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RESEARCH REVIEW FOR POSSIBLE RELATION BETWEEN MOBILE PHONE REDIATION AND BRAIN

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ABSTRACT

The aim of this paper is to introduce a research review for the effect of Mobile phone radiation on human health and the possible relation between Mobile phone radiation and brain tumor. Mobile phones become increasingly prevalent throughout our society. In the year 2016, it was estimated that there were 4 billion cellular phone users worldwide; the number is growing by one million every month in the US. The goal of this paper is to give a brief overview and also discuss the biological effects of the exposure to mobile phones radiation. Many effects have been reported with the use of mobile phones on human organisms due to the exposure to electromagnetic radiation. Concerns about the links between using the mobile phones and biological effects, in particular, the brain tumors have been under research. As the other radio signals transmition devices, cellular phone emits radiofrequency energy, which can heat the brain tissues and cause damage to the brain cells. But even mobile phones operates at power level below the level at which such heating effects occur, long term exposure to low level RF from mobile phones could cause other types of health effects, such as brain cancer, due to energy absorption in the brain tissues. Some human biological experiments, such as Aly et al. 2014, Aly, et al. 2008 indicates, the average time for the human cells to respond to the effect of RF radiation was approximately 2.5 min, Hardell et al.2002, and Repacholi et al.1997 indicated increased risk with exposure to mobile phones radiation. The British Association festival of science was told recently that using a mobile telephone more than doubles the risk of developing brain cancer on the side of the head where the phone is held.

KEYWORDS

Mobile phones, brain tumor, RF radiation, EMF, health effects.

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INDUSTRY 4.0 AS AN OPPORTUNITY TO ACHIEVE ENVIRONMENTAL SUSTAINABILITY: THE DIFFERENCE BETWEEN SMES AND LARGE COMPANIES

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ABSTRACT

The decline of environmental sustainability is undoubtedly one of the biggest problems if not the most severe one that threatens our planet. In the last decade, to overcome this global issue, industries were regulated, events and conferences were organized, objectives have been made, but the high cost of green practices, the fierce competition among firms, and the massive increase rate of production made all these efforts insufficient, in the other hand, the fourth industrial revolution could potentially provide suitable solutions to achieve high environmental sustainability. The present research contributes to the environmental sustainability literature by studying the vision that companies in Europe have on Industry 4.0 and the main objectives that they want to achieve from this transformation. Furthermore, relying on a statistical study, the research identifies the differences between large companies and SMEs in Europe when it comes to the incorporation of environmental sustainability objectives within their Industry 4.0 strategies.

KEYWORDS:

Environmental sustainability – Industry 4.0 – Large companies – SMEs – technological facilities

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ACTIVE CONTROLLER DESIGN FOR GLOBAL CHAOS SYNCHRONIZATION OF HYPERCHAOTIC BAO AND HYPERCHAOTIC XU SYSTEMS

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ABSTRACT

This paper investigates the global chaos synchronization of identical hyperchaotic Bao systems (Bao and Liu, 2008), identical hyperchaotic Xu systems (Xu, Cai and Zheng, 2009) and non-identical hyperchaotic Bao and hyperchaotic Xu systems. Active nonlinear control is the method adopted for the global chaos synchronization of the hyperchaotic systems addressed in this paper and the synchronization results have been established using Lyapunov stability theory. Since the Lyapunov exponents are not required for these calculations, the active nonlinear control method is very effective and convenient to achieve global chaos synchronization of identical and non-identical hyperchaotic Bao and hyperchaotic Xu systems. Numerical simulations have been provided to demonstrate the effectiveness of the synchronization results for the hyperchaotic Cao and hyperchaotic Xu systems.

KEYWORDS

Active Control, Nonlinear Control, Chaos Synchronization, Hyperchaos, Hyperchaotic Bao System, Hyperchaotic Xu System.

