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**Review Article** **Published Date:-2020-12-04 00:00:00**

## Industrial control systems: The biggest cyber threat

Industrial control systems (ICS) are critical, as in these systems, cyber threats have the potential to affect, disorganize, change their mode of operation, act as an information extraction vehicle, and ultimately turn against itself. Creating risks to the system itself, infrastructure, downtime, leakage of sensitive data, and even loss of human life. Industrial control systems (ICS) are vital to the operation of all the modern automated infrastructure in the western world, such as power plant and power stations. Industrial control systems (ICS) differ from the traditional information systems and infrastructures of organizations and companies, a standard cyber security strategy cannot be implemented but part of it adapting to the real facts and needs of each country, legislation and infrastructure. These systems require continuous operation, reliability and rapid recovery when attacked electronically with automated control, isolation and attack management processes. Incorrect settings and lack of strategic planning can lead to unprotected operation of critical installations, as they do not meet the cyber security requirements. Industrial control systems (ICS) require special protection in their networks, as they should be considered vulnerable in all their areas, they need protection from cyber attacks against ICS, SCADA servers, workstations, PLC automations, etc. Security policies to be implemented should provide protection against cyber threats, and systems recovery without affecting the operation and reliability of operating processes. Security policies such as security assessment, smart reporting, vulnerability and threat simulation, integrity control analysis, apply security policy to shared systems, intrusion detection and prevention, and finally firewall with integrated antivirus and sandbox services should be considered essential entities.

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**Review Article** **Published Date:-2020-06-03 01:00:00**

## Impact of mineralformation on restoration of the soil structure in nakhchivan AR and geographical spreading legitimacy

The silt fractions have a great impact in soil structural formation. If the soil forming rocks don’t disturb, crush and weather, the soil forming processes on them occur weakly, the organic substances cause formation of the loamy stratums without completely turning. This mostly influences the initial soil forming layers. The reproduction minerals in these soils cause initial minerals majority by occurring weakly. If these processes occur quickly then they cause a gradual increase of the reproduction minerals and reduction of the initial minerals.

The heights of the zones where the geographical spreading of such stratums is situated depend on levels.

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**Review Article** **Published Date:-2020-06-03 00:00:00**

## Methods of identification models of soil humidity

For the operational forecasting of the dynamics of moisture reserves, it is reduced to the prediction of precipitation and total evaporation (E). The remaining elements of the balance either do not change over time, are either known or are defined as functions of P and E.

The plant’s need for water E (evapotranspiration) is determined on the basis of the bioclimatic method in the modification of B.V. Danilchenko (2) by the formula:

Eu = ? ? b K M (1)

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**Review Article** **Published Date:-2020-05-29 01:00:00**

Study of the influence of relay elements on the erosion process on the basis of GIS technology

Erosion has become widespread in the local climatic conditions of Azerbaijan. From this point of view, different types of erosion (washing, erosion, deflation, etc.) can often be found in many soil types formed in the territory of the republic. It should be taken into account that as a result of erosion, the top fertile layer of the soil is washed away and as a result, the soil is deprived of the humus layer. In the presented article, the effect of relief elements on the erosion processes occurring in the lands of Gadabay region was studied on the basis of GIS technologies.

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**Review Article** **Published Date:-2020-05-29 00:00:00**

Therapeutic benefits of lemongrass and tea tree

Lemongrass is a culinary herb with a lemony aroma.it is mostly cultivated in Southeast Asia, Sri Lanka, Indonesia and India. It is conventionally used for relieving anxiety, stress and pain. Because of the presence of limonene and citral, lemongrass extracts exhibits antimicrobial, antidandruff and anti-inflammatory effects. However Tea tree extracts are mostly employed in the treatment of dermal, inflammatory and microbial infections.

