INSPEM WEEKLY SEMINAR

UPM UNIVERSITI PUTRA MALAYSIA
BERILMU BERBAKTI

Date & Time

9th March 2018, Friday @ 3.15 pm

Venue

Al-Farabi Seminar Room, Second Floor, INSPEM

Presenter

Dr. Mohd Zahurin Mohamed Kamali
Sabbatical Researcher
Laboratory of Computational Sciences and Mathematical Physics

Topic

Ant colony programming for solving differential equations

Abstract

Differential equations are widely used to model physical phenomen in many disciplines including engineering, physics, economics, and biology. In the present work, a variant type of ant colony programming (ACP) method is implemented. This variant type of ACP algorithm is unique as it does not use the criteria of distance. It utilizes the probability function which related to the quantity of the pheromone level in the ACP. The objective is to show the consistency and the applicability of the nontraditional ant colony programming (ACP) method in solving various ordinary differential equations (ODE's) and partial differential equations (PDE's) problems. Comparatively, similar and exact solution is achieved by using the ACP approach. Illustrative numerical example as well as tables are presented for comparison purpose