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

Speaker: **Dr. Uri Shalit,** Statistics & Information Systems Engineering, Faculty of Industrial Engineering and Management, Technion.

Time: Wednesday **October 17** at **11:15**

Place: **Schreiber 309**, School of Computer Science, TAU

Title: **Learning to act from observational health data**

Abstract: The proliferation of data collection in the healthcare space brings with it opportunities for extracting new knowledge leading to concrete policy implications. For example, using electronic healthcare records to individualize medical practices.

The scientific challenge lies in the fact that standard prediction models such as supervised machine learning are often not enough for decision making from this so-called "observational data": Supervised learning does not take into account causality, nor does it account for the feedback loops that arise when predictions are turned into actions. On the other hand, existing causal-inference methods are not adapted to dealing with the rich and complex data now available, and often focus on populations, as opposed to individual-level effects.

In my talk I will discuss the difference between prediction and action and introduce the basic ideas of causal inference in this context. I will then show how we apply recent ideas from machine learning and deep learning to the problem of individual-level causal inference, motivated by application in healthcare.

Host: **Prof. Ron Shamir** (rshamir@tau.ac.il), School of Computer Science, TAU