Heave Behavior of Granular Pile Anchor-Foundation (GPA-Foundation) System in Expansive Soil

ABSTRACT: Granular Pile Anchor (GPA) is one of the innovative foundation techniques, dev
Probabilistic Response Evaluation of Plan-Irregular Buildings Subjected to Bi-directional Seismic Loading

Original Article, D34
Manie S, Moghadam AS, Ghafory-Ashtiany M.

ABSTRACT: The present paper aims at evaluating the response of three-dimensional buildings with in-plan unidirectional mass and stiffness irregularities subjected to bi-directional seismic loads. A new method is proposed which utilizes the response of torsional buildings as an alternative to conventional fragility curves for collapse behavior assessment of three-dimensional structures.

Keywords: Torsional Buildings, Probabilistic, Collapse, Plan Irregularity, Low-Rise Buildings
Investigation and Measurement of Heavy Metals Amount (As, Pb, Cd, Hg) within Rivers Estuaries Located in the West Side of Urmia Lake

Original Article, D35
Esmat Saatloo SJ, Esmat Saatlo M, Siosemarde M, Merufinia E.

ABSTRACT: The ecosystem of Urmia Lake is almost close ended and the water of rains and springs is the main source of water in this lake. Heavy metals amount in the lake water and its effect on the lake ecosystem is a serious issue, especially when the water level of Urmia Lake is decreased, which lead us to consider polluters and their effects.

Keywords: Urmia Lake, Ecosystem, Sewage, Heavy Metals, Artemia, Environment.
Structural Identification of Bridges (Case Study: Mazandaran, Iran)

ORIGINAL ARTICLE, D36
Mehdi Nezhad M. R., Amir Kolaee E., Nikbakht H., Gholi Pour Pate Roudi H.

ABSTRACT: Throughout more thousand years of human civilization, bridge and bridge architecture have been engaged in the development and progress of the world. A bridge is a combination of structures which are influenced by river bed, ground strength and amount of water across it.

Keywords: Bridge Architecture, Design Method, Material Type, Constructing Technique, Natural Factors.
Estimations of Sediments in Mahabad Dam Using Artificial Neural Networks and Comparing the Results with Hydrometer Approach

Original Article, D37
Khezri H, Merufinia E.

ABSTRACT:
A deposition phenomenon is considered as one of the hydrometer processes which have ability to influence the most of the hydrometric processes. This phenomenon can be predicted by means of the multi-layer networks in the present work. It is pointed out that the multi-layer networks in prognosticating a measure of the sediments is superior to hydrometer method.

Keywords: Artificial Neural Network, Hydrometer Method, Nero solution, Sediments.

Usage Alteration of the Nazlu-Chay River of Iran due to Excessive Exploit of Its Material Includes Sand and Gravel in the Lake Urmia Catchment
**ABSTRACT:** From Ancient times rivers were so essential for human beings and they had a major role in the formation of societies and modern life. The study of river management is important because some direct influence of exploits includes: river hydraulic alteration, sediment place and river scope morphology. The research of the interaction between river ecology and sand and gravel exploit, along with environmental consequences, is a key to understanding the condition of the river. In this study, the interaction of the river managed by sand and gravel and river scope morphology in a specific area was investigated.

**Keywords:** Environmental on sequences, River ecology, Sand and Gravel exploit

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**ABSTRACT:** The development of transportation in the large cities needs some new tunnels to be designed and constructed nearby existing ones. These new tunnels interact with the existing ones and alter the internal forces. Numerical modeling and field tests can be used to study the interaction of existing and new tunnels. 3D numerical modeling is a powerful tool that can simulate the effects of existing tunnels on the new one. The internal forces of the existing tunnel are altered after the interaction of the new tunnel. This study aims to simulate the interaction of the existing and new tunnels using 3D numerical modeling and field tests.

**Keywords:** EPB Shield, 3D Numerical Modeling, Tunnel Interaction

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**ABSTRACT:** Landfill is one of the oldest and most widely used methods of waste management. Due to the special geographical and construction features of the area of Babol, the best landfill site is determined using the fuzzy logic method. The criteria of the landfill site are: distance from inhabited areas, distance from water sources, distance from road, distance from industrial areas, and surrounding condition. The option that has the best condition according to weight is chosen as the final location of the landfill.

**Keywords:** Solid waste management, Site, Babol, Boolean logic Method, Kardijkola.

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**ABSTRACT:** Urbanization and urban development build large amounts of impervious areas, stopping the infiltrating of rainfall into the ground. This creates more surface runoff, resulting in flooding and erosion. Stormwater management is important in urban areas to prevent these problems. The MUSIC (Multi-Objective Simulated Annealing) algorithm is used in this study to optimize the stormwater treatment measures in the Gold Coast city, Australia. The optimization of the construction cost and the reduction of the runoff volume are considered as the objective functions. Genetic algorithm is used to optimize the MUSIC algorithm. The optimization of the model is performed using the MUSIC-GA algorithm. The results indicate a proper convergence of the MUSIC-GA results toward the global optimal solution.

