

**** Apart from the Department of Chemical Sciences, the candidates with a Chemistry background may apply to the following faculty members from the Department of Biological Sciences and Earth Sciences.

Interdisciplinary research area:	Application Information
<p>Dr. Rituparna Sinha Roy: Interdisciplinary research area: Peptide based therapeutics, cancer nanomedicine, drug delivery, biomimetic chemistry, chemical biology, supramolecular chemistry, applied biomaterials, cancer biology, and regenerative nanomedicine.</p> <p>Minimum Essential Qualification: MSc Chemistry (minimum marks 55%) having specialization in organic chemistry, or MSc Chemistry (minimum marks 55%) with MSc project in the area of organic chemistry or MSc in Life Sciences (minimum marks 55%) having specialization in Biochemistry/Zoology/Biotechnology/Microbiology/ Human Physiology and having Chemistry as one of the pass subjects in BSc. Candidates need to have strong background in chemistry. Candidates need to have NET-JRF/UGC-JRF/ DBT-JRF/ICMR-JRF/DST-INSPIRE or equivalent independent fellowship.</p>	<p>Select "PhD in Biological Sciences (Autumn 2021)" in the "Applying for" drop-down menu at the time of filling online application form Click Here</p>
<p>Dr. Rahul Das Structural Biology, NMR spectroscopy and Cell signalling</p>	<p>Select "PhD in Biological Sciences (Autumn 2021)" in the "Applying for" drop-down menu at the time of filling online application form Click Here</p>
<p>Dr. Supratim Datta Protein and microbial engineering, Biological Chemistry</p>	<p>Select "PhD in Biological Sciences (Autumn 2021)" in the "Applying for" drop-down menu at the time of filling online application form Click Here</p>
<p>Interdisciplinary research area:</p>	<p>Application Information</p>

<p>Dr. Neelanjana Sengupta Computer simulations at the biology-nanomaterial interface</p>	<p>Select "PhD in Biological Sciences (Autumn 2021)" in the "Applying for" drop-down menu at the time of filling online application form Click Here</p>
<p>Interdisciplinary research area:</p>	<p>Application Information</p>
<p>Dr. Amit Kumar Mandal Structural Proteomics, Clinical Proteomics and Imaging mass spectrometry</p>	<p>Select "PhD in Biological Sciences (Autumn 2021)" in the "Applying for" drop-down menu at the time of filling online application form Click Here</p>

<p>Interdisciplinary research area:</p>	<p>Application Information</p>
<p>Dr. Swastika Chatterjee Computational Mineral Physics</p> <p>Details of Computational Mineral Physics The Earth's interior is inaccessible to mankind. However, the evolution of the Earth and the other planets, as well as their present structure and dynamics, depends on processes that take place in their deep interiors. There are several ways in which the Earth's interior can be probed indirectly. First principles quantum mechanical based studies being one of them. In the last two decades it has progressively grown into an indispensable tool which is employed in conjugation with results flowing out of seismology, cosmochemistry, geochemistry, meteoritics, and high pressure and temperature laboratory experiments to extract useful information that help us to thermodynamically model the Earth's interior. The Mineral Physics group here at IISER Kolkata performs first principles density functional theory (DFT) based studies to investigate the dynamical stability and thermoelastic properties of probable phases inside the Earth at pressure and temperature conditions up to the Earth's inner core.</p>	<p>Select "PhD in Earth Sciences (Autumn 2021)" in the "Applying for" drop-down menu at the time of filling online application form Click Here</p>

<p>Thermoelastic properties of minerals and melts are the crucial link that permit the seismic tomographic images of the Earth's interior to be translated into information of geophysical significance: mineralogy, composition, and temperature. State-of-the-art high pressure experimental techniques and quantum mechanical first-principles atomistic simulations complement each other and help us obtain robust estimates of various physical and chemical parameters needed for seismic and geodynamical study of Earth interiors. For a brief overview of the scope of first principles based studies in Geo-sciences one may refer to the following review article: J. Brodholt and L Vocadlo, MRS Bulletin, Vol 31, September 2006</p>	
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