

# Rundong Zhou

## Curriculum Vitae

### Contact Information

**Email:** rundongz@chalmers.se

**Phone:** +46 734809317

**Website:** rundong-zhou.github.io

### Research Interest:

Computational physics, Fluid mechanics, Dynamical system, Numerical methods,  
Physical oceanography and Atmospheric Science

## EDUCATION

**Bachelor of Applied Science in Engineering Science**

2021

**Major in Engineering Physics**

Major GPA 3.59

University of Toronto

Toronto, Canada

Candidate for **Master of Science**

expected 2024

**Major in Complex Adaptive Systems**

Chalmers University of Technology

Gothenburg, Sweden

## PUBLICATIONS

Zhou, R., Grisouard, N. *Spectral solver for Cauchy problems in polar coordinates using discrete Hankel transforms*. Submitted to Journal of Computational Physics. arXiv:2210.09736

## HONOURS AND AWARDS

**Avancez Scholarship**

2022

Chalmers University of Technology

- 75% tuition fee reduction.

**Undergraduate Research Fellowship**

2018

Canadian Institute for Theoretical Astrophysics

- C\$ 2000 per month for four months.

**Dean's Honour List**

2015 Fall

University of Toronto

2016 Fall

- Pass with >80% average.

2020 Fall

2021 Winter

## RESEARCH EXPERIENCE

### Undergraduate Thesis

September 2020 - April 2021

Department of Physics, University of Toronto

Toronto, Canada

Supervisor: Prof. Nicolas Grisouard

- A novel spectral method to solve fluid equations in polar coordinates.

### Summer Undergraduate Research Program

May - September 2018

Canadian Institute for Theoretical Astrophysics

Toronto, Canada

Supervisor: Prof. Norm Murray

- Data analysis on Galactic Legacy Infrared Midplane Survey Extraordinaire (GLIMPSE) database.

### Research Assistant

April 2021 - Present

Department of Physics, University of Toronto

Supervisor: Prof. Nicolas Grisouard

- A novel Fourier-Bessel based spectral method using discrete Hankel transform.

### Research Assistant

January - April 2022

Department of Mechanical Engineering, University of Ottawa

Supervisor: Prof. Natalie Baddour

- Developing a new type of 2-D discrete Fourier transform in polar coordinates using Dini series.

## PROFESSIONAL EXPERIENCE

### Intern Technical Interpreter

October - December 2019

Baoshan Iron & Steel Co., Ltd., and PMC-Colinet Industries

Shanghai, China

Supervisor: Marcello Mameli

- English and Mandarin. RPP07-3 CNC Pipe Finishing Machine bearing replacement and refurbishment project at Baoshan Iron & Steel Co., Ltd..