



The University of the West Indies
Faculty of Science & Technology
Department of Mathematics & Statistics
PhD. Seminar Notice (Seminar 1)

Title: Data Mining For Cancer Driver Genes.

Abstract:

BioInformatics is a rapidly developing field that encompasses the use of tools and techniques from molecular biology, computer science and statistics. In the area of cancer research, different strategies have been implemented to distinguish driver genes from passenger genes, an essential prerequisite for the development of drugs and treatment regimes for patients. One of the more recent approaches is the use of a pathway-oriented solution. Methods that employ this strategy are highly dependent on the quality and size of the pathway interaction network, and require a powerful statistical environment for their analysis. Existing genomic libraries are available in the R-Bioconductor package. One of these packages, DriverNet employs a pathway-based method that uses a gene interaction network in the form of an adjacency matrix. In our analysis we set out to combine data from 3 different networks (VarWalker, DawnRank and DriverNet) for analysis. We found this increased the accuracy of the identification of driver genes significantly. An enriched dataset was produced that included 11,932 genes with 334,134 interactions.

Speaker: Ms. Emilie Ramsahai

Date: Wednesday 25th November, 2015

Venue: Anatomy Teaching Lab (Bldg. 34), Faculty of Medical Sciences, Mt. Hope Medical Complex (E.W.M.S.C)

Time: 12:00 PM – 1:00 PM