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**Research Article** **Published Date:-2020-05-27 00:00:00**

Risk evaluation and modeling of soils contaminated with Polycyclic Aromatic Hydrocarbons (PAHs) in parts of Bonny Island, Niger Delta, Nigeria

Environmental impact of a recent oil spill incident in Bonny terminal using soil media was studied using a risk-based modeling approach. The establishment of the presence of contaminants of concern (CoC), evaluation/assessment, modeling spilled volume and ascertaining potential health risk associated with the spill incident was carried out. The Contaminant of Concern (CoC) included Total Petroleum Hydrocarbons (TPH) and Polycyclic Aromatic Hydrocarbons (PAHs). Soils and groundwater were sampled in the vicinity of the spill incident and further away into the surrounding communities. Soils were sampled into the depths (0.1 m, 0.5 m,1.0 m, 1.5 m), and the results of sieve analysis revealed that the area is predominantly silty sand in composition. This study also revealed that TPH concentration at all locations and depths exceeded DPR target value of 50 mg/kg. The TPH model revealed that a total volume of 222,500m3 of the spill area exceeded DPR intervention value of 5000 mg/kg. The results of PAH showed that only BS-1, BS-6, BS-8, BS-9 and BS-10 exceeded DPR target value of 1.0 mg/kg at some depths. All other sample depths and locations were within the target limit. The 3-D grid generated for PAH showed that 563,000m3 of the study area exceeded the DPR target value. The 3-D block models generated for TPH and PAH, along with the cross-sections and extracted time slices all showed that the concentration of the Contaminant of Concern (CoC) generally decreased with depth, and the centre of the spill located at the south-eastern part of the survey area. Based on these models, three spill zones were identified; Zone 1-highly contaminated areas (BS-8, BS-9, BS-10); Zone 2 - moderately contaminated areas (BS-1, BS-2, BS-6, BS-7); and low contaminated areas (BS-3, BS-4, BS-5). The entire soil in the area were contaminated with TPH and 47% of the area contaminated with PAH. This study has shown the effectiveness of the use of a model-based approach in quantifying hydrocarbon contamination volumes in the area. There is therefore the need for continuous monitoring of hydrocarbon spills in the area.

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**Review Article** **Published Date:-2020-05-11 00:00:00**

Studies of the possibility of determining amplifications in kinematic pairs

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The article discusses approaches to solving problems of accurately determining strength in kinematic pairs. It is known that the nature of the bonds imposed by kinematic pairs is determined by the geometric shapes of the elements of the pairs. For what, here, the bonds acted during the entire time the mechanism was moving, so that the elements of the kinematic pairs would continuously touch each other. Where it is recognized that one of the simplest methods for taking into account the inertia of a link is the principal moment method. How the contradiction is sought is here because the normal acceleration has a direction opposite because normal acceleration has a direction opposite to the link (directed toward the center), and the image of tangential acceleration is directed parallel to this acceleration. The following simplification can be made if the main vector of inertia is considered together with the weight of the link.

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**Research Article** **Published Date:-2020-04-17 00:00:00**

[A comparative study of solid waste management in the United States, Europe and Asia]

Managing municipal solid waste correctly is critical to the success of a society. Many regions and countries in the world are behind others in the context of solid waste management. In order to compare three such regions within this context, a meta-analysis was conducted in order to develop a decision matrix. Within this decision matrix, the United States, Europe, and Asia were compared to determine which region is managing municipal solid waste the best. This research design allowed for compiling information from many sources to increase the accuracy of data used in the justifications for the decision matrix. Purposive sampling was used to select and evaluate sources that discuss solid waste management to discern which region's processes are most favorable in many parameters. The decision matrix consists of nine parameters: main management techniques; finances; landfill taxes; jobs created; waste generation; waste composition; waste storage, collection, and transportation; energy recovery; and environmental health. Each was scored on a scale from zero to ten, ten being the best score and zero being the worst. The final score from the decision matrix suggested that Europe had the most favorable municipal solid waste management (MSWM) system, and the United States had a notably close yet lower score. Asia had the lowest score that was hardly comparable to the other two regions.

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**Short Review** **Published Date:-2020-04-15 00:00:00**

[Alps and climate]

Pines have been discovered to die in the Alps. In any place of skiing, you can find dried pine trees from 2x to 20 meters high. In each zone of visibility of the forest mass of such pines, there are from 1 to 90%. I wonder if science deals with this issue

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