
RMIT BioModelling Group

Meetings

Mathematical modelling and controlling the dynamics of infectious diseases



Speaker: Dr. Musa Mammadov
Faculty of Science and Technology
RMIT University

Date: Friday 25 August 2017

Time: 3:00–4:00pm (Talk & Q/A)

Venue: Building 8 Level 9 Room 66 (AGR),
RMIT City campus

All students and staff are welcome

The talk will be followed by snacks and drinks

ABSTRACT: Mathematical modeling has played an important role in predicting, assessing and controlling potential outbreaks. In this talk, we will briefly discuss the main approaches used for the modeling of infectious diseases with the major focus on dynamical systems. We also present a new optimal control model to describe and control the dynamics of infectious diseases where the average time of isolation (i.e. hospitalization) of infectious population is considered as a control parameter. All the preventive measures aim to decrease the average time of isolation under given constraints.

BIO: Musa Mammadov (Mamedov) is a Senior Research Fellow at the Faculty of Science and Technology, Federation University Australia. He obtained his MSc degree in Mathematics from Baku State University (Azerbaijan), PhD in Mathematics from St. Petersburg State University (Russia) and PhD in Mathematics&IT from Federation University Australia. His main research interests lie in the optimal control theory (asymptotic stability of optimal trajectories) and optimization (theory and numerical methods) with a strong