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PRINCETON INSTITUTE OF ENGINEERING & TECHNOLOGY FOR WOMEN (Approved by AICTE New Delhi, Affiliated to JNTU, Hyderabad) Korremula (V),Ghatkesar(M), Medchal District-500 088

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### 1. Non-Parity Domination Problem of Kronecker Product Graphs A.Bhagyasree

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#### Abstract

In any graph two vertices are not of same parity if both vertices and do not have natural power of same prime number. In this article, we will discuss about problems on domination parameter in graphs as non-parity domination parameter in graphs. A dominating set of graph is called non-parity dominating set if all vertices of dominating set are not of same parity. The possible least number of members of any non-parity dominating set is called non-parity domination number of graph and non-parity domination number of graph is denoted by The upper nonparity domination number of graph is the maximum cardinality of any non-parity dominating set and it is denoted by In this paper, first we will discuss some results and bounds on. Then, we calculate exact value of non-parity domination number of Kronecker product of wheel graphs. Also, established some relationship between and some domination parameter of graph.

#### 2. Signature Verification and Alert using Deep Learning

Umarani

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#### Abstract

Online protection in data innovation (IT) frameworks is one of the hugest and complex issues of the computerized period. Expansions in network size and related information have straightforwardly impacted mechanical forward leaps in the Web and correspondence regions. Malware assaults are turning out to be progressively complex and unsafe as innovation propels, making it challenging to recognize an invasion. Identifying and relieving these dangers is a huge issue for standard insightful techniques. Moreover, the aggressors utilize complex cycles to stay undetected for a lengthy period. The changing nature and numerous cyberattacks require a speedy, versatile, and adaptable guard framework. Generally, conventional AI put together interruption identification depends with respect to just a single calculation to distinguish interruptions, which has a low location rate and can't deal with a lot of information. To upgrade the exhibition of interruption recognition frameworks, another profound multi-facet characterization approach is created. This approach includes five modules: preprocessing, auto encoding, information base, order, and input. The characterization module involves an autoencoder to diminish the quantity of aspects in a remaking highlight. Our strategy was tried against a benchmark dataset, NSL-KDD. Contrasted with other cutting edge interruption location frameworks, our system has a 96.7% precision.

## 3. Network Security in Cloud and Big Data Computing using AI K.Manjula

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#### Abstract

Web information is fundamentally expanding because of the advancement of organization innovation, actuating the presence of enormous information. The tests have also shown that profound mining and examination of enormous datasets would present extraordinary advantages. In spite of the fact that distributed computing upholds information examination in a revaluated and savvy way, it brings serious protection issues while sending the first information to cloud servers. In the interim, the returned examination result experiences malevolent deduction assaults and furthermore uncovers client security. In this paper, to overcome the above security issues, we propose an overall system for Protecting Multiparty Information Security (PMDP for short) in distributed computing. The PMDP system can safeguard numeric information figuring and distributing with the help of untrusted cloud servers and accomplish appointment of capacity all the while. Our structure is based upon a few cryptography natives (e.g., secure multiparty calculation) and differential protection instrument, which ensures its protection from semi-honest



members without intrigue. We further launch PMDP with explicit calculations and exhibit its security, productivity, and benefits by introducing security investigation and execution conversation. Besides, we propose a security-improved system sPMDP to oppose malignant inside members and outside enemies. We delineate that both PMDP and sPMDP are solid and scale well and consequently are alluring for down-to-earth applications.

### 4. Survey on Solid Waste Management Techniques and Practices

K.Sony

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#### Abstract

Solid waste collection and its management are crucial as it determines the sustainability of the environment. The global impact of waste is rapidly growing and will have an enormous effect on health, the environment, and the economy. To improve the efficiency of garbage collection and segregation, several research works are progressing towards developing a highly effective system to address this cause. This paper compares different research in waste management for municipal solid waste categories. The main focus of this paper is to highlight ongoing research strategies for waste classification and segregation with the conclusion of the overall assessment of the different literature reviewed.

## 5. Measurement of the Family-Friendly Practices: Development and Validation of Scale

G.Venkatramana

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Abstract



The study in the field of family-friendly practices is increasing and has become an important area of research in the study of organizations. However, there is a lack of a proper theoretic model and a comprehensive latest tool to measure family-friendly practices in the organization. The objective of the study is to explore the key factors for family-friendly practices and develop and validate a multidimensional scale through EFA and CFA. The objective of the study was achieved by a) exhaustive literature review study b) items generation c) development of the scale and d) validation of the scale. In the first stage, an extensive review of the past literature and interview with the IT/ITES professionals were carried out to study the underlining dimensions of FFP and a questionnaire with 25-Items was developed a. In the second stage based on the review from five academic experts, and five human resource professionals from the IT/ITES sector, two of the items were modified and 4 items were deleted. Hence family-friendly practices questionnaire with four factors and 21-Items was developed and the same was used for the empirical validation.

Exploratory Factor Analysis/EFA was performed and FFP scale with four factors: work flexibility benefits, specialized leave option, dependent care options, and Health insurance benefits, with 18 items was framed. Finally, confirmatory factor analysis/CFA was performed using AMOS 23 to confirm the factors developed by EFA, and a final scale with 13 items with reliability and validity was developed.

### 6. Machine Learning Based Privacy Preservation in Data Mining

R.Shirisha

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#### Abstract

There's mind blowing volume of information that is generated at exponential rate by different organizations such as clinics, protections companies, banks, stock market etc. It is done by greatness of digitization of technology. It is well known that exceptionally huge sum of data is being created by diverse electronic devices. This information might be handled to assist choice making. However information analytics is inclined to security violations. There is no question



that the information analytics is extremely helpful in decision making handle, but it'll cause some serious protection concerns. So ensure the person privacy in the method of information analytics got to be most important and essential assignment. In this paper, different dangers related to security are inspected. Methods and models of privacy protecting are too talked about limitations. These days the part of calculations of PPDM is exceptionally crucial. Today, no question a number of PPDM methods have been grown to protect the protection of person. A few of them are cryptography, secured whole calculations, perturbation and k-anonymity. Here primary center is on current researches related to PPDM. The paper will empower to understand the distinctive challenges that are gone up against in PPDM. It'll also offer assistance to memorize and apply the best applicable procedure agreeing to diverse data circumstances.

# 7. Hybrid Dynamic Path Planning Approach for Autonomous Robots in partially Known Dynamic Environments

#### N.Bhargavi

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#### Abstract

In recent years, research in the field of path planning for mobile robots has emphasized on dynamic environment because it is regarded a more difficult challenge than path planning in a static environment. The majority of proposed solutions require re-planning the remaining course of the Autonomous Mobile Robotics whenever new information is received, which considerably increases the calculation time and makes real-time implementation of these methods difficult or impossible. In this paper, a dynamic path planning method, a Near- Optimal Multi Objective Hybrid Dynamic Path Planning (NO-MOHDPP) is proposed and is an enhancement of our earlier research work called "A Multi-Objective Hybrid Collision-free Optimal Path Finder (MOHC-OPF) for Autonomous Robots in known static environments". The proposed approach consists of two different stages, one is Static Offline Path Planning Stage, uses global information about its environment to find the optimal path using MOHC-OPF algorithm through



static obstacles. A robot tracks this optimal path. Second stage, Dynamic Online Path Planning Stage, takes sensors information to update the optimal path online to prevent collisions with dynamic stationary obstacles which are dynamically encountered in the environment. This proposed mechanism includes on demand backward motion ability for a robot in order to avoid dynamic obstacles. The standard maps were used for the simulation and evaluation of the proposed method. The simulation outcomes demonstrate the proposed approach's capacity to identify both static and dynamic obstacles, as well as its capability to locate a collision-free, near-optimal path to a goal location in dynamically changing environments. The optimization criteria are path-length and execution-time. 97% of the studies using the proposed technique demonstrate that there is more than 15% decrease in path length as well as execution time on average when compared to the existing methods.

## 8. An Efficient Technique Of Load Balancing In Cloud Computing S.Vasavi

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#### Abstract

Cloud load balancing method to allocate the load to multiple virtual machines, handle the resources utilization decrease the response time, and avoid the overflow any overload any virtual machine. A load balancing approach distributes the load dynamically across all nodes in the entire cloud. The load balancing method avoids the situation when a virtual machine is heavily loaded. It helps to achieve resource utilization and improving overall system performance. It's also grantee resources distributed fairly. When any virtual machine goes down, the load balancer implements fair load balancing, with the primary focus being on the availability of resources to the user and the secondary focus on improving system performance. The proposed algorithm is mainly focused on average, minimum and maximum response times.. Cloud computing has the distributing among the different operating system there is a chance of deadlock occurring during the resources allocation. Existing algorithms (Min Min, Min-Max, Round Robin) suffer from



problems of overhead, starvation, and deadlock. There are two approaches using load balancing algorithms: static and dynamic. Target Algorithm Focus on increasing cloud performance.

## 9. The relationships of religiosity, spirituality, religious and spiritual coping with depression among medical and health science students

G.Pradeep

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Abstract

**Introduction:** Depression is a global mental health issue. Vulnerability for this condition increases in the university student population, specifically in the medical and health science disciplines. Previous evidence showed that religiosity and spirituality were inversely linked with depression. They have also been predominantly treated as one construct. Still, these relationships are vague.

**Objective:** This study aims to investigate these correlational relationships of religiosity and spirituality with depression among medical and health sciences students.

**Methods:** A total of 151 medical and health science students were recruited from various universities across Malaysia. Beck's Depression Inventory second edition (BDI-II) was used to measure depression and depressive symptoms, the Duke University Religion Index (DUREL) was used to measure religiosity, and the Spirituality Scale (SS) was used to measure the beliefs, intuitions, lifestyle choices, practices, and rituals representative of the human spiritual dimension. Whilst the brief scale of religious coping (RCOPE) and spiritual coping questionnaire (SCQ) were used to assess positive and negative religious and spiritual coping respectively.

**Results:** A negative relationship was found between religiosity, positive religious coping, and depression. Whilst positive relationship was found between negative religious coping and depression.



**Conclusion:** These findings give insight into this population. It also provides avenues for psychoeducation and intervention. The ramifications of these findings may be applicable at the society as well as the government and policy making level in Malaysia.

## 10. Progression of COVID-19 Cases in Telangana State:by using ARIMA-MLP -ELP Prediction Models

#### A.Sruthi

Princeton institute of Engineering & Technology for women

#### Abstract

This paper focuses; thestudy of design of the pandemic COVID-19 in Telangana State from 1st. Dec 2020 to 30th May 2021. We have fitted ARIMA, MLP, and ELP models, by taking the data from the beginning of 1st. Dec 2020 to 30th May 2021. Used R-Code, to fitthe ARIMA, MLP, and ELP models and developed to compare the precision of forecast methods.

### 11. Optimization for Bio Inspired Wireless Sensors Using Hybridization

#### P.Renuka

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#### Abstract

The importance of wireless technology has become a necessity in electronics and telecommunication domain. This is due to its several essential characteristics. Amongst them is the sensor deployment, its coverage, connectivity, energy, etc. The obtainment of these characteristics is important to gather the acquired and required information. Various local and global algorithms are available to obtain these characteristics. To obtain the requiring meets of accuracy there is a need to a new proposition. Leading to this a variant is proposed from the existing algorithms. This has gone to hybridization. The work would not only be limited to

coverage and connectivity characteristics, but the variant will open a window for the upcoming challenges in the wireless sensor network domain. The challenges may not only be limited to obtaining of the characteristics but also leading to more and useful hybridization. The evolution of hybridization can also lead to the development of a very new and fresh model or models in future, which might be a required in the coming time for the domain of wireless sensor networks. In the work considering the works done on various wireless sensor algorithms both bio and nonbio inspired algorithms. A variant is developed to podcast the coverage and connectivity characteristics majorly influenced by bio inspired optimization in the wireless sensor domain. This leading to a development of a hybrid variant for obtaining the coverage and connectivity characteristics.

