The 5th International Workshop on Computational Network Biology: Modeling, Analysis, and Control (CNB-MAC 2018)

August 29, 2018 | Washington, D.C.

CNB-MAC 2018 Workshop Chairs:
Byung-Jun Yoon (Texas A&M)  Xiaoning Qian (Texas A&M)
Tamer Kahveci (University of Florida)  Ranadip Pal (Texas Tech University)

Workshop Program:

08:45-09:00 Opening Remarks – CNB-MAC 2018 Workshop Chairs

09:00-10:15 Session 1 – Session chair: Dr. Ranadip Pal
- Identification of co-evolving temporal networks – by Rasha Elhesha, Aisharjya Sarkar, Christina Boucher and Tamer Kahveci
- A Linear Delay Linear Space Algorithm for Enumeration of All Connected Induced Subgraphs – by Mohammed Alokshiya, Saeed Salem and Fidaa Abed
- MetaNN: Accurate Classification of Host Phenotypes From Metagenomic Data Using Neural Networks – by Chieh Lo and Radu Marculescu

10:15-10:35 Coffee Break

10:35-12:15 Session 2 – Session chair: Dr. Tamer Kahveci
- Recursive model for dose-time responses in pharmacological studies – by Aminur Rahman, Saugato Rahman Dhruba, Souparno Ghosh and Ranadip Pal
- Global analysis of N6-methyladenosine functions and its disease association using deep learning and network-based methods – by Songyao Zhang, Shaowu Zhang, Xiaonan Fan, Jia Meng, Yidong Chen and Yuifei Huang
- Cross-Population Analysis for Functional Characterization of Type II Diabetes Variants – by Dalia Elmansy and Mehmet Koyutürk
- A Stochastic Model of Size Control in the Budding Yeast Cell Cycle – by Mansooreh Ahmadian, John Tyson and Yang Cao

12:15-13:45 Lunch Break

13:45-15:00 Session 3 – Session chair: Dr. Anna Ritz
- Characterizing Building Blocks of Resource Constrained Biological Networks – by Yuanfang Ren, Ahmet Ay, Alin Dobra and Tamer Kahveci
- Network-based machine learning and graph theory algorithms for precision oncology – by Wei Zhang, Jeremy Chien, Jeongsik Yong and Rui Kuang
Network-Based Prediction of Polygenic Disease Genes Involved in Cell Motility – by Miriam Bern, Alexander King, Derek Applewhite and Anna Ritz

15:00-15:20 Coffee Break

15:20-16:35 Session 4 – Session chair: Dr. Yufei Huang

- Optimal Clustering with Missing Values – by Shahin Boluki, Siamak Zamani Dadaneh, Edward Dougherty and Xiaoning Qian
- Analysis and Remedy of Negativity Problem in Hybrid Stochastic Simulation Algorithm and its Application – by Minghan Chen and Yang Cao
- Scalable Optimal Bayesian Classification of Single-Cell Trajectories under Regulatory Model Uncertainty – by Ehsan Hajiramezanali, Mahdi Imani, Ulisses Braga-Neto, Xiaoning Qian and Edward R. Dougherty

16:35-16:45 Announcement of Student Travel Awards – Award Chair (Dr. Ranadip Pal)

16:45-17:00 Closing Remarks – CNB-MAC 2018 Workshop Chairs

17:00-18:00 Poster Session – Session chair: Dr. Byung-Jun Yoon

- Decoding TDP-43 dependent Cryptic Splicing in Amyotrophic Lateral Sclerosis and Identifying novel disease-causing genes – by Hari Krishna Yalamanchili, Hyun-Hwan Jeong and Zhandong Liu
- Analyzing Genomic Data Using Tensor-based Orthogonal Polynomials – by Saba Nafees, Sean Rice and Caleb Phillips
- Bayesian Biomarker Discovery for RNAseq Data – by Ali Foroughi Pour and Lori A. Dalton
- Comprehensive updates in network synthesis models to create an improved benchmark for network alignment algorithms – by Hyun-Myung Woo, Hyundoo Jeong and Byung-Jun Yoon
- An Algorithmic Approach to the Representation of Biological Information and Long-term Memory – by John Pfaltz
- Bayesian Modeling of Plant Drought Resistance Pathway – by Aditya Lahiri, Aniruddha Datta and Priyadharshini Venkatasubramani
- Integration of multiple data sources for gene network inference using genetic perturbation data – by Xiao Liang, William Chad Young, Ling-Hong Hung, Adrian Raftery and Ka Yee Yeung
- SL-GLAlign: Improving the Local Alignment of Biological Networks through Simulated Annealing – by Marianna Milano, Wayne Hayes, Pierangelo Veltri, Mario Cannataro and Pietro Hiram Guzzi
- Sensitivity Analysis of Discrete Models and Application in Biological Networks – by Gaoxiang Zhou, Kai-Wen Liang and Natasa Miskov-Zivanov