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**Three centuries of random lines: from Buffon's needle to scale-invariant networks**

(Theo Cacoullos Memorial Lecture 2024)

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**Abstract**

This talk will focus on (a) the history of some stochastic geometry dating from Buffon's famous thought-experiment concerning baguettes, through (b) a variety of proposed geometric models for city and traffic flow, to (c) a general and intuitive description of the author’s results concerning a recent approach to spatial transportation networks. There should be something of interest for all (including audience participation in design of a statistical experiment with stochastic geometry overtones)

*Keywords:* Buffon’s needle; Poisson line patterns; spatial transportation models

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