You are cordially invited to a Computational Genomics Seminar

Dr. Yotam Drier

The Lautenberg Center for Immunology and Cancer Research, Faculty of Medicine, The Hebrew University of Jerusalem

*"*Epigenomics of human disease*"*

Wednesday, February 21 at 11:15

School of Computer Science, Check Point Building, Room 420

**Abstract:** In this talk I will demonstrate the work in our lab to uncover what causes epigenetic disruptions in disease and how to utilize epigenomic analysis to uncover disease mechanisms and suggest new therapeutic avenues. I will share three stories: 1) How loss of SMCHD1 disrupts splicing and DNA methylation regulation, and leads to facioscapulohumeral muscular dystrophy; 2) How the regulatory landscape of lung neuroendocrine tumors reveals epigenetic subtypes and dependence on FGF signaling; 3) A computational method we developed to predict pathway activity in single cells from single cell RNA-seq data, and its application to study cancer functional heterogeneity and alterations caused by COVID-19 infection.

Host: Prof. Ron Shamir, School of Computer Science, Tel Aviv University