

The 6th International Workshop on Computational Network Biology: Modeling, Analysis, and Control (CNB-MAC 2019)

September 7, 2019 | Niagara Falls, NY

CNB-MAC 2019 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:

09:00-09:15 Opening Remarks – *CNB-MAC 2019 Workshop Chairs*

09:15-10:30 Session 1 – *Session chair: Dr. Young (Yang) Cao*

- **Cell Cycle Control and Environmental Response by Second Messenger Networks in *Caulobacter Crescentus*** – by Chunrui Xu, Bronson Weston and Yang Cao
- **Analysis of two mechanisms of telomere maintenance based on the theory of G-Networks and Stochastic Automata Networks** – by Kyung Hyun Lee and Marek Kimmel
- **Network-based Method for Loci with Statistically Frequent Inter-Chromosomal Interactions at Single-cell Resolution** – by Chanaka Bulathsinghalage and Lu Liu

10:30-10:45 Coffee Break

10:45-12:00 Session 2 – *Session chair: Dr. Dougu Nam*

- **Leveraging TCGA gene expression data to build predictive models for cancer drug response** – by Evan Clayton, Toyya Pujol, John McDonald and Peng Qiu
- **Robust edge-based biomarker discovery improves prediction of breast cancer metastasis** – by Nahim Adnan, Chengwei Lei and Jianhua Ruan
- **A Meta-Analysis of Genomic and Transcriptomic Variations in Lung Adenocarcinoma** – by Talip Zengin and Tuğba Önal-Süzek

12:00-13:30 Lunch Break

13:30-14:45 Session 3 – *Session chair: Dr. Peng Qiu*

- **(Highlight Presentation) Biclustering analysis of transcriptome big data identifies condition-specific microRNA targets** – by Sora Yoon, Hai Nguyen and Dougu Nam
- **Bayesian Gamma-Negative Binomial Modeling of Single-Cell RNA Sequencing Data** – by Siamak Zamani Dadaneh, Paul de Figueiredo, Sing-Hoi Sze, Mingyuan Zhou and Xiaoning Qian
- **ComHapDet: A Spatial Community Detection Algorithm for Haplotype Assembly** – by Abishek Sankararaman, Haris Vikalo and François Baccelli

14:45-15:00 Coffee Break

15:00-16:20 Session 4 – Session chair: Dr. Anna Ritz

- **DeeplyEssential: A Deep Neural Network for Predicting Essential Genes in Microbes** – by *Md Abid Hasan and Stefano Lonardi*
- **Grow Lineages along Minimum Spanning Tree for B Cell Receptor Sequencing Data** – by *Xingyu Yang, Christopher Tipton, Matthew Woodruff, Enlu Zhou, Frances Eun-Hyung Lee, Ignacio Sanz and Peng Qiu*
- **(Lightning Talk) A Bayesian Rank-Based Pathway Classifier** – by *Emre Arslan and Ulisses M. Braga-Neto*.
- **(Lightning Talk) A Meta-analysis of Gene Expression Data in Neurodegenerative Diseases** – by *Abdulahad Bayraktar, Tugba Önal-Süzek, Barış Ethem Süzek and Ömür Baysal*
- **(Lightning Talk) Systematic Normalization with Multiple Housekeeping Genes for the Discovery of Genetic Dependencies in Cancer** – by *Oliver Bonham-Carter and Yee Mon Thu*

16:20-16:30 Student Travel Awards & Closing Remarks – CNB-MAC 2019 Workshop Chairs

16:30-17:15 Poster Session – Session chair: Dr. Byung-Jun Yoon

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