

# CoE-MaSS weekly seminar series

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

**Prof Winston Garira**

*(Department of Mathematics and Applied Mathematics,  
University of Venda)*

## ***“Discussion on the Generic Categories of Multiscale Models of Infectious Disease Systems”***

Friday, 12 July 2019

10h30-11h30

CoE-MaSS Seminar Room, 1<sup>st</sup> floor, MSB, Wits.

In the last five years, I established that multiscale modelling of infectious disease dynamics follows five common principles with respect to model structure and method of formulation. This resulted in recent work in which I formulated a categorization framework for multiscale models across all major levels of organization of an infectious disease system from the cell level up to the macro-ecosystem level. The intention was that it makes it easier not only to understand and compare multiscale models, but also makes it easier for researchers to know where to start when first creating their own multiscale and more importantly that researchers do not end up re-inventing similar multiscale modelling strategies under different names. In this talk, I will first present the categorization framework and then use it to provide a complete categorization of the different types of multiscale models of infectious disease systems. While this categorization cannot be claimed to be unique, I think that it constitutes a good starting point, which may be found useful as a basis for further refinement in the discourse for multiscale modelling of infectious disease systems.

Email: [winston.garira@univen.ac.za](mailto:winston.garira@univen.ac.za)



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