

# ATUL TANAJI MOHITE

Campus Limpertsberg, 162 A, avenue de la Faencerie, L-1511  
Luxembourg, +49 (0)15751512234  $\diamond$  atul.mohite@uni.lu



## EDUCATION

---

### University of Luxembourg

PhD student in group of Prof. Dr. Etienne Fodor

*November 2020 - Now*

### Ludwig Maximilian University, Munich

Master of Science in Physics

*October 2017 - April 2020*

GPA: 1.3

### Indian Institute of Technology, Delhi

Bachelor of Technology in Engineering Physics  
Department of Physics

*July 2013 - May 2017*

DGPA: 7.913 / 10

## RESEARCH INTERESTS

---

I am interested in non-linear and non-equilibrium phenomena in physics. This includes a wide range of problems in theoretical biophysics and statistical physics. My main focus lies in active matter dynamics and coarsening dynamics in a biological context. The research topics I would primarily like to work on are non-linear dynamics, stochastic processes, information theory, soft condensed matter, and non-equilibrium thermodynamics.

## PROJECTS

---

### Master's Thesis - Mechanochemical co-operativity and pattern formation

The main aim of the project was to build a model based on mechanochemical coupling of proteins on a membrane. For two protein species, one can extract kinetic activation and deactivation rates. The simulation of a reaction-diffusion model led to the formation of patterns.

## PUBLICATIONS

---

**Atul Tanaji Mohite, A. Goychuk and E. Frey**, Mechanochemical co-operativity and pattern formation in two protein species (manuscript in preparation)

**Atul Tanaji Mohite, A. Goychuk and E. Frey**, Membrane mediated protein conformation change leads to arrested phase separation in mechanochemically co-operating two protein species (manuscript in preparation)

## SCHOLASTIC ACHIEVEMENTS

---

### IIT-Joint Entrance Examination 2012-13

Secured All India Rank 1474 in IIT-JEE 2012-13

### Indian Physics Olympiad (IPhO)

Selected in top 300 students in India, 2012-13

### Middle-school Aptitude and Maths test, 2007-08

Awarded 17th rank in Maharashtra state of India with a percentile score of 99.99, 2007-08.

## WORK EXPERIENCE

---

**Max Planck Institute for Neurobiology, Martiensried** *Dec 2018 - March 2020*  
Contributed to a team of students for maintenance of SyConn. SyConn is aimed to automate synaptic connectivity inference for volume electron microscopy.

## TEACHING EXPERIENCE

---

**Ludwig Maximilian University, Munich** *Nov 2018 - Feb 2019*  
Calculation methods for Physics and Mathematics, Winter semester 2018

## INTERNSHIPS

---

**TIFR-Mumbai** *May 2015 - July 2015*  
Conducted experiments and examined polarization dependence of dielectric metastructures

**Leiden University, Netherlands** *May 2016 - July 2016*  
Implemented experimental setup for a tomography technique of NbN superconducting multiphoton detectors and analyzed data for it.

## TECHNICAL SKILLS

---

<b>Programming Languages</b>	C++, Java, Python
<b>Modeling and Analysis</b>	COMSOL, Mathematica
<b>Software &amp; Tools</b>	Latex

## LANGUAGES

---

<b>Marathi</b>	Mother tongue
<b>Hindi</b>	Fluent
<b>English</b>	Fluent
<b>German</b>	Proficiency B1

## EXTRA-CIRRICULAR INVOLVEMENT

---

National Service Scheme-IIT Delhi, Volunteered for long term project NSS-Medicine Baba, Born-to-Blossom and Cloth & relief fund collection drives *July 2013 - May 2017*

Part of IIT-Delhi Fine Arts & Crafts club *July 2013 - May 2017*

## HOBBY AND INTERESTS

---

As a hobby, I like to paint and sketch. I enjoy reading novels and poetry. I admire the works of Bhalachandra Nemade and Tukaram.