Mathematics, Statistics, and Computer Science   **@ UIC**

Statistics and Data Science Seminar

A measure of information in non-regular problems

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Abstract: Fisher information plays an important role in statistics, from asymptotic efficiency, to optimal design of experiments, to the construction of default priors for Bayesian analysis. However, existence of Fisher information requires regularity conditions. What happens if the regularity conditions are not met? Is there an alternative measure of information that can be used in non-regular problems when the Fisher information does not exist? In this talk, I will present a generalization of the Fisher information to non-regular problems, based on the Hellinger distance, and discuss its properties and some examples. Hints about its application to optimal design of experiments may also be given.

Wednesday, November 18 at 4:00 PM in SEO 636