Population genetics inference using segments of identity by descent

Segments of identity by descent (IBD) are long tracts of DNA shared by pairs of individuals due to inheritance from a recent common ancestor. These segments are useful for several applications, including inferring relationships and inferring population genetics parameters. I will discuss approaches to detecting IBD segments from SNP array or whole genome sequence data, and describe methodology and results for using IBD segments to estimate mutation rate, recombination rate, and selection.