



Two Days Meeting on

**Nonlinear Dynamics in
Chemistry & Biology**

NLDCB 2019

8-9th April, 2019

S. N. Bose National Centre For Basic Sciences

Kolkata, West Bengal

Programme Schedule

8th April 2019

8:30-9:45 AM Registration

9:45-10:00 AM Inauguration

Session I

10:00 AM-1:20 PM

Chair: J.K.B

Talks

- Deb Shankar Ray(10.00-10.30): Homochirality ; a perspective from statistical mechanics
- Neelima Gupte (10.30-11.00): Prediction of the tipping point in hierarchical and climate networks: Microtransitions and other predictors

11:00-11:20 AM Tea Break

- Ram Ramaswamy(11.20-11.50): Collective dynamics of NF- κ B in cellular ensembles: Synchrony and chimeras
- Syamal Kumar Dana(11.50-12.20): Sudden transition to large amplitude oscillation: Routes to Extreme events
- Sumana Dutta(12.20-12.50): Pinning and unpinning of chemical excitation waves around anatomic obstacles
- Sagar Chakraborty(12.50-1.20): Connecting Periodic Orbits with New Equilibria of Evolutionary Games

1:20-2:30 PM Lunch

Poster Session

2.30-3.30 PM

Chair: B.C.B

Session III

3:30-5:20 PM

Chair: J.C

Talks

- Debasish Mondal(3.30-4.00): Stochastic search processes under restart

4:00-4:20 PM Tea Break

- Kinshuk Banerjee (4.20-4.50): Role of cost in the optimization of speed and accuracy in biological error correction networks
- Subhasree Ghosh(4.50-5.20): Controlling of quantum dynamics in chemical systems by optimized polychromatic fields

9th April 2019

Session IV (A Special Session)

9:30-1:10 AM

Chair: S.P.B

Talks

- D Mukherjee(9.30-10.00): Early Days of Nonlinear Dynamics in Kolkata
- Jayanta Bhattacharjee(10-10.30): Quantum Dynamics and Dynamical Systems
- Somdatta Sinha(10.30-11.00): Compositional Complexity in Genomic Patterns and Classification

11:00-11:20 Tea Break

- Sanjay Puri(11.20-11.50): Cooling of Granular Gases
- Kamal Bhattacharyya(11.50-12.20): Enzyme kinetics as a problem of nonlinear dynamics

- Bimalendu Deb(12.20-12.50): Nonlinearity and photon-photon correlation by cavity QED
- Tanmoy Banerjee(12.50-1.20): Symmetry-breaking states in Coupled oscillators: from Physics to Ecology

1:20-2:30 PM Lunch

Session V

2:30-4:50

Chair: S.Adhikari

Talks

- Sandip Kar(2.30-3.00): Dynamical reorganization of transcriptional events governs robust Nanog heterogeneity
- Arnab Ghosh(3.00-3.30): Quantum Thermodynamic Machines
- Pulak Kumar Ghosh(3.30-4.00): Effect of hydrodynamic interaction in the dynamics of self-propelled particles

4:00-4:20 PM Tea Break

- Syed Shahed Riaz(4.20-4.50): Spatio-temporal pattern formation in diffusively relaxed dynamics