Hurum Maksora Tohfa
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EDUCATION

Bryn Mawr College **Expected Graduation: May 2022**
Bachelor (Hons.) in Physics with a minor in mathematics and concentration in scientific computing

AWARDS AND RECOGNITION

Velay Fellowship 2020, POD Innovation Award finalist for "Undergraduate Students Partnering with Faculty to Develop Trauma-Informed, Anti-Racist Pedagogical Approaches During Covid-19 Times", Bryn Mawr College Summer Science Research Grant, Bryn Mawr College Merit Scholarship, Philadelphia Foundation (Hussain Scholarship), National Team Member (International Olympiad of Astronomy and Astrophysics 2017), National Team Member (International Junior Science Olympiad 2015)

Relevant Course Work: Electromagnetism, Quantum Mechanics, Multivariable Calculus, Number Theory, Linear Algebra, Differential Equations, Advanced Classical Mechanics, Mathematical Methods, Real Analysis, Abstract Algebra, Abstract Algebra II, Advanced Quantum Mechanic, Advanced Electronics Lab, Applied Statistics, Introduction to Computer Science, Statistical Mechanics and Thermodynamics, Advanced Electrodynamics and Magnetism, Introduction to Cosmology (Graduate level), Data structure, Discrete Mathematics, Graph Theory

Other: Center for Matter at Atomic Pressures Summer School (selected to receive stipend), CMB-S4 Summer School

RESEARCH EXPERIENCE

Research Intern, Kavli Institute for Astrophysics and Space Research **Massachusetts Institute of Technology**
Advisor: Professor Michael McDonald May 2021- Present

- Proving previously found pressure-luminosity correlation is not a cavity specific property and, finding factors that drives the correlation, analyzing the driving factors and observing biases in the cavity detection process to meaningfully account for the bias

Undergraduate Research Assistant, Department of Physics and Astronomy **Haverford College**
Advisor: Daniel Grin September 2019- Present

- Writing programs to numerically solve relevant differential equations for different universe models and identifying free parameter values which coincide with QSO data and further analyzing constraints at higher redshift, imposing the constraints to create CMB power spectrums and generating temperature map of the universe

Undergraduate Research Assistant, Department of Physics **Bryn Mawr College**
Advisor: Professor David Schaffner December 2018-May 2019

- Creating simulations using bi-spectral analysis and bi-coherence to find modes where energy transfer took place

Undergraduate Research Assistant, Department of Physics **Bryn Mawr College**
Advisor: Professor Michael Schulz May 2019- August 2019

- Analytically solving field equations for Lifshitz Metric to find correlation function using AdS/CFT correspondence

WORKING EXPERIENCE

Hvaerford College **Haverford, PA**

- Teaching Assistant for Statistical Mechanics and Thermodynamics (Fall 2021), Advanced Quantum Mechanics (Spring 2021), Advanced Classical Mechanics (Fall 2020), and Multivariable calculus (Spring 2020)

Bryn Mawr College **Bryn Mawr, PA**

- Teaching Assistant for Introductory Physics I (Fall 2019), Introductory Physics II (Spring 2019)
- Peer Tutor Fall 2020- Present
- Student Consultant Fall 2019- Present
- Quantitative center tutor Fall 2020- Present

Test Scores:

SAT: 1530/1600

SKILLS AND INTERESTS

Clubs and organizations: Undergraduate representative on the tenure track faculty search committee, President of Society of physics students: Bryn Mawr Chapter, STEM Scholar (New York Academy of Sciences), Member (American Physical Society), Bryn Mawr College Math Club, Academic Team Member of Society of Science in Bangladesh

Programming language: Python, Mathematica, Java, MATLAB, R, C, HTML, PHP