MATH COLLOQUIUM SERIES

MATH @ USM
http://math.usm.my

SCHOOL OF MATHEMATICAL SCIENCES
UNIVERSITI SAINS MALAYSIA

DR RASHID JAN

DEPARTMENT OF MATHEMATICS
UNIVERSITY OF SWABI, PAKISTAN

COMPUTATION OF THE BASIC REPRODUCTION PARAMETER OF EPIDEMIC MODELS

The basic reproduction number is a critical parameter used in epidemiology to measure the contagiousness of an infectious disease. It represents the average number of new infections caused by a single infected individual in a completely susceptible population. The importance of the basic reproduction parameter lies in its ability to provide crucial insights into the dynamics and potential spread of a disease. It assists in understanding disease severity, planning public health responses, evaluating intervention strategies, and guiding vaccine development efforts. In this talk, we presented a different epidemic model to show how different models are formulated with different strategies. We presented the Jacobian approach for the computation of the basic reproduction number of an epidemic model. The Next-Generation approach is used to determine the basic reproduction parameter of an epidemic model. This parameter provides critical insights into the transmission dynamics, control measures, and potential impact of infectious diseases.

LIVE • matematikUSM

Thursday, 22 June 2023
9:00 – 10:00 am (Malaysia)
https://bit.ly/MCS22-06-2023

Website: http://math.usm.my
Email: dean_mat@usm.my
Tel: +604 653 3284 | Fax: +604 657 0910
Facebook: https://www.facebook.com/matematikUSM
Instagram: https://www.instagram.com/math_usm

KAMI MEMIMPIN

UNIVERSITI SAINS MALAYSIA

APEX™