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A NEW TECHNIQUE FOR PROTECTING SENSITIVE DATA AND EVALUATING CLUSTERING PERFORMANCE

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ABSTRACT

Data mining researchers and policy makers have need of raw data collected from organizations and business companies for their analysis. Any transmission of data to third parties and the organizations outsourcing their wok should satisfy the privacy requirements in order to avoid the disclosure of sensitive information. In order to maintain privacy in databases, the confidential data should be protected in the form of modifying the sensitive data items. In statistical disclosure control, masking methods are used for modifying the confidential data. Most of the perturbative masking techniques existing in the literature are general purpose ones. In this work, a new perturbative masking technique called as modified data transitive technique (MDTT) is used for protecting the sensitive numerical attribute(s). The performance of the proposed technique (MDTT) is compared with the existing masking techniques additive noise, rounding and micro aggregation. The experimental result shows the MDTT technique has produced better results than existing techniques.

KEYWORDS

Privacy, Micro Aggregation, Rounding, Additive Noise, Modified Data Transitive Technique (MDTT).

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PROPOSED A RATE-BASED SCHEME FOR ATM FLOW CONTROL

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ABSTRACT

ATM is representative of the connection-oriented resource provisioning class of protocols. The ATM network is expected to provide end-to-end QoS guarantees to connections in the form of bounds on delays, errors and/or losses. Performance management in ATM network depend upon different parameters. ABR flow control is one of the important parameter for performance management. In this paper, we shall focus on the ABR flow control. Available Bit Rate (ABR) service is becoming more and more important in Asynchronous Transfer Mode (ATM) networks because it can be used to fill in the bandwidth slack left by the scheduling traffic. Recently, two flow control scheme for ABR traffic were under active discussion. They are credit-based flow control scheme and rate-based flow control scheme. Credit-based flow control scheme can completely avoid cell loss. However, its main drawback is the per-VC large buffer requirement. On the other hand, rate-based flow control, requires less buffer. Unfortunately, the rate based schemes are generally slow in response to congestion. Worst still, these schemes are usually unfair. In this paper, a rate-based flow control scheme called the Max- Min scheme is introduced. The scheme can rapidly achieve the max-min fairness allocation and reduce the peak queue lengths of the bottleneck switches. To solve the problem of different source-to-switch separations for different connections, another rate-based scheme, called the Max-Min Scheme with Delay Adjustment, is proposed. With this, the peak queue lengths at the switches are further reduced.

KEYWORDS

ATM, ABR, QoS.

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ANDROID UNTRUSTED DETECTION WITH PERMISSION BASED SCORING ANALYSIS

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ABSTRACT

Android smart phone is one of the fast growing mobile phones and because of these it the one of the most preferred target of malware developer. Malware apps can penetrate the device and gain privileges in which it can perform malicious activities such reading user contact, misusing of private information such as sending SMS and can harm user by exploiting the users private data which is stored in the device. The study is about implementation of detecting untrusted on android applications, which would be the basis of all future development regarding malware detection. The smartphone users worldwide are not aware of the permissions as the basis of all malicious activities that could possibly operate in an android system and may steal personal and private information. Android operating system is an open system in which users are allowed to install application from any unsafe sites. However permission mechanism of and android system is not enough to guarantee the invulnerability of the application that can harm the user. In this paper, the permission scoring-based analysis that will scrutinized the installed permission and allows user to increase the efficiency of Android permission to inform user about the risk of the installed Android application, in this paper, the framework that would classify the level of sensitivity of the permission access by the application. The framework uses a formula that will calculate the sensitivity level of the permission and determine if the installed application is untrusted or not. Our result show that, in a collection of 26 untrusted application, the framework is able to correct and determine the application's behaviour consistently and efficiently.

KEYWORDS

Permission, permission scoring-based, malware Android phone, Security, Internet, malware.

