sikora, and Silas Workman

[\[arXiv\]](#)

A Piecewise Approach for the Analysis of Exact Algorithms

2024

with Katie Clinch, Serge Gaspers, Abdallah Saffidine, and Tiankuang Zhang

[\[arXiv\]](#)

SELECTED AWARDS

University of New South Wales Engineering 2023 Dean's Honours List

Feb 2024

6th Place worldwide and 1st in Australia in IEEEExtreme

Oct 2023

24-hour Programming Competition hosted by IEEE

1st Place in International Collegiate Programming Contest Regional Finals

Oct 2023

2024 ICPC South Pacific region contest

1st Place in International Collegiate Programming Contest Regional Finals

Dec 2022

2023 ICPC South Pacific region contest

5th Place worldwide and 1st in Australia in IEEEExtreme

Oct 2022

24-hour Programming Competition hosted by IEEE

Bronze Medal in Chinese National Olympiad in Informatics

Jul 2019

China's Top High School Algorithm Competition

Bronze Medal in IOI China Team Selection Competition

May 2019

The competition in China to select outstanding competitors to participate in IOI

SKILLS

Languages: Chinese (native), English (fluent)

Programming: C, C++, Python, JavaScript, Java, Answer Set Programming, AMPL (A Mathematical Programming Language)