

## Shape Analysis of Residential Subdivision Parcels of District 1 of Tabriz

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### Abstract

Land is of significant importance to human life, whose limitations and the conditions of modern urban life have increased its importance. The main purpose of the present study is the shape analysis of the residential subdivision parcels in the planned texture, worn out texture and informal settlement in terms of length to width ratio using two compactness indexes of Areal form factor and the Hussar Index. The desirability of land subdivision means the proper and optimal use of it in the first place. The research is applied and is descriptive-analytical in terms of method. Uni-variate Wilcoxon, Kruskal-Wallis and Spearman correlation tests were used for analysis. The results of Wilcoxon test for both indices showed that all three textures were in good condition. In addition, the results based on the spatial form factor and Hussar index showed that the planned texture with informal resettlement area and informal settlement area with worn texture was statistically different in terms of desirability of the length to width ratio of parcels. Also, there was no statistically significant difference between the worn-out texture and the planned texture in terms of the length to width ratio in terms of the desirability of residential subdivision parcels. It was then found that the worn-out texture with the average rating of 17458/79 based on the spatial form factor and 17329/15 based on the Hussar index is in the best position compared to the other two textures in terms of optimal ratio of length to width of the residential subdivision parcels. Also the results of both indices have a full correlation and consistency. Therefore, the result is that the spatial form factor and the Hussar index have the same function in the Tabriz region.

**Keywords:** *Shape analysis, Compactness index, Spatial form factor, Hussar index, Land subdivision.*

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### The Influence of the Number 11 Interpretation on the Design of Shah Nematollah Vali Dome Based on Abjad Letters

Hadi Shahamat<sup>1</sup>, Abdul Karim Suleimani<sup>2</sup>

#### Abstract

The numbers and their interpretation have been mysteriously influential in Iran's past architecture and played a key role in the formation of many monuments. The culture, religious, philosophical, and artistic beliefs of every nation have their own secrets and mysteries that, if manifested, can lead to the creation of artistic works called architecture. By analyzing the interpretation of the relationship between letters, numbers and their role in the beliefs of a particular class of Seluk, one can see the great impact of the wisdom -based mystical view on the physical formation and creation of very beautiful and symbolic forms, as it is clearly manifested in the design and execution of the Nematollah Vali's tomb in Mahan of Kerman. The research method of this article is descriptive-analytical and data collection is done through documentary and library method. The results of the evaluation of the formation of Shah Nematollah Vali dome showed that social, political pressures, as well as attention to the secrecy and confidentiality among the mystical groups and Seluk architects, led to the symbolic use of eleven in the dome architecture of this building. This issue reveals the relationship between numbers, letters, and their impact on the creation of human-centered architecture based on wisdom and semantics.

**Keywords:** *Wisdom, Eleven, Dome, Dome of Shah Nematollah Wali.*

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## **Spatial Evaluation and Analysis of Agricultural Bank Branches in Ilam Central Area**

**Asadolah devsalar<sup>1</sup>, Sadegh seidbeigi<sup>2</sup>, Elham rezaei<sup>3</sup>**

### **Abstract**

One of the most important service centers for the citizens of a city are the banks, which is the driving force of bank branches throughout the city to attract customers and satisfy them. It is necessary that their location be selected so that it provides public access to the city's residents and maximizes profitability for the bank. The main purpose of the present study is to evaluate and analyze the location of the branches of the Agricultural Bank of Ilam's central area . The study method is descriptive-analytical design. There are three branches of the Agricultural Bank in this area, where Ayatollah Heidari Street branch is in the best position for spatial analysis. Ilam branch and Ferdowsi Street Branch are also described as suitable. But Ferdowsi Street branch is not of a good quality in terms of legibility and aesthetics. Therefore, the branches of the Agricultural Bank of the Ilam city are well located and satisfy the customers.

