# Statistical Sciences
## UNIVERSITY OF TORONTO

# SEMINAR SERIES

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| **When:** | **Thursday, November 23, 2017** |
| **Time:** | **3:00 – 4:00 pm** |
| | **Refreshments at 2:45 pm** |
| **Where:** | **Stewart Building, 149 College Street, Rm 409** |
| **Speaker:** | **PATRICK BROWN, University of Toronto, Centre for Global Health Research, St. Michaels' Hospital** |

# Air Pollution, Spatial Statistics, and Mortality in India: Where We Are and Where To Next

In the past few months much media attention has been devoted to smog in Delhi and to the question of the effect of air pollution on mortality. The media has not afforded the same degree of attention to Spatial Statistics, but this talk will seek to convince the audience that it should do.

The Generalized Linear Geostatistical model and methods for fitting it will be described, and the effect of ambient PM 2.5 on mortality in India will be discussed.

The second half of the talk will explore a more challenging methodological problem, which is modelling data where there is uncertainty in case locations. A kernel smoothing algorithm based on the EMS algorithm and making us of Gaussian Markov Random Fields will be presented.