Boston University Statistics
and Probability Seminar Series

Mixture inference at the weak identifiability

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Mathematics and Computer Science (MCS) Building, Room 148
111 Cummington Street, Boston

Tea and Cookies at 3:30pm in MCS 153

Abstract: Parameter identifiability is a principal assumption of statistical models in order to make meaningful inferences. There are two nonidentifiabilities in finite mixture models: *boundary nonidentifiability* and *label nonidentifiability*. Although parameters are not identifiable in the strict sense, there is a form of *asymptotic identifiability* which can provide reasonable answers as the sample size grows. The reason why asymptotic identifiability occurs is because the parameters are *locally identifiable*.

In this talk, I address the role of the two key identifiabilities and nonidentifiabilities on finite mixture inference, and investigate estimation and labelling of parameter estimators when the sample size is not large relative to the separation of the components. I then propose new methods which can solve several drawbacks of existing methods.

For directions and maps, please see *http://math.bu.edu/research/statistics/statseminar.html.*