

You are cordially invited to a **Computational Genomics Seminar**:

Speaker: Dr. Yaron Orenstein, Department of Electrical and Computer Engineering, Ben-Gurion University

Time: Wednesday, 2/5/2018, at 11:15

Place: Schreiber 309, School of Computer Science, Tel Aviv University

Title: "Deep learning for protein-RNA interactions"

Abstract: Protein-RNA binding, mediated through both RNA sequence and structure, plays vital role in many cellular processes, including neurodegenerative-diseases. Modeling the sequence and structure binding preferences of an RNA-binding protein is a key computational challenge. Accurate models will enable prediction of new interactions and better understanding of the binding mechanism.

In the talk, I will describe a new deep learning based approach to learn RNA sequence and structure binding preferences from large biological datasets. I will present results of our algorithm outperforming the state of the art, both in vitro and in vivo. I will give examples of the biological insights we can gain by applying our neural networks to largest datasets of protein-RNA interactions. I will conclude with open questions and a discussion on the success of deep learning in computational biology.

Joint work with Ilan Ben-Bassat and Benny Chor.

Host: Prof. Ron Shamir (rshamir@tau.ac.il), School of Computer Science, Tel Aviv University