## 12. Plant Leaf Disease Detection and Classification Systems Using CNN Architectures

#### G.Vinodha

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#### Abstract

Plants are highly prominent in human life, which are used in different areas such as medicine, diet, etc. One of the major scopes of research in plants is the identification and classification of diseases. Earlier the infected plants were physically observed by the experts and researchers, which was laborious and expensive. Consequently, it's imperative to have automated techniques to identify diseases on plants. Image processing methods are significantly effective when compared to manual visual analysis. Such type of methods controls the parameters involved in detecting plant diseases with greater accuracy and lower financial outlay. Deep learning models eliminate the limitations of traditional image processing methods and are widely used since they can extract features by themselves. Among the models available, the Convolutional Neural Network (CNN) architectures are extensively used for image classification and modelling complex processing applications with extensive data that can be used for plant disease identification and classification in the agricultural sector. Accordingly, this study emphasizes the



potential of utilizing artificial intelligence (AI) in the agricultural sector. In order to address the limitations and to determine the scope of Convolutional Neural Networks (CNN) in the agricultural sector, particularly for plant disease detection and classification, an exhaustive literature survey was conducted. A summary of surveyed research papers, their backgrounds, key aspects, and their efficiency in the real world has also been discussed. The presented survey will help the researchers to identify various issues and to explore the innovations in the area of plant disease detection and classification.

# **13.** A Novel FinFET-Based Low-Power and High-Speed Two-Stage Dynamic Comparator

B.Umarani

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#### Abstract

This paper presents a novel FinFET-based two-stage dynamic comparator architecture with compact size, low power, and high speed. In the decision phase, the hybrid pre-amplification stage provides sufficient gain to speed up the latch stage. Meanwhile, adding two n-type FinFET transistors between the cross-coupled latch increases the speed and reduces the power dissipation. Also, P-type FinFET pass transistors are used for resetting both stages. The proposed structure is designed and analytically verified in CADENCE SPECTRE in 18 nm FinFET technology. The total delay, power consumption and power delay product are as low as 43.32ps, 5.56  $\mu$ W, and 0.24 fJ at 10 mV input differential voltage, respectively. The proposed technique is two times faster and 1.5 times power efficient and exhibits a low power delay product compared to conventional shared charge dynamic latched comparator with the same technology. The size of the proposed circuit is 2.85  $\mu$ m x 2.44 $\mu$ m. It finds applications in high-resolution and high-performance analog to digital converters.



### 14. Review of Security Issues in Mobile Ad Hoc Networks M.Soumya

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#### Abstract

Numerous technologies are being evolved in the everyday life. The researchers' concentration is gained increasingly by these growing modern technologies. A Mobile Ad-hoc Network (MANET) is a self-configuring along with a self-organizing network devoid of an infrastructure utilized by wireless mobile devices. Several kinds of security measures are being adopted; even then, there occur attacks often. Innovative methodologies are invented by the attacker for attacking. To guard data numerous technologies have been established whereas simultaneously, another methodology will be implemented to hack the information. All the technology is comprised of pros and cons, in the same way, MANETS are also included in that category. The MANETS' security threats, challenges, along with complications are reviewed in this paper. The various methodologies utilized in the latest literature to sort out the MANETS' security problems are significantly surveyed in this manuscript. On the regions of identification of malicious activity, malicious node detection, methodologies, performance evaluation, along with Energy Consumption (EC), the theoretical interpretation is performed.

## 15. Searching for the Self between expatriation and Alienation in the Modern Arabic Novel (A Last Call for the Passengers) by Ahmed Al-Qarmlawi as model (applied critical study)

#### P.Santhosh

#### Princeton institute of Engineering & Technology for women

#### Abstract

This study aims to focus on a critical and exciting topic, which is strongly under discussion on the literary scene, and in modern literary writings of poem anecdote and novels as this subject has the title of self between expatriation and alienation in the modern Arabic novel through the



novel of a last call for the passengers by the author ahmed el qarmlawi an educationl moael an applied critical study for the analysis of the literal impact in order to show the aesthetic elements and their influence on souls and as taste is the base of literal research then analyze the elements such as the author life his achievements environment epoch as the writer is the fruit of many intricate circumstances in a way that the analysis of impacts may realize a certain purpose from the author therefore it is necessary to analyze the trends of his book foreign effects upon the writer and the text with the analysis of all the characteristics of authors with the emphasize on different phenomena in their writings.

### 16. Lexical coherence and its impact on the consistency of literal texts M.Lalitha

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#### Abstract

Lexical coherence is a modern branch of linguistics, and this research is based on a study of one of the phenomena of lexical coherence, namely repetition, as lexical consistency is based on the study of two phenomena, namely, cohesion and repetition, and this research is devoted to the study of repetition and the disclosure of its contributory role. In the fusion of parts of the poetic text - a poem no reconciliation by Amal Dunqul - and the frequent repetition in the poem led to the connection of the text from the beginning to the end. therefore the topic was entitled ((Lexical coherence and its impact on the consistency of educational litteral texts) and deals with an element that leads to lexical linkage, namely: repetition in a poem that does not reconcile by Amal Dunqul, and the nature of the subject necessitate that we study it in the introduction, two chapters, and a conclusion. Research and the most important of them: that the lexical linkage is one of the most important textual criteria, the emergence of repetition and abundance in the text of a poem that does not reconcile, and this repetition had a significant impact in achieving the lexical coherence of the text of the poem.



## 17. Progression of COVID-19 Cases in Telangana State:by using ARIMA-MLP -ELP Prediction Models

#### **B.Balaji Naik**

Princeton institute of Engineering & Technology for women

#### Abstract

This paper focuses; thestudy of design of the pandemic COVID-19 in Telangana State from 1st. Dec 2020 to 30th May 2021. We have fitted ARIMA, MLP, and ELP models, by taking the data from the beginning of 1st. Dec 2020 to 30th May 2021. Used R-Code, to fitthe ARIMA, MLP, and ELP models and developed to compare the precision of forecast methods.

# **18.** Video Captioning Models Based On Machine Learning And Deep Learning Techniques

#### A.Anusha Reddy

Princeton institute of Engineering & Technology for women

#### Abstract

The present world is conquered almost by a lot of information in various forms. In which, videos are the most preferable form of information to provide live knowledge about the world. People can able to get current affairs up to date without any slight changes through videos. Unfortunately, these benefits are fully not reachable to the deaf and dumb or hearing impaired people. To overcome these obstacles, whatever the video contains, it can be explained in text form which is effective for the hearing impaired people to get fruitfully. Here comes, the captioning of videos arrived to rescue the problem. Video captioning is approached by various researchers in various methods which include different techniques and cost-effective machines. But this approach is to provide a different dimension of view towards video captioning. The proposed approach is introduced to overcome the issue of utilizing cost-effective resources like GPU (Graphical Processing Unit), etc. The proposed method is constructed with both machine learning and deep learning technique which consists of four different approaches and the

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#### Princeton INSTITUTE OF ENGINEERING 8 TECHNOLOGY FOR WOMEN Chowdaryedud, Korremula (V); Ghatkesar (M), Medchal Dist, TS-500086

comparative results are analyzed to declare the best approach. The machine learning part deals with three different classifiers to provide variations. The key features are vital to predict the actual captions for the video captions. Here, the requisite features namely edge, shape, and texture features are extracted. The extracted features are classified with three superior machine learning classifiers as Support vector machine, Naive Bayes, and Random forest. The deep learning part deals with the modified convolutional neural network model for both feature extraction and classification process. The proposed methods experiment with two different benchmark datasets such as MSVD and MSR – VTT. The efficiency of the proposed approach with two different datasets is evaluated using the standard performance metrics such as Accuracy, Precision, Recall, and F1 – Score.

## **19.** A Hybrid Multi-Level Feature Selection Framework For Prediction Of Chronic Disease Using Spark Technique

#### Shaik Asif

Princeton institute of Engineering & Technology for women

#### Abstract

Chronic illnesses are among the most common serious problems affecting human health. Early diagnosis of chronic diseases can assist to avoid or mitigate their consequences, potentially decreasing mortality rates. Using machine learning algorithms to identify risk factors is an exciting strategy. The issue with existing feature selection approaches is that each method provides a distinct set of properties that affect model correctness, and present methods cannot perform well on huge multidimensional datasets. We would like to introduce a novel model that contains a feature selection approach that selects optimal characteristics from big multidimensional data sets to provide reliable predictions of chronic illnesses without sacrificing data uniqueness.[1] To ensure the success of our proposed model, we employed balanced classes by employing hybrid balanced class sampling methods on the original dataset, as well as methods for data pre-processing and data transformation, to provide credible data for the training model. We ran and assessed our model on datasets with binary and multivalued classifications.



We have used multiple datasets (Parkinson, arrythmia, breast cancer, kidney, diabetes). Suitable features are selected by using the Hybrid feature model consists of Lassocv, decision tree, random forest, gradient boosting,Ada-boost, stochastic gradient descent and done voting of attributes which are common output from these methods. Accuracy of original dataset before applying framework is recorded and evaluated against reduced data set of attributes accuracy. The results are shown separately to provide comparisons. Based on the result analysis, we can conclude that our proposed model produced the highest accuracy on multi valued class datasets than on binary class attributes.[1]

## 20. Assistance System For 3D Navigational Endocranial Procedures Based On Image Acquisition

Dhanunjay

Princeton institute of Engineering & Technology for women

#### Abstract

Endoscopy involves no physical contact with human body where it uses the precise results with the accuracy of 2mm. Video based navigation is used to acquire those accuracy of endoscopic image. This surgical task requires precision which is conducted inside where it requires greater precision and accuracy. These images are taken before and after the surgery is completed. In some cases, endoscopy video consists of complications which consists of low texture, reflection. Since, images acquire doesn't allow the precise location which performs the procedure. In this proposed approach. 3D navigation assistance to address those issues along with video to attain full clarity resolution. The video extraction produces features of an image and related feature points. Modify the two-dimensional coordinates when extraction is complete, then create matching images. Motion detection may be identified using a variety of techniques. Upon that basis of tracking, previous errors may be reduced and the operations can be evaluated as a whole. Video is used to extract image information and associated feature points. Once this is all done, let the system keep track of the 2D and 3D characteristics of the image and where they are



located. Endoscopic skull surgery could be carried out effectively owing to this 3D image. Once the procedure is finished, we must determine the next motion detection point. Consequently, we discovered that with the use of trackers, we could provide an ideal situation with a precision of around 5 mm. Almost 50% of the original image's comparative percent of similarities are legitimate matches.

## 21. An Image Sharing-Based Solution For Secure Inpatient Medication Administration

Dr.A.Krishnamurthy

Princeton institute of Engineering & Technology for women

#### Abstract

Patients face risks of health damage from medication error. To prevent such errors, hospitals need a secure medication administration system. Using threshold sharing technology, a secure medication administration method is proposed here. When a patient visits the doctor and the doctor prescribes n medications, a photo of the patient is encoded into n portions. Then the prescription and these n portions are stored in the hospital information system. Any portion provides the smallest quantity of information needed to reveal the smallest part of the original photo. As more portions are received, more of the photo is revealed. Once all n portions have been received, the original photo is revealed with very little distortion, meaning that the method is highly fault-tolerant. Before dispensing medications, the dispensers at the medication counter should scan the tags of all drug packages. If the dispensers at the medication counter have the correct n medications, the computer receives the n portions, and the photos of the patients are displayed on the screen. Then the dispensers at the medication counter know that there are no drugs missing or wrong, and also which drugs belong to which patient.



## 22. Correlation Between Spike Potential And Field Potential In The Motor Cortex Of Rats With Parkinson's Disease

Dr.Rajeev Srivasthava

Princeton institute of Engineering & Technology for women

#### Abstract

Correlation between the spike discharge and rhythm of local field potential (LFP) of neurons provides clues on the information coded by the nerves. In this study, spike and LFP in the motor cortex (M1) of rats with Parkinson's diseases (PD) at the inattentive rest and during walking along a ladder were recorded using multi-channel neuronal recording system (Plexon). Neuronal classification was first performed for the nuclei of M1. Then for different types of neurons, the spike-LFP correlation was analyzed in the M1 using three indicators, namely, coherence value, phase locking and spike-field coherence (SFC). Results: 1. Based on electrophysiological characteristics, the nuclei neurons in M1 were classified into two types respectively; 2. There was no significant difference in spike-LFP correlation in PD rats compared with the controls when at the inattentive rest; 3. There were different changes in the spike-LFP relationship for the PD rats compared with the controls when walking the ladders. The intensity of spike-LFP correlation decreased for type A neurons in M1, while it increased for type B neurons in M1.

