

# Data Science Seminar Series

Thursday, March 17<sup>th</sup>, 3:30-4:30 pm, S375

## **TITLE**

New swarm intelligent algorithms for clustering problems

## **SPEAKER**

Dr. Mohamed A. Tawhid, TRU

## **ABSTRACT**

In this talk, improved swarm intelligent algorithms, namely, Salp Swarm Optimization algorithm, whale optimization, and Grasshopper Optimization Algorithm are proposed for data clustering. Our proposed algorithms utilize the crossover operator to obtain an improvised version of the existing algorithms. The performance of our suggested algorithms is tested by comparing the proposed algorithms with standard swarm intelligent algorithms and other existing algorithms in the literature. Non-parametric statistical test, the Friedman test, is applied to show the superiority of our proposed algorithms over other existing algorithms in the literature. The performance of our algorithms outperforms the performance of other algorithms for the data clustering problem in terms of computational time and accuracy.

## **BIOGRAPHY**

Dr. Mohamed A. Tawhid obtained his PhD in Applied Mathematics from the University of Maryland, USA. He is currently a professor at Thompson Rivers University. He has various research interests include computational intelligence and artificial intelligence, and their applications to data analysis. He has published more than 70 referred papers, served on editorial board several journals, and worked on several industrial projects in BC, Canada.

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