

Programme Schedule

Day 0 **3.12.2017**

01:00 PM – 05:00 PM: Pre-conference workshop

Experiments in Complex Systems

Venue: Department of Chemistry, BTech Laboratory

06:00 PM – 07:00 PM: Conference Registration

07:00 PM – 09:00 PM: Dinner

Day 1 **4.12.2017**

07:30 AM – 08:30 AM: Breakfast

08:30 AM – 09:30 AM: Registration

09:30 AM – 10:30 AM: Inaugural session

10:30 AM – 10:45 AM: Conference Photograph

10:45 AM – 11:10 AM: Tea Break

11:10 AM – 12:30 PM: Technical Session I (Chemical oscillators)

Session Chair: Prof. Punit Parmananda

11:10-11:55 Plenary Session: Prof. Deb Shankar Ray

Title: Chemical oscillators: revisiting a basic paradigm of nonlinear dynamics

11:55-12:30 Dr. Federico Rossi

Title: Dynamics of Lipid-stabilized droplets in networks of Belousov Zhabotinsky Micro-oscillators

12:30 PM – 02:00 PM: Lunch

02:00 PM – 03:45 PM: Technical Session II (Flows and Plasma)

Session chair: Prof. Madhurjya Pratim Bora

02:00-02:35 Prof. Nilakshi Das

Title: Strongly correlated complex dusty plasma

02:35-03:10 Dr. Ratul Dasgupta

Title: Viscous Cauchy-Poisson Problem: waves at the interface of two immiscible liquids

03:10-03:45 Prof. Pinaki Pal

Title: Low Prandtl-number rotating magnetoconvection

03:45 PM – 04:10 PM: Tea Break

04:10 PM – 05:55 PM: Technical Session III (Nonlinearity in Biological Systems)

Session Chair: Prof. Durga Charan Dalal

04:10-04:45 Prof. Joydev Chattopadhyay

Title: Population dynamics : 1202 and beyond

04:45-05:20 Dr. Jan Freund

Title: Trait-based population dynamics in a predator-prey system

05:20-05:55 Prof. Marcus Hauser

Title: Transient synchronization in yeast cell populations

06:00 PM – 06:40 PM: Technical Session IV (parallel sessions)

Short Oral talks I

Session Chair:

- 06:00-06:20 Dr. S. Sridhar
Title: How to predict cardiac arrhythmias: identifying dynamical transitions in cardiac models
- 06:20-06:40 Dhriti Mahanta
Title: Pinning of scroll waves to highly branched flat heterogeneities

Short Oral talks II

Session Chair:

- 06:00-06:20 Prashim Kamble
Title: Experimental study of symmetrical and asymmetrical airfoil with wind tunnel setup
- 06:20-06:40 S. Leo Kingston
Title: Extreme events in a memristor based driven Liénard system

07:00 PM – 09:00 PM: Dinner

Day 2 5.12.2017

07:30 AM – 08:30 AM: Breakfast

08:30 AM – 10:15 AM: Technical Session V (Coupled and Isochronous Oscillators)

Session Chair: Prof. Syamal Dana

- 08:30-09:05 Prof. Tomasz Kapitaniak
Title: Solitary states for coupled oscillators
- 09:05-09:40 Prof. Manish Shrimali
Title: Explosive Death in Coupled Nonlinear Oscillators
- 09:40-10:15 Prof. Gautam Gangopadhyay
Title: On the isochronous orbits of weakly nonlinear dynamical open systems

10:15 AM – 10:40 AM: Tea Break

10:40 AM – 12:25 PM: Technical Session VI (Bifurcations and Chaos)

Session Chair: Prof. H. Bailung

- 10:40-11:15 Prof. Ulrike Feudel
Title: Death and revival of chaos
- 11:15-11:50 Prof. Jiten Kalita
Title: The sub-alpha and sub-beta phenomena at the pre- and post-vortex shedding regime: a close look through structural bifurcation
- 11:50-12:25 Prof. Marian Wiercigroch
Title: Complex dynamics of pendula for energy harvesting

12:30 PM – 02:00 PM: Lunch

02:00 PM – 03:00 PM: Technical Session VII (parallel sessions)

Short Oral talks III

Session Chair:

- 02:00-02:20 Tanushree Roy
Title: Patterning using Noise
- 02:20-02:40 Vaibhav Varshney
Title: Oscillation Death and revival by coupling with Damped Harmonic Oscillator

Short Oral talks IV

Session Chair:

- 02:00-02:20 Aasifa Rounak
Title: Investigating intermittent chaotic oscillations in randomly excited vibro-impact systems
- 02:20-02:40 Mahashweta Patra
Title: Robust Chaos in 3-D Piecewise Linear Map
- 02:40-03:00 Hiranya Deka
Title: Partial coalescence of unequal sized drops
- 03:00 PM – 05:00 PM: Poster Session and tea**
- 05:00 PM – 06:45 PM: Technical Session VIII (Self-organization)**
Session Chair: Prof. Sitangshu B. Santra
- 05:00-05:35 Prof. Marco Antonio Rivera Islas
Title: On the dynamics of Liesegang-type pattern formation in a gaseous system
- 05:35-06:10 Dr. Vishwesh Guttal
Title: Tipping points and self-organization in ecosystems
- 06:10-06:45 Dr. Annette Taylor
Title: Self-organization and feedback in enzyme catalyzed reactions
- 06:45 PM – 07:05 PM: Conference Business meeting**
- 07:30 PM – 09:30 PM: Conference Dinner**

Day 3

6.12.2017

07:30 AM – 08:30 AM: Breakfast

08:30 AM – 09:50 AM: Technical Session IX (On Networks and Complexity)

Session Chair: Prof. T. Punniyamurthy

- 08:30-09:15 Plenary Session: Prof. Govindan Rangarajan
Title: Sparse Vector Autoregressive and Network Representations of High Dimensional Time Series Data
- 09:15-09:50 Prof. Parongama Sen
Title: Disease spreading on complex networks: a recent study on Ebola outbreak
- 09:50 AM – 10:10 AM: Tea Break**
- 10:10 AM – 11:10 PM: Technical Session X (parallel sessions)**
Short Oral talks V
Session Chair:
- 10:10-10:30 Gaurav Vaibhav
Title: Trajectory Optimization in Highly Non-Linear Dynamics
- 10:30-10:50 Rima Devi
Title: SIR Model Based Study on Chicken Pox Outbreak in Kamrup District of Assam, India
- 10:50-11:10 S. Mohanty
Title: Active vibration absorber for a nonlinear system for combination and 1:1 internal resonance condition

Short Oral talks VI

Session Chair:

- 10:10-10:30 D. Aravinthan
Title: Impact of Biquadratic Coupling on Spin Current Induced Magnetization Switching in Pentalayer Nanopillar
- 10:30-10:50 Nilay Mondal
Title: Drug Transport in an Electroporated Tissue: A Mathematical Approach
- 10:50-11:10 Anupama Roy
Title: Synchronization on branching hierarchical networks

11:15 AM – 11:45 AM: Valedictory Session

01:00 PM – 04:00 PM: River cruise and lunch

NB: All lectures will be held at the Conference centre; Poster session and all meals (breakfast, lunch and dinner) will be in the Conference centre lobby.