

**Abstract :**

This study was conducted to predict the geographic distribution of plant species, the most important environmental factors and assess the extent of tolerance species of in Jiroft plain in Kerman province. According to objective, data on vegetation cover and habitat factors such as topography, climate, geology and soil were collected. Vegetation sampling was done in systematically randomized method using plots along 4 transects of 200-1000 m. plots size was according the species type around  $1-4m^2$  , and the number of plots according to the vegetation changes based on the statistical method was 60 plots. To measure soil characteristics, soil samples were taken at the beginning and end of each transect at depth of 0-30 cm. Map of environmental variables was prepared using GIS and geostatistics-ethods. Then, The map of plant type prediction was prepared using maximum entropy model was developed. Accuracy of the model was evaluated using the AUC statistic. Totally, results showed that EC research, elevation, pH, slope, nitrogen, organic carbon, texture, potassium, phosphorus and lime were the most important factors to distinguish plant types in the study .

**Keywords:** Maximum Entropy, geostatistics, area under the curve, Jiroft plains.



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**The Thesis Submitted for the Degree of Master of Science  
In the field of Combating desertification**

# **Habitat Suitability Modeling of Plant Species using the Maximum Entropy Method (MaxEnt) in Jiroft Plain**

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Jun 2016