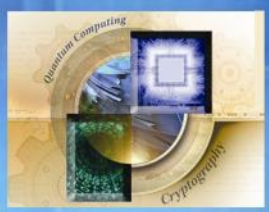
Souvenir



Annual Conference of Vijnana Parishad of India

and

National Symposium

Recent Development in Applicable Mathematics & Information Technology

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(Sponsored by DST & CSIR)

Organised By :

Jaypee Institute of Engineering & Technology
Guna, M.P (India)
www.jiet.ac.in

Rameshwar Thakur

RAJ BHAVAN
BHOPAL - 462 052

November 23, 2009

MESSAGE

I am glad to know that Jaypee Institute of Engineering and Technology, Guna is organizing the Annual Conference of Vijnana Parishad of India and a National Symposium, and that a souvenir is also being published to mark the occasion.

No country can progress without science and technology. In the modern times, Management has also emerged as a major tool for ensuring success in any field. Therefore, bonding of engineering with management techniques is imperative for growth and development.

I hope the Annual Conference of Vijnana Parishad of India and National Symposium will provide a forum for scientists, engineers, technologists to exchange their views and make recommendations for the future research and development of new technologies.

My best wishes are for the success of the Conference and the Symposium.

Rameshwar Thakur

(Rameshwar Thakur)

Digvijay Singh

1, Shyamla Hills, (8, Bungaow),
Bhopal (M.P.) - 462 013
☎ : 0755 - 2661500, 2441788

21 - 11 - 09

MESSAGE

I am delighted to know that Jaypee Institute of Engineering and Technology, Raghogarh, District Guna, Madhya Pradesh is organizing the Annual Conference of Vijnana Parishad of India and a National Symposium from 4th December to 6th December, 2009. It is also learnt that a Souvenir is being brought out on this occasion.

I wish all success for the event.

(DIGVIJAY SINGH)

Shivraj Singh Chouhan
Chief Minister

Government of Madhya Pradesh
BHOPAL - 462 004
October 25, 2009

MESSAGE

I am happy to learn that the Jaypee Institute of Engineering and Technology, Guna is organising the Annual Conference of Vijnana Parishad of India and a National Symposium during December 4 - 6, 2009.

India has been leader in the field of Mathematics since ancient times. Our glorious achievements in this field have lead to our advancement in the field of computer software.

I sincerely hope that fruitful deliberations will be held during the Annual conference of Vijnana Parishd of India and the Symposium.

I offer my best wishes for the success of the Conference and the Symposium.

(Shivraj Singh Chouhan)

कन्हैया लाल अग्रवाल
राज्यमंत्री,
सामान्य प्रशासन, नर्मदा घाटी विकास
एवं विमानन विभाग,
मध्यप्रदेश शासन

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Email : Chairmannvda-mp@nic.in
जावक क्र. : 1395
दिनांक : 15.10.09

MESSAGE

It gives me immense pleasure to note that Jaypee Institute of Engineering and Technology is going to organize the Annual Conference of Vijnana Parishad of India and a National Symposium.

New vistas are opening up everyday in the field of science and technology. I hope that the conference would come out with effective solutions and suggestions with regard to the problems in this field and would be very useful for the students as well as researchers.

I wish all success for the conference.

15/10/09

(K.L. Agrwal)

MANOJ GAUR
Excutive Chairman

JAIPRAKASH
ASSOCIATES LIMITED

Octover 27, 2009

MESSAGE

It is heartening to learn that the Jaypee Institute of Engineering and Technology (JIET), Guna is organizing the Annual Conference of Vijnana Parishad and a National Symposium of ***"Recent Developments in Applicable Mathematics and Information Technology"*** from 4th to 6th December 2009 at its campus.

I am extremely happy to know that the main objective of the Conference and Symposium is to offer a common platform for presenting and exchanging ideas with regard to the applications of techniques of mathematical sciences to deliver on emerging trends as wall as the practices that will benefit mankind. The theme of the Conference is quite relevant and has wide scope for innovative research. The Conference would certainly enthuse mathematicians, computer scientists, and other professionals in exchange of views.

I congratulate the organizers of the Conference and Symposium and wish them and all participants a big success.

