

## Abeer Karandikar

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| CONTACT INFORMATION              | Ashoka University<br>Sonipat, Haryana   | Website: <a href="https://github.com/Abeer-Karandikar">https://github.com/Abeer-Karandikar</a><br>E-mail: <a href="mailto:abeer.karandikar_ug24@ashoka.edu.in">abeer.karandikar_ug24@ashoka.edu.in</a> |
| EDUCATION                        | <b>Ashoka University</b><br>Third Year Undergraduate Student in Physics, 2021-24<br><b>M.E.S. Abasaheb Garware College, India</b><br>High School Education  |  |
| RESEARCH EXPERIENCE              | Perihelion Precession of Mercury's Orbit, Mentored by: Dr. Bikram Phookun and Philip Cherian (Selected for Meera Memorial Paper Presentation Competition 2023, St. Stephen's College)- Report and Code<br><br>Computational project on knot topology. In particular in 4-dimensions. Intended to look at the physics behind the working of the DNA enzyme topoisomerase. Mentored by: Dr. Somendra M Bhattacharjee- Code<br><br>I have been conducting experiments on nematic liquid crystals with negative electric anisotropy (MBBA) and the effect of applying electric fields across them. Another problem we are looking into is that of nematic films on substrates such as water or glycerol. Some experiments have been successfully conducted and the work on these problems will continue in the coming months. Mentored by: Dr. Pramoda Kumar- Report<br><br>Independent project work on animal behaviour at IISER Pune animal behaviour lab, Mentored by: Dr. Raghav Rajan- Certificate |  |
| TEACHING EXPERIENCE              | Teaching Assistant-ship for the Astronomy module as part of the Lodha Genius Program- Certificate   |  |
| ADDITIONAL ACADEMIC ENGAGEMENTS  | International Centre for Theoretical Sciences Summer Course on Curves and Surfaces: Geometry and Physical Application Certificate<br><br>Fat Chance: Probability from the Ground Up offered through EdX by HarvardX - Certificate   |  |
| PROJECT REPORTS AND CERTIFICATES | Molecular Dynamics of Lennard-Jones System, Statistical Mechanics: PHY-3610-1 (Monsoon'23), Professor Bikram Phookun- Report and Code<br><br>Learning Techniques and Methods for Experimental Soft Matter Physics, Mentored by: Dr. Pramoda Kumar- Report   |  |

Measuring the Speed of Light, Lab III: PHY-2020-1 (Spring'23) Final Project, Professor Susmita Saha- Report

Perihelion Precession of Mercury's Orbit, Mentored by: Dr. Bikram Phookun and Philip Cherian- Report and Code

International Centre for Theoretical Sciences Summer Course on Curves and Surfaces: Geometry and Physical Application- Certificate

Independent project work on animal behaviour at IISER Pune animal behaviour lab, Mentored by: Dr. Raghav Rajan- Certificate

TECHNICAL  
PROFICIENCY

LaTeX, Python, Mathematica

ADDITIONAL  
ENGAGEMENTS

Treasurer, PhySoc Ashoka University, the physics society of Ashoka University for the academic year 2023-24

Member of the Ashoka University Mens' Volleyball Team