The Department of Mathematical Sciences
Colloquium

# Prof Alexey Kuznetsov

York University

## Thursday, March 9, 2017
## Rm 240 WCharlton Hall
## 4 – 5 pm

# *The hitchhiker's guide to Levy processes*

What is the connection between the financial time series and grazing patterns of bacteria, cash flows of insurance companies, and fluctuations and transport in plasma, seismic series, and spreading of epidemic processes? The answer is: Levy processes, which are used in modeling all of these diverse phenomena. I will begin this talk with a gentle introduction to Levy processes followed by some of their applications. Then I will focus on exponential functionals of Levy processes, and I will describe how they fit in the theory of positive self-similar Markov processes in general and stable processes in particular. After discussing some analytical tools and techniques which are used in studying the exponential functional, I will explain why the Answer to the Great Question of Life, the Universe, and Stable Processes is exactly forty-two.

**Refreshments will be served 3:15 – 3:45 pm in the Faculty & Graduate Student Lounge**
**Rm 4118 French Hall West**

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