

## From Esseen to Stein

*Tuesday, September 18, 2018 10:00 AM (50 minutes)*

One key ingredient in Carl-Gustav Esseen's proof of the Berry-Esseen bound is a smoothing inequality that quantifies the distance between two distribution functions in terms of the distance between their characteristic functions. What is well-known is how to use this inequality with a subsequent Taylor expansion of the characteristic functions to prove the Berry-Esseen bound. What is not so well-known is that Esseen's inequality can also be combined with ideas introduced by Charles Stein to obtain an alternative proof of the Berry-Esseen bound.

In this talk we will give a gentle introduction to Esseen's work on the Berry-Esseen bound and to some ideas of Stein's method.

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