



THE WEIZMANN INSTITUTE OF SCIENCE
FACULTY OF MATHEMATICS AND COMPUTER SCIENCE

Machine Learning and Statistics Seminar

Room 1 ,Ziskind Building
on Wednesday, May 09, 2018
at 11:15

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V(D)J Diversity of Subsets of T and B Cells, Statistics and Probability

Abstract:

This talk will include an introduction to the topic of V(D)J rearrangements of particular subsets of T cells and B cells of the adaptive human immune system, in particular of IgG heavy chains. There are many statistical problems that arise in trying to understand these cells. They involve estimating aspects of functionals of discrete probabilities on (random) finite sets. Topics include but are not limited to exchangeability, estimating non-centrality parameters, and estimating covariance matrices from what are called "replicates" that have been amplified by the PCR process and (partially) sequenced.

I have received considerable assistance from Lu Tian, and also Yi Liu; as well, I have been helped considerably by Andrew Fire and Scott Boyd, and also Jorg Goronzy