

PHYSICS COLLOQUIUM

Eytan Domany

Weizmann Institute

“Predicting outcome in cancer:
Hope, Hype, Physics and. . . Biology”

Monday, January 28, 2008

4:00 PM, Ronald Geballe Auditorium, Rm. A-102

Seminars



Jan. 28-Feb. 1, 2008

Abstract: Considerable effort has been devoted during the recent five years to identify gene expression signatures that predict aggressiveness and outcome of cancer at the time of its discovery. In breast cancer, different groups used different cohorts of patients and different DNA microarrays to produce short-lists of predictive genes, and reported high success rates. Unfortunately, the predictive lists found by different groups had very few genes in common.

Eytan will review some of this work, point out problematic aspects of it and present PAC-ranking, a method designed to estimate the number of training samples needed to produce a robust predictive gene list. If time permits, Eytan will describe briefly an ongoing study of colon cancer, where the machine-learning approach taken in the studies of breast cancer was replaced by one that focuses on the underlying biology.

Tuesday, January 29

Particle Theory Seminar

2:30 PM, Rm. C-421, PAT

Jeffrey Mandula, UW Particle

TBA

Condensed Matter Seminar

4:00 PM, Rm. C-421, PAT

Ping Ao, UW Physics

“Robustness in Biological Processes: Can We Quantify It?
And a few related issues far from equilibrium”

Thursday, January 31

Astronomy Colloquium

4:00 PM, Rm. A-102, PAA

Simon Krughoff, University of Washington

“Hunting for Supernovae in all the Wrong Places”