

Join us for our

NITheP Webinar Series

Prof Hugo Touchette

University of Stellenbosch



Title: Classical and quantum processes with random resets

Abstract: I will discuss in this talk 'reset processes' which are stochastic processes - classical or quantum - that are forced at random times to return to some state. These processes have been studied for some time now as population models, where a reset is a catastrophe that wipes all or part of a population, as well as random searches mimicking our own behaviour as we search for something (e.g., car keys) and, without success, return to where we think that something should be. Recently, the study of reset processes has been revived in physics in connection with biophysical and nonequilibrium applications. I will give an overview of these applications, as well as of my own recent work on the spectral properties and the large deviations of reset processes.

Bio: Hugo Touchette is Professor of Applied Mathematics at Stellenbosch University, where he teaches probability and statistics, random processes, and, from next year, machine learning as part of Stellenbosch's new MSc in Machine Learning. He moved to South Africa in 2013 to work at the National Institute for Theoretical Physics (now NITheCS), after spending 9 years at Queen Mary University of London. He holds a PhD from McGill University in Canada, where he is from.

Register in advance for this webinar:

https://ukzn.zoom.us/webinar/register/WN_TfhCTPvIR2qDLVwAKcHSRA

After registering, you will receive a confirmation email containing information about joining the webinar.

Date: Thursday, 18th June 2020

Time: 14h00