Tail Asymptotics for Two-Dimensional Reflecting Brownian Motion — a Kernel Method

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Abstract: In this talk, we consider a semi-martingale reflecting Brownian motion model. Using this model, we show how the kernel method can be applied for exact tail asymptotics in the stationary distribution. We demonstrate how to locate the left-most singular point, and how to determine the detailed behavior of the unknown moment generating function at the left-most singular point. This information is the key for characterizing exact tail asymptotics in terms of a Tauberian-like theorem.