

## **SMART CITY ANALYSIS AND PREDICTIONS USING SPATIAL DATA AND EVOLUTIONARY COMPUTING TECHNIQUES**

**THOMAS JOSEPH**

Assistant Professor, Department of Computer Science and Engineering,  
St. Joseph's College of Engineering and Technology, Palai, Kottayam, Kerala, India

### **ABSTRACT**

Practical problems with non-convex problems cannot be solved in a reasonable time. There is neither an easy way to classify a non-convex problems nor a shorter way to summarize the vast range of possibilities. Setting up an industry is always a Multi Objective Problem and a non-convex optimisation problem. A designer sets a pessimistic target value so the solution will not be a Pareto optimal solution. Finding a parallel development among the pareto frontier, there by achieving a tradeoff among the solutions using spatial data and predicting its sustainability, is a difficult task. Soft computing is used for solving this practical problem in a reasonable time. The prediction approaches used for parallel development are ant colony optimization and simulated annealing. The approaches give optimized solutions to set up the smart city [1] by using spatial data with low cost function.

**KEYWORDS:** Smartcity, Ant Based Optimisation, Prediciton Method, Simmulated Annealing, Spatial Data