(MANOJ GAUR)

JAYPEE GROUP

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Prof. S.K. KHANNA
Ph.D.(engg), FIE, FNASc, FNAE
Former Chairman AICTE & vice chairman UGC

MESSAGE

I am happy to learn that Jaypee Institute of Engineering & Technology (JIET), Guna is holding the Annual Conference of Vijnana Parishad and a National Symposium on ***"Recent Developments in Applicable Mathematics and Information Technology"*** at its campus on Dec. 4-6, 2009. In this conference, many researchers would participate and I learn that on this occasion a Souvenir is also being brought out.

Mathematics is one of the main branches of human knowledge which aims to describe, analyze, control and improve operations, planned and executed by technical system in industry, business, government and civil societies. The theme of the conference is quite befitting and hence naturally would attract researchers in the discipline across the country. I am sure the Conference and Symposium would deliberate important issues in the discipline and come out with pragmatic solutions.

I wish the Conference and Symposium a grand success.

Prof. S.K. Khanna
Ph.D. FNASc, FNAE

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY
Waknaghat, P.O. Dumehar, Kandaghat, Distt. Solan - 173 215 (H.P.) INDIA
Phone : (91) 1792 257999
Fax : (91) 1792 245268

MESSAGE

It gives me immense pleasure to know that the Jaypee Institute of Engineering and Technology (JIET), Guna is organizing the Annual Conference of Vijnana Parishad and a National Symposium on ***"Recent Developments in Applicable Mathematics and Information Technology"*** from 4th to 6th December 2009 at its campus.

The Conference and Symposium aim to bring like - minded individuals in the area of Mathematical Sciences and IT together so as to provide them a common platform to interact and discuss new challenges. I am sure that the deliberations spread over three days will enrich academic wisdom and enable exploration of new domains of applications in Mathematics and IT.

I congratulate the organizers of the Conference and Symposium and wish them and participants all success.

YAJ MEDURY

JAYPEE INSTITUTE OF ENGINEERING & TECHNOLOGY
(Constituent Centre of Jaypee University of Information Technology, Waknaghat, H.P.)
A.B. ROAD, P.B. No. 1, RAGHOGARH, DIST: GUNA (M.P.) PIN : 473226
Phone : 07544 - 267051, 267310 - 14 Fax : 07544 267011
Website: www.jiet.ac.in

MESSAGE

Japee Institute of Engineering and Technology, Guna will be organizing the Annual Conference of Vijnana Parishad and National Symposium on ***"Recent Developments in Applicable Mathematics and Information Technology"*** during December 4 - 6, 2009.

Mathematics has provided the foundation for solving intricate problems and has formed the basis for applications to real life situations. The selection of theme of Mathematics combined with Information Technology is novel. This combination will be full of practical applications of techniques, exchange of useful ideas and overall enrichment of knowledge. The assembly of large number of academicians, researchers and professionals practicing in the field will provide a stimulus for intellectual growth and a new direction for work to all concerned.

The efforts put in by the organizers in planning and conduction this national event is laudable. I wish all success to the Conference and Symposium.

(Dr. N.J. Rao)
Director

JAYPEE INSTITUTE OF ENGINEERING & TECHNOLOGY
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November 09, 2009

FROM THE DESK OF DEAN (RESEARCH)

An Institution of excellence is known by the research reported and published by the faculty in various journals of National and International repute. Organization of conferences / symposia / seminars acts as a catalytic agent in promotion of research at the Intuition. On such occasion our young faculty members get an opportunity to interact with eminent personalities who are experts in their own field. They get inspiration from them to undertake their own research. They also get an opportunity to present their research papers on their doorstep and identify some new research problems from the discussions and deliberations at the conference and symposium.

It is a matter of great academic satisfaction that Japee Institute of Engineering and Technology, Guna is organizing the Annual Conference of Vijnana Parishad of India and a National Symposium from Dec. 04 to 06, 2009. This conference is the 4th in its series since the inception of the Institute in 2003. Lord Becon has rightly said, "Mathematics is the gateway and key to all sciences". Information Technology also has its own importance in the present era of Technology. Efforts have been made to invite leading mathematicians and computer scientists to deliver plenary and invited lectures. I am confident that the deliberations of the conference and symposium will prove a new mile-stone for development of research in Applied and Engineering Sciences at JIET, Guna (M.P.)

