UNIVERSITI PUTRA MALAYSIA
BERILMU BERBAKTI

INSPEM WEEKLY SEMINAR

39/2018

Date & Time

16th November 2018, Friday @ 3.15 pm

Venue

Al-Farabi Seminar Room, Second Floor, INSPEM

Presenter

Dr. Ismail Mohd

Research Fellow
Laboratory of Computational Statistics & Operations Research

Topic

A Globally Convergent Interval Method for Computing and Bounding Real Roots of a Once Continuously Differentiable Function with One Variable

Abstract

In this seminar, it will be shown how Newton's method can be extended to the interval Newton method for locating and bounding a simple root of a once continuously differentiable function $f: D \subseteq R \to R \ \ (f \in C^1(D))$ in a given interval $\underline{x} = [x_I, x_S]$ where $x_I, x_S \in R$ are the infimum and supremum of $\underline{x}$ respectively. The method also can be extended to isolate and bound a multiple root. The seminar will prove that the method never fail to converge.