

**The Koret-Berkeley-Tel Aviv University  
Initiative in Computational Biology and Bioinformatics (KBTI)**

**Annual Workshop: Advances in Computational Biology**

May 26 2022, Jaglom Auditorium (the Senate building), Tel Aviv University

09:30 – 09:45 *Gathering & Coffee*

09:45 – 09:50 Opening, **Prof. Karen Avraham**, Vice Dean, Faculty of Medicine, TAU

**Chair: Adi Stern, TAU**

09:50 – 10:10 **Steven Brenner, UCB**: StrVCTVRE, a method for prioritizing pathogenic structural variants

10:10 – 10:30 **Jennifer Listgarten, UCB**: Machine learning for protein engineering

10:30 – 10:50 **Ran Elkon, TAU**: Genomic delineation of the interplay between 3D genome organization and transcriptional regulation

10:50 – 10:55 **Noa Ecker** (Pupko lab), **TAU**: A machine-learning approach to optimize existing phylogenetic tree-search softwares

10:55 – 11:20 *Coffee break*

**Chair: Roded Sharan, TAU**

11:20 – 11:40 **Joseph Lewnard, UCB**: Harnessing large-scale clinical informatics for real time learning: experience during the COVID-19 pandemic

11:40 – 12:00 **Roded Sharan, TAU**: Mutational signatures: from basic science to clinical applications

12:00 – 12:20 **Jean-Philippe Vert, Mines ParisTech**: Learning to align biological sequences

12:20 – 12:25 **Yadid Algavi** (Borenstein lab), **TAU**: A data-driven approach for predicting the impact of drugs on the human microbiome

12:25 – 13:15 *Lunch break*

**Chair: Steven Brenner, UCB**

13:15 – 13:35 **Irit Gat-Viks, TAU**: Disease tolerance and resistance programs in influenza virus infection

13:35 – 13:55 **Peter Sudmant, UCB**: Profiling aging across cellular, organismal, and population levels

13:55 – 14:15 **Andres Cardenas, UCB**: Environmental influences on human epigenetic variability and epigenetic age acceleration

14:15 – 14:20 **Michael Peeri** (Tuller lab), **TAU**: Detecting selection for mRNA secondary structure strength at single gene resolution across the tree of life

14:20 – 14:25 Concluding remarks