

## Posters on 15<sup>th</sup> January

| S.No. | Presented by             | Title of the Poster   |
|-------|--------------------------|---|
| 1     | Viney Kumar              | Estimating epidemic threshold under individual vaccination behavior and adaptive social connections: A game-theoretic complex network model |
| 2     | Sarvesh Kumar Upadhyay   | Complex networks and bunching of extreme events   |
| 3     | Dr Ankur Kumar Jain      | Rumor Diffusion Model on Social Networks with Experts Strategy & Crawley Martin Functional Response   |
| 4     | Shanmuga Priya B         | A network biology approach to elucidate mechanisms of disease progression by utilizing compiled databases specific to human health          |
| 5     | Madhumita Mondal         | Bakry–Émery–Ricci curvature: an alternative network geometry measure in the expanding toolbox of graph Ricci curvatures                     |
| 6     | Nikhil Chivukula         | ViCEKb: Creation and network-based analysis of a curated knowledgebase on vitiligo-triggering chemicals to link exposome and health         |
| 7     | Shreyes Rajan Madgaonkar | Network toxicology approach for investigation of environmental contaminants-induced toxicological effects on human and ecosystem health     |
| 8     | Yash Arya                | Effects of structural properties of neural networks on machine-learning performance   |
| 9     | Karan Singh              | Streamlined approach to mitigation of cascading failure in complex networks   |
| 10    | Akash Yadav              | Disparity-driven heterogeneous nucleation in finite-size adaptive networks  |
| 11    | Ayushi Saxena            | Effects of repulsive coupling in non-locally coupled ring of phase oscillators  |
| 12    | Kiran Sharma             | The Ripple Effect of Retraction on an Author's Collaboration Network  |
| 13    | Sangita Dutta            | Global synchrony in presence of higher order interactions   |

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| 14 | Shraosi Dawn                | Dynamical stability of complex systems   |
| 15 | Ajaya Kumar Sahoo           | Investigation of plastic additives-induced toxicities by leveraging network-centric approach                             |
| 16 | Adithya L J                 | Continuous Time Quantum Walks on Complex Network Topologies  |
| 17 | Gaurav Chopra               | Tropical climate classification based on the Intertropical Convergence Zone dynamics from a complex networks perspective |
| 18 | Pradyumna Harlapur (Sujith) | Structural Balance of Gene Regulatory Networks: Balancing Sparsity and Coordination for Stable Phenotypic Outcomes       |
| 19 | Udit Raj                    | Study of Higher-Order Interactions in Unweighted, Undirected Networks Using Persistent Homology                          |
| 20 | Dweepabiswa Bagchi          | Asynchronous dynamics of ecological systems induced by higher order interactions   |
| 21 | Anggy Eka Pratiwi           | A Modified SIR Model for Simulating Competitive Information Diffusion in Real-World Social Network                       |
| 22 | Shubham Gupta               | Communities in Streaming Graphs: Small Space Data Structure, Benchmark Data Generation, and Linear Algorithm             |
| 23 | Abha Singh                  | Fitness fluctuations in the Bak-Sneppen model  |
| 24 | Shruti Tandon               | Emergence of order through multilayer interactions in a turbulent reacting flow  |
| 25 | Nur Aziean Mohd Irdis       | Epidemic Modelling on Contiguous District Networks in Peninsular Malaysia  |
| 26 | Nurul Zahirah Abd Rahim     | Mapping Learning Dynamics: A Study of Friendship and Peer Tutor Networks using SNA and TDA in Malaysian Higher Education |
| 27 | Dishant Sisodia             | Dynamical analysis of a parameter-aware reservoir computer   |
| 28 | Abhishek Sharma             | Synchronization transitions in adaptive Kuramoto-Sakaguchi oscillators with higher-order interactions                    |
| 29 | Priyanka Rajwani            | Stochastic Kuramoto oscillators with inertia and higher-order interactions   |

## Posters on 16<sup>th</sup> January

| S.No. | Presented by             | Title of the Poster   |
|-------|--------------------------|---|
| 1     | Sangita Dutta            | Global synchrony in presence of higher order interactions   |
| 2     | Prateek Yadav            | Classification of brain networks of <i>Caenorhabditis elegans</i> into different life stages using supervised machine learning            |
| 3     | Imran Ansari             | Detection of Core-Periphery Structure in Networks Using Ant Colony Optimization   |
| 4     | Palash Kumar Pal         | Global synchronization in generalized multilayer higher-order networks  |
| 5     | Shraban Kumar Chatterjee | A Generalized Network Model for Complex Graph-Data  |
| 6     | Rakshita Sharma          | Effect of Phase lag parameter on the Swarmalator dynamics   |
| 7     | Mohammed Mujahid M       | Spatiotemporal dynamics of deep convective clouds across a wide range of scales using multiresolution analysis                            |
| 8     | Atiyab Zafar             | Rising inequality signals collapse in a network based model of complex adaptive systems   |
| 9     | Jayendrajyoti Kundu      | A multidimensional systems biology approaches on Mtb-host interactions reveals potential regulators for host metabolic reprogramming      |
| 10    | Swapnil Mane             | Forecasting User Aggressive Behavior in Online Social Networks  |
| 11    | Kumar Sourav             | Collective rotation-flips in directed ring of non-isochronous Stuart-Landau oscillators   |
| 12    | Tapas Kumar Pal          | Extreme events in a coupled chaotic non-identical oscillators   |
| 13    | Rini T Paul              | Overlapping community detection in bipartite networks   |
| 14    | Rahul Chhimpa            | Avalanche event in number theoretic division model  |
| 15    | Kaustav Mehta            | Exploring Comorbidity Networks in Mild Traumatic Brain Injury Subjects through Graph Theory: A Traumatic Brain Injury Model Systems Study |

