Blind analysis as coherence testing - Molly Kao

Abstract:
Experiments in high energy physics are inescapably theory- or model-laden. Moreover, the necessity of collecting and interpreting massive amounts of data in these contexts requires making choices at various points of the analysis of an experiment, many of which are not uniquely dictated by the data, thus opening the door to the influence of considerations that are not strictly empirical. Physicists are aware of this issue, and utilize a variety of techniques collectively referred to as "blind analysis" to counteract possible cognitive biases. Drawing on work by Alisa Bokulich, among others, I argue that we can understand the application of certain blind analysis techniques as a type of coherence testing, that can help to reveal possible discordances in the data.