## PhD Supervisors

<table>
<thead>
<tr>
<th>Role</th>
<th>Faculty</th>
<th>Academic Unit in IITD/Institute/University</th>
<th>Email ID (Official)</th>
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</thead>
<tbody>
<tr>
<td>Supervisor 1</td>
<td>Manidipa Banerjee</td>
<td>Kusuma School of Biological Sciences, IIT Delhi</td>
<td><a href="mailto:mbanerjee@bioschool.iitd.ac.in">mbanerjee@bioschool.iitd.ac.in</a></td>
</tr>
<tr>
<td>Supervisor 2</td>
<td>Kedar Khare</td>
<td>Optics and Photonics Centre, IIT Delhi</td>
<td><a href="mailto:kedark@physics.iitd.ac.in">kedark@physics.iitd.ac.in</a></td>
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## Project requirements (Student qualification, preferred experience/skills, etc)

- The student must have B.Tech/M.Sc./M. Tech. degree in Biophysics/Biochemistry/Bioinformatics, with excellent academic records throughout.
- The student must have CSIR-JRF/DBT-A JRF/ICMR JRF/GATE qualification (if applicable).
- Experience in programming, coding, image processing or in biochemistry/biophysics techniques will be desirable.

## Source of fellowship/funding

(If applicable) The research will be supported through individual projects or institute fellowship(s) available to the PIs.
Role of Faculty Members involved:

Manidipa Banerjee, IIT-D: Prof. Manidipa Banerjee’s laboratory at the Kusuma School of Biological Sciences utilizes cryoelectron microscopy and 3D reconstructions to understand the molecular mechanism of virus-host interaction. The laboratory utilizes a variety of molecular virology, biochemistry and structural biology-based methods for understanding conformational alterations in virus capsids under various conditions. A state-of-the-art national cryoelectron microscopy facility being established at IIT-D will be available for this work.

Kedar Khare, IIT-D: Kedar Khare’s laboratory works in the area of computational imaging with emphasis on both imaging hardware and image reconstruction algorithms. Recent work involves a number of algorithmic contributions to quantitative phase imaging, 3D imaging, holography, that have led to system or device implementations. The focus of the laboratory is primarily on novel imaging concepts/techniques with collaborative work on application development – particularly in life sciences. Another focus area of the lab is light propagation in random media like atmospheric turbulence.