



UPM
UNIVERSITI PUTRA MALAYSIA
BERILMU BERBAKTI

INSPEM WEEKLY SEMINAR

20/2018

Date & Time

22nd June 2018, Friday @ 3.15 pm

Venue

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

Presenter

Dr. Mohammad Hasan Abdul Sathar

Associate Researcher

Laboratory of Computational Sciences and
Mathematical Physics



Topic

**Numerical Integration by Linear Legendre Multi
Wavelets**

Abstract

In the present work, a new direct computational method for solving definite integrals based on linear Legendre multi wavelets is introduced. This approach is an improvement of previous methods which are based on Haar wavelets functions. An algorithm using properties of the linear Legendre multi wavelets is developed in order to find numerical approximations for double, triple and improper integrals. The main advantage of this method is its efficiency and simple applicability. To validate the algorithm, numerical experiments are conducted to illustrate the accuracy of the method.