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GLOBAL INFORMATION TECHNOLOGY INFRASTRUCTURE IN ADDRESSING THE PROBLEM OF ENVIRONMENTAL DEGRADATION IN KENYA

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ABSTRACT

Information Technology (IT) infrastructure and related research communities can help tackle environmental challenges in developing countries through environmentally sustainable models of economic development. The paper sought to examine the status of current and emerging environmentally friendly technologies, equipment and applications in supporting programs that play a role in addressing environment degradation in Kenya. It also sought to underscore the role of IT in environmentally sustainable consumption. The paper examines what constitutes environment degradation and explores the negative effects of IT infrastructure on the environment. The consequences of E-waste on environment are discussed followed by green IT as part of the solution to environment degradation as a result of adoption of IT. The papers also discuss the available IT infrastructure that can be used to combat the challenges of environment degradation. The paper ends with possible IT infrastructure measures that can be used to mitigate environment degradation.

KEYWORDS

IT infrastructure, Environment degradation, Developing nations, Environmentaly friendly technologies, IoT.

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SPACE-EFFICIENT K-MER ALGORITHM FOR GENERALISED SUFFIX TREE

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ABSTRACT

Suffix trees have emerged to be very fast for pattern searching yielding O (m) time, where m is the pattern size. Unfortunately their high memory requirements make it impractical to work with huge amounts of data. We present a memory efficient algorithm of a generalized suffix tree which reduces the space size by a factor of 10 when the size of the pattern is known beforehand. Experiments on the chromosomes and Pizza&Chili corpus show significant advantages of our algorithm over standard linear time suffix tree construction in terms of memory usage for pattern searching.

KEYWORDS

Suffix Trees, Generalized Suffix Trees, k-mer, search algorithm.

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AN EFFICIENT ALGORITHM TO CALCULATE THE CONNECTIVITY OF HYPER-RINGS DISTRIBUTED NETWORKS

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ABSTRACT

The aim of this paper is develop a software module to test the connectivity of various odd-sized HRs and attempted to answer an open question whether the node connectivity of an odd-sized HR is equal to its degree. We attempted to answer this question by explicitly testing the node connectivity's of various oddsized HRs. In this paper, we also study the properties, constructions, and connectivity of hyper-rings. We usually use a graph to represent the architecture of an interconnection network, where nodes represent processors and edges represent communication links between pairs of processors. Although the number of edges in a hyper-ring is roughly twice that of a hypercube with the same number of nodes, the diameter and the connectivity of the hyper-ring are shorter and larger, respectively, than those of the corresponding hypercube. These properties are advantageous to hyper-ring as desirable interconnection networks. This paper discusses the reliability in hyper-ring. One of the major goals in network design is to find the best way to increase the system's reliability. The reliability of a distributed system depends on the reliabilities of its communication links and computer elements.

KEYWORDS

Hyper-ring Network, reliability, Network Connectivity, Network Conductivity.

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EFFECTS OF HUMAN FACTOR ON THE SUCCESS OF INFORMATION TECHNOLOGY OUTSOURCING

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ABSTRACT

Information technology outsourcing is one of the factors affecting the improvement of flexibility and dynamics of enterprises in the competitive environment. Also, the study of the factors affecting its success has been always considered by business owners and the area of research. Professional experiences and research results consider that the success of IT (Information technology) outsourcing projects relates to the effective knowledge transfer and human factors. The human factors are influenced by the cultural and environmental context of the inside and outside of the organization. Hence, it is necessary to study the effectiveness of these variables in different cultural environments. This study investigates the effect of human factors including the customer motivation and vendor willingness on the success of IT outsourcing projects. For this purpose, the research hypotheses were developed and analyzed by the structural equation method. The result of a field study among 94 companies and organizations show the difference of the findings of this study with earlier findings in other countries. Based on the findings, the client motivation doesn't affect the knowledge transfer but the vendor willingness affects the customer motivation to knowledge transfer. This result can help the business owners to take appropriate approaches for achieving success in IT outsourcing projects.

KEYWORDS

Outsourcing, Information technology, knowledge transfer, IT outsourcing success, human factors.

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