Considerable Reduction in Sewage Pollutants of Urmia City from Modernist view of Biolac Process.
The Biolac filtration system is based on active multi-stage sludge refineries. This system is a kind of modern biological treatment plant. The advantages of the Biolac system are that it can treat high-strength wastewater with a treatment efficiency of approximately 90%. The effluent can be used for irrigation and can meet the secondary treatment standards of the US Environmental Protection Agency (EPA). If the results of the study are compared to the EPA standards, it will be evident that the effluent of such system can be discharged to surface waters.

**Keywords:** Biolac, EPA Standards, Pollutant, Urmia Wastewater

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The Effect of Uncertainties on Calculation of Initiation of Corrosion of Reinforcement for Assessment of Reliability of Concrete Structures

ABSTRACT:
An important problem with the analysis of corrosion of reinforcements used in concrete structures is the calculation of corrosion initiation time. Uncertainty in the calculation of the initiation time of corrosion affects the accuracy of the analysis. In this study, a probabilistic model is used to calculate the corrosion initiation time. It is found that the resulting time will be associated with at least 40% of uncertainty.

**Keywords:** Reinforcement Corrosion, Corrosion Initiation Time, Probabilistic Model, Random Sampling

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Considering Creep Parameters of Rock Mass to Evaluate the Necessity Thrust for Excavation in Squeezing Ground

ABSTRACT:
There are a lot of complex problems involving a number of conflicting factors when planning a TBM drive in a squeezing ground. In this study, a new approach is proposed to consider the creep parameters of rock mass to evaluate the necessity of thrust for excavation. The results show that the necessity of thrust is decreased by increasing the advance rate increment as a mitigation measure to thrust reduction.

**Keywords:** Beheshtabad tunnel, Creep, TBM, Thrust, 3D numerical simulation

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Reflecting to Explanation of Islamic City’s Authentic Concept

ABSTRACT:
Today, there are many efforts to develop Islamic City’s criteria and requisites that have been endeavored to generalize the traditional Islamic City. The criteria and requisites should be derived from the Islamic teachings, and no complexity with the standards and Islamic validated and documented principles derived from the Quran and traditions.

**Keywords:** Islamic City, Islamic Teachings, Theoretical Perspectives.
Seismic Behavior Assessment of The Historical Tomb of Sheikh Shahab-edin Ahary

ABSTRACT:
This study aims to investigate failure mechanism of historical tomb of Shahab-edin Ahary elements and determines areas for reinforcement in order to prevent the collapse of historical tomb. Various results have been studied after utilizing finite element model using Ansys software and various analyses.

Keywords: Seismic Behavior, Historical Buildings, Dynamic Analysis, Sheikh Shahab-edin Ahary, Macro Modeling.


ABSTRACT:
Current study has analyzed the trend of population establishment in residential centers of Tehran metropolitan area from the viewpoint of regional management and urban planning. The results show that Tehran metropolitan area has not experienced significant changes in regional management and urban planning. The situation of urban settlements network of Tehran metropolitan area and emergence of environmental problems in the region.

Keywords: Management and Planning System, Residential Centers, New Towns, Spatial Organization of Population, Metropolitan Area, Tehran.

Three Dimensional Simulation of Flow for Semi Cylindrical Weirs Using Fluent Software

ABSTRACT:
The weirs are one of the important and prevalent items to measure discharge in open channels and they are used in most of the water systems. The volume flow rate is a function of weir geometry and flow conditions. In this paper, the flow pattern for three different radiuses of semi cylindrical weirs has been studied. It is worth noting simulating the flow has done for three different radiuses of semi cylindrical weirs.

Keywords: Flow pattern, Semi Cylindrical Weir, 3D simulation, K-ε Turbulence Model, Volume of Fluid Model, Fluent software


ABSTRACT:
Today there are many methods of financing in the world and every country selects its convenient financing methods for their projects. In this paper, AHP model has been used to prioritize financing methods for the dam and power plant projects in Iranian Water and Power Resources Development Company. "Bank financing", "Subsidies and taxes", "Private capital", "Revenue Bonds", "Long-term loans", "Private equity", "Leasing", "Discount and usance", and "BOT contracts" are the next factors in the ranking of project financing methods, respectively.

Keywords: Finance, Financial resources, Financing of project, Project Financing Techniques, Analytical Hierarchy Process (AHP)
Estimating of the Relationship between Chemical Water Quality Parameters and Flow Rate of Karun River in Wet and Dry Seasons

Original Article, D62
Karami O, Shokouhifar M, Boroomandnasab S.

ABSTRACT:
Hydro-Chemical Studies using regression tests would be efficient operational to save the time and cost, if the regression models have the appropriate for estimating the values. The regression patterns of HCO3 and flow rate showed that adjusted R square were appropriate but none of the regression models did not have satisfactory for pH and EC.

Keywords:
Adjusted R Square, Hydrochemical, Karun River, Residual, Regression pattern, t-Test

Assessment and Feasibility of Tourism Development in the Kanibarazan Wetland of Mahabad, Iran

Original Article, D63
Hossein Pour M, Movahhed A., Rashidi Ebrahim Hesari A, Shamaie A.