## 23. The Effectiveness Of Music Therapy On Depression And Happiness Of Depressed Women

N.Vidya

Princeton institute of Engineering & Technology for women

#### Abstract

Background: Music has a great influence on human spirit. Music therapy is one of the most useful ways to boostpeople's mood, especially in depressed patients. The aim of this research was study the effect of music therapy on depression and happiness of depressed women.



Methods: It was a semi experimental study with pretest, posttest, follow up and control group. The sample included the depressed women who referred to the consultation and psychotherapy center managed by the researcher. The subjects were matched from age, educational status, acquiring one standard deviation below the mean in depression, happiness and other criteria considered in this research. Thirty patients were randomly selected according to the inclusion criteria and were randomly assigned to experimental and control groups. The experimental group participated in 12 sessions of music therapy including playing a music instrument, singing, rhythmic movements, and listening to music, but the control group did not receive any intervention. The instruments were Back's Depression instrument (BDI), and the Oxford Happiness Questionnaire. Data were collected by Beck's Depression Instrument (BDI) and Oxford Happiness Questionnaire. The collected data were analyzed by using SPSS-21 using MANOVA and ANCOVA tests. Results: The results showed a significant difference between experimental and control group in depression and happiness (P < 0.001). The rate of depression score significantly decreased in experimental group in comparison with pre- test and control group. Also, the score of happiness significantly increased in experimental group. These results significantly persisted after 2 months fallow up period (P < 0.001). Conclusions: These results emphasize the possible important of music therapy on depression and happiness in depressed women.

## 24. Study The Effect Of Magnetic Field On Polymer Doping Tio2 Nanoparticles

P.Jyothi

Princeton institute of Engineering & Technology for women

#### Abstract

The metal nanoparticles (NPs) so as ferromagnetic (FM)/ Polymers is given to nanostructures importance in many electro- optics devices, a base work for these devices is depend on Faraday rotation. In this study the magnetic field effect is appear



## 25. Optimal and Approximate Analysis of an Information Network D.Anuradha

Princeton institute of Engineering & Technology for women

#### Abstract

The subjectivity seen in quantum theory has been the topic of major debate ever since the theory was first introduced about a century ago. The idea of treating the subject and the object independently has been difficult to accept in the science community; however, the subjective limit of knowledge has been discussed in philosophy for centuries. On the other hand, one of the important outcomes of recent studies of quantum theory is developing useful and practical applications from often controversial and philosophical debates such as the simultaneous existence of multiple states or superluminal influencing, which appears to violate the locality imposed by relativity. Establishing a long-distance correlation may be effective in a number of applications in quantum information technology. In this paper, an entanglement swapping scheme for three 2-level states is examined using numerical methods. In particular, it is studied that there is a class of non-maximal states that approximate the optimal outcome, namely, the weakest link.

#### 26. Assessment Of Some Enhancement Methods Of Renal X-Ray Image

N.Salma Sulthana

Princeton institute of Engineering & Technology for women

#### Abstract

The study focuses on assessment of the quality of some image enhancement methods which were implemented on renal X-ray images. The enhancement methods included Imadjust, Histogram Equalization (HE) and Contrast Limited Adaptive Histogram Equalization (CLAHE). The images qualities were calculated to compare input images with output images from these three



enhancement techniques. An eight renal x-ray images are collected to perform these methods. Generally, the x-ray images are lack of contrast and low in radiation dosage. This lack of image quality can be amended by enhancement process. Three quality image factors were done to assess the resulted images involved (Naturalness Image Quality Evaluator (NIQE), Perception based Image Quality Evaluator (PIQE) and Blind References Image Spatial Quality Evaluator (BRISQE)). The quality of images had been heightened by these methods to support the goals of diagnosis. The results of the chosen enhancement methods of collecting images reflected more qualified images than the original images. According to the results of the quality factors and the assessment of radiology experts, the CLAHE method was the best enhancement method.

## 27. Study The Correlation Between Diabetic Foot Syndrome And The Level Of Renal Impairment In Patients With Type II Diabetes Among Egyptian Population

#### V.Srikanth

Princeton institute of Engineering & Technology for women

#### Abstract

Diabetic nephropathy and diabetic foot syndrome (DFS) are two major complications of diabetes. Patients and methods: A cross-sectional cohort study in a single tertiary university hospital for a collective of patients with type 2 diabetes was performed. A total of 100 patients with type 2 diabetes were studied, for whom standardized foot examination, fundus examination, L.L. arterial duplex were performed. HbA1c, albuminuria, serum creatinine and blood urea were analysed. Estimated GFR was calculated according to CKD-EPI equation. Patients were grouped into the chronic kidney disease (CKD) stages according to the eGFR and presence of albuminuria. DFS was classified according to Wagner as well as University of Texas stages. Results: There was a significant negative correlation between the Wagner stages and eGFR (P<0.001) as well as University of Texas stages and eGFR (P<0.001) in all patients with type 2 diabetes and DFS (Spearman test). Type 2 diabetes patients with chronic L.L. ischemia had significantly higher HbA1c (P<0.05), higher serum creatinine (P<0.001), higher blood urea

(P<0.001), higher A/C ratio (P<0.001) and significantly lower eGFR (P<0.001). Conclusion: There was a strong association between the degree of renal function impairment and DFS in type 2 diabetic patients with pre-terminal renal insufficiency; thus it should be recommended that diabetic patients with renal insufficiency should be regularly and more frequently screened for the presence of DFS and should be given specific care and should be educated regarding foot care.

## 28. Inelastic Scattering Form Factors For Carbon And Oxygen Halo Isotopes S.Chandrabhanu

Princeton institute of Engineering & Technology for women

#### Abstract

In the present article, an inelastic electron scattering form factors 13,15,19C nuclei distributed in the 1p1/2, 1d5/2 and 2s1/2 model space (outside 12C inert core) and 17,23O nuclei in sd model space (outside 16O inert core) has been studied. 15,19C and 23O is one neutron halo nuclei. The shell model calculations have been completed by the recent version of the shell model code NushellX@MSU. The effective interactions ZBMI employed to calculate the energy eigenvalues and eigen states that is used to calculate the one body transition densities (OBTD) to be used in the inelastic electron scattering form factors calculations. Tassie and Bohr-Mottelson models are employed to calculate the total form factors with harmonic oscillator potential (HO) and we get good agreement with available experimental data.



## 29. Effect Of Surface Diffuseness Parameter On Quasi-Elastic Scattering Calculations For 6He+64Zn, 7Li+64Zn And 8Li+90Zr Systems

P.Swamy

Princeton institute of Engineering & Technology for women

#### Abstract

Effects of surface diffuseness parameter on quasi-elastic scattering have been studied using the nuclear potential Woods-Saxon (WS) for 6He+64Zn, 7Li+64Zn and 8Li+90Zr systems. The effect of rotational deformation was included for the nuclei 64Zn with ground state rotational band up to the 4+ states. We have been carried out the single (SC) and coupled-channels (CC) calculations to obtain the best compatibility between the notional accounts of d $\sigma$ qel/d $\sigma$ R with experimental data for systems studied. we find that the best fitted value of the diffuseness parameter which obtained through a coupled- channel calculation with inert target and excited projectile for In the current work, the singlechannel (SC) and the coupled- channels (CC) calculations, which were between the relative motion of the colliding nuclei and their intrinsic motions, were conducted to study its influence on calculation, the ratio of the quasi-elastic to the Rutherford cross sections and probe the surface diffuseness find that the best fitted value of the diffuseness parameter which obtained through a coupled- channel calculation with inert target and excited and excited projectile for the 6He+64Zn, 7Li+64Zn and 8Li+90Zr.

## **30.** New Plasmonic Photonic Crystal Fiber Sensor Based On Core Size

B.Krishnamurthy

Princeton institute of Engineering & Technology for women

#### Abstract

m. Using the same value of h will make the wavelength sensitivity in presence of gold better than the other elements, while the presence of copper is the best in term of amplitude sensitivity. $\mu$  5.5=1 at h –In this paper, a new plasmonic photonic crystal fiber (PPCF) to use as sensor for



different analyte was designed. The finite element method (FEM) by COMSOL environment was used to investigate the properties and sensing performance numerically. The sensor is made from photonic crystal fiber surrounded by a layer of noble metal. The effect on the outer surface of the PCF of various selective noble metals (gold, silver and copper) used to efficiently generate surface plasmon resonance (SPR) has been studied. A high wavelength sensitivity with a limit of 5000 (nm/RIU) was achieved for different refractive index of analyte. The simulation results indicate that closing holes to the center of the sensor have high influence on the sensitivity of the refractive index, where the wavelength sensitivity and the peaks values in the behavior of the losses curves were increased. For all tests, the relation of wavelength of resonant with the refractive index of analyte was linear, meaning that the sensor could be used for a wider range of refractive index of analyte. Realized amplitude sensitivity reaches 300RIU

# **31.** The Influence Of Some Important Parameters On The Performance Efficiency Of The Compound Parabolic Solar Concentrator

P.Amulya

Princeton institute of Engineering & Technology for women

#### Abstract

The solar concentrator is designed in the form of a compound parabolic concentrator CPC of relatively light metal (aluminum) with a reflective inner surface (coated with a reflective material). Parabola is characterized by a high concentration of incident rays at one point (the focus) of a large radiation field, in other words the design has a relatively large acceptance angle and a small amount of diffusion compared to other concentrators. The CPC of circular cross section has been designed by using (Zemax) optical design program, with a different concentration ratio for each sample (C = 1, 2, 3, 4, 5). The design of the sample should be consistent with the shape of the detector (which is attached to the exit aperture). A plastic cover has been used to cover the entrance aperture to protect against external environmental factors (such as moisture, dust, and rain), made of hard material (PMMA) which has a good thermal



expansion coefficient. The number of rays falls to the detector and the optical power and illumination have been read to study the optical efficiency, evaluate them to the optical system according to the angle of inclination of the sun within the range (0o-25o). The technology of truncation of solar concentrator, i.e. cutting part of the concentrator's length, has been adopted to obtain an optimal design that can receive and reflect as much solar radiation as possible. The deductions are used for different values of the design length (100mm, 200mm, 300mm, 400mm, 500mm) taking into account the change in the entrance aperture for each length to accommodate the largest possible amount of radiation as an important factor and has a major influence on the design efficiency. As for the exit aperture, it has a fixed value of the section area (50 mm) for all designs with different concentration ratios to obtain a suitable comparison standard.

## **32. Theoretical Analysis Of The Electronic Current At Au/PTCDA Interface** Dr.A.Krishnamurthy

Princeton institute of Engineering & Technology for women

#### Abstract

We have been studied and analysis the electronic current at the interfaces of Au/PTCDA system according to simple quantum mode for the electronics transition rate due to postulate quantum theory. Calculation of electronic current were performed at interface of Au/PTCDA as well as for investigation the feature of electronic density at this devices. The transition of electronic current study under assume the electronic state of Au and PTCDA were continuum and the states of electrons must be closed to energy level for Au at Fermi state, and the potential at interface feature depended on structure of Au and PTCDA material. The electronic transition current feature was dependent on the driving force energy that results of absorption energy by PTCDA dye and the transition energy for configuration.


## **33.** Gamma Ray Effects On White Blood Cells Of Male Mice

Dr.Rajeev Srivasthava

Princeton institute of Engineering & Technology for women

#### Abstract

Background: This paper we appear the light on the effect a weak gamma radiation with chronic irradiation on White blood cells defend. Object: Exposure with ionizing wave has various effect on the several hematological parameter and tissue of biological. Our paper were scoped to detecting the soft dose radiation rate of gamma wave effect on several blood parameter of white mice. Material and Method: In this paper a mice with white color were employed in this work which scale about (two to three) age months and 26 to 35 weight gm. These mice with healthy were produced from the veterinary collage in University of Mosul. Keeping these mice were obtained in cages of plastic equipped with metal lids with dimensions (21x31x31 cm) states were put to ensure good hygiene. Results: Decline of total mean value of WBC count was obtained in the, neutrophil monocyte, lymphocyte, basophil and eosinophil, with a weak dose rate of irradiation 110 mGy/h and 310 mGy/h of irradiation part at 3 days and increased with declining arraival to irradiation time at 41 days. However rebuilding and recovery were happened at 61 days of time of irradiation. Conclusion: Undetected impact of weak dose rate gave from gamma wave of 241Am on WBC count of total value were happened repair and recovery outcome from cells after exposure with 61 days. Gamma wave impact lead to significant decrease in WBCs count in a dose – dependent manner, which was lead to risk of healthy effort through exposure to irradiation. Moreover studies are recommended to show the other Troubles of gamma wave can refer to the workers in radiation department as medical and biophysics field.



