

ANDY ZHANG

CONTACT INFORMATION

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Github: [aszhang107](https://github.com/aszhang107)

EDUCATION

Princeton University

Ph.D. in Applied and Computational Mathematics

M.A. in Applied and Computational Mathematics

Advisor: Amit Singer

Princeton, NJ

2022 – Present

2022 – 2024

Duke University

B.Sc. Computer Science | B.Sc. Mathematics

GPA: 3.94/4.00

Durham, NC

2018 – December 2021

INDUSTRY EXPERIENCE

Amazon

Software Development Engineer I, AWS

January - July 2022

Seattle, WA

Amazon

Software Development Engineer Intern, AWS

Summer 2021

Seattle, WA

RESEARCH INTERESTS

Broad: applied mathematics, biological imaging

Specific: 3-D reconstruction in cryo-EM, method of moments, convex optimization, numerical linear algebra

CURRENT PROJECTS

Method of moments with non-uniform distribution of viewing angles and homologous modeling (*in progress*)

with Oscar Mickelin, Amit Singer

PUBLICATIONS

- [1] **A. Zhang**, O. Mickelin, J. Kileel, E. Verbeke, N. Marshall, M.A. Gilles, A. Singer, “Moment-based metrics for molecules computable from cryo-EM images”. [Biological Imaging 4 \(2024\): e3](#). Preprint: [arXiv:2401.15183](#)

TALKS

October 2024 - MACSMIN 2024, University of Liverpool, **invited talk**

March 2024 - SMBp Seminar, Flatiron Institute, **invited talk**

October 2023 – Graduate Student Seminar, PACM

TEACHING EXPERIENCE

Teaching Assistant, Duke University

Fall 2019 – TA, CS 230: Discrete Mathematics for Computer Science

Spring 2019 – TA, CS590: Computational Structural Biology

Fall 2020 – Head TA, CS 230: Discrete Mathematics for Computer Science

Spring 2020 – TA, CS590: Computational Structural Biology

Fall 2021 – Head TA, CS 230: Discrete Mathematics for Computer Science

AWARDS & HONORS

Graduate Research Fellowship Program

Alex Vasilos Memorial Prize

National Science Foundation

Duke University