

Informal Discussion

Andrew Critch
(Friday's colloquium speaker)

Thursday, January 5, 2012
2- 4 p.m., HH-3022

How algebraic geometry can improve machine learning
(an informal discussion)

Abstract:

The emerging field of algebraic statistics is an incredible avenue for *pure mathematicians* (algebraists, geometers, and combinatorialists) to understand and impact data-driven sciences of ever-increasing importance like medicine, artificial intelligence, and economics. Since the advent of graphical statistical models (e.g. causal graphs) and the development of Sumio Watanabe's "Singular Learning Theory", algebraic and geometric methods have lead to significant improvement of model selection criteria such as the Bayesian Information Criterion (BIC) and the Akaike Information Criterion (AIC).

I'm very excited about this amazing connection, and would like to invite anyone in the mathematics and statistics department who is interested to have an informal conversation about it.