NERCCS 2024 - Program

March 20 - Wednesday

9:00 - 9:45 **(Location: Barben rooms - "upstairs")**

TBA
Brian Hunt, University of Maryland

10:15 - 12:15 - Contributed talks sessions

Dynamic Network - (Location: Barben rooms - "upstairs")

10:15 - 10:45
Deriving Dynamical Model Equations from Temporal Network Data Using a Graph Rewriting Framework
Hiroki Sayama, Binghamton University

10:45 - 11:15
Uncovering the universal nature of citation networks: From science of science to law of law and patterns of patents
Sadamori Kojaku, Binghamton University

11:15 - 11:45
Q-Learning Dynamics in Vaccination: A Double-Edged Sword for Addressing Vaccine Hesitancy
Atticus McWhorter, Dartmouth College

11:45 - 12:15
Effects of nonlinear membrane capacitance in the Hodgkin- Huxley model of action potential on the spike train patterns of a single neuron
Jitender Kumar, University of Delhi

Network applications - (Location: Cheel Commons - "downstairs")

10:15 - 10:45
Revealing the Transition of Exploration Modes in Human Mobility Networks
Lu Zhong, Rensselaer Polytechnic Institute

10:45 - 11:15
Tangent functional connectomes uncover more unique phenotypic traits
Mintao Liu, Purdue University

11:15 - 11:45
Evaluating trajectories derived from dynamic functional connectivity across fMRI conditions
Si Thu Aung, State University of New York at Buffalo

11:45 - 12:15
Redefining Complexity Science Using Functional State Spaces
Andy E. Williams, Nobeah Foundation

14:00 - 14:45 (Location: Barben rooms - "upstairs")

Modeling Biological Networks using Omics Data
Kimberly Glass, Harvard Medical School

15:15 - 17:15

Data-driven Methods for Complex Systems - (Location: Barben rooms - "upstairs")

15:15 - 15:45
Spatio-Temporal Multivariate Correlation Analysis of the Global Human Rights Dataset
Amanda Goodrick, State University of New York at Binghamton

15:45 - 16:15
Enhancing Electrical Network Vulnerability Assessment with Ensemble and Deep Learning Techniques
Ayman S. Akash, North Dakota State University

16:15 - 16:45
Data-driven time-dependent three-dimensional magnetohydrodynamics (MHD) simulation for the solar corona
Keiji Hayashi, New Jersey Institute of Technology

16:45 - 17:15
Non-Spatial Hash Chemistry as a Minimalistic Open-Ended Evolutionary System
Hiroki Sayama, Binghamton University

Social Networks - (Location: Cheel Commons - "downstairs")

15:15 - 15:45
Why can't we agree? The Consensus Problem in Polities of Heterogeneous Agents
Damian Sowinski, University of Rochester

15:45 - 16:15
Game Theory and Nuclear Strategy: An Abstract Model for Evaluating Risk of Thermonuclear War
Matthew Christ, Binghamton University

16:15 - 16:45
Exploring Social Networks: An Analysis of Intra-organizational Networks
Ximeng Chen, Sacred Heart University

16:45 - 17:15
Effect of recommending users and opinions on the network connectivity and idea generation process
Sriniwas Pandey, Binghamton University

March 21 - Thursday

9:00 - 9:45 **(Location: Barben rooms - "upstairs")**

TBA
George Ilhwan Park, University of Pennsylvania

10:15 - 12:15

Dynamic Network - (Location: Barben rooms - "upstairs")

10:15 - 10:45
Group-structured evolutionary game dynamics with environmental feedback
Katherine Betz, State University of New York at Buffalo

10:45 - 11:15
An Application of Tensors in the Stochastic Reaction Diffusion Master Equation
Md Mustafijur Rahman, The University of Alabama

11:15 - 11:45
Dunbar's Number in Motion: Agent-Based Simulations of Friendship Formation
Christopher Cooke, Binghamton University

11:45 - 12:15
A Measure of Interactive Complexity in Network Models
Will Deter, Binghamton University

Network applications - (Location: Cheel Commons - “downstairs”)

10:15 - 10:45
Urban Circuitry: Unveiling Accessibility in Complex Networks
Bibandhan Poudyal, University of Rochester

10:45 - 11:15
Network-based analysis of the effect of blast-induced concussions on animal brains
Zeynep Ertem, Binghamton University