(D. S. Hooda)
Dean, Research
&
Chairman
Local Organizing Committee

Organizing Committee of the Conference

Chief Patron

Sh. Manoj Gaur Executive Chairman, Jaypee Group

Patron

Dr. Y. Medury C.O.O. (Education), Jaypee Group

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Prof. K. K. Jain Dean, JIET

Convener

Prof. D. S. Hooda Dean (Research), JIET

Organizing Secretary

Dr. Shishir Kumar HOD (CSE), JIET

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Prof. P. K. Singh	Member
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Sh. V. C. Pandey	Member
Dr. Shishir Kumar	Organizing Secretary

ABSTRACTS OF PLENARY
&
INVITED TALKS

ITM11 : Application of Fibonacci sequence and its Recent Trends in the Applied Mathematics

Bijendra Singh
School of Studies in Mathematics, Vikram University, Ujjain (M. P.) India.
E-mail: bijendrasingh@yahoo.com

The Fibonacci sequence has many remarkable properties; moreover, it continues to find applications in many areas of science and mathematics. The literature in Fibonacci sequence is very vast now a day and over the years. This sequence is a very intriguing and interesting subject. This sequence is constructed by choosing the first two numbers (The ”seeds” of the sequence) then assigning the rest by the rule that each number be the sum of the two preceding numbers. The Fibonacci sequence is defined as 1 1 2 3 5 8 13 21 34 55 89 144 …… Presentation is centered on application of Fibonacci sequence and recent trends of Fibonacci sequence in the applied mathematics. Some attractive properties of Fibonacci sequence also incorporated with simple example.

ITM12 : Reliability And Economic Analysis Of A Computer System With Hardware And Software Failures

S.C. Malik
Department of Statistics, M.D. University, Rohtak-124001 (Haryana) INDIA
E-mail : sc_malik@rediffmail.com

In view of the every significant role of a computer system, the phenomenon of its reliability has become a subject of hot discussion among the researchers and engineers belong to different disciplines. Actually, the case of reliability of the computer systems has got the momentum on Oct. 26, 1992 when the computer aided dispatch system of the London ambulance service broke down right after its installation, paralyzing the capability of the world’s largest ambulance service which handles 5000 daily requests to transport patients in emergency situations. Since then many studies have been conducted with the consideration of hardware and software failures. However, not much work has been reported so far on this topic.

Thus in the present study, some reliability and economic measures of a computer system are analysed in detail using semi-Markov process and regenerative point technique. The system has two units – one is operative and the other is kept as spare in cold standby. There are two types of failures – Hardware and Software in the system. A single server is available to the system who inspects the unit at its hardware failure to see the feasibility of repair. If repair of the unit is not feasible, it is replaced by new one immediately. However, replacement of the software is made by new one whenever it fails. The failure time of the unit is exponentially distributed while the distributions of inspection, repair and replacement of the unit at software failures are taken as arbitrary with different probability density functions. The numerical results for a particular case are also obtained.

ITM13 : Formation Of Multivariable Polynomials

R.C.Singh Chandel
DA-77, Shalimar Bagh, Delhi-88 E-mail: rcschandel@yahoo.com

In our talk we shall discuss how the multivariable polynomials are formed through Rodrigues' formulae and generating functions.

ITM14 : The Fractional Fourier Transform and its Application to Signal Processing

Renu Jain
School of Mathematics and Allied Sciences, Jiwaji University, Gwalior.

The fractional calculus has become an exciting new mathematical method for solution of diverse problems in mathematics, science and engineering. One of the important tools in fractional calculus is the fractional Fourier transform (FRFT) which is a generalization of the ordinary Fourier transform. The FRFT plays a significant role in signal processing where it generalizes the notions of frequency domain and time frequency plane. The present lecture discusses the origin of FRFT and illustrates some of its applications

ITM15 : Biodiversity, Agri-Biotechnology and Applications of Bioinformatics

Gulshan Wadhwa
Principal Scientific Officer, Department of Biotechnology, Ministry of Science & Technology, New Delhi – 110003 Email : gulshan.dbt@nic.in

The statement emphasize on the natural approach to nurture the nature with the role of modern informatics. Biodiversity is the most prevailing facts of the biosphere which signifies the greater Biotechnological view for welfare of humankind. It not merely adopts an organism being with the environment as well as maintains the integrity, consistency of ecosystem, thus helpful in their sustenance. Nature provides the varieties of environment to grow and adopt with new features, which consequently appeared as a new variety and considered to be indispensable component of a healthy ecosystem.

