

TEL AVIV UNIVERSITY – UNIVERSITY OF TORONTO JOINT WORKSHOP

Big-Data and Health



JANUARY 23-24, 2017 - TEL AVIV UNIVERSITY, TEL AVIV, ISRAEL

Zeevi Auditorium, Beit Hatfutsot, Tel Aviv University

Day 1 | Monday, January 23, 2017

9:45-10:00 **Greetings**
Prof. Yoav Henis, Ph.D.
Vice President for Research and Development,
Tel Aviv University

Prof. Vivek Goel, Vice President, Research and
Innovation; University of Toronto

Session I INTEGRATING AND UTILIZING NEW BIG-DATA MODALITIES IN HEALTH RESEARCH

10:00-10:30 **Prof. Muhamad Mumdani (UT)**
*Data Meets Decisions: Bridging Analytics and Health Policy and Practice
Decision-Making*

10:30-11:00 **Prof. Tova Milo (TAU)**
Crowd-Powered Data Management

11:00-11:30 **Prof. Lorraine Lipscombe (UT)**
Harnessing big data from health care systems for health research

11:30-12:00 **Prof. Eran Toch (TAU)**
Privacy in Full Genome Sequencing

12:00-13:30 *Lunch break*

Session II BIG DATA OMICS IN BIOMEDICAL RESEARCH

13:30-14:00 **Prof. Ron Shamir (TAU)**
*Utilizing diverse omic data from many cancer studies: proof of concept
and applications*

14:00-14:30 **Prof. Gary Bader (UT)**
*Patient classification using integrated clinical and genomic similarity
networks*

14:30-15:00 **Dr. Irit Gat-Viks (TAU)**
*Utilizing genomic technologies to understand the immune system and its
role in disease*

15:30-16:00 *Coffee break*

16:00-16:30 **Prof. Anna Goldenberg (UT)**
*Data integration for precision medicine: methods, pitfalls and
opportunities*

16:30-17:00 **Prof. Tami Geiger (TAU)**
Genome scale proteomic profiling breast cancer

Day 2 | Tuesday, January 24, 2017

Session III PERSONALIZING HEALTHCARE

10:00-10:30 **Prof. Michael Brudno (UT)**
*PhenoTips and PhenomeCentral: Building an integrated Informatics
framework for rare diseases*

10:30-11:00 **Prof. Varda Shalev (TAU and Maccabi)**
Personalized healthcare in practice

11:00-11:30 **Prof. Frank Rudzicz (UT)**
Language as a lens into cognition in diagnostic software

11:30-12:00 *Coffee break*

12:00-12:30 **Dr. Roni Shouval (TAU)**
*"Are We There Yet"? Machine Learning for Predictive Modeling in
Hematopoietic Stem Cell Transplantation*

12:30-13:00 **Dr. Trevor Jamieson (UT)**
*Data at the coal face: clinical-decision support systems as the future of
knowledge translation and why data scientists should care*

13:00-14:30 *Lunch break*

Session IV STATISTICAL MODELING OF MEDICAL DATA (Machine Learning and Biomedical Big Data)

14:30-15:00 **Prof. Yoav Benjamini (TAU)**
Big data analysis in the Human Brain Project

15:00-15:30 **Prof. Therese Stukel (UT)**
Introduction to Data Science

15:30-16:00 **Prof. Lior Wolf (TAU)**
*Deep Learning for Cell Counting, Lung Disease Diagnosis and Identification
of Bone Lesions*

16:00-16:30 *Coffee break*

16:30-17:00 **Prof. Shelley Bull (UT)**
*Heterogeneity in complex human genetics and genomics: Can statistical
modelling help?*

17:00-17:30 **Prof. Amir Tirosh (TAU)**
Obesity outcomes in young adults

17:30-17:45 *Conclusion*