11:15 - 11:45
A S3XY Analysis of Tesla’s North America Supercharger Network
Luke Netto, Binghamton University

11:45 - 12:15
Exploring the Impacts of the Complex Interplay Between Waning Immunity and Disease Fatality on the Topology of Scale Free Networks
ThankGod Ifreke Sylvanus Ikpe, Tohoku University, Japan

14:00 - 14:45 (Location: Barben rooms - “upstairs”)

Environment-adaptive machine learning potentials for atomistic simulations of materials under extreme conditions
Ngoc Cuong Nguyen, MIT

15:15 - 17:15

Data-driven Methods for Complex Systems - (Location: Barben rooms - “upstairs”)

15:15 - 15:45
DYNAMICS AND DRIVERS OF GENDER REPRESENTATION IN MATHEMATICS
Phil Chodrow, Middlebury College

15:45 - 16:15
Network Classification Based on Network Structural Properties
Saiful Islam, State University of New York at Buffalo

16:15 - 16:45
Analyzing the Feature Space of Physiological Signals in Relation to Mental Workload
Martin Duffy, Clarkson University

Fluid Dynamics - (Location: Cheel Commons - “downstairs”)

15:15 - 15:45
The role and impact of converging flows toward Bipolar Magnetic Regions
Kinfe Gebreegzabihar, Aksum University

15:45 - 16:15
Large-Eddy Simulation of Turbulent Flows Around Two Canoe Paddles

Peter Parrish, Clarkson University

16:15 - 16:45
Generalising Convective Instability Analysis for Spatially Varying Non-constant Problems with a Finite Domain
Tony Abrantes, Clarkson University

March 22 - Friday

9:00 - 9:45 (Location: Barben rooms - "upstairs")

Multiscale Energy Transfer within Turbulence
James Chen, University at Buffalo

10:15 - 13:45

Fluid Dynamics - (Location: Barben rooms - "upstairs")

10:15 - 10:45
Rolling Detachment Mechanism in Turbulent Flows for Charged Rough Bumpy Particles
Abbas Khanmohammadi, Clarkson University

10:45 - 11:15
Numerical Investigation of Indoor Particle Transport Using Lagrangian Method
Amirmasoud Anvari, Clarkson University

11:15 - 11:45
CHORUS++ Simulation Jupiter's Convection Zone
Maxwell Stephan, Clarkson University

11:45 - 12:15
Explicit Large Eddy Simulations of Two Naval Propulsion Units
Stephen Monroe, Clarkson University

10:15 - 13:45

Data-driven Methods for Complex Systems - (Location: Cheel Commons - "downstairs")

10:15 - 10:45
Spatial and Temporal Variability of Dissolved Organic Carbon in Adirondack Lakes
Manas Bhole, Syracuse University

10:45 - 11:15
The Preservation of Input/Output Directed Graph Informativeness under Crossover
Andreas Pape, Binghamton University

11:15 - 11:45
A Qualitative Approach for Detection of Emergent Behaviors in Dynamical Systems
Shweta Singh, Northeastern University

Poster session

March 21, Thursday 17:45 - 19:15

Location: Cheel Commons - “downstairs”

Adaptability reveals the healthcare system resilience to pandemics
Dimitri Lopez, Rensselaer Polytechnic Institute

Self-Organization in Non-Equilibrium Thermodynamic Systems
Georgi Georgiev, Assumption University

Graph Neural Network Model Reveals Transcriptomic Differentiation in Bronchopulmonary Dysplasia
Matthew Jehrio, University of Rochester

Bio-Inspired Drone Swarm Movement via Boid and Evolutionary Algorithms
Michael Magid, Binghamton University

Exploring Urban Traffic Dynamics: A Simulation-Based Study of Autonomous and Traditional Vehicles
Miriam Flores Castillo, Binghamton University

Toward understanding genomic segmental duplications by network analysis across multiple species
Saiful Islam, State University of New York at Buffalo

Analyzing Patient Reviews on Google Map Hospital Profiles through Neural Embedding and Network Modeling
Xin Wang, Binghamton University

Enhancing Prenatal Care through Machine Learning: A Comprehensive Analysis of Maternal Factors for Predicting Neonatal Birth Weight
Zahra Mahdavi, Clarkson University