BOSTON UNIVERSITY

Boston University joint Biostatistics, Statistics and Probability Seminar Series

Using optical map alignments to study copy number changes.

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Thursday, June 5, 2008, 4-5pm
Department of Biostatistics
Room: 335 Crosstown Building
801 Massachusetts Avenue, Boston

Tea and Cookies at 3:30pm in 335 Crosstown Building

Abstract: Optical mapping is a high-throughput system that produces whole genome restriction maps. It is well developed for small (e.g., microbial) genomes, and recent advances have enabled optical mapping of mammalian-sized genomes as well. Although the availability of whole genome sequences has made many of the traditional uses of restriction maps redundant, its high-throughput nature makes many novel applications possible, often making use of the available sequence information. In this talk, I will give an overview of the optical mapping system, and describe how alignments of optical maps to a reference genome can be used to study copy number variations using a hidden Markov model approach.