



BIPLAB BOSE

Associate Professor,
Dept. Biosciences & Bioengineering, IIT Guwahati

PROFILE

I work at the interface of experimental biology and mathematics. I study emergent and dynamical phenomena in Biology, using the concepts of Dynamical Systems and Statistical Physics. Currently, I am working on cell-cell interactions, information processing in cell signaling, and cellular state change problems. I also have experience in recombinant gene products. I have developed software for data analysis in Biology. Have developed and taught courses, including an online course, on Systems Biology.

CONTACT

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Indian Institute of Technology
Guwahati, Guwahati, Assam, 781039,
India

AREAS OF INTERESTS

Complex Systems
Systems Biology
Mathematical Biology
Dynamical Systems
Statistical Physics in Biology

EDUCATION

Ph. D (Biochemistry)
All India Institute of Medical Sciences, New Delhi
2005

M. Pharm (Pharmaceutical Engineering)
Jadavpur University, Kolkata
1998

B. Pharm
Jadavpur University, Kolkata
1996

WORK EXPERIENCE

Assistant Prof., Dept. of Biosciences & Bioengineering, IIT Guwahati
2006–2014

Lecturer, Biological Sciences, BITS Pilani
2005–2006

RECENT PUBLICATIONS

- Devaraj V., Bose B. DEBay: A computational tool for deconvolution of quantitative PCR data for estimation of cell type-specific gene expression in a mixed population. **Heliyon**, 2020, 6 (7), e04489.
- Chandrasekaran K., Bose B. Percolation in a reduced equilibrium model of planar cell polarity. **Physical Review E**, 2019, 100 (3), 032408.
- Devaraj V., Bose B. Morphological State Transition Dynamics in EGF-Induced Epithelial to Mesenchymal Transition. **Journal of Clinical Medicine**, 2019, 8 (7), 911.

SOFTWARE

FlowPy: Software for Flow Cytometry data analysis
CoreNetMap: Software for gene expression correlation analysis

MOOC

Dynamical Models in Biology: YouTube - <https://bit.ly/2OX909T>