

## Assignment 5

1. Find the optimal value of the Sphere function with four (4) variables using PSO.

$$\min f(x) = \sum_{i=1}^4 x_i^2$$

where,  $x_i \in [-10,10] \ \forall i$

2. Solve the GAP problem using PSO and compare the results with
  - a. Optimal
  - b. Approximation
  - c. Binary-Coded GA
  - d. Real-Coded GA

Also, plot a graph representing the convergence over 100 iterations for GAP12 with

- a. Binary-Coded GA
- b. Real-Coded GA