Pacific Institute *for the* Mathematical Sciences

PIMS-UVic Distinguished Lecture

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Thursday, September 21, 2017
3:30 pm

Clearihue Building, room A212
University of Victoria

Probability of Outbreak and Time to Outbreak in Viral Zoonotic Infectious Diseases

Zoonotic diseases are infectious diseases transmitted to humans from vertebrate animals. Many of these diseases originate from a viral pathogen and are associated with spillover from wildlife. Viral pathogens represent a large proportion of emerging and re-emerging infectious diseases, e.g., coronaviruses, ebolaviruses, hantaviruses. Some well-known and new mathematical results from Markov chain and branching process theory on probability of and time to disease emergence or to disease extinction are summarized in the context of SIR epidemic models and multi-group models with one group being the animal source. These results are discussed in terms of their implications for public health intervention and for control of zoonotic infectious diseases.

http://www.uvic.ca/science/math-statistics/home/home/events/index.php