

CIBCB 2018 Preliminary Schedule

Wednesday May 30: Tutorials

- 8:30 Registration
- 9:30-11:30 Representation in Bioinformatic Applications of Evolutionary Computation.
Presenter: *Daniel Ashlock*
- 11:30-1:00 Lunch
- 1:00-3:00 An Introduction to CRISPR for Bioinformaticists.
Presenter: *Wendy Ashlock*
- 3:00-5:00 Feature Selection Methods for Efficient Classification of Gene Expression Data
Presenter: *B. Chandra*

Abstract Session I 5:00 Friday June 1

EEG Emotion Detection Review
Mohamed Ahmed Abdullah and Lars Rune Christensen

Multiple Omics Data Integration to Identify Long Noncoding RNA Responsible for Breast Cancer Related Mortality
Tapasree Roy Sarkar, Arnab Kumar Maity, Yabo Niu and Bani K Mallick

Single Nucleotide Polymorphisms: Identification and Association with Breast Cancer using Biocomputing Approach
Neelofar Sohi and Amardeep Singh

Feature extraction and prediction of acidosis from cardiocography data based on antepartum pH data
Vinayaka Nagendra Harikishan Gude Divya Sampath and Steven Corns

A novel computational approach to simulate intracellular complex network in type 1 diabetes progression
Zhenzhen Shi and Majid Jaber-Douraki

Abstract Session II 11:00 Saturday June 2

The Ethical Status of an AI
James A. Foster and Donaald Wunsch

A Future Direction for the Disease Gene Association Problem
Tyler Collins and Sheridan Houghten

On Christian Bök's *The Xenotext*: Computation and Biology in Poetry
Joseph Alexander Brown

Deep learning based machine learning technique for reconstructing heterogeneous drug target interaction networks
Hetal Rajpura and Alioune Ngom

Gene Expression Analysis using Adaptive Resonance Theory
Niklas Melton and Donald Wunsch

Thursday May 31

- 8:30** Registration and Welcome to CIBCB
- 9:00-10:00** Plenary talk
- 10:00-10:30** Coffee
- 10:30-12:00** Session: **Understanding biological systems**
- 10:30-10:55 Deep Learning Pipeline to Classify Different Stages of Alzheimer's Disease From fMRI Data
Yosra Kazemi and Sheridan Houghten
- 11:00-11:25 Ensemble Validation Paradigm for Intelligent Data Analysis in Autism Spectrum Disorders
Thy Nguyen, Kerri Nowell, Kimberly E. Bodner and Tayo Obafemi-Ajayi
- 11:30-11:55 CCA based multi-view feature selection for multi-omics data integration
Yasser El-Manzalawy
- 12:00-1:30** Lunch
- 1:30-3:30** Sesseion: **Gene Expression**
- 1:30-1:55 An Improved Feature Selection Technique for Gene Expression Data
B. Chandra
- 2:00-2:25 Analysis of Grapevine Gene Expression Data using Node-Based Resilience Clustering
Jeffrey Dale, John Matta, Susanne Howard, Gunes Ercal, Wenping Qiu and Tayo Obafemi-Ajayi
- 2:30-2:55 Application of Ensemble Learning to the Differential Gene Expression in Left-Right Breast Tumors
Casey Cole, Kenneth Nesbitt and Homayoun Valafar
- 3:00-3:30** Coffee
- 3:30-5:30** Session: **Sequence Analysis**
- 3:30-3:55 Computational Analysis of Plasmodium falciparum RNA-Seq data reveals Protein Interactions that might be implicated in the Invasion of the Red Blood Cells
Jumoke Soyemi, Itunuluwa Isewon, Olubanke Ogunlana, Solomon Rotimi, Jelili Oyelade and Ezekiel Adebisi
- 4:00-4:25 RNA Secondary Structure Graphical Rendering Library
Abdullah N. Arslan and Keith A. Monschke
- 4:30-4:55 Edit Metric Decoding: Return of the Side Effect Machines
Sheridan Houghten, Tyler K. Collins, James Alexander Hughes and Joseph Alexander Brown
- 5:00-5:25 Tandem mass intensity estimation for de novo peptide sequencing
Hatem Loukil
- 5:30-5:55 Chemical Structure Recognition and Prediction: A Machine Learning Technique
Fakheredine Keyrouz, Lara Tauk and Elias Feghali
- 6:30-9:00** **Conference Banquet**

Friday June 1

- 8:30** Registration
- 9:00-10:00** Plenary talk
- 10:00-10:30** Coffee break
- 10:30-12:00** Session: **Models of Biological Systems**
- 10:30-10:55 High-Performance and Distributed Computing in a Probabilistic Finite Element Comparison Study of the Human Lower Leg Model with Total Knee Replacement
Corneliu Arsene
- 11:00-11:25 On the Generalizability of Linear and Non-Linear Region of Interest-Based Multivariate Regression Models for fMRI Data
Ethan Jackson, James Hughes and Mark Daley
- 11:30-11:55 Pavlov Principle and Brain Reverse Engineering
Witali Dunin-Barkowski and Ksenia Solovyeva
- 12:00-1:30** Lunch
- 1:30-3:00** Bioinformatics and Bioengineering Technical Committee Meeting and Coffee Break
All are welcome!
- 3:00-5:00** Session: **Data Analysis**
- 3:00-3:25 Hierarchical Clustering and Tree Stability
Amanda Saunders, Daniel Ashlock and Sheridan Houghten
- 3:30-3:55 Parameter Selection for Modeling of Epidemic Networks
Michael Dube, Sheridan Houghten and Daniel Ashlock
- 4:00-4:25 Analysis of Symbolic Models of Biometric Data and their use for User and Task Identification
James Hughes, Joseph Brown, Adil Khan, Asad Khattak and Mark Daley
- 4:25-5:00 Data Driven Point Packing for Fast Clustering
Matthew Stoodley, Daniel Ashlock and Steffen Graether
- 5:00-6:00** Abstract Session I (See the Wednesday Schedule)

Saturday June 2

8:30-9:00 Coffee break

9:00-11:00 Session: **Learning and Data Mining**

9:00-9:25 Improving Medical Search Tasks Using Learning to Rank
Mohammad Alsulmi and Benjamin Carterette

9:30-9:55 Cross-validation and cross-study validation of kidney cancer with machine learning and whole exome sequences from the National Cancer Institute
Abdulrhman Aljowie, Usman Roshan and Nihir Patel

10:00-10:25 Drug target interaction predictions using PU-Learning under different experimental setting for four formulations namely known drug target pair prediction, drug prediction, target prediction and unknown drug target pair prediction
Hetal Rajpura and Alioune Ngom

10:30-11:45 Abstract Session II (See the Wednesday Schedule)

11:45-12:00 **Wrap up of CIBCB 2018**