# 34. Investigating The Impact Of Gamma Radiation On Optical And Structural Properties Of Malaysian And Sudanese Gum Arabic Under Different Annealing Temperatures And Durations

#### N.Vidya

Princeton institute of Engineering & Technology for women

#### Abstract

The aim of this paper is to study the effects of gamma radiation on the structural and optical properties of two types of Gum Arabic, one from Sudan and another from Malaysia. The Gum Arabic samples were first annealed at different temperatures and for different durations before being irradiated using Am-241 gamma ray for 72 hours. Both the irradiated and non-irradiated samples were then examined using various characterization methods to gain insights into how gamma radiation alters the material's structural and optical properties. Our study also compares between raw and annealed gum, Gum Arabic from Sudan and Malaysia, powder sample and nodular sample as well as different annealing temperatures and durations. Our results from X-ray diffraction (XRD) show that both annealing, and gamma irradiation have the tendency to alter the crystalline size of Gum Arabic. From the absorption spectra obtained using UV-Visible spectrophotometer, we observe that generally, both gamma irradiation and annealing temperature broadened the width of the absorption peak, except for Gum Arabic from Malaysia annealed at 150°C for 40 minutes where the absorption peak became narrower. The fluorescence spectra of our powder samples also show that the light emitted shifted from blue to yellow when annealing temperature increases but gamma irradiation exhibited insignificant effect on the spectra. However, the spectra for our sample in nodular show more sensitive response to gamma irradiation where the light emitted shifted from near yellow to white.



# **35. Electronic Structure Of Suggested Nickel Metal Complexes: DFT Calculations**

P.Jyothi

Princeton institute of Engineering & Technology for women

#### Abstract

SDD bases were used to maintain relaxation of the proposed nickel-metal complexes. The DFT method was used in the Gaussian software package. The results showed that the energy of the ground state of the complexes decreases with increasing number of electrons in the complex. The energy gap for the complexes varied depending on the coordination of the complexes and the subgroups in each complex. The N2 complex is a softer complex compared to the other two. The N1 complex with two amine groups as ligands in the complex appeared as an absorption in the infrared range. The results gave us the idea to propose new nickel-metal complexes with chelating ligands with mixed donors for the catalytic treatment.

## 36. Femtosecond Optical Nonlinearity Signal And Dark Field Scattering Microscopy Of Gold Coated Zinc Oxide Nanowires

D.Anuradha

Princeton institute of Engineering & Technology for women

## Abstract

The current work presents practical study on improved second-harmonicgeneration; SHG signal in individual ZnO NWs coated with gold nanoparticles., experiments on the growth of gold nanoparticles (Au NPs) onto zinc oxide nanowires(ZnO NWs) by several densities of gold nanoparticles coated are prepared via an impregnation simple method. The surface morphologies and the propagation manner of hybrid nanostructures the "TEM' was utilized to study the optical properties of samples nanostructures. The dark – field scattering microscopy was used to



characterize single ZnO NW and confirm the coated of hybrid Au/ ZnO nanowires and characterize the density effect of the gold nano particles. By make a comparison between a single zinc oxide with and without gold nano particles coated, nonlinear experiment was studied through it, we got to the estimated improvement of second - harmonic generation signal about  $\sim$  1.5 times,  $\sim$  7 times, and  $\sim$  7.5 times for low, moderate and full coated of gold nanoparticles.

# **37. Study Of Spectral Reflectivity Properties And Spectral Measurements Of Dissolved And Suspended Materials In Water Using Device Radiometer**

N.Salma sulthana

Princeton institute of Engineering & Technology for women

#### Abstract

The study of water classification and water drainage knowledge (the amount of submerged area) using the method of integration of remote sensing data and spectroscopy data on the earth scans reflected in the method of electromagnetic radiation reflected (Radiance) and fall (Irradiance) where any ground target receives direct solar radiation (E) and is measured in watt/m2 units. As for the radiation reflected from it (L) is measured by the same unit that the radiometer records these radiations in the form of electrical signals, so they must be converted into radiation units, so when the radiometer is directed to the target, it records the radiation reflected in the units of volts (radiometer.....) the use of modern technology in the field by determining the intensity of the reflectivity of the earth's spectral, including water classification, These results are compared with industrial satellite images, where the device's channels operate on the same electromagnetic spectral fields used in satellites.



## **38. Desertification Monitoring in the South-West of Iraqi Using Fuzzy** Inference System

V.Srikanth

Princeton institute of Engineering & Technology for women

#### Abstract

In this research, the region in the south-west of Iraq is classified using a fuzzy inference system to estimate its desertification degree. Three land cover indices are used which are the Normalized Difference Vegetation Index, Normalized Multi-Band Drought Index and the top of atmosphere surface temperature to build a fuzzy decision about the desertification degree using eight decision roles. The study covers a temporal period of 38 years, where about every 10 years a sample is elected to verify the desertification status of the region, starting from 1990 to 2018. The results show that the desertification status varied every 10 years, wherein 2000 encountered the highest desertification in the south-west of Iraq.

# **39. Maximum Likelihood And Bayesian Estimation Of Rayleigh With Partly Interval-Censored Case-I Data**

S.Chandrabhanu

Princeton institute of Engineering & Technology for women

## Abstract

In this research, we consider the time interval for estimating non-character parameter functions for a single parameter Rayleigh apportionment. First, we get the maximum probability estimators (MLE.s) for non-personal parameters. MLEs cannot be obtained in clear formats. We also consider Bayesian reasoning for nonpersonal parameters Bayes estimates and associated reliable periods cannot be we get in closed shapes. We use an important sampling technique to round (calculate) Bayes estimates and their associated reliable time periods. For in order to compare we



also used the accurate method to calculate Bayes. estimaties and related reliable periods. Monte Carlo simulation is performed using the R programming language to compare the proposed fashion performance, and one data set was analyzed for illustration purposes. We take into account the Bayes forecast trouble based on observable sampling.

## 40. Finite Elements Analysis Of Laser Cutting Process

P.Swamy

Princeton institute of Engineering & Technology for women

Abstract

Laser cutting process one of the most important operations used to cut the materials due to its several advantages like a good quality end product and small affected heat zone. This paper presented a numerical study and analysis for a plate made of steel alloy and aluminum alloy. In order to compare the behavior of the two materials under laser cutting process, many parameters were obtained like max. Temperature, heat flux, max. Stress according von-mises theory, shear stress and total deformation under different three laser powers (100, 200, 300) watt. It was found that by increasing the laser power, the temperature, stress and heat flux increased for the two plates.

# 41. Simulation Of Active Medium Emission Cross Section Influence On Passive Q-Switching Laser Pulse Characteristics

B.Krishnamurthy

Princeton institute of Engineering & Technology for women

## Abstract

Rate equations model was solved numerically by Runge-Kutta-Fehlberg method using computer software program prepared to simulate the effect of the active medium emission cross section on passive Q-switching pulse characteristics. We reported the passive Q-switching of Nd: YVO4



laser with the Cr+4: Y SO. The study shows the duration, energy, power, maximum photons density, initial and final inversion of population are decrement as a function of active medium emission cross section.

# 42. A Simple New Method For Purifying Grain Size By Pulse Laser Ablation

P.Amulya

Princeton Institute Of Engineering & Technology For Women

#### Abstract

We present a new method to prepare collide with fine grain or (quantum dots) in solutions by changing the function of laser used, between ablation and irradiation by this can be obtained changing the location of the focal plane of the focusing lens and hence changing the fluence, which leads to the fragmentation of the large grains to smaller grains size. Repeating the changing process several times can lead to obtaining quantum dots or very small grain size.

## 43. Sustainability Perceptions On Wastewater Treatment Operations In Urban Areas Of Developing World

N.Pavani

Princeton institute of Engineering & Technology for women

#### Abstract

Implementation of the sustainability concepts in water use and management have received considerable attention all over the world. These efforts have led to the initiation of wellcoordinated attempts to ensure reliable wastewater management systems across wide range of industrial or commercial operations. The choice of wastewater treatment technology in a particular organizational setting is often influenced by large number of factors. In the case of rapidly expanding developing state like Kerala, the decision on the choice of wastewater



treatment unit in an organization is often based on the acceptability of the pollution control agencies than through any rigorous evaluation for the process sustainability. The research initiatives undertaken elsewhere have emphasized the need for evaluation of three broad aspects of sustainability - economic, environment and social - in the planning and design of wastewater treatment units. This paper examines the degree of acceptability of the sustainability concepts in the wastewater treatment operations for Indian scenario. The assessment is made based on the information collected on the wastewater treatment operations carried out at a few selected cases. The research outputs bring to light the areas that need strengthening of organizational capability in taking environmentally, economically and socially conscious decisionmaking relating to wastewater treatment operations.

## 44. Environmental Hazard And Disaster In Disposing Marble Slurry V.Sundeep

Princeton institute of Engineering & Technology for women

#### Abstract

Considerable marble reserves exist in Rajasthan, an Indian state. The industry generates an extremely large number of wastes from mined areas in the form of mine wastes to processing and polishing wastes at gang saws locations. Production of marble slurry, the waste dust along with heat consumes more than 43,000 litres of water per hour per gangsaw. The rapidly advancing marble industry generates heaps of uncontrolled wastes which are piling up in the absence of proper disposal systems. Before it is too late, damage to environment and human health might reach point of no return. It is, therefore, uppermost and urgent that both utilization and disposal systems are developed SIMULTANEOUSLY. This has to be done as fast as possible and on the priority basis. Marble slurry is alkaline having pH value of 9.1 which can help utilization as admixture to concrete leading to rural construction and reconstruction. Moisture contents and



water absorption properties were found to be very low resulting into dryness and presence of fine particles. Crops are damaged and human health gets deteriorated. The investigation of effect of marble slurry on crops and lands was done, that is, on existing crops like garden grass, wheat crops and sunflower. The severity of the crisis is indicated from observations of damage.

## 45. Application Of Green Building Concept For An Integrated Township Project- A Case Study

#### N.Pavani

#### Princeton institute of Engineering & Technology for women

#### Abstract

The use of Ecosystems for recreation, wealth enhancement and other selfish purposes is growing. However, the capacity of Ecosystems to provide these services has declined significantly. Reversing the degradation of Ecosystems while meeting increasing demands for their services is a major challenge. It is called as a solution, technique, an attitude or a lifestyle, turning GREEN is possibly the only way out of this mess we have created ourselves for. Virtually, all earth's Ecosystems have been significantly transformed through human actions. Changes have been especially rapid in the last 50 years and today the fastest changes are taking place in developing countries. Ecosystems are particularly affected by large scale construction. In the instant project work a case study is planned to undertake the GREEN home features as per the guidelines framed by the Indian Green Building Council (IGBC), Hyderabad for the construction & development of an integrated township project at Besa, Nagpur. The land use plan is covered under Residential prototypes i.e. Bungalows, Row Houses, Apartments, Sky Villas, EWS etc. and Non-residential Prototypes such as Commercial centers, Educational Institutions, Health Service Centre, Public utilities, park, Gardens, landscape etc. All these amenities shall be within 1.50 Km radius. In addition to this there are infrastructure network like Roads, Drainages, Water Supply, Electrification, Gardens etc. Following factors are studied within the IGBC norms as Site Efficiency Water Efficiency Energy EfficiencyMaterials Indoor air Quality The above

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## 46. Finite Element Analysis For Structural Response Of Rcc Cooling Tower Shell Considering Alternative Supporting Systems

M.Madhu babu

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#### Abstract

Hyperbolic RCC free standing cooling towers constitute an important component of systems dealing with thermal power generation or nuclear power generations. Keeping in view modern requirements these structures constitute high rise structural systems.it is a normal practice to adopt one of the following kind of supports to the shell part of the tower. 1. Fixity at the base 2. I type of column support at the base 3. V type of column support at the base With a view to compare the relative influence of the supports on the structural response offered by the shell for available case history Finite Element Analysis employing higher order Mindlin formulation have been undertaken. The comparison has been made of the self-weight loading, static wind loading and pseudo static seismic activities the loads are calculated as per the recommendation of relevant IS codes.



