

# **Abstract**

**El-Badr Mohamed Osman**

## **A DYNAMIC AUTOMATED SYSTEM FOR SITE LAYOUT PLANNING IN EGYPT**

Allocating an optimal space for resources and facilities in the construction site before the project starts is a problem known as site layout planning, solving this problem is a challenging task. A construction site with a well-planned layout could lead to minimizing the transportation time and cost for labour and materials, increasing in the productivity as well as work quality, improvement in the safety, reducing the harmful effects on the surrounding environmental. Construction sites in Egypt often neglect overlook the site layout planning task and do not consider it as a basic task that must be performed which lead to inefficient layouts. Although a lot of automated site layout systems had been developed, these systems even have some shortcomings, limits hard to apply in real construction sites in Egypt. The aim of this paper is to introduce the components for a dynamic automated system which is capable to perform the task of site layout based on Genetic Algorithms (GAs) as optimization engine and Computer Aided Drafting (CAD) for graphical representation to overcome the limitations of other developed automated systems.