

## **KAMAL TRIPATHI**

The Institute of Mathematical Sciences,  
4<sup>th</sup> Cross Street, CIT Campus, Taramani,  
Chennai, 600113, Tamilnadu, India  
Cell: +91-9176067048  
Nationality: Indian  
[kamalt@imsc.res.in](mailto:kamalt@imsc.res.in), [kamaltri123@gmail.com](mailto:kamaltri123@gmail.com)

## **RESEARCH INTERESTS**

My research interest lies in mechanobiology in general. I am also interested in My current research centres around confined polymers in biophysical context.

## **EDUCATION**

- |             |   |
|-------------|---|
| 2014 - 2019 | <b>Ph.D., The Institute of Mathematical Sciences, Chennai</b> (due for submitting August 2019)<br>Concentrations: Physics<br>Thesis: Confined Polymers in Biophysical Contexts<br>Thesis Advisor: Prof. Gautam I. Menon<br>Thesis Co-advisor: Prof. Satyavani Vemparala |
| 2012 - 2014 | <b>M.Sc., Banaras Hindu University, Varanasi,</b><br>Concentrations: Physics<br>Thesis: Kinetics of Phase Transition in Nematic liquid Crystals<br>Thesis Advisor: Prof. Shri Singh   |
| 2009 - 2012 | <b>B.Sc., C.S.J.M. University, Kanpur,</b><br>Concentrations: Physics, Chemistry, Mathematics   |

## **ACADEMIC DISTINCTIONS**

- Qualified CSIR-NET-LS in 2013
- GATE-2014 (All India Rank -14)

## **PROJECTS**

1. Kinetics of Phase Transition in Nematic liquid Crystals  
Supervisor: Prof. Shri Singh
2. Nuclear Fluctuations in Stem Cells from a Dynamical Systems perspective  
Supervisor: Prof. Gautam I. Menon

## **PUBLICATION(S)**

1. Chromatin compaction states, nuclear shape fluctuations and auxeticity: A biophysical interpretation of the epigenetic landscape of stem cells  
Kamal Tripathi, Gautam I. Menon  
bioRxiv 419556; doi: <https://doi.org/10.1101/419556>

## **PRESENTATIONS**

1. Title: The auxetic phenotype in mouse embryonic stem cells exiting pluripotency (Computational Biology Group Annual Talk, March 2018)
2. Conformations of confined and crowded polymers near attractive curved surfaces (Institute Seminar Week, March 2019)

## **TEACHING EXPERIENCE**

1. Teaching assistant for the soft matter course (Jan-Apr 2018) under Prof. Purushottam Ray

## **ATTENDED SCHOOLS AND CONFERENCES**

1. VIIth Bangalore School of Statistical Physics (ICTS Bangalore) – July 2016
2. Complex Fluids - CompFlu - 2016 (IIIT-Hyderabad) - December 2016
3. EMBO – Experimental and Theoretical approaches to cell mechanics (RRI and NCBS Bangalore) – April -May 2017
4. VIIIth Bangalore School of Statistical Physics (ICTS Bangalore) – July 2017
5. Complex Fluids - CompFlu - 2017 (IIT-Madras) - December 2017
6. 6<sup>th</sup> Indian Statistical Physics Community Meeting (ICTS Bangalore) – February 2018
7. 7<sup>th</sup> Indian Statistical Physics Community Meeting (ICTS Bangalore) – February 2019
8. Mechano-Developmental Biology 2019, (Coorg) Feb-Mar 2019

## **GRANTS AND FELLOWSHIPS**

Senior Research Fellow, Department of Atomic Energy, INDIA.

## **RELEVANT SKILLS**

- Programming ability in Python
- Extensive knowledge of molecular dynamics simulation.
- Fluent in English

## **REFERENCES**

Prof. Gautam I. Menon,  
Dean, Computational Biology Group,  
Professor, Computational Biology and  
Theoretical Physics, The Institute of  
Mathematical Sciences, CIT Campus,  
Taramani, Chennai-600 113 INDIA  
Email: [menon@imsc.res.in](mailto:menon@imsc.res.in)  
Tel: +91-44-2254-3266  
Webpage: <http://www.imsc.res.in/~menon/>

Prof. Areejit Samal,  
Reader, Computational Biology, The  
Institute of Mathematical Sciences,  
CIT Campus, Taramani, Chennai-600 113  
INDIA  
Email: [asamal@imsc.res.in](mailto:asamal@imsc.res.in)  
Tel: +91-44-2254-3219  
Webpage: <http://www.imsc.res.in/~asamal/>

Prof. Satyavani Vemparala,  
Professor, Theoretical Physics, The Institute  
of Mathematical Sciences, C.I.T Campus,  
Taramani, Chennai-600113, INDIA  
Email: [vani@imsc.res.in](mailto:vani@imsc.res.in)  
Tel: +91-44-2254-3257  
Webpage:  
[http://www.imsc.res.in/~vani/WebPage/IMSC-  
page/Welcome.html](http://www.imsc.res.in/~vani/WebPage/IMSC-page/Welcome.html)