# **47.** Concrete-Steel Composite Beams Of A Framed Structure For Enhancement In Earthquake Resistance

A.Rajini

Princeton Institute Of Engineering & Technology For Women

#### Abstract

Behavior of flexural members in a framed structure is a function of their stiffness properties. These stiffness properties in turn depend upon the ductility of the member. Conventional reinforcement of Torsteel bars if replaced by rolled steel sections may change these properties. This also reduces the congestion of reinforcement at the beam column junction and facilitates for more ductility. This is advantageous for high rise structures most susceptible to earthquakes. This paper covers a comparative study of members with conventional reinforcement and reinforcement using rolled steel sections. Beams were cast and tested for failure load and deformation by keeping the percentage of reinforcement and cross section the same. Experimental results were compared analytically using software ANSYS. Results show that the use of rolled steel sections is more effective in terms of load carrying capacity in flexure, deflection and stiffness properties.

## 48. Computation Of Buckling Strength Of Reinforced Concrete Columns By The Transfer-Matrix Method

K.Geetha

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The existing methods for predicting of the buckling strength of reinforced concrete are satisfactory for the usual cases of use. However their applicability remains limited. The approximate methods apply only for shorts columns with a small eccentricity of a compression force. The other existing methods impose restrictive conditions: a partially loaded column cannot



be modelled by the known methods; concentrated horizontal load or a concentrated moment applied in an unspecified point of the column cannot be treated. The restrictions on the modes of fixing of the supports limit the studies to hinged-hinged columns or to cantilever. The interest of the matrix transfer method for the calculation of the buckling strength of reinforced concrete columns is its flexibility. It allows studying all the external loading cases and all conditions of supports.

## **49. Engineering Utilization Of Marble Slurry**

M.Naresh

Princeton Institute Of Engineering & Technology For Women

#### Abstract

Marble slurry is a processing and polishing waste of marble mining industry. Its huge quantity of the order of 20% out of mined resources is dumped on any empty land, agricultural fields, pasture lands, river beds and road sides. The present dumping practices have been creating a number of nuisances and problems including environmental and human health. Scientific disposal systems but with more emphasis on engineering utilization have to be developed simultaneously and as fast as possible. Construction industries can be the main user of marble slurry whether in bulk or minor quantities. The utilization of marble slurry in mortar either by substitution or addition ,in damp proof course(DPC)replacing sand by 50% marble slurry as leak proof material, formwork removing agent, curing and white washing mixture were investigated by field experiments and observations. Formwork removal was easily obtained with smooth surfaces. Using slurry in curing proved to be more efficient, cheap and more beneficial to the concreting process having hardening and gaining strength more than normal. White washing with 50-50 slurry and lime was proved to be the best option.



## 50. Conformal Mapping And Swartz-Christophel Transformation Of The Critical Normal Stress Distribution Of Footing On Slope

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The present work tries to elucidate on the advantages of conformal mapping transformation over other advanced engineering analysis skills. The work "Variational Solution of the Critical Normal Stress Distribution of Footing on Slope" carried out by Onyelowe and Agunwamba in 2011 used limit equilibrium condition to solve the stability problem establishing a mathematical expression to determining the critical normal stress of footing on slope. However, the present work has gone further to determine how the critical stress is spread with respect to rupture angle using the conformal mapping transformation. Therefore, conformal mapping transformation has proved to be a good engineering tool and principle to solving footing on slope problems.

## 51. Wastewater Management In A Dwelling House- A Case Study

V.Sundeep

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#### Abstract

Domestic wastewater treatment system for a dwelling house, grey water treatment using planter bed and septic tank with root zone bed (RZB) for black water, has been experimented in a house as a zero discharge concept. Two years of operation and maintenance suggests that model is efficient for pollutant removal. System is maintenance free and economically viable for individual houses in rural areas as well in semi-urban developing areas. Installation cost is about 0.1% of cost construction of house. Providing zero discharge concepts may be made mandatory to ease the burden on the government and to keep environment safe.



# 52. Experimental Study On Water Permeability And Chloride Permeability Of Concrete With Ggbs As A Replacement Material For Cement

Venkateshwarlu

Princeton Institute of Engineering & Technology for women

#### Abstract

Over the past decade, global warming and environmental destruction have become manifest problems, resulting in increasing attention to pollution and waste management control. The use of recycled waste cementitious materials is becoming of increasing importance in construction practice. In India, we produce about 7.8 million tonnes of blast furnace slag, which is a by-product of steel. The disposal of GGBS as a landfill is a problem, which leads to serious environmental hazards. GGBS can be incorporated in cementitious materials to modify and improve certain properties for specific uses. An attempt has been made to replace cement using GGBS in concrete of gradesM20& M25 and studying its permeability characteristics. GGBS was used to replace the cement partially from 0 to 100% at increments of 5%. The experimental results showed that, with the partial replacement of cement by GGBS till 60%, the permeability of concrete is decreased and the resistance to chemical attack is increased.

## 53. Correlation Between Physical Properties And California Bearing Ratio Test On Soils Of Gujarat Region In Both Soak And Unsoak Condition

N.Pavani

Princeton Institute Of Engineering & Technology For Women

## Abstract

In highway design, subgrade strength ismostly affected by thickness of pavement. One of the methods to determine the subgrade strength in India is CBR (California Bearing Ratio) test. CBR testing in the laboratory on soaked and un-soaked conditions to simulate the field soil conditions. in this paper the comparisons between CBR soaked test results for CBR unsoaked in some



variation of silt+clay content in soil of Gujarat region and make simple comparisons between CBR soaked for CBR un-soaked by considering the soil properties whereas can be predicted the CBR soaked value based on the CBR unsoaked test results. The results showed that there was a linear correlation between the CBR soaked and CBR unsoaked also influenced by the nature of the index (the properties of the soil). The maximum value of CBR ranges of 20-40 percent silt+clay content.Silt+clay content also affect the DCP results and DCP is maximum at higher silt+Clay content.

## 54. Evaluation Of Mechanical Properties Of Self Compacting Concrete With Manufactured Sand And Fly Ash

#### A.Rajani

Princeton Institute Of Engineering & Technology For Women

#### Abstract

This paper presents the details self compacting concrete (SCC) developed by using fly ash and manufactured sand. Characterization studies of all the ingredients of SCC have been carried out. SCC containing different proportion of fly ash have been tested for Slump flow, V-funnel, U-Box, L-box and J-ring and found that the values are within the limits prescribed by EFNARC. Mechanical properties such as compressive strength, split tensile strength, modulus of rupture and modulus of elasticity have been evaluated as per Bureau of Indian Standards. It is observed from the studies that the compressive strength and split tensile strength decreases with the increase in replacement of cement by fly ash. The modulus of rupture values are slightly decreasing with the increase of % replacement of cement by fly ash. Further, it is noted that IS: 456 underestimates the flexural strength compared to corresponding experimental observations. Static modulus of elasticity has been computed for all the SCC mixes and is found to be less than the value computed by using IS: 456-2000. The reason for the same modulus of elasticity for all SCC mixes may be attributed to presence of large contents of mineral admixtures, make the SCC mix denser, which will increase in stiffness. It can be concluded that SCC with manufactured sand and fly ash can be used for all applications in the construction sector.

# 55. Damaged Rc Beams With Circular Web Opening Repaired Using Different Configurations Of Bonding Steel Plate

K.Shobha

Princeton Institute Of Engineering & Technology For Women

#### Abstract

This paper presents the results of an experimental study regarding the repair effectiveness of steel plates for damaged Reinforced Concrete (RC) beams with a circular web opening at shear zones. It highlights the effect of fixing the steel plates on the damaged beams on the load capacity, deflection, steel strain, steel plate strain and failure mode. In the experimental program, three beams were used, with one solid beam used as a control beam and the other two beams repaired by using two configurations (incline and vertical) of steel plate. The results revealed the efficiency of using steel plates for the repairing of damaged beams with a circular opening, in that it increases the ultimate capacity of the beams significantly and reduces the deflection under the opening. Furthermore, it was found that using an incline configuration of steel plate for repairing of beams with a web opening is much more efficient than the use of the vertical configuration. Using an inclined configuration not only increased the ultimate capacity of the beams, it also changed the mode of failure from shear mode to flexural mode.

## 56. Effect Of Steel Fibres On The Strength And Behaviour Of Self Compacting Rubberised Concrete

V.Sundeep

Princeton Institute Of Engineering & Technology For Women

## Abstract

The concepts of sustainability and sustainable development are receiving greater attention nowadays as the causes of global warming and climatic change are discussed in various forums. Since, concrete is the most widely used construction material on earth, sustainable technologies



for concrete construction allow for reduced cost, conservation of resources, utilization of waste materials and the development of eco-friendly durable concrete. Considering the above aspects, a cementitious composite known as Self Compacting Rubberised Concrete (SCRC) was developed by adding scrap rubber to Self Compacting Concrete (SCC). The investigations on the engineering properties of SCRC revealed that there is a systematic reduction in compressive, tensile and flexural strength of SCC on addition of scrap rubber. In order to improve the foresaid engineering properties of SCRC, steel fibres were added to the composite and the properties of Steel Fibre Reinforced Self Compacting Rubberised Concrete (SFRSCRC) were evaluated. Also, a general regression equation correlating various engineering properties of the composite was developed.

## 57. Variability Issues Of Road & Its Subsurface Addressed By Ground Coupled Gpr

K.Geetha

Princeton Institute Of Engineering & Technology For Women

#### Abstract

The application of ground penetrating radar 'GPR' for pavement evaluation is relatively new concept in India. Air coupled antenna based GPR systems are mostly used worldwide because of its ease and availability of the well defined mathematical models useful for calibration purpose and subsequent ground parameter estimation, whereas for ground coupled antenna based GPR systems there is no known mathematical models available for calibration and parameter estimation. Therefore, the use of ground coupled systems is quite challenging. In this study, a ground coupled antenna based GPR survey has been conducted at Roorkee, India, to examine the repercussions of the structural variability on the pavement & utility related works. The variability issues have been focused based on the basis of the visual interpretation of GPR image and the variations in average electromagnetic (EM) wave velocity. The variations in the EM wave velocity have been found to indicate the variations in the ground composition which many a times is not detectable through visual interpretation of ground image. This has an impact on the



accuracy of the predicted depth of utilities and thicknesses of pavement sub layers. Thus, the need of GPR calibration with respect to depth scale is of enormous importance and should be done frequently at various locations on a big road. The best part which attracts is the ease & fastness of the velocity approach with which the work of depth and thickness estimation can be conducted. At network level the approach proves to be very effective. The ground coupled GPR based layer thickness estimation results are obtained with 19.55 % average error.

## 58. An Experimental Study On Growth Of Time-Dependent Strain In Shape Memory Alloy Reinforced Concrete Beams And Slabs

M.Naresh

Princeton Institute Of Engineering & Technology For Women

#### Abstract

This paper highlights the useful properties of Shape Memory Alloy (SMA), towards utilization in concrete structures. The ability of SMA bars to reduce growth of time-dependent and thermal strains in concrete beams and slabs using laboratory scale model was investigated upto concrete age of 600 days and are hereby presented in this paper. It was observed that the growth of timedependent strain was less in the treated beams and slabs reinforced with a combination of SMA and conventional steel bars, than in controlled beams and slabs with only conventional steel bars. With increase in age of concrete the difference between strain growths in treated and controlled specimens' increases, maintaining the parameters of size, percentage area of reinforcement, concrete grade and environmental conditions same. With increase in span and ambient temperature the influence of SMA reinforcement in reducing time-dependent strain growth was more prominent. Mechanical behavior of the test specimens were analyzed using Model Codes, ACI 318 (2005) and CEB (1993) and found that, higher yield strength of SMAs', increases cracking moment and effective moment of inertia of the treated specimens under dead-load. This restricts growth of time-dependent deflections and therefore strains in treated flexural specimens.



