From Esseen to Stein

Tuesday, 18 September 2018 10:00 (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 proof 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.

Presenter: ROLLIN, Adrian (National University of Singapore)