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Paper Title: Insilico Search for Potential Vaccine Candidates in Helicobacter Pylori Genome

Abstract: Availability of genome sequences of pathogens has provided a tremendous amount of information that can be useful in drug target and vaccine target identification. The proteins/ peptides vaccines that could elicit the mucosal immune response are of great interest as potential vaccines. Recent new developments in the field of bioinformatics, genomics and proteomics have triggered the development of the insilico approach of vaccine design. This study follows the approach of 'reverse vaccinology' which employs the whole genome sequencing and advances in bioinformatics to identify vaccine candidates. The completely sequences genome of Helicobacter pylori 26695 (NC_000915) comprising of 1576 electronically annotated ORFs were analyzed in silico using a multi step computational screen to identify potential vaccine candidates. The selection parameters used were cellular localization, sequence similarity to known virulence factors and additional filtering criteria such as size. These screening criteria resulted in the selection of 316 ORFs with known and hypothetical proteins as potential vaccine candidates.

Keywords: in silico, reverse vaccinology, vaccine candidates, virulence factors

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Paper Title: Mirror Adaptive Random Testing by Static Partitioning

Abstract: software's are being used extensively and having a huge impact on humans life. Random testing as one of the simplest testing methods is being used to test software systems. Based on the rational that distributing test cases more evenly will result in having batter chance to reveal non-point pattern failure regions, various Adaptive Random Testing (ART) methods have been proposed. In this paper we propose mirror adaptive random testing by static partitioning which while having same computational overhead cost will have better performance compared with that of mirror adaptive random testing.

Keywords: random testing, adaptive random testing, mirror, static partitioning.

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Kaustubh Dilip Patil, Raheel Lateef Baig, Prathamesh Phule, Sudharshan Sawant, Ankita Kailas **Authors:** Patil

Paper Title: Free Energy Generator System

Abstract: Claims of "Free Energy" generation using Perpetual Motion Machines (PMM) are usually discounted by the scientific community since PMMs are considered impossible, as a direct corollary of the Law of Conservation of Energy. However for the scientifically inquisitive mind, the urge to distill reasons which make some systems appear as PMMs, remains a factor. More than 90% world's power is being generated using electromagnets based on the faraday's law of electro-magnetic induction. Many new technologies were discovered with time which led a drastic change in the perception of electric energy. But at the same time there is misconception of FREE ENERGY. Energy becomes free only at a point after which we don't have to pay for power generation after commissioning the unit. By

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using the magnetic force of magnets continuous motion (Energy) is generated. We used Neodymium magnets are placed on the fins of the fan which has a capacity of 1-1.4 T[1]. Disc shaped magnets are placed in such a way that all the north poles or south poles are facing one direction. This magnet also produces a magnetic field, so both the magnetic fields repel each other (like poles repel), which causes the fins to move. The free Energy Generator was fitted onto the 2 wheelers in-front. The power extracted was used to charge a mobile battery. Few positive results are motivating us to create a better model to store the energy and use for different necessary applications by using this free energy. In this research paper, the usage of free energy was noticed by using a magnet and few satisfactory results are motivating us to review little research ground work of magnets to create a perfect strong prototype for better applications.

Keywords: Electromagnetic Induction, free energy, neodymium magnets, MOC

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Authors: Liudmila Aleksandrova, Yanko Aleksandrov, Magdalena Mihaylova Paper Title: Elevator Capsules-Types of New Generation Panoramic Elevators

Abstract: Annotation Main elements of the elevator capsules concept: integrated internal multi-level park, internal transparent elevator capsuleand internal high-speed elevators, situated outside the capsule.

Keywords: types, new generation, panoramic elevators.

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Authors: K.A. Lathief Paper Title: Polytronics Technology for Small Scale Microelectronics Industry

Abstract: For many years plastics were well known merely as INSULATORS and were used predominantly for shielding copper wires. Now the emerging new technology POLYTRONICS, changes our viewpoint in visualizing the conducting polymers as a material of MICROELECTRONICS. Microelectronics technology in conjunction with silicon is flexible enough to easy rolling up of circuits that consume less power and above all they can be manufactured at a fraction of cost involved in making semiconductor chips. This technology has number of upcoming areas of interest where lot of research is going on to manufacture microelectronic components on plastic substrates which would allow manufacturing of gadgets through just printing process.

Keywords: Insulators, Polytronics, Microelectronics

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Authors: Liudmila Aleksandrova, Yanko Aleksandrov, Magdalena Mihaylova, Ivan Kirchev, Ivan Aleksandrov

Paper Title: Conceptual Innovative Design of Buildings - Toronto - Sky Velodrome 2015

Abstract: The conceptual design of buildings requires the unity of compositional, functional, constructive, technological, aesthetical and other characteristics. In this paper is reviewed a solution of the authors which includes the above-mentioned characteristics in order to achieve a high degree of competitiveness in an international high-rise building design competition and namely Superskyscrapers Sky Velodrome Toronto 2015.

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Keywords: conceptual design, high-rise building, innovation.