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| 16 | Devvrat Pandey                | Computational Analysis of Transcriptomic data reveals factors associated with prognosis and treatment in Pancreatic Ductal Adenocarcinoma   |
| 17 | Praveenkumar Venkatesan       | Time-varying network captures emerging phenomena prior to the Kerala floods in 2018 and 2019  |
| 18 | Pritam Kundu                  | Genome-scale community modeling for deciphering the metabolic synergisms in termite gut microbiota  |
| 19 | Vaibhav Anand                 | A Multi-Level Boolean Formalism   |
| 20 | Adithya A                     | Study of El Niño Southern Oscillations using recharge-discharge model and machine learning approach   |
| 21 | Kushal Haldar                 | Comparing the dynamics of binary-fate and multi-fate team-based regulatory networks in cellular decision making   |
| 22 | Mr. Sunil Kumar Meena         | Breaking Down the Quantum Circuit for Influence Maximization  |
| 23 | Roi Alfassi                   | Semantics of creativity: identifying LLM-authored fanfiction stories with Latent Personal Analysis  |
| 24 | Poulomi Chatterjee            | Comparing molecular changes among breast cancer subtypes through network-based approach   |
| 25 | Devanshi Chhatbar             | Topology aware Optimization of Encrypted Gradient Aggregation in Differentially Private Federated Learning via Broadcast Encryption for Enhanced Security in Multi-Party Network Transmission |
| 26 | Asutosh Anand Singh           | Synchronization Analysis in Kuramoto Oscillator System in the Presence of Phase Lag and Noise   |
| 27 | Yuvrajsingh Pravinsingh Patil | Dynamic stability of complex systems using Gershgorin disc theorem  |
| 28 | Hirdesh Kumar Pharasi         | Spectral and network analysis of the financial markets  |
| 29 | Richita Ghosh                 | Chimeric states induced by higher-order interactions in coupled prey–predator systems   |
| 30 | Jisha Mariyam John            | Impact of weight thresholding on the robustness of complex networks to central node attack strategies   |

## Posters on 17<sup>th</sup> January

| S.No. | Presented by       | Title of the Poster   |
|-------|--------------------|---|
| 1     | Md Sayeed Anwar    | Synchronization in adaptive higher-order networks   |
| 2     | Rishi Ranjan Singh | Deep Learning based Link Prediction for Minimizing Maximum Betweenness of Networks  |
| 3     | Komal Chawla       | Heterogeneity induced control of chaotic systems  |
| 4     | Divyanshi Kanwar   | Identification of Depression Markers in the resting state by Functional Brain Networks  |
| 5     | Rasha Shanaz       | Ethics In Rotten Apples: A Network Epidemiology Approach For Active Cyber Defense   |
| 6     | Emma Towlson       | Rich club prominence as a novel early biomarker of cognitive decline  |
| 7     | Jerry Jones David  | Functional hyper-graphs of stock markets  |
| 8     | Adithya L J        | Continuous Time Quantum Walks on Complex Network Topologies   |
| 9     | Kirtidev Mohapatra | Fairness-aware Analysis of Centrality Measures in Social Networks   |
| 10    | Masoom Bhargava    | Spatiotemporal Dynamics And Bifurcation Analysis On Network And Non-Network Environments Of Dangerous Prey And Predator Model           |
| 11    | Dr. Gaurav Chauhan | Gene expression noise due to phase separation of transcription factors  |
| 12    | Akrati Saxena      | Fairness Metrics for Community Detection Methods in Social Networks   |
| 13    | Tamanna I. Urmi    | Evaluating Sparsification Algorithms for Gene Regulatory Networks: Effective Resistance, Random, K-Neighbor, and Forest Fire Approaches |
| 14    | Dr. Amit Sharma    | Aging in Weighted Ensemble of Excitable and Self-oscillatory Neurons: The role of Pairwise and Higher-order Interactions                |
| 15    | Ranjib Banerjee    | Pattern formation in a two-compartment rumor model under dispersion   |

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| 16 | Shovan Dutta          | Frustrated Quantum Magnetism on Complex Networks: What Sets the Total Spin   |
| 17 | Aswin Balaji          | Identifying dynamical transitions and temporal structure of complex systems dynamics   |
| 18 | Nidhi Dilip Sonwane   | Universality in the self-similar hierarchical organization of real-world networks  |
| 19 | Moturi Pradeep        | Black Swan Events on Ethereum Blockchain Transaction Networks  |
| 20 | Rahul Kumar Singh     | Evolution of Social Networks in Kanzara Village: Changing Patterns of Social, Informational, Agricultural and Financial Interactions |
| 21 | Madhvi Ramrakhiyani   | Farthest-First Traversal For Identifying Multiple Influential Spreaders  |
| 22 | Swati Chauhan         | Machine Learning for Phase Ordering Dynamics   |
| 23 | Swapnil Mane          | Aggression Breeds Aggression: The Impact of Aggressive Feeds on User Behavior on Social Media Network                                |
| 24 | Vishnu A M            | Modelling protein complexes as multilayer networks   |
| 25 | Dr. Priodyuti Pradhan | Information Localization in Complex Networks   |
| 26 | Robert Rai            | Compartmental Framework for Prebunking Misinformation  |
| 27 | Anupama Roy           | Mitigation and Enhancement of Neuronal Extreme Events: Impact of coupling and random links   |
| 28 | Thamizharasan S       | Collective dynamical states in adaptively coupled identical phase oscillators  |
| 29 | Subhosanket Dutta     | Dynamical phase transitions in post-ictal generalized EEG suppression  |