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Martin B Short*, School of Mathematics, Georgia Institute of Technology, 686 Cherry Street, Atlanta, GA 30332. *Mathematical modeling of crime hotspots.*

Many crime types exhibit strong spatio-temporal clustering; such clusters are often referred to as crime hotspots. The driving forces behind this clustering have been extensively studied by criminologists for many years, but the mathematical nature of these processes has received little attention. In this talk, I will present mathematical models and techniques that I and my colleagues have used to understand the dynamics of hotspot formation, ranging from partial differential equations to statistical density estimation. Throughout, I will discuss the link between the criminological understandings and the mathematics, and also show how the mathematical models allow insight into the process that go beyond what the criminological studies readily allow. (Received February 07, 2014)