References:

L. Aleksandrova, Y. Aleksandrov, M. Mihaylova, I. Kirchev, I. Aleksandrov, SKY VELODROME - TORONTO. Project № 1000001495. Finalist. Cagdas Egemen Ozturk, Tamer Dag **Authors:** Paper Title: The Design and Implementation of a Mobile Prescription System **Abstract:** In this paper, a mobile prescription reminder and scheduling system application is designed and implemented. By using the application, users are able to create and manage prescriptions and are reminded to take the medication based on the prescription data. Besides, users are able to reach the prospectuses of the drugs. Since the medicine compliance is very important to have an effective treatment, the main goal of this application is to help people to take their medicines on time and find the prospectus information of the drugs easily by using their mobile phones. 7. **Keywords:** iOS, Medicine Compliance, Mobile Application, Smartphone 45-47 References: B. Kocurek, "Promoting Medication Adherence in Older Adults and the Rest of Us", Diabetes Spectrum, vol. 22, no. 2, pp. 80-84, 2009. J. M. Silva, A. Mouttham, and A. E. Saddik, "UbiMeds: A Mobile Application to Improve Accessibility and Support Medication Adherence", Proceedings of the 1st ACM SIGMM international workshop on Media studies and implementations that help improving access to disabled users - MSIADU '09, 2009. About the iOS Technologies (2014, Sep. 17) [Online]. Available: https://developer.apple.com/library/ios/documentation/Miscellaneous /Conceptual/iPhone OS Tech Overview/Introduction/Introduction.html. Local and Remote Notifications in Depth (2015, Mar. 09) [Online]. Available: https://developer.apple.com/library/mac/documentation/ NetworkingInternet/Conceptual/RemoteNotificationsPG/Chapters/WhatAreRemoteNotif.html. Sezer Uzungenc, Tamer Dag **Authors:** A QoS Efficient Scheduling Algorithm for Wireless Sensor Networks Paper Title: Abstract: In Wireless Sensor Networks, it is needed to schedule different types of packets such as real time and non-real time packets. It is important to reduce sensors' energy consumptions. In this paper, we propose new packet scheduling algorithm and integrate with Wireless Sensor Networks to improve energy consumptions. Our proposed Dynamic Multi Threshold Priority packet scheduling algorithm ensures a decrease in loss ratio for the lower priority level data with acceptable fairness towards higher priority level data. Threshold algorithm is compared with the commonly used scheduling algorithms such as First-Come-First-Serve (FCFS) and fixed priority non-preemptive. Simulation results illustrate that the Dynamic Multi Threshold Priority packet scheduling algorithm can provide a better QoS for low priority packets while keeping the QoS levels for high priority packets at similar levels. Keywords: Dynamic Multi Threshold Priority Packet Scheduling; First-Come-First-Serve (FCFS); Non-Preemptive Priority Scheduling; QoS 8. **References:** 48-50 B. Ian F. Akyildiz, W. Su, Y.Sankarasubramaniam, E. Cayirci, "A Survey on Sensor Networks", Georgia Institute of Technology, IEEE Communications Magazine, August 2002 M Bernard T, and Fouchal H., "A low energy consumption MAC protocol for WSN", IEEE communication conference, ICC 2012 S.Kim, Y. Kim, "An energy efficient priority-based MAC protocol for wireless sensor networks", International Conference ICT Convergence (ICTC),2012. K. Ramamritham, J.A. Stankovic, "Scheduling Algorithms and Operating Systems Support for Real-Time Systems", University of Massachusetts, Amherst, 1994

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Authors: Aleksandar Tsenov

Paper Title: Alternative Management Architectures for Internet of Things

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Abstract: The main domain of interest in this paper is the implementation of solutions for Internet of Things in order to meet the ever-increasing demands on modern network management. There are a lot unsolved problems regarding system management in IoT. It is a normal process at the beginning of the development of suitable management architectures, to start with enhancement of well-known management approaches, models and functions. As a result, the work presents a conceptual framework in order to demonstrate how to incorporate IoT technologies and how to elaborate requirements and possible advantages. This article also provides examples with concrete IoT solutions and their possible application in the framework as a final proof-of-concept.

Keywords: Internet of Things, network management, architectural framework, out-of-band model

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Authors: S. K. Patil, P. M. Pawar

Paper Title: Development and Analysis of Low Cost Sheet Structure using Agricultural Waste

Abstract: The basic moto of this idea is to generate haste from the waste. As pandharpur and many other districts in Maharashtra are rich in cultivation of wheat there is lot of agro waste residue of wheat straw. The farmers here burn this wheat straw making pollution and causing lot of environmental impact. So the idea is to develop fabrication materials and household materials using this wheat straw which is rich in cellulosic properties and eco friendly. So the cellulosic properties when extracted from this wheat straw forms a sticky and non degradable pulp, which helps to mould fabrication materials viz. interior panels etc, household materials viz, disposable food plate etc. These materials formed using Wheat straw pulp are tough durable and sound proof.

