

國立東華大學應用數學系
專題演講

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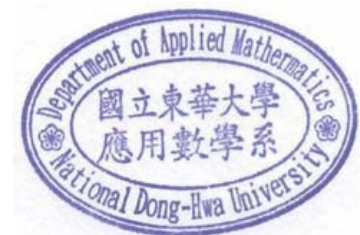
講題：A Flexible Point Process Model for Describing Arrivals to a Service Facility.

時間：101年11月02日(星期五) 15:20-16:50

地點：理學院A324會議室

摘要

In many applied settings, one needs a description of incoming traffic to the system. In this talk, we argue that the Palm-Khintchine superposition theorem dictates that the process should typically look "locally Poisson". However, there are usually obvious time-of-day effects that should be reflected in the model. Furthermore, in many data sets, it appears that medium-scale burstiness is also present. In this talk, we consider a Poisson process that is driven by a mean-reverting Feller "square root" diffusion as a flexible vehicle for modeling such traffic. We argue that this model is tractable computationally, is parsimonious, has physically interpretable parameters, and can flexibly model different behaviors at different scales. We discuss different estimation methods and hypothesis tests that are relevant to this model, and illustrate the ideas with call center data. This work is joint with Jeff Hong and Xiaowei Zhang.



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