

Day 0 (August 1, Sunday)**Workshops & Tutorials****Tutorials (Chairs: Jun Wan, Andy Perkins)**

9:00-11:30 Introduction to Application Containerization Using Singularity (William Sanders, Jason Macklin, Matthew Bradley, Richard Yanicky and Aaron McDivitt)

11:30-12:20 An Introduction to Computational Approaches for 3D Genomic Modeling (Max Highsmith and Jianlin Cheng)

12:20-1:10 Next Generation Sequencing Data Analysis (Nadia Lanman, Sheng Liu, Sagar Utturkar and Yucheng Zhang)

1:10-2:50 A Graphical Front-end for Rapid and Scalable Execution of Bioinformatics Workflows Using Serverless Cloud Computing (Ling-Hong Hung, Varik Hoang, Wes Lloyd and Ka Yee Yeung)

2:50-5:20 Pytorch_EHR: A Codebase for Building Recurrent Neural Network Based Predictive Models Using Electronic Health Records (Laila Rasmy, Ziqian Xie and Degui Zhi)

Workshops (Chairs: Weihua Guan, Jason Moore, Scott Williams)

9:00-11:00 10th Workshop on Parallel and Cloud-based Bioinformatics and Biomedicine (ParBio)

9:00-6:00 Machine Learning Methods for Single-Cell Analysis (ML-SCA)

9:00-11:30 Machine Learning Models for Multi-omics Data Integration (MODI)

1:00-4:00 No-Boundary Thinking in Bioinformatics (NBT)

1:00-4:00 High Performance Computing, Big Data Analytics and Integration for Multi-Omics Biomedical Data (HPC-BOD)

5:00-6:00 First-Time Attendee Special Session (Chair: Anna Ritz)**Day 1 (August 2, Monday)**

8:40-10:30 **BCB Session 1A (Chair: Cuncong Zhong)** **BCB Session 1B (Chair: Gaurav Pandey)** **BCB Session 1C (Chair: Leonid Chindelevitch)**

[Sequence Analysis](#)

[Electronic Health Records](#)

[Systems Biology](#)

7:30-10:30 **WABI Sessions 1A & 1B**

7:30-7:40 **Opening Remarks (Chair: Mohammed El-Kebir)**

7:40-8:40 **WABI Session 1A (Chair: Nadia El-Mabrouk)** [Phylogenetics - Reconciliation](#)

8:40-9:00 Break

9:00-10:30 **WABI Session 1B (Chair: Alexandru Tomescu)** [Pattern Matching](#)

10:30-10:45 Break

10:45-12:00 **Plenary Session 1**

Day 2 (August 3, Tuesday)

8:45-10:30	BCB Session 3A (Chair: Zhongming Zhao) Single Cell Omics	BCB Session 3B (Chair: Ariful Azad) Machine Learning & Drug Design
7:40-10:30	WABI Sessions 3A & 3B	
	7:40-8:40 WABI Session 3A (Chair: Manuel Lafond) Phylogenetic Networks	
	8:40-9:00 Break	
	9:00-10:30 WABI Session 3B (Chair: Paola Bonnizoni) Compression	
10:30-10:55	Break	
10:55-12:00	Plenary Session 2	
10:55	Introduction (Chair: Yu Zhang)	
11:00	Aidong Zhang, Fellow of ACM and IEEE, Transfer Learning and Meta Learning for Biomedical Applications	
12:00-1:00	Break	
1:00-2:20	Featured Session on Bioinformatics, Data Science, AI and COVID (Chairs: Hongmei Jiang and May Wang)	
2:30-4:20	BCB Session 4A (Chair: Sanjay Purushotham) Medical Imaging	BCB Session 4B (Chair: Byung-Jun Yoon) Graphs and Networks
12:30-1:30	WABI Session 4A (Chair: Elodie Laine) RNA - Structure	

Day 3 (August 4, Wednesday)

- 8:45-10:30** **BCB Session 5A (Chair: Mohd Anwar)** **BCB Session 5B (Chair: Kaiman Zeng)**
COVID-19 **Clinical Trials & Outcome Prediction**
- 7:40-10:00** **WABI Sessions 5A & 5B**
7:40-8:40 **WABI Sessions 5A (Chair: Tomas Vinar)** **RNA - Transcriptomics**
8:40-9:00 Break
9:00-10:00 **WABI Sessions 5B (Chair: Mohammed El-Kebir)** **Statistical Inference / System Biology**
- 10:30-10:55 Break
- 10:55-12:00** **Plenary Session 3**
10:55 Introduction (Chair: Alessandra Carbone)
- 11:00** **Keynote: Mona Singh, Professor of Computer Science, Algorithms for Deciphering Disease Networks**
- 1:00-12:30 Break
- 12:30-2:00** **Featured Session on Diversity and Inclusion: Challenges and Opportunities (Chairs: Xiuzhen Huang, May Wang)**
2:00-2:30 Break
- 2:30-4:15** **BCB Session 6A (Chair: Ozgur Tostan)** **BCB Session 6B (Chair: Fereydoun Hormozdiari)**
Cancer **Ontologies & Databases**
- 12:00-1:15** **WABI Session 6A**
12:00-1:00 **Metagenomics (Chair: Riccardo Vicedomini)**
1:00-1:15 **Closing Remarks (Chairs: Alessandra Carbone, Mohammed El-Kebir)**
- 4:15-4:30 Break
- 4:30-5:00** **Recognitions and Awards Ceremony (Chairs: Hongmei Jiang, Xiuzhen Huang, Jiajie Zhang)**
5:00 **Closing Remarks (Chairs: May Wang, Tamer Kahveci)**