

Syed Saam Rasool

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Education

B.S., Materials Science and Engineering 2021-2023
Columbia University

B.A., Mathematics 2018-2021
Colby College (GPA: 3.78)

- Ralph J. Bunche Scholar

Work Experience

Research and Development Engineer, Metal Fuels Aug 2023-Present

- Improve the selectivity towards the desired phase and reduce impurities in aluminum oxide produced via water-reactive aluminum
- Use DFT methods to identify key reaction mechanisms and evaluate potential catalysts and additives

Engineering Intern, VEIR June 2023-Aug 2023

- Performed materials testing to determine the electrical properties of selected superconducting tapes under an applied strain
- Created an analytical model which reports the state of strain within the superconducting layer. This complemented mechanical failure testing and the evaluation of cable prototypes

Fellow, Marjorie Lee Browne STEM Education Fellowship June 2021-July 2021

- Led a STEM camp for excelling students of color attending under-resourced middle schools in Memphis, TN
- Participated in workshops held at the National Civil Rights Museum aimed at promoting equity in the classroom

Teaching Assistant, Colby College Sept 2019-May 2021

- Graded weekly problem sets and quizzes, hold TA help sessions
- Courses: Series in Honors Calculus, Series and Multivariable Calculus

Mathematics Tutor, Colby College Sept 2019-May 2020

Education and Engagement Intern, Colby College Museum of Art Sept 2019-May 2021

- Analyzed and presented visitor survey results to the Museum board
- Researched and planned the launch of a competitive student docent program at the Museum

Musician, Winslow Congregational Church Jan 2020-May 2021

- Served as the principal organist and musician at the local UCC congregational church

Research Experience

Undergraduate Researcher, Polymath Jr. REU June 2020-July 2020
PI: Steven Miller
Areas: number theory, probability

- Produced probabilistic models of sequence length walking along primes and other integer sequences under digit-appending operations ([preprint](#))

Materials Science & Engineering Research Assistant, Columbia University

July 2022-May 2023

PI: Siu Wai Chan

Areas: materials science, ceramics

- Fabricated nanoparticles of copper-doped Cerium oxide and characterized their electronic conductivity using impedance spectroscopy (EIS)