Tanmay Pandey

⚓ Google Scholar   ✉ Email   in LinkedIn   🎧 Github   🐦 Twitter

Short Biography

I am Tanmay Pandey, a fourth year Biology majors, studying in **Indian Institute of Science Education and Research, Mohali**, India. I am interested in Membrane Biophysics, Synthetic Biology, Neuromorphic Computation, Polymer Biophysics, Lipid Membranes, Self-Assembly, Drug Transport, NeuroBioPhysics, Experimental and Computational Biophysics and Cell Signalling Biophysics.

Publications

Directed evolution of DNA strands provides adaptable memory for reservoir computing networks to solve multiple tasks.   Under Review
Preprint available on bioRviX
Tanmay Pandey, Jan Steinkühler
DOI: 10.1021/acs.jpcb.4c07431 ☑

Experimentally Determined Shapes of Plasma Membrane Vesicles, Phosphatidylcholine (PC), and PC-Cholesterol Vesicles: Vesicles Deflation Analysis Using Confocal Microscopy   June 2025
Journal of Physical Chemistry B
Harshmeet Kaur, Rajni Kudawla, *Tanmay Pandey*, Tripta Bhatia
DOI: 10.1021/acs.jpcb.4c07431 ☑

Shape analysis of Biomimetic and Plasma Membrane Vesicles   January 2025
ChemSystemsChem
Rajni Kudawla, Harshmeet Kaur, *Tanmay Pandey*, Tripta Bhatia
DOI: 10.1002/syst.202400052 ☑

Education

BS-MS Indian Institute of Science Education and Research, Mohali, India   October 2022 July 2027
   • Biology Majors

Projects

DNA-based neuromorphic Computation   Remote
Bio-inspired computation lab, *University of Kiel*   March 2024 - Ongoing
 Supervisor: Prof. Dr. Jan Steinkuelher

Shape analysis of biomimetic and plasma membrane vesicles   IISER, Mohali
Soft matter Biophysics Lab, *IISER Mohali*   June 2023 - March 2025
 Supervisor: Dr. Tripta Bhatia

Confocal Microscopy Image Analysis   IISER, Mohali
Soft matter Biophysics Lab, *IISER Mohali*   April 2023 - December 2023
 Supervisor: Dr. Tripta Bhatia

Courses

Lipid Membranes: From Cells to Synthetic Biology,
by *Dr. Tripta Bhatia* and *Dr. Thomas G. Pomorski*.

Global Inititative of
Academic Networks

Skills

Programming Languages: Python, Javascript, Matlab

Laboratory Skills: GUV preparation, Confocal microscopy, Phase contrast microscopy, Image analysis using OpenCV
and ImageJ

Online Courses

Supervised Machine Learning: Regression and Classification by **DeepLearning.AI**.
[Certificate](#).

Coursera

R Programming Language by **Johns Hopkins University**.
[Certificate](#).

Coursera

Programming for Everybody (Getting started with Python) by **University of Michigan**.
[Certificate](#).

Coursera