CoE-MaSS weekly seminar series

**THE DST-NRF CENTRE OF EXCELLENCE IN
MATHEMATICAL AND STATISTICAL SCIENCES (CoE-MaSS)
PRESENTS A SEMINAR BY**

Prof Akim Adekpedjou
(Department of Mathematics and Statistics, University of Missouri, USA)

"Risk Factors Discovery using Targeted Learning in Data Science"

Friday, 22 March 2019
10h30-11h30
CoE-MaSS Seminar Room, 1st floor, MSB, Wits.

Explosive expansion of collected data - in terms of dimensionality, diversity, and volume - increases more rapidly than we can analyse to draw useful conclusions, make informed decisions, and provide specific recommendations. Longitudinal data fall under the umbrella of big data and are encountered in many fields such as biomedical, actuarial science, health care, and government. Traditional estimation and machine learning are unable to estimate accurately quantities that are functions of big data. In this talk, we analyse longitudinal spatial data using new efficient tools of modelling big data called Targeted Learning in Data Science, namely: Super Learner Algorithm, Targeted Maximum Likelihood, and Targeted Influence Curve. After a brief review of the tools, we discuss how some quantities of interest with longitudinal data are estimated. The estimators are not based on any specific models and are twice robust. A simulation study results is given. Application of models to recurrent oesophageal cancer in the northern part of France are presented.
Email: akima@mst.edu

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