**Key words:** *Location, Agricultural Bank, Ilam City.*

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**Measuring the Relationship between Physical Quality of Housing and Occupational Security in Urban Informal Settlements  
(Case Study: Abbasabad Neighborhood, Sanandaj)**

**Mohammad Taghi Razavian<sup>1</sup>, Boshra Naseri<sup>2</sup>, Hadi Gholami Noorabad<sup>3</sup>, Morteza Baghbanouni<sup>4</sup>**

**Abstract**

Informal settlements have been one of the outcomes and features of contemporary urbanization in developing countries, including Iran. Of all the problems these settlements have, occupancy security is one of the most important issues they encounter. The right to housing is a fundamental element in improving the living conditions of residents in these settlements, and the lack of which leads to unwillingness to participate, unwillingness to invest in housing improvements and psychological trauma to residents. The purpose of this study was to investigate the relationship between occupation security and physical quality of housing in Abbasabad neighborhood of Sanandaj. The present study is an applied and descriptive-analytical research method that was conducted using library and survey information (questionnaire). The statistical population of the study consists of all household heads of Abbas Abad neighborhood of Sanandaj. Data were analyzed using factor analysis, multivariate regression, Pearson correlation test, mean test, and path analysis in SPSS software. The results showed that participatory occupation security factor with numerical value of "0.846" was more effective than conventional occupation security and experience-based factors on physical quality of housing in Abbasabad. Also, the results of path analysis showed that there is a positive and direct relationship between physical quality of housing and occupancy security indices, so as by increasing the occupancy security indices, the physical quality of housing in this area is increased.

**Keywords:** *Housing quality, Occupational security, Informal settlement, Sanandaj City, Abbas Abad.*

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## Routing aging of the Iranian population in the selected age group using time series for Horizon 2056

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### Abstract

The demographic changes of a country serve as the basis for large-scale policymaking and decision-making. Hence, population is the basis of investment in the development of roads and housing, economic enterprises, educational and health facilities, amenities and energy supply, and so on. Thus, a misunderstanding of demographic changes will lead to disparities in planning and ultimately loss of time and capital. The elderly population is a population that is more than ten percent of the total population aged 65 years. Also, the definition of an elderly person in different countries varies according to life expectancy between 50 and 75 years. In this study, age 70 is considered as the age of aging. Accordingly, the purpose of this study is to route the aging population of the selected age group over the next 37 years (at 2056 horizon). In this regard, the Autoregressive integrated moving average (ARIMA) model is used to apply relationships and predictions. The data used are the censuses of 1986 to 2016. The results show that the population change is expected to increase by 70 years and above, which will reach 743.16% in 2056. Also, according to the results predicted by the ARIMA model, it is expected that by the 2056, population aged 70 years and over is "26644317" with is equal to 22% of the total population in that year.

**Keywords:** *Population forecasting, Aging, Arima Model, Horizon 2056.*

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## Evaluation and Analysis of Horizontal Extension of Ahwaz Metropolis from 1973 to 2013

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### Abstract

The present study seeks to use the capability of remote sensing software and GIS to detect changes in land cover and land use, as well as changes in the dynamic growth of Ahwaz's territory and its ecological condition based on information obtained from satellite data. This research is an applied design. The data collection method includes library, field and aerial photography and remote sensing studies. The data were collected from detailed and master urban plans, land preparation, population and housing census results, statistical yearbooks and other valid sources. Remote sensing data that is required in digital form is provided through the Remote Sensing Center. The software used is Geomatica P.C.I, Arc GIS, Arc view, Auto cad, Excell. In this study, geomorphology map, landforms and phenomena have been identified and interpreted. The results showed that Ahwaz city with an area of 138.12 km<sup>2</sup> in 1973 had 16% change. From 1973 to 1990, the area of Ahvaz has reached 188.3, and from 1990 to 2005, Ahvaz has had the largest change as 260.13 km<sup>2</sup> compared to other years. Ahwaz did not change much between 2005 and 2013. In general, it can be said that the growth of Ahvaz has been increased several times between 1994 and 2013. Births and migration from cities, war-torn villages and many job seekers from other cities in the province and adjacent provinces to Ahvaz metropolis were among the factors affecting the expansion of Ahwaz.

**Keywords:** *Remote Ssensing, Geographic information System, Horizontal city expansion, Ahwaz Metropolis.*

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