

## Date & Time

14 September 2018 (Friday) @ 3.15 pm

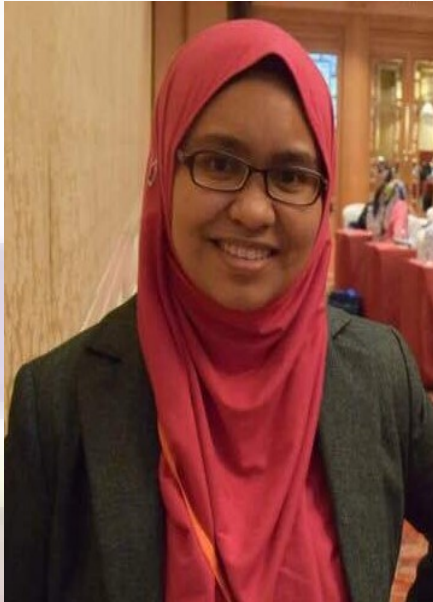
## Venue

Al-Farabi Seminar Room,  
Second Floor, INSPEM

## Presenter

Ms. Zurita Ismail

Research Officer  
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## Topic

**Community Detection in Graphs -  
Case Study of UPM Coauthorship Network**

## Abstract

In the study of complex networks, a network is said to have community structure if the nodes of the network can be easily grouped into (potentially overlapping) sets of nodes such that each set of nodes is densely connected internally. In the particular case of non-overlapping community finding, this implies that the network divides naturally into groups of nodes with dense connections internally and sparser connections between groups. With coauthorship network, community detection allows us to identify scientists that often collaborate with each other. Using the dataset of journal publications of UPM for the first four years of UPM Research University status (2007-2010), we constructed coauthorship networks representing collaborations between the authors of these publications. We apply community detection techniques via Mathematica software in order to examine the underlying community structure for scientific collaboration in UPM for this period.

**Keywords:** Combinatorics, Graph Theory, Complex Networks, Social Networks, Community Detection