

MYRTO LEFKOPOULOU

Distinguished Lecture



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DATE:
Thursday,
September 4, 2008

LOCATION:
Kresge Building
G3

TIME:
4:00 pm - 5:00 pm

Coffee and tea will be served
at 3:30 pm in Kresge G3
and a reception will be held
following the lecture in
Sebastian's Cafe.

“Statistical Challenges in Genetic Studies of Mental Disorders”

It has been a century since early preliminary reports suggested heredity in some psychiatric disorders such as insanity. Decades have passed since the modes and levels of inheritance were documented for a number of psychiatric and behavioral disorders such as Tourette's Syndrome and nicotine dependence. Despite recent landmark successes that led to discoveries of genetic variants for several complex diseases, the hunting for genes underlying mental disorders remains largely elusive. In addition to political challenges, there are also major clinical and analytical challenges. Mental disorders are difficult to characterize both phenotypically and genetically. Beyond the challenges that are common for complex diseases such as cancer and age-related macular degeneration, there are great intrapersonal variations and uncertainties, particularly over time. The diagnoses of mental disorders generally depend on instruments that include many descriptive questions, and comorbidity is common. I will present some of the joint work conducted by my group in recent years that is motivated by the need arising from studying mental disorders. For example, we have developed methodology and software to analyze ordinal traits and multiple traits commonly encountered in mental health research. The potential of these methods has been demonstrated through simulation as well as several genetic analyses of several mental disorders such as hoarding, nicotine dependence, and alcohol dependence.