# **59. Improvement Of Highway Work Zone Performance By Traffic Management**

M. Madhu babu

Princeton Institute Of Engineering & Technology For Women

#### Abstract

This study investigates the effects of traffic management strategies on performance of a work zone along arterial roads. The strategies included Temporary Access Control (TAC), Limitation of Heavy Vehicles (LHV) and Lanes Management (LM). Study area was conducted on Queen Rania Al-Abdullah Arterial Street (QRAA) in Amman, the Capital of Jordan. Traffic volume was collected through field observation during morning rush hours. Then, a micro simulation model was developed based on empirical traffic data using VISSIM software. The simulation model has been validated using different parameters. The analysis showed that the average delay was highly affected by a lot of factors like percent of heavy vehicles, flow from access roads, parking, driver behavior and lanes monitoring. Moreover, the average delay was 113.5 second/vehicle and average speed was 17 km/hr. furthermore, speed has decreased from 22 km/hour before work 10.1 km/hour work (-54 zone to at zone %)

## 60. Prediction Of Monthly Rainfall In Ordan Valley Using Artificial Neural Network

#### B.Nithesh Ikshwaak

#### Princeton Institute Of Engineering & Technology For Women

#### Abstract

Artificial Neural Network (ANN) was applied to predict the long-term monthly rainfall for selected stations in Jordan valley. Meteorological data measured by Jordan meteorological department in the period between5791 and 5001 were used. Three neurons which receive input signals of total monthly rainfall for three stations were used in the input layer of the network.

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One neuron, which produces corresponding output signals of the total monthly rainfall, to one station, is utilized in the output layer of the network. Finally, the values determined by the artificial neural network model were compared with the actual data. Errors obtained in this model are well within acceptable limits.

## 61. A Comparison Of Smart Phone Camera Calibration Approaches Using The Digital Close-Range Photogrammetry Technique

P.Sravanthi

Princeton institute of Engineering & Technology for women

#### Abstract

This paper presents a real-time application of mobile phone digital camera calibration adopting two different methods depends on Photo Modeler computer software to determine the distortion parameters and the camera intrinsic. Two different methods were used to assess the calibration process via with two different mathematical models, which are the DLT and the SIFT, to detect and identify the features of the calibration pattern to assess a robust bundle orientation of the targeted geometrical shapes. The results showed that both methods have a standard difference of estimation of the pattern calibration values that do not exceed 1.70 pixels in both X, Y direction with a maximum connectivity of minimum 94% between images, in counter of the Auto-Calibration approach which has a residuals of 2.60 pixels in both direction of X and, Y with a connectivity of 35% as a maximum overlapping percentage between images.



## 62. Finite Element Analysis Of Soil-Pile Interface Under Cyclic Loading J.Sangeetha

Princeton Institute Of Engineering & Technology For Women

#### Abstract

The behavior of circular pile has been widely treated considering the loading as a monotonic loading. In practise, the type of the load is varies according to many factors, which pushed us to use cyclic loading. The purpose of this article is to analyze the behavior of the soil-pile interface in calibration chamber under cyclic loading. A finite element analysis, through Plaxis 2D code, is used to realize this study. This paper deals with a new evaluation of the pile response, by taking into account the different pile–soil adhesions. It is found at the level of the friction sleeve that, the shear stress increases when the pile–soil adhesions increases. Further, the lateral friction stress is much more influenced by the friction sleeve roughness.

# 63. Repair Of Rc Beams With Openings Subjected To Torsion Using Steel Plates

#### V.Sandeep

#### Princeton Institute Of Engineering & Technology For Women

#### Abstract

This paper presents the results of an experimental investigation on the behavior of RC beams with openings repaired by steel plates and subjected to pure torsion. The experimental study includes testing of seven RC beams divided into three groups. The parameters considered in this study include the steel plates configuration, opening width and steel plate thickness. The experimental work consists of one solid specimen, four specimens with openings of 300 x 150 mm and two specimens with openings of 500 x 150 mm. The results of the tested beams include cracking and ultimate torques, angle of rotation, toughness, and mode of failure. A cost effectiveness study was performed to compare the different repair configurations used in this



research. The experimental results showed that using full steel plates in repairing beams with opening significantly improved the ultimate torsional capacity of such beams.

## 64. Decision Support System For Risk Management With Application To Water Supply Systems In Egypt

A.Rajani

Princeton institute of Engineering & Technology for women

#### Abstract

Water supply systems (WSS) are commonly collected of water sources (WS), transmission pipes, treatment plants, and distribution networks from source to tap and generally are subjected to variation of risks. However, the present study provides an adaptive risk management framework for water supply systems that provides drinkable water to various Cairo regions. However, three risk assessment and management case studies were conducted at different Cairo drinkable water supply systems during 2015- 2018, including the location served by North Helwan, Fostat and ElMarg water treatment plants (WTP). The work scope was involved in two main parts. In the first part, the common risk challenges in water distribution systems (WDS) are assessed to adopt the methodology for risk management in the Cairo water system. Moreover, these types of risks are sectored according to their potential impact and probability of occurrence is developed. While, the second part involved on developing a Grey Relational Analysis (GRA) approach to integrate risk alternatives mitigation based on supply reliability, environmental, social and economic key criteria and consequently supply decision support on the choosing of risk response strategies according to the correlation between their reference and comparability sequences. Then, in order to monitor the tolerability of acceptable residual risk levels after applying the proposed alternative strategies, the principal of As Low As Reasonably Practicable (ALARP) is applied. The outcomes of this paper displayed that several risks constitute the main parameter within which to characterize water supply systems and its operation, thus, it is a key factor in supply and distribution system operation and planning decision making. Moreover, this study put



forward the basis for water services providers to mitigate the risk of non-compliance and realize the target supply standards within the short, medium and long term.

## 65. Assessment Of Irrigation Water And Water Delivery Performance At Branch Canal Level In The Nile Delta

M. Madhu babu

Princeton Institute Of Engineering & Technology For Women

#### Abstract

Egypt currently facing a critical water scarcity situation. The agriculture sector remains the main and the largest consumer of available fresh water consuming about more than 80% of Egypt's water resources. In addition, the increasing food demand with less water consumption is of a great importance and a great challenge in the same time due to the rapid increase in population. Therefore, water allocation among different water use sectors is in a highly competitive situation with the agricultural sector.

This study examines water delivery performance and its effects on farmers of the command area of Alfia branch canal with an area served of 3883 ha (9240 feddans) located on eastern Nile Delta. Water supply system was evaluated at the canal level, using the adequacy, efficiency, dependability and equity indicators. These indicators calculated for 24-months irrigation seasons of 2016 and 2017, using measured water deliveries and calculated crop water requirements, water quality analysis, along the canal.

The findings of the study showed that there is a direct relationship between water level at the head of the branch canal and the corresponding drain due to the presence of well-functioning subsurface drainage. Water availability in the canal command area is sufficient throughout the year fulfilling adequacy because farmers located at the tail end of the canal are conjunctively using the shallow groundwater to overcome the shortage of delivered water. Farmers located in the head of the canal are occasionally use the groundwater comparing to farmers suited in the tail end due to better water accessibility in the head of the canal. However, they grow rice which is



high water consumer crop while the irrigation duty supply for the canal is released based on other crops excluding rice. For this reason, farmers substitute the deficit water amount from the groundwater.

## 66. Experimental Investigation On Geopolymer Concrete By Using Ggbs And Marble Powder

P.Sravanthi

Princeton institute of Engineering & Technology for women

#### Abstract

This paper contains study of experimental investigation on geopolymer concrete by using GGBS and marble powder with basic fluids Sodium Hydroxide (NaOH) and Sodium Silicate (Na2SiO3). Distinctive molarities of sodium hydroxide arrangement i.e. 8M, 10M and 12M are taken to get ready diverse blends and the compressive strength is ascertained for each of the blend. In this study we comapared results of marble with fly ash to GGBS with fly ash for 8M, 10M and 12M. the compressive strength of concrete, flexure strength and split tensile strength are tabulated.conclusions draw on from these tests.

## 67. Sustainability Perceptions On Wastewater Treatment Operations In Urban Areas Of Developing World

M.Naresh

Princeton Institute Of Engineering & Technology For Women

#### Abstract

Implementation of the sustainability concepts in water use and management have received considerable attention all over the world. These efforts have led to the initiation of wellcoordinated attempts to ensure reliable wastewater management systems across wide range of industrial or commercial operations. The choice of wastewater treatment technology in a



particular organizational setting is often influenced by large number of factors. In the case of rapidly expanding developing state like Kerala, the decision on the choice of wastewater treatment unit in an organization is often based on the acceptability of the pollution control agencies than through any rigorous evaluation for the process sustainability. The research initiatives undertaken elsewhere have emphasized the need for evaluation of three broad aspects of sustainability - economic, environment and social - in the planning and design of wastewater treatment units. This paper examines the degree of acceptability of the sustainability concepts in the wastewater treatment operations for Indian scenario. The assessment is made based on the information collected on the wastewater treatment operations carried out at a few selected cases. The research outputs bring to light the areas that need strengthening of organizational capability in taking environmentally, economically and socially conscious decisionmaking relating to wastewater treatment operations.

# 68. Environmental Hazard And Disaster In Disposing Marble Slurry

N.Pavani

Princeton Institute Of Engineering & Technology For Women

#### Abstract

Considerable marble reserves exist in Rajasthan, an Indian state. The industry generates an extremely large number of wastes from mined areas in the form of mine wastes to processing and polishing wastes at gang saws locations. Production of marble slurry, the waste dust along with heat consumes more than 43,000 litres of water per hour per gangsaw. The rapidly advancing marble industry generates heaps of uncontrolled wastes which are piling up in the absence of proper disposal systems. Before it is too late, damage to environment and human health might reach point of no return. It is, therefore, uppermost and urgent that both utilization and disposal systems are developed SIMULTANEOUSLY. This has to be done as fast as possible and on the priority basis. Marble slurry is alkaline having pH value of 9.1 which can help utilization as admixture to concrete leading to rural construction and reconstruction. Moisture contents and

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water absorption properties were found to be very low resulting into dryness and presence of fine particles. Crops are damaged and human health gets deteriorated. The investigation of effect of marble slurry on crops and lands was done, that is, on existing crops like garden grass, wheat crops and sunflower. The severity of the crisis is indicated from observations of damage.

## 69. Application Of Green Building Concept For An Integrated Township Project- A Case Study

#### P.Sravanthi

Princeton Institute Of Engineering & Technology For Women

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The use of Ecosystems for recreation, wealth enhancement and other selfish purposes is growing. However, the capacity of Ecosystems to provide these services has declined significantly. Reversing the degradation of Ecosystems while meeting increasing demands for their services is a major challenge. It is called as a solution, technique, an attitude or a lifestyle, turning GREEN is possibly the only way out of this mess we have created ourselves for. Virtually, all earth's Ecosystems have been significantly transformed through human actions. Changes have been especially rapid in the last 50 years and today the fastest changes are taking place in developing countries. Ecosystems are particularly affected by large scale construction. In the instant project work a case study is planned to undertake the GREEN home features as per the guidelines framed by the Indian Green Building Council (IGBC), Hyderabad for the construction & development of an integrated township project at Besa, Nagpur. The land use plan is covered under Residential prototypes i.e. Bungalows, Row Houses, Apartments, Sky Villas, EWS etc. and Non-residential Prototypes such as Commercial centers, Educational Institutions, Health Service Centre, Public utilities, park, Gardens, landscape etc. All these amenities shall be within 1.50 Km radius. In addition to this there are infrastructure network like Roads, Drainages, Water Supply, Electrification, Gardens etc. Following factors are studied within the IGBC norms as Site Efficiency Water Efficiency Energy EfficiencyMaterials Indoor air Quality The above concepts are being applied to an integrated township project as per IGBC format on 300.22 acres



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Princeton institute of Engineering & Technology for women

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K.Geetha

Princeton Institute Of Engineering & Technology For Women

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# 76. Experimental Study On Water Permeability And Chloride Permeability Of Concrete With Ggbs As A Replacement Material For Cement

B.Nithesh Ikshwaak

Princeton Institute Of Engineering & Technology For Womens

#### Abstract

Over the past decade, global warming and environmental destruction have become manifest problems, resulting in increasing attention to pollution and waste management control. The use of recycled waste cementitious materials is becoming of increasing importance in construction practice. In India, we produce about 7.8 million tonnes of blast furnace slag, which is a by-product of steel. The disposal of GGBS as a landfill is a problem, which leads to serious environmental hazards. GGBS can be incorporated in cementitious materials to modify and improve certain properties for specific uses. An attempt has been made to replace cement using GGBS in concrete of gradesM20& M25 and studying its permeability characteristics. GGBS was used to replace the cement partially from 0 to 100% at increments of 5%. The experimental results showed that, with the partial replacement of cement by GGBS till 60%, the permeability of concrete is decreased and the resistance to chemical attack is increased.