**Keywords:** Urban stormwater, Water sensitive urban design, MUSIC, Constructed wetland, Genetic algorithm

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**Evaluation of Stability of Spillway Gable Roof of Nazlu Dam via Slide Software**
Comparative Hydraulic Simulation of Water Hammer in Transition Pipe Line Systems with Different Diameter and Types

Original Article, D43
Sharif F, Siosemarde M, Merufinia E, Esmat Saatlo M.
J. Civil Eng. Urban.

ABSTRACT:
The transient pressure caused by water hammer events is sufficient to fracture pipes and some equipment, and for this... pressure fluctuation it is advisable to choose pipes with most similar elastic modulus and one greater diameter size.

Keywords:
Elastic modulus, Pipe line, Transient pressure, Water hammer

Numerical Simulations of Distribution and Sediment Transmission in Pre Settled Pools Using Finite Volume Method and Comparison with Experimental Results

Original Article, D44
Borna MR, Janfeshan Araqi H, Merufinia E, Asnaashari A.
J. Civil Eng. Urban.

ABSTRACT:
Pre settled pools were most important elements in water purification process. Because of enormous cost of making these... laboratory results as well as capacity of this model to predict distribution of sediment profiles in pre settled pools.

Keywords:
Pre Settled Pools, Profile of Flow Velocity, Distribution of Sediment Concentration

Estimation of Daily Discharge of Baranduz River via Chaos Theory

Original Article, D45
Pour Mohammad Aghdam A, Asheghi R, Merufinia E.
J. Civil Eng. Urban.

ABSTRACT:
The chaotic behavior of monthly precipitation time series is investigated using the phase-space reconstruction technique... value of correlation in daily scale is an indication of the existence of chaos in the water flow of Baranduz Chay River.

Keywords:
Baranduz Chay River, Chaos Theory, Correlation Dimension, Delay Time

Criteria of Passive Defense in Subway Stations

Original Article, D46
(Information on the article not provided in the text)

J. Civil Eng. Urban.

ABSTRACT:
(Information on the abstract not provided in the text)

Keywords:
(Information on the keywords not provided in the text)
ABSTRACT:
Defense is an integrated concept, which includes both active and passive defenses. The effects of the war include heavy ... of wars) the citizens' security will increase, and the defensive power and national security will enhance subsequently.

Keywords: The Subway, Designing, Passive Defense, Threat, Architecture.

ABSTRACT:
Studying a society's Population changes is important for any planning. Since all eco-social planning are designed due to ... that employers' ratio has and will have declined, which is why the percentage of unemployed people have a high trend.

Keywords: Population Change; Planning; Statistics; Population Structure; Ardabil City.

ABSTRACT:
Effluent generally includes nutrient elements like nitrogen and phosphorus. Its discharge to water resources leads to an increase in the growth of different types of algae, hence it is necessary to decrease the amount of phosphorus and nitrogen as much as possible before discharging of... respectively and average reduction of Nitrate and phosphate were 81.43, 92.66 and 83.66, 74.26 percent respectively.

Keywords: Nitrate, Phosphate, Phragmites australis, Typha latifolia, channel, Wastewater.

ABSTRACT:
At present, water waste has become a global concern. On the other hand, the amount of sweet water on the earth is fixed... network when several simultaneous leakages have occurred, and the accuracy of the model is verified by the results.

Keywords: Leakage Detection, Barometers Placement, Neural Network, Bat Algorithm.

ABSTRACT:
Assessment of the Laws and Regulations Regarding to Housing Indicators in Iran
Hamzehlou S., Hamzehlou S.

**ABSTRACT:** The unorganized status of housing in all around the world was driving force of emphasizing on "adequate housing right" as well as most important economic and social rights. Housing indicators are divided into four main categories, which are economic, social, geographic, and political ones. In this research, the research methodology includes a comparative analysis of the existing regulations in housing and the extent of their completion in accordance with housing indicators.

**Keywords:** Housing, Physical Indexes, Human Rights, Shelter.

MehdiNezhad M.R., AmirKolaee E., Nikbakht H.

**ABSTRACT:** Nowadays cities benefit from two geographical (natural, social, and economical environments) and artificial (man-made environments) problems. A high rate of depreciable resources and about thirteen million people live in this city. Green roofs are good means for reducing these problems of Tehran.

**Keywords:** Green Roof, Roof Garden, Drain, Artificial Filter, Damp-Proof Coarse.

Sargazi MA

**ABSTRACT:** Tamin Village has a special place of importance in the villages of Zahedan situated in the south-east of Iran. In this region, the research methodology includes a comparative analysis of the existing regulations in housing and the extent of their completion in accordance with housing indicators. In this research, the research methodology includes a comparative analysis of the existing regulations in housing and the extent of their completion in accordance with housing indicators.

**Keywords:** Tamin Village, Dast Kand Architecture, Completion Nature 

Salehi N, Zabihi H, Zarabadi ZS.

**ABSTRACT:** Tall buildings are defined as signs and certain points in urban view, if located and constructed properly, and their indicators in determining its policies and strategies should be prioritized to tall buildings which shapes an optimal urban view.

**Keywords:** High-rise Buildings, Urban Landscapes, Impressive Indicators, ANP.