

Date & Time

Friday, 23rd August 2019 @ 3.15 pm

Venue

**Al-Farabi Seminar Room, Second Floor,
INSPEM**

Presenter

Assoc. Prof. Dr. Hishamuddin Zainuddin

Deputy Director,
Institute for Mathematical Research



Topic

**Geometry of Dynamical Systems – An Outsider’s View
(INSPEM Remix)**

Abstract

Dynamical systems in general consists of three main ingredients, the space of evolution parameter, the state space and the evolution rule. It is well understood that the underlying geometry of each dictates the dynamics of the systems considered but more importantly allow us to examine the available structures to consider for their quantum counterparts. We will give a cursory view on concepts such as symplectic geometry, stable manifolds, centre manifolds, and symbolic dynamics. Some of these will be exemplified by dynamics on hyperbolic surfaces and the well-known Lorenz attractor. In the same vein, we will touch upon the geometrical ingredients needed to quantize chaotic systems.

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