## 77. Correlation Between Physical Properties And California Bearing Ratio Test On Soils Of Gujarat Region In Both Soak And Unsoak Conditon

M.Naresh

Princeton Institute Of Engineering & Technology For Women

## Abstract

In highway design, subgrade strength ismostly affected by thickness of pavement. One of the methods to determine the subgrade strength in India is CBR (California Bearing Ratio) test. CBR testing in the laboratory on soaked and un-soaked conditions to simulate the field soil conditions. in this paper the comparisons between CBR soaked test results for CBR unsoaked in some



variation of silt+clay content in soil of Gujarat region and make simple comparisons between CBR soaked for CBR un-soaked by considering the soil properties whereas can be predicted the CBR soaked value based on the CBR unsoaked test results. The results showed that there was a linear correlation between the CBR soaked and CBR unsoaked also influenced by the nature of the index (the properties of the soil). The maximum value of CBR ranges of 20-40 percent silt+clay content.Silt+clay content also affect the DCP results and DCP is maximum at higher silt+Clay content.

## 78. Evaluation Of Mechanical Properties Of Self Compacting Concrete With Manufactured Sand And Fly Ash

#### A.Rajani

Princeton Institute Of Engineering & Technology For Women

#### Abstract

This paper presents the details self compacting concrete (SCC) developed by using fly ash and manufactured sand. Characterization studies of all the ingredients of SCC have been carried out. SCC containing different proportion of fly ash have been tested for Slump flow, V-funnel, U-Box, L-box and J-ring and found that the values are within the limits prescribed by EFNARC. Mechanical properties such as compressive strength, split tensile strength, modulus of rupture and modulus of elasticity have been evaluated as per Bureau of Indian Standards. It is observed from the studies that the compressive strength and split tensile strength decreases with the increase in replacement of cement by fly ash. The modulus of rupture values are slightly decreasing with the increase of % replacement of cement by fly ash. Further, it is noted that IS: 456 underestimates the flexural strength compared to corresponding experimental observations. Static modulus of elasticity has been computed for all the SCC mixes and is found to be less than the value computed by using IS: 456-2000. The reason for the same modulus of elasticity for all SCC mixes may be attributed to presence of large contents of mineral admixtures, make the SCC



mix denser, which will increase in stiffness. It can be concluded that SCC with manufactured sand and fly ash can be used for all applications in the construction sector.

# 79. Damaged Rc Beams With Circular Web Opening Repaired Using Different Configurations Of Bonding Steel Plate

M. Madhu babu

Princeton Institute Of Engineering & Technology For Women

#### Abstract

This paper presents the results of an experimental study regarding the repair effectiveness of steel plates for damaged Reinforced Concrete (RC) beams with a circular web opening at shear zones. It highlights the effect of fixing the steel plates on the damaged beams on the load capacity, deflection, steel strain, steel plate strain and failure mode. In the experimental program, three beams were used, with one solid beam used as a control beam and the other two beams repaired by using two configurations (incline and vertical) of steel plate. The results revealed the efficiency of using steel plates for the repairing of damaged beams with a circular opening, in that it increases the ultimate capacity of the beams significantly and reduces the deflection under the opening. Furthermore, it was found that using an incline configuration of steel plate for repairing of beams with a web opening is much more efficient than the use of the vertical configuration. Using an inclined configuration not only increased the ultimate capacity of the beams, it also changed the mode of failure from shear mode to flexural mode.

## 80. Effect Of Steel Fibres On The Strength And Behaviour Of Self Compacting Rubberised Concrete

P.Sravanthi

Princeton Institute Of Engineering & Technology For Women

#### Abstract

The concepts of sustainability and sustainable development are receiving greater attention nowadays as the causes of global warming and climatic change are discussed in various forums. Since, concrete is the most widely used construction material on earth, sustainable technologies for concrete construction allow for reduced cost, conservation of resources, utilization of waste materials and the development of eco-friendly durable concrete. Considering the above aspects, a cementitious composite known as Self Compacting Rubberised Concrete (SCRC) was developed by adding scrap rubber to Self Compacting Concrete (SCC). The investigations on the engineering properties of SCRC revealed that there is a systematic reduction in compressive, tensile and flexural strength of SCC on addition of scrap rubber. In order to improve the foresaid engineering properties of SCRC, steel fibres were added to the composite and the properties of Steel Fibre Reinforced Self Compacting Rubberised Concrete (SFRSCRC) were evaluated. Also, a general regression equation correlating various engineering properties of the composite was developed.



## 81. Variability Issues Of Road & Its Subsurface Addressed By Ground Coupled Gpr

M.Naresh

Princeton Institute Of Engineering & Technology For Women

#### Abstract

The application of ground penetrating radar 'GPR' for pavement evaluation is relatively new concept in India. Air coupled antenna based GPR systems are mostly used worldwide because of its ease and availability of the well defined mathematical models useful for calibration purpose and subsequent ground parameter estimation, whereas for ground coupled antenna based GPR systems there is no known mathematical models available for calibration and parameter estimation. Therefore, the use of ground coupled systems is quite challenging. In this study, a ground coupled antenna based GPR survey has been conducted at Roorkee, India, to examine the repercussions of the structural variability on the pavement & utility related works. The variability issues have been focused based on the basis of the visual interpretation of GPR image and the variations in average electromagnetic (EM) wave velocity. The variations in the EM wave velocity have been found to indicate the variations in the ground composition which many a times is not detectable through visual interpretation of ground image. This has an impact on the accuracy of the predicted depth of utilities and thicknesses of pavement sub layers. Thus, the need of GPR calibration with respect to depth scale is of enormous importance and should be done frequently at various locations on a big road. The best part which attracts is the ease & fastness of the velocity approach with which the work of depth and thickness estimation can be conducted. At network level the approach proves to be very effective. The ground coupled GPR based layer thickness estimation results are obtained with 19.55 % average error.



## 82. Marketing Development At Each Stage Of The Product

M Santhosh Kumar

Princeton Institute Of Engineering & Technology For Women

#### Abstract

Any product has to go through four stages of introduction, growth, maturity and decline, with different marketing characteristics, they are: price-oriented trial sales method, direct sales method, unique product strategy, cost-oriented strategy; non-comprehensive Pricing, product line expansion, and tightening, harvesting, or consolidation strategies. In order to win the market, develop and strengthen yourself in the competition, you might as well try.

## 83. The Organizational Structure of China, Japan and the United States and Its Comparison

#### P Srivani Renuka

#### Princeton Institute Of Engineering & Technology For Women

#### Abstract

As a highly comprehensive industrial sector, the automobile industry plays an extremely important role in promoting the country's industrialization and realizing the modernization of the entire national economy and social life. It has the characteristics of a wide range of industrial associations, added value, elasticity of demand and high rate of technological progress. Its development can drive the steel, non-ferrous metals, plastics, rubber, glass and other raw material industries in the first place, improve the level of the machinery manufacturing industry in the middle, and promote petrochemical industry, highway construction and various supporting services in the lower end.


# 84. On The International Economic Environment Of My Country's Industrial Structure Adjustment

#### D Shiva Prasanna

Princeton Institute Of Engineering & Technology For Women

#### Abstract

As our country moves from closed to open, the most urgent task is to adjust the industrial structure to meet the requirements of the internationalization of economic life. Therefore, the adjustment of a country's industrial structure not only depends on its own national conditions, but also is affected by the international economic environment in which it is located. The content of the international economic environment is rich and the scope is wide. This article only briefly analyzes some of the main problems, and then gives some opinions on the adjustment of my country's industrial structure.

# 85. Bookmark And Share Email This Article Print This Article The New Pattern Of Economic Cooperation In Northeast Asia And Our Countermeasures

#### Archana

Princeton Institute Of Engineering & Technology For Women

#### Abstract

A new pattern of economic cooperation is emerging in Northeast Asia. Northeast Asia is an area formed by including Japan, North and South Korea, the eastern part of the Soviet Union and the coastal areas of northeastern my country. Due to differences in systems and a series of historical reasons. Political and economic relations between countries in the region have been cold in the past and have even become a hotbed of war. However, in recent years, the political relations among the countries in the region have begun to thaw, the economic relations have become

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increasingly close, and a new pattern of economic cooperation is emerging. Some even believe that the region will soon form an "economic zone" or "economic circle". So what is

#### **86.** Pacific Development Confusion

#### Gandhamalla Ram Narsaiah

Princeton Institute Of Engineering & Technology For Women

#### Abstract

In the Pacific region, East Asia and Latin America also stand out. The difference is that East Asia represents the successful model of developing countries and regional economies, while Latin America has become a symbolic representative of the problems of third world countries. The contrast between the booming economy of the former and the stagflation of the latter accompanied by a severe debt crisis is hard to believe, since only twenty-five years ago Latin America rivaled most East Asian countries in economic prosperity and wealth, while When most market economy countries, especially East Asian countries .

#### 87. On The Current Adjustment Of Japan's Foreign Economic Strategy

K Naveen Kumar

#### Abstract

Japan is now the world's largest trade surplus country and largest creditor country. Japan's foreign exchange reserves occupy the first place in the world, and the yen has become one of the strongest currencies in the world. Japan's gross national product has surpassed the Soviet Union, becoming the second largest economy in the world. The per capita output value of Japan has surpassed that of the United States. However, in recent years, the trade friction between Japan and the United States and Europe has intensified, and the United States and Europe have more and more trade protectionist restrictions on Japanese exports. The yen has appreciated substantially since September 1985, and by December 1987.



### 88. Economic Reforms Falter With New Philippine Government

Paka Mallesh

#### Abstract

Since the Co. Aquino government came to power in February 1986, it has undergone a very severe test in politics, and also faced many obstacles in economic reform. Over the past two years, the new Philippine government has introduced economic reform measures including land reform, privatization of state-owned enterprises, debt reform, trade liberalization, free market mechanism reform, and fiscal and taxation reform. Due to the dictatorship of former President Marcos for 20 years, the economic structure has been seriously out of order for a long time, chronic illnesses have accumulated, and reform is not easy.

# **89.** An Exploration On Solving The Foreign Exchange Balance Of Three Foreign-Funded Enterprises

#### K Krishna Kumari

#### Princeton Institute Of Engineering & Technology For Women

#### Abstract

"Three capital" enterprises, namely overseas Chinese-funded enterprises, foreign-funded enterprises and Sino-foreign joint ventures. After the Third Plenary Session of the Eleventh Central Committee of the Communist Party of China, the country has formulated a large number of foreign-related economic regulations, such as the "Foreign-related Economic Contract Law", "Sino-Foreign Equity Joint Venture Law", etc., which have effectively promoted the smooth progress of foreign investment work. However, due to the short time of opening to the outside world and the imperfect economic legislation, there are still many problems in foreign-related economic activities. Among them, the foreign exchange balance of "three foreign-funded" enterprises is relatively important and has certain influence. according to



# 90. comparative study on the export market structure of manufactured goods in East Asia and Latin America

M Hari Prasad

Princeton Institute Of Engineering & Technology For Women

#### Abstract

The diversification of export markets and the development of South-South intra-regional trade are the two major problems faced by developing countries in the market structure strategy of manufactured goods export. The impact of fluctuations and deteriorating terms of trade trends related to commodity structure on their export earnings, so the diversification of export markets has become a

#### 91. With Malaysia's New Economic Policy

K Ananda Kumari

Princeton Institute Of Engineering & Technology For Women

#### Abstract

It has been 17 years since Malaysia implemented the 20-year "New Economic Policy" in 1970. During this period, Malaysia has made some progress in the national economy by formulating and implementing three five-year economic development plans. According to statistics, in 1985, the per capita GNP reached more than 1,800 US dollars, which is second only to Singapore among ASEAN countries, and also belongs to a category of countries with rapid economic development among the developing countries in the third world.



## 92. Negotiations and contracts for technology introduction projects Naga Raju

Princeton Institute Of Engineering & Technology For Women

#### Abstract

After the technology introduction project has gone through the feasibility study and the relevant units have made a decision, it will enter the specific implementation stage, that is, the negotiation stage. Through the negotiation, the contract is signed, the rights and obligations of both parties are determined, and the required technology is introduced to make it play a role in the national economy...

