

## ***Modern statistical genetics***

Chiara Sabatti, Stanford University

The explosion of data acquisition capacity in the life sciences during the past 20 years presents a number of challenges and opportunities for statisticians: genetics is a paramount example. I will provide a brief introduction to the problem of reconstructing the genetic basis of traits using modern genotyping techniques. We will discuss heritability, genotype quality control, association studies, model selection approaches, correction for multiple comparison strategies, and models that allow us to analyze simultaneously multiple phenotypes.