MIT Department of Mathematics & The Theory of Computation Group At CSAIL



## **Bioinformatics Seminar**

Speakers: Paul de Bakker, Massachusetts General Hospital Department of Molecular Biology Title: Human Genome Variation and Risk to Common Disease Date: Monday, 27 February 2006 Time & Location: Refreshments: 11 am in the Theory of Computation Lab at MIT's Building 32, Stata Center Room G-575 Talk: 11:30 am the Theory of Computation Lab at MIT's Building 32, Stata Center, Room G-575 URL: <u>http://www-math.mit.edu/compbiosem/</u>

## Abstract:

With the recent completion of the International HapMap Project and the availability of high-throughput genotyping technologies, it has now become possible to comprehensively test common genetic variation for a etiological role in complex traits and common disease. The HapMap provides insight into the fine-scale patterns of linkage disequilibrium, haplotype block structure, and hotspots of recombination. I will describe computational strategies to association testing through linkage disequilibrium on a genome-wide scale. Given that HapMap is based only 270 individuals from four populations, it is essential that we evaluate how well the observed LD structure in HapMap will transfer across different population samples. I will present empirical data that support the efficacy of HapMap in genome-wide association studies.

The seminar is co-hosted by Professor Peter Clote of Boston College's Biology and Computer Science Departments and MIT Professor of Applied Math Bonnie Berger. Professor Berger is also affiliated with CSAIL & HST.

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For General Questions, please contact kvdickey@mit.edu