# **93. Measures taken by the New Zealand government to manage foreign debt** K Naveen Kumar

Princeton Institute Of Engineering & Technology For Women

#### Abstract

The outbreak of the international debt crisis has raised many new issues for the management of my country's foreign debt. The revelation of the debt crisis to our country is that it is easy to repay foreign debts when it is borrowed, and if it is not well controlled, managed and used improperly, it will not only fail to play a positive role in the development of the national economy, but will also bring serious consequences. On the other hand, countries that have successfully managed foreign debts have provided my country with the experience of formulating foreign debts that are in line with their own national conditions and adapt to changes in the international economic and financial situation.



### 94. Taiwanese Private Enterprise Mother-In-Law And Daughter-In-Law K Naveen Kumar

Princeton Institute Of Engineering & Technology For Women

#### Abstract

In the past 40 years, Taiwan's economy has developed rapidly. From 1952 to 1988, the gross national product increased from 1.6 billion US dollars to 122.5 billion US dollars. Rapid economic growth has made Taiwan one of the "Four Little Dragons" in Asia alongside South Korea, Hong Kong and Singapore. From the perspective of enterprise structure, from 1952 to 1985, the proportion of private enterprises in all enterprises increased from 43.4% to 83.9%, while the proportion of public enterprises decreased from 56.6% to 16.1%. In contrast, private enterprises developed rapidly and came from behind to become Taiwan's economic.

#### 95. Adjustment Of Industrial Structure In Developing Countries In The 1980s

Bollaram Divya

Princeton Institute Of Engineering & Technology For Women

#### Abstract

Since the 1980s, the world economy has entered a period of unstable and low-speed growth. The economic development of various countries has encountered difficulties of different degrees and manifestations, and has started to carry out economic adjustment or reform one after another. Under the impact of the worldwide wave of new technology revolution, the international division of labor in production is undergoing new changes, and the world industrial structure is undergoing new adjustments accordingly. Therefore, all kinds of countries are faced with the severe choice of how to upgrade the industrial structure.



# **96.** A Study On The Influence Factors Of Citizenship And Attachment On Smart City Acceptance Intention For Sustainable Development : Focusing On Innovation Resistance Model

Sandhya Rani-Gundala

#### Princeton Institute Of Engineering & Technology For Women

#### Abstract

This study utilizes the existing innovation resistance model to understand the acceptability of smart cities for sustainable development. As a citizen of the state, we derived citizenship, a personal characteristic of the degree of responsibility and public knowledge, as variables, and presented a research model by deriving attachments describing the relationship between people, places, and the environment. Based on this, we tried to establish an empirical study after establishing logic to identify it, and conducted the research overall by drawing a comprehensive conclusion. Survey items were used based on literature research and prior research for hypothetical verification

# 97. Quadratic Boost Converter With Cld Cell For Solar Lighting Applications

Anjaiah-Jillapally

#### Princeton Institute Of Engineering & Technology For Women

#### Abstract

The dc-dc converter is necessary to boost the low voltage from Solar panel/array to required voltage in Solar PV applications. In Solar PV system, the dc-dc converter will be buck-boost or boost converter. Many new boost converters are derived nowadays. In these, one of the modern converters is quadratic boost converter. Boost converters are required to operate at high values of duty ratio to get higher output voltage levels. The drawback of higher duty ratio value is that it limits the switching frequency values due to high reverse recovery time, which leads to poor efficiency and high electromagnetic interference effects. In existing boost converters, the



switches are suffered with high voltage stress. The proposed work has not considered the electromagnetic interference but rest of the issues are taken care by adding appropriate Capacitor, Inductor, Diode bridge (CLD) with the Quadratic boost converter. In this proposed converter high output voltage is obtained with low duty ratio. Thus, it eliminates the problem of high reverse recovery time and limitation in using high switching frequency. It also reveals that the efficiency of the quadratic boost converter with CLD cell is higher than conventional boost converters and voltage stress is drastically reduced for the same output. Therefore, quadratic boost converter with CLD cell is well suited for solar PV lighting applications.

# **98. Fuzzy Logic Controller Based Three-Phase Pwm Ac Chopper Fed Induction Motor Drive With Hbcc Technique**

#### S.Bhavana

Princeton Institute Of Engineering & Technology For Women

#### Abstract

In this work, novel control approach for PFC of 3-ph PWM AC choppers is designed. The control strategy is based on the HBCC method fed 3-ph squirrel cage Induction Motor with flexible starting and smooth speed control operating modes. The main aim of this work is to get the IM drive's input PFC to work under various operating conditions. PFC is achieved by driving the actual 3-ph supply with a constant current and the corresponding reference currents, which are produced in phase with the supply voltages using the HBCC technique. The suggested control strategy has two loops, an inner loop and an outer loop. The amplitude of the supply reference current arising from either the speed controller or the starting controller is the output of the inner loop, which is PWM signals from the ac chopper and the output of the outer loop is the amplitude of the supply reference current arising from either the speed controller. As a consequence, the proposed system is simple, dependable, reliable and economical. Mathematical analysis of the drive mechanism is performed. The input LC filter's components are designed using frequency response. The proposed control technique is analysed, measured and simulation of results are obtained in a variety of testing circumstances.



# **99.** Evaluation Of Photovoltaic System Irradiation For Efficiency And Varying Temperature Effect Via Measurement

S.P.R.Manohar Raja

Princeton Institute Of Engineering & Technology For Women

#### Abstract

This paper deals with valuating the experimental performance of 46MWh solar photovoltaic system which was designed, developed, sized and installed at multi-complex building of health centre, Obodo Ahiara, in Ahiazu Mbaise local government area, Imo State, Nigeria for002061 converting abundant sunlight natural energy resource directly to electricity. The performance characteristics of the modules are valuated experimentally in terms of their response variables open circuit voltage (Voc), maximum voltage Vmax, short circuit current Isc, maximum current Imax, maximum power Pmax, and efficiency  $\varepsilon$  as a function of difference irradiance values of 400W/m2, 450W/m2, 500W/m2 and 600W/m2 for a period of 30 days in the month of January, 2018. These response variables are generally observed hourly to be directly proportional to irradiance with significant decrease in efficiency, Vmax, and Voc and Fill factor FF. Maximum efficiencies of 11.23% and 8.27% are achieved at irradiance of 500W/m2 for the module 1 and module 2 respectively. The maximum power outputs obtained at irradiance of 500W/m2 are 15.39 W and 22.65 W representing 30.78% and 45.3% of the manufacturer's power specifications for the PV module 1 and module 2 tested respectively. The hourly daily measured total and average temperatures vary from high values of 345.400C (43.180C), 310.100C(38.760C) and 306.000C(38.250C) on the 1st, 3rd and 4th days to low values of 272.400C(34.050C) and 290.500C(36.310C) on the 5th and 2nd days.



## **100. Direct Lightning Strike On The Telecommunication Antenna Pole** Pasya.Pramada Kumari

Princeton Institute Of Engineering & Technology For Women

#### Abstract

For the wireless communication industry, lightning protection is always an increasing necessity due to the increasing growth of sophisticated electronic devices mounted on separate poles. The direct lightning strike on the telecommunication pole can cause dangerous over voltages, causing damage to the functions of sensitive equipment as well as dangerous step and touch voltages in the area around the pole legs. In this paper will be studied the transient electromagnetic process of the poles and the various lines connected to them under the action of the direct lightning impulse at the top of the pole. In the analysis of the transient process of electromagnetic wave propagation, each conductor of the pole is divided into certain segments. The length of the segment must respect the limit length criterion which is part of the minimum wavelength of the greater than one tenth of the minimum wavelength of the electromagnetic wave. This wavelength is a function of the maximum frequency in the limited lightning frequency spectrum.



# PROCEEDINGS OF INTERNATIONAL CONFERENCE ON INFORMATION & COMMUNICATION ENGINEERING



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1	11/2/2021	11:30 am-12:30 pm	Pre Conference Workshop	IBM	Mr. Abhishek Kumar
2		10:30 am-11:30 am	Inaugural Function & Key Note Address 1	Dr J R Joshi, Project Director Kusha, DRDO	Dr. Amit Agrawal & Dr. Rajeev Shrivastava
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4	12/2/2021	12:30 am-1:30 pm	Technical Session 1 &2	Session Chair: Dr. Manisha Sharma/ Dr. Kamal K Mehta	Dr. Rajesh Tiwari & Dr. Ritesh Kushwaha
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11	13/2/2021	1:30 pm -2:30 pm	Technical Session 7 & 8	Session Chair: Dr. D S Kushwaha / Dr. Sankit Ramkrishna	Dr. Neeraj Misra
12		2:30 pm -3:30 pm	Key Note Address 5	Dr Dhananjay Kumar, Prof and HoD, MIT Campus Chennai	Dr. Sanjay Kumar Suman
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# Real-time Implementation for the Speech Steganography using Short-Time Fourier Transform for Secured Mobile Communication

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Bharat institute of engineering and technology India <sup>1,2,3</sup>

#### Abstract

Steganography is the technique of concealing an undisclosed message inside an ordinary public message known as the Carrier. Digital signal processing methods, such as least significant bit encoding, have historically been used for hiding messages. The use of deep neural networks as steganographic functions for speech data is something this paper will present. This paper also demonstrate that the steganographic models suggested for vision are less suitable for speech and introduce a new model that involves the use of inverse-short-time fourier transform and short-time fourier transform within the network as the differentiable layers, thus imposing a vital constraint on the network outputs. Empirically, the efficacy of the proposed methods relative to deep learning based on multiple speech datasets should be demonstrated and the results are quantitatively and qualitatively examined. Moreover, using multiple decoders or a single conditional decoder, the proposed solution may be applied to conceal multiple messages in a single carrier. Finally, under various channel distortions, this model Qualitative studies indicate that human listeners cannot detect changes to the carrier and that the decoded messages are highly intelligible.

### The Power of PBL with its Consequences in Online Classes: Covid 19 Pandemic Impact

Vishnu Kumar Mishra<sup>1</sup>, Megha Mishra<sup>2</sup>, Rajesh Tiwari and Rajeev Shrivastava<sup>3</sup>



#### SSTC-SSGI INDIA 1,2 and BIET HYDERABAD INDIA 3,4

#### Abstract

Problem-based learning (PBL) is a learner-oriented teaching methodology through which the familiarity of cracking an undetermined problem which is restricted for stimulated content is performed. Learners gain knowledge of a subject in a deep manner. The PBL method does not concentrate for explaining the problems by means of a given answer, other than it allows additional desirable abilities and attributes to be shaped. This engages the achievement of details, improved synchronization and link the assembly and communication. Pedagogic systems have been exaggerated universally by the COVID-19 pandemic, and this pandemic is responsible to the complete shutting down of schools, universities and colleges. Online learning comprises courses delivered 100 percent interactive by postsecondary institutions, except massively open online courses (MOOCs). Compared to conventional courses that work as a brick-and-mortar devoting for school house, online learning, or virtual classes offered over the internet. The approach helps learners to improve the abilities and turns it to opportunity by doing practice. It improves condemnatory assessment, retrieval of anthologized and facilitates continuous knowledge surrounded by a team. This study also explores the downside of PBL by using the online platform with its benefits

### Design and Implementation of Women Security System using Internet of Things and Advanced RISC machine

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#### Abstract

Abstract: Women are now faced with many daily problems. As women are strong and unwilling to walk on the streets all night and all day, they face a lot of safety issues. In order to solve these challenges, we are designing new technologies. We use the Internet of Things (IOT) to make it possible for intelligent bands to send alerts, including locations, to nearby hospitals, police stations or registered mobile telephone numbers. A system of safety which uses a lot. An add-on called a smart stick, which includes GPS, GSM and ARM7 processors, is introduced. This GPS module tracks the location of individuals with intelligent bands. Turn the intelligent band on when the woman is threatened by pressing the power button. If activated, messages are sent to local police stations, local hospitals and registered mobile phone. When activated, it is sent automatically





# Utility-Oriented Federation of Cloud Computing Environments Through Different Application Services

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#### Abstract

This paper presents the vision, challenges, and architectural elements of Inter-Cloud for the utility-oriented federation of Cloud computing environments. The proposed Inter Cloud environment supports the scaling of applications across multiple vendor clouds. We have validated our approach by conducting a set of rigorous performance evaluation studies using the Cloud Sim toolkit. The results demonstrate that the federated Cloud computing model has immense potential as it offers significant performance gains as regards response time and cost-saving under dynamic workload scenarios.