ABSTRACT:
Tourism has been approved as a powerful tool in development model, and its activities are known as invisible export and generate income, create jobs. The tourists of the region, like the others of around, can increase the income and make money, but also steps will be taken in order to create a tourism center within the region.

Keywords:
Kani Barazan Wetland, Tourism Development, Environment, SWOT, Mahabad

The Evaluation of the Eco-tourism and Geo-tourism in Maragheh, Iran: A SWOT Analysis

Original Article, D64
Tavallaei S, Solaymani M, Rashidi Ebrahim Hesari A, Hadjalizadeh J.

ABSTRACT:
The major objective of this study is to investigate the geo-tourism and ecotourism capabilities and limitations of the region. The evaluation of the development of SWOT, and the major objectives of the region must be developed in such a way to make the best use of the local possible opportunities.

Key words: Ecotourism, Geo Tourism, Maragheh, SWOT

A Seismic Microzonation Study with Geotechnical Aspects on the New Construction Sites in Ardabil, Iran

Original Article
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ABSTRACT:
Due to development of constructions in Ardabil city in northwest of Iran and placing it on the alluvium, seismic and site response are very important in its planning. The dense granular alluviums and some with high stiffness experience the lowest PGA of about less than 0.3g.

Key words:
Hazard, Design Earthquake, Site Response, Microzonation

ABSTRACT:
The leaking water flow from the soil dam body lead to transport of its materials that this issue causes internal erosion. For this reason, a horizontal drainage is presented in the soil dam body. In this regard, it is necessary to investigate the effect of length and thickness parameters of horizontal drainage for the discharge of the drainage water is reduced.

Key words:
Horizontal Drainage, Non-homogeneous Dam, Leakage Flow, Finite Element

ABSTRACT:
Regarding the development of the cities and increasing human's interference in natural sources, evaluation of appearance and design is of key importance. In this regard, the present study is to evaluate the appearance and urban beauty quality in the city space from the concept of time dimension. The urban landscape as a medium for urban function is developed and using the perspectives of place and making relationship with beauty quality in city space.

Key words:
Aesthetics, Urban Landscape, Time Dimension, Movement, Pictorial Sequence, Evaluation Criteria

ABSTRACT:
The urban worn textures are the urban development potentials that turned into a threat to the whole city by its high scale. The main contribution of this study is to provide principles of urban design intervention in deteriorated textures. The study was done by qualitative and quantitative methods. Finally, the proposed designs for the urban will be presented.

Key words:
Deteriorated Texture, Design Principles, Public Spaces, Farzan Square

ABSTRACT:
Architecture building sustainability regarding smart materials

Volume 4 : Issue 4, July 2014
ABSTRACT:
In contrast with the arrival of machine and abundant industrial production that leads to reduction of energy resources and decrease of traditional materials, there will be some solutions in order to achieve the goals of constant architecture by using these materials.

Keywords:
Sustainable Architecture, Building Features, Smart materials.

ABSTRACT:
Safety of urban spaces has an important role in improving society welfare in all citizens, but among the urban spaces and applicability of public transportation the amount of perceived safety feeling from space will increase as well.

Keywords:
Safety, Urban Spaces, Women

ABSTRACT:
In this paper, a high resolution finite volume method (FVM) is developed in order to discretization of multidimensional Partial Differential Equations (PDEs). This method is capable of dealing with shallow water (SW) and shock problems, especially those having discontinuities.

Keywords:
Dam break, finite volume method, high resolution Local Lax–Friedrich scheme, Voronoi Mesh.

ABSTRACT:
Snow is one kind of precipitation that because of its delay in turning into runoff water is much more different from other climate change. This study was designed to evaluate the performance of Fuzzy-Neural Network at predicting the average monthly discharge of catchment basin areas having snow regimes.

Keywords: Average monthly discharge, Neural fuzzy network, Snow melting modeling, Jajrud catchment basin.
Examine the Effect Height on Changing Intermediate Flexural Frames Performance Level after Adding Outward-Oriented Vestibule Braces

Original Article, D73
Khaksefidi S., Ghalehnovi M., Rahdar H. A., Rezaee M.

ABSTRACT:
Considering the inability to design techniques based on force the predicted nonlinear behavior of members, arising from large-scale structures due to non-linearity of materials and non-linearity of behavior of members under flexural loading. This paper addresses the ability of outward-oriented vestibule brace (O-OVB) to control the nonlinear behavior of intermediate flexural frames. The performance level of a given structure is determined by performing nonlinear static analysis and comparing the maximum inter-story drifts with an acceptance criterion. The consideration of the behavior of the members also showed that the behavior of the members is not completely linear under high levels of load. To address this non-linearity, the control methodology (CSM) in ATC-40 was used. SAP2000 software was used for modeling and analysis.

Keywords: Flexural Frame, Nonlinear Behavior, Nonlinear Static, Outward-Oriented Brace