KRISHNA IYER V S

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EDUCATION

Indian Institute of Science Education and Research, Pune — August 2020 - May 2025
BS-MS Dual Degree — *CGPA: 8.6/10*

- Major in Physics, with coursework in Biology and Mathematics
- Master's Thesis on *Viscoelastic Properties of Renewing Cytoskeletal Networks*

RESEARCH EXPERIENCE

Theoretical Biophysics Working Group — June 2025 - Present
Doctoral Student — *University of Göttingen*

- Collective behaviour of gliding filamentous bacteria
- Simulating self-propelled semi-flexible filaments with Lammps

Theoretical Biophysics Working Group — June 2024 - January 2025
Visiting Master's Student — *University of Göttingen*

- Effect of renewal on the mechanical response of Cytoskeletal networks
- Using Cytosim to simulate renewing Cytoskeletal elements
- Development of analysis tools for studying viscoelasticity
- Model development of renewing filaments for self-restructuring networks

Computational and Structural Biology (COSPI) Lab — December 2022 - April 2024
Intern — *IISER Pune*

- Phase separation of different proteins in biological systems
- Developing Molecular Dynamics and Monte Carlo simulations
- Using simulations to study order parameters for active phase separation

Prabal K Maiti (PKM Lab) Lab — May 2023 - July 2023
Intern — *IISc Bangalore*

- Studying the spatial reorganization of amyloid fibrils in α-Synuclein
- Coarse-grained modelling of α-Synclein using Lammps and GROMACS
- Modelling amyloid fibrils and observing their dynamics in α-Synclein environment

ACADEMIC EXPERIENCE

Physics: Computational Physics, Quantum Mechanics, Statistical Mechanics, Non-Linear Dynamics, Soft Matter Physics, Condensed Matter Physics, Electrodynamics

Biology: Genetics, Bioinformatics, Ecology, Mathematical and Computational Biology, Biophysics

Mathematics: Graph Theory, Algorithms, Calculus, Linear Algebra, Group Theory, Complex Analysis

SKILLS

Programming	C++, Python, Fortran
Scripting	Bash, vimscript, POSIX utilities
Simulation	Lammps, GROMACS, Cytosim, VMD
Tools	LaTeX, git, gnuplot, vim, HTML
Graphics	Inkscape, GIMP

CONFERENCES

MPG Third Infinity October 2024
Poster & Flash Talk *MPI-NAT Göttingen*

Cytoskeleton as Active Matter October 2024
Poster & Flash Talk *Bad Honnef*

MASFE, IISER Pune August 2023
Participant *IISER Pune*

TEACHING

Cytosim Hackathon August 2024
Instructor *MPI-NAT Göttingen*

· Helped organize a 3-day hackathon introducing biology and biophysics students on using Cytosim for simulating cytoskeletal networks, providing support for cytosim.

SCHOLARSHIPS

KVPY Scholarship 2021-Present
DST INSPIRE Scholarship 2020-2021

NON-ACADEMIC EXPERIENCE

Mimamsa August 2021-May 2022
Design Coordinator *IISER Pune*

· Volunteered as the Design Coordinator for the 2022 edition of Mimamsa (a national level science quiz organized by the students of IISER Pune)

IISER Pune Clubs August 2020-May 2024
Design Coordinator *IISER Pune*

· Design Coordinator for various clubs in IISER-Pune (Karavaan, Literary Club, Music Club, Quiz Club) during the period at IISER.

Inkscape 2021-Present
Development

· Testing, contributing occasional patches to the Inkscape codebase, fixing bugs/crashes

REFERENCES

Prof. Dr. Stefan Klumpp Universität Göttingen
Theoretical Biophysics Group

· stefan.klumpp[at]phys[dot]uni-goettingen[dot]de

Prof. Dr. Madhusudhan M. S. IISER Pune
COSPI Lab

· madhusudhan[at]iiserpune[dot]ac[dot]in

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September 10, 2025