

# TIANJIE QIU

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## EDUCATION

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### Brown University

Sc.M in Data-Enabled Computational Engineering and Science

Expected May 2024

### University of Illinois at Urbana-Champaign

2018-2021

B.Sc in Physics, B.Sc in Mathematics with Applied Math concentration

GPA:3.84/4.00

- Highest Distinction, Dean's List, James Scholar, Susan Schaeffer Scholarship

## SKILLS

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### Programming Languages

Java, C++, Python, Fortran

### Software

MATLAB, Mathematica, SageMath, LaTeX

### Languages

Mandarin, English, German

## EXPERIENCE

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Teaching Assistant, ENGN0040 Teaching Assistant

Jan 2023 - Now

Brown University

Providence, RI

Grader, ENGN0510 Course Grader

Aug 2022 - Dec 2022

Brown University

Providence, RI

Undergraduate Researcher, Nanofabrication Lab, Covid-Pod Project

May 2021 - Dec 2021

University of Illinois at Urbana-Champaign

Urbana, IL

- Designed and fabricated micro-scale exosome sorting device using ultraviolet lithography. Prepared and conducted experiments in cleanroom. Ran tests and collect data for analysis. Built mobile application for covid tests from scratch using Java. Achieved function via Bluetooth connection. Created database to store users' testing data.

Internet Technologist, UIUC Chinese Scholar and Student Association

Aug 2018 - Dec 2021

University of Illinois at Urbana-Champaign

Urbana, IL

- Build, manage, operate and optimize UIUCCSSA application, official social media and websites. Provide information tech service to CSSA IT department. Launched website and application with is feed to 6k+ students in Urbana-Champaign area.

Undergraduate Researcher, Sensing and Control Across the Atlantic

Aug 2019 - Dec 2019

University of Illinois at Urbana-Champaign, University of Birmingham

Urbana, IL

- Developed data-collection system with Raspberry Pi, collecting data via designed sensor network. Stored and analyzed data with Amazon Web Server(AWS) service. Transport data for visualization.

## RESEARCH INTERESTS

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High performance computing and machine-learning applications in scientific researches, atomic modelling of materials; complex dynamical systems and chaos theory, fluid dynamics. Critical behaviors in phase transitions, topological superconductors/insulators.

## CONFERENCE TALKS AND PAPERS

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1. *Rapid detection of intact SARS-CoV-2 using designer DNA nets and a pocket-size smartphone-linked fluorimeter*, submitted to *Biosensors and Bioelectronics* Oct.2022

2. *Rapid, Sensitive Detection of Intact SARS-CoV-2 using DNA Nets and a Smartphone-Linked Fluorimeter*, Paper No. 12387-21 *Optical Diagnostics and Sensing XXIII: Toward Point-of-Care Diagnostics* Jan.2023

## MISCELLANEOUS

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- I am a member of the Brown Frisbee team and a road-cyclist.
- I am a landscape photographer. I enjoy hiking, trekking and backpacking. I love dark skies and hate Starlink.