The agriculture biotechnology space has grown in the past five years as witnessed in increasing number of private sector and public sector projects. The investment in the sector has also shifted to some extent from purely application-oriented research to a mix of basic and applied research. Birth of several biotechnology companies who are catering to and providing specialized research services to seed companies who lack in-house research facilities demonstrates the growing opportunities agri-biotechnology.

Bioinformatics is the interdisciplinary science which provides necessary support to study and understanding the Biodiversity and Agri-Biotechnology through Data collection, interpretation and analysis and prediction. Integration of the data, database development and development of the associated tools for data mining for useful purposes. Presently many Web servers, tools and databases are providing the sufficient information about the biodiversity aspect of organism's, right from their Genomics to functional variants. It further encompasses the modern approach of understanding the natural play in species development and its survival. Bioinformatics technology can however take advantage of the vast array of computational tools that that the information technology has provided us with such as statistical software, graphics simulation, algorithms and database management software. These are able to consistently organize, process and bring together data from numerous different sources. Biologists thereby rely on a series of mathematical models of pathways to determine the complexity of interactions that can occur in biological systems. They rely on super computers making accurate and interactive bio simulations in order to be able to get a complete picture of the system they are studying. Keeping this in view, Department of Biotechnology, Ministry of Science & Technology

ITM16 : Modeling Ca^{2+} Oscillations In Neuron Cells

K.R. Pardasani
Department of Mathematics, Maulana Azad National Institute of Technology,
Bhopal – 462051, INDIA

Mathematical modeling is an art that emulates the biological and natural processes in terms of differential equations. One such interesting task in the present time is mathematical modeling of the ubiquitous ion Ca^{2+} whose importance is visible in almost all organs of the human body like *myocytes*, *hepatocytes*, *oocytes*, *astrocytes*, *neurons* etc. The neuron cells are the basic unit that can be held responsible for the functioning of our human brain. These neurons communicate in between themselves via electrical and chemical synapses. This Ca^{2+} plays a crucial role in neurotransmitter release in the synaptic cleft of these chemical synapses. Because of the limitations of current imaging techniques to peep at Ca^{2+} levels on the scale micrometers and microseconds, mathematical modeling provides a beautiful alternative and an escape route for the same cause. In particular, mathematical modeling is used to emulate the process of Ca^{2+} oscillation in neuron cells because it is widely believed that neurons encode biophysical signals in the frequency of Ca^{2+} oscillations. The mathematical modeling of Ca^{2+} oscillations leads to a system of non-linear ordinary differential equations equipped with the appropriate initial condition. For the simulation purpose of such models analytical and numerical techniques are employed. The numerical results shed the light on relationships among various biophysical parameters and their impact on calcium oscillation. These results obtained can be of great use to biomedical scientists for developing protocols for diagnosis and treatment of neurological disease.

ITM17 : Some Aspects of Thermo elastic Problems

K. C. Deshmukh
Professor and Former Head, Department of Mathematics, Nagpur University, Nagpur - 33

The development of thermo elastic problems of various isotropic as well as anisotropic bodies is considered to be one of the important achievements of Engineering and technology in twentieth century. The aim of this talk is to give the brief of followings:
1. Brief history of thermo elasticity.
2. Direct and indirect thermo elastic problems.
3. Preparation of Mathematical model and the Numerical Computations.
4. Applications of thermo elastic problems in engineering as well as to society.

ITM18 : Singularity Method For Cell Models In Hydrodynamics

SUNIL DATTA
Departmernt of Mathematics and Astronomy, Lucknow University, Lucknow

In this presentation basic singularities , namely Stokeslet, stresslet, potential doublet etc., of the Stokes equations governing the flow of slow viscous fluids are deployed for the cell model to investigate the hydrodynamic permeability of membranes built up by particles.