Keywords: moto, pandharpur, agro waste residue of wheat straw, environmental impact, fabrication materials, cellulosic properties and eco friendly.

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Paper Title: Experimental Performance of Flexural Behaviour of Self Compacting Ferrocement Flat and V Shaped Folded Roof Panels

Abstract: The research paper present the experimental work carried out to investigate the behavior of different shaped ferrocement roof panels. The total twelve ferrocement self compacting flat and V shaped folded roof panels with different number of wire meshes were casted and tested under two point loading. The number of wire meshes varied from 1 and 2 layers. Effect of these varying number of wire mesh layers on flexural strengths and deflection of Flat and V shaped folded roof panels are studied. And it is proved that the load carrying capacity of V shaped folded roof panel is found more with reduced deflection.

Keywords: flat panel, folded panel, mortar; wire mesh, self-compacting ferrocement.

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Authors: Chrysanthi Argiropoulou, Kosmas-Aristotelis Doucas

Paper Title: Evaluation of Reliability of Hellenic Positioning System (HEPOS) in Forest and Forest Area Abstract: Permanent reference station networks have been already established all over the world and used with

success in geodetic and surveying applications for high accuracy positioning. Following the example of this development, the Hellenic Positioning System (HEPOS) was created in Greece. The system constitutes the first Greek Network of Permanent GPS Reference Stations. The aim of the paper is to evaluate the reliability of the system in forest and forest lands. So an implementation of the system HEPOS and three RTK techniques of it -Single-Base, technique with Virtual Reference Stations (VRS-RTK) and Network DGPS -took place in five different forest environments: a) in an axis of forest road, b) under the canopy of high forest of broadleaf oak (Quercus frainetto), c) in forest grassland, d) in an urban type environment (buildings in forest environment) and e) a trigonometric point. The measurements were carried out in the University forest of Taxiarhi-Vrastanon Halkidikis. The results shows that the Single Base technique provides more precise results than the VRS technique, while the latter proved more effective than the Network DGPS technique under the canopy of high forest of broadleaf oak (Quercus frainetto) and in an urban type environment (buildings in forest environment). A variation in relation to the above conclusion is observed in measurements on the axis of the forest road, in the forestal grassland and on the trigonometric point, where the Single Base and VRS techniques appear to be equal and in any case superior to the technical Network DGPS technique. As for the measurement environments, the best results of positional accuracy were presented in order of priority, on the trigonometric point, in the forestal grassland, in the urban type environment (buildings in forest environment), in the axis of forestal road and finally under the canopy of high forest of broadleaf oak (Quercus frainetto). In the DGPS technique the line was different with the best results appear in the forestal grassland, then in the trigonometric point, in urban type environment (buildings in forest environment), in the axis of forestal road and finally under the canopy of high forest of broadleaf oak (Quercus frainetto).

Keywords: Permanent reference station, VRS, MAC, Single Base, Network DGPS, RTK, accuracy.

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Paper Title:

Biometric Authentication of Individual Using SEMG Signals

Abstract: In this study, a new biometric method based on surface EMG (SEMG) signals in response to a fixed force is developed. The main goal is to study the possibility of a contactless verification of individuals by using SEMG signals. This method based on estimating the power spectral density (PSD) of the SEMG signals, and then extracting frequency parameters that will be used in radial basis function (RBF) to classify individuals. At fixed intensity of Maximum Voluntary Contraction (MVC), SEMG signals have shown good performance and high specify regardless of fatigue or electrode displacement. This role may have vital impact on the biometric field.

Keywords: SEMG, Biometrics, PSD, RBF, MVC, Classification.

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Paper Title:

Development of Mathematical Model for Coupled Tank System using System Identification (SI)

Abstract: This paper presents the development of mathematical model for Coupled Tank System (CTS) using System Identification (SI) method. In this research, real model of CTS-001 is used as a medium to generate transfer function experimentally. By 1058 input and output data from the execution process are recorded and analyzed to develop a model. Implementation of SI toolbox is applied and explained clearly in order to generate a model of CTS. Then, the model of CTS is tested via open and closed loop method to observe the stability and transient responses of the system. This output response from the modeling function can be taken as the benchmark to achieve a good response for future implementation of CTS. All the execution and performances can easily be monitored in MATLAB environment.

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Keywords: Coupled Tank System (CTS), Mathematical Model, System Identification (SI), Transfer Function.

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Personalized Mobile Search Engine Using Hashing Concept

Abstract: The main goal of the our system is to search results according to location and content concept with multiple preferences. In our system effort of nearest neighbor algorithm is applied for efficient and effective search result. Personalize Mobile Search Engine System is associated with web based application and mobile application. In mobile application, GPS is used for searching nearest location. The purpose of this paper is to search result with minimum execution time using data mining algorithm and hashing concept .We can find nearest result to our query by using nearest neighbor algorithm in web application and nearest location concept in mobile application. Our main aim is to reduce execution time for searching query that we will implementing in our application.

Keywords: Content concept, Hashing, Location concept, Nearest Neighbor, Personalized mobile search engine (PMSE).

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