ITC11 : Managing Information Security – An IT Experience

Anuraag Awasthi
CEO, CampCorp Pvt. Ltd

We are living in an information age. Information in all its forms is handled like a hot resource. It is the competitive advantage that an entity has over others. Increasingly it is becoming a regulatory requirement as well. As information takes myriad forms and becomes all pervading, and the world gets ever more connected, the risks associated with this information handling multiply manifold. All this information brings with it enormous risks in terms of maintaining the confidentiality, integrity and availability of the data, as well as ability to recover in case of any disaster.
How does one manage risks associated with handling all this information? What are the organizations that have been in this area in these early years doing? Different organizations / industries may deploy different techniques for managing the risks. This paper talks about the risks management from an IT organization perspective, and the lessons learnt.

ITC12 : Biometrics

Suneeta Agarwal
M.N.N.I.T. Alahabad

Identity establishment is a challenging problem for modern society. In the early days of civilization, people lived in small communities and everyone knew each other. With the population growth and increase in mobility, we started relying on documents and secrets to establish identity. The need for high accuracy and broad population coverage has made it necessary to investigate reliable and robust solutions for efficient and secure authentication. Person identification is now an integral part of the infrastructure needed for diverse business sectors such as banking, border control, law enforcement. Three fundamental techniques or factors used in authentication/identification mechanism are:

- Something you know: passwords and PIN.;
- Something you have: Card and tokens;
- Something you are: refers to biometrics- measurements of physical characteristics and personal traits.

With numerous devices, traditional paradigm of user name and password based scenarios are not practical. Traditional password/token based authentication schemes are insecure and are being replaced by biometric authentication mechanisms. Biometrics, the science of recognizing an individual based on his anatomical or behavioral traits is becoming popular nowadays Biometrics provide an unobtrusive and convenient authentication mechanism. The word Biometrics is Derived from the Greek words “Bio”: Life and “Metric”: to measure. Biometrics studies statistical & mathematical methods of recognizing people based on physical or behavioral traits.
Advantages of biometrics :
Uniqueness: No need to remember passwords or carry tokens: Biometrics cannot be lost, stolen or forgotten: More secure than a long password;
Solves repudiation problem: Not susceptible to traditional dictionary attacks.
Types of biometrics:

- Physical Biometrics :Fingerprint, Hand Geometry, Face, iris ;
- Behavioral Biometrics :Handwriting, Signature, Speech, Gait
- Chemical/Biological Biometrics: Skin spectroscopy .DNA, blood-glucose.

ITC13 : Data Mining in Service Sector: A Case Study with Reference to Life Insurance Companies in India.

Dharmendra Kumar
Dean, Faculty of Engineering & Technology, Guru Jambheshwar University, Hisar (Haryana)

The Service sector is going through almost revolutionary change, which dramatically affects the way in which we live and work. New services are continually being launched to satisfy our existing needs and to meet needs that we did not know we had. 10 year ago people does not anticipate the need for e-mail, online banking, web hosting, online reservations and many more. But today many of us feel that we cannot survive without them. Service organizations vary widely in size. At the one end are the huge international corporations operating in such industries such as tourism, airlines, banking, insurance, telecommunications etc. where as on the other end of the scale is a vast array of locally owned and operated small business including parlors, hotels, laundries etc. In the service sector today industries are producing diminishing results from 'tried and true' growth strategies which are causing a shift away from monolithic towards competency-led enterprises. To keep growing, firms are being forced to consider competing in new ways. This paper is intended for life insurance companies, who would like to get aware of the possible applications of data mining to enhance the performance of some of their core business process and to predict their future on the basis of their present trend and pattern. Keeping this in view the present invited talk is prepared based on research work done by us that will identify the investment behavior of customers in Life insurance sector of India as case study example by using statistical data mining technique. This assessment will definitely guide the Life insurance companies to strengthen their market policies.

ITC14 : Knowledge Discovery in Databases (KDD) for Large and Complex Objects

K. S. Vaisla,
Kumaon Engineering College, Dwarahat (Almora), Uttarakhand
E-mail: vaislaks@rediffmail.com

Knowledge Discovery in Databases (KDD) is the non-trivial process of identifying valid, novel, potentially useful, and ultimately nderstandable patterns in large data collections. The most important step within the process of KDD is data mining which is concerned with the extraction of the valid patterns. KDD is necessary to analyze the steady growing amount of data caused by the enhanced performance of modern computer systems. However, with the growing amount of data the complexity of data objects increases as well. Modern methods of KDD should therefore examine more complex objects than simple feature vectors to solve real-world KDD applications adequately. Multi-instance and multi-represented objects are two important types of object representations for complex objects. Multi-instance objects consist of a set of object representations that all belong to the same feature space. Multi-represented objects are constructed as a tuple of feature representations where each feature representation belongs to a different feature space.

ITC15 : Emerging Broadband Wireless Networks And Its Applications

Shailendra Mishra
Head, Department of Computer Science & Engineering, Kumaon Engineering College, Dwarahat (Almora), Uttarakhand E-mail: skmishra1@gmail.com

The main goal of this paper is to review the most recent development of new technologies related to the topic of the high-speed packet data of wireless Internet and potential applications. This paper will provide an overview of HSDPA and will focus on the business values that such a highly-efficient access technology will bring to wireless operators, including higher capacity and newer services. The key mechanisms of HSDPA and the performances will be explained. The other future evolutions like HSUPA or MIMO and OFDM will also be presented. HSDPA increases the downlink data rate within a cell to a theoretical maximum of 14Mbps, with 2Mbps on the uplink. The changes that HSDPA enables include better quality and more reliable, more robust data services. In other words, while realistic data rates may only be a few Mbps, the actual quality and number of users achieved will improve significantly.

ITC16 : Geoinformatics technology: From Computer Science perspective

K.Ram Mohan Rao
Scientist, Geoinformatics Division, Indian Institute of Remote Sensing ,Indian Space Research Organization, Dehradun 248001

There has been tremendous success of Computer Science and Engineering discipline. The discipline has primarily evolved with the study of the theoretical foundations of information and computation, and of practical techniques for their implementation and application in computer systems.Today most of the applications are developed using computer sconce in difference areas viz., Bioinformatics, Geoinformatics, Cognitive science, Computational chemistry, Computational neuroscience, Computational physics, Numerical algorithms, Computational mathematics.
Geoinformatics is a computer based system for managing and processing geospatial data has evolved constantly in last few decades and has been emerged as significant interdisciplinary technology. It has been an important tool in science, government agencies, private agencies and the public since the 1960s. It is being used in a variety of application areas such as Civil Engineering, Geography, Geology, Environmental Sciences, Agriculture, Disaster Mitigation and Management, Archaeology, Forestry, Business, Journalism, Natural Resource Monitoring and Management, Infrastructure Development and Management, Event Mapping (Accidents/ Crime/ Fire/ Utilities), Automated Mapping/ Facility Management, Land Use Mapping and Management, Urban and Regional Planning etc. The development of GIS has been highly influenced by the progress of Computer science and information technology. This paper provides an overview of the technological developments of Geoinforamtics with the background of developments in the field of computer science.

ITC17 : Intelligent Machine-Human Communication Interfaces

R. C. Chakraborty
Former Director of DTRL & ISSA (DRDO)
E-mail: rcchak@gmail.com

We live in an era of rapid change moving towards a network society of machines that has the information and knowledge. We require seamless, easy-to-use, high quality, affordable communications between people and machines, anywhere, and anytime. The creation of intelligence in machine has been a long cherished desire to replicate the functionality of the human mind. Intelligent information and communications technology (IICT), emulates and employ some aspect of human intelligence in performing a task. The IICT based systems, include sensors, computers, knowledge-based software, human-machine interfaces and other devices. The IICT enabled machines and devices anticipate requirements and deal with environments that are complex, unknown, unpredictable and bring the power of computing technology into our daily lives and business practices. Intelligent systems were first developed for use in traditional industries, such as manufacturing, mining, and more, enabling the automation of routine or dangerous tasks to improve productivity and quality. Today, intelligent systems applications exist virtually in all sectors where they deliver social as well as economic benefits. This talk is prepared, using information available from open sources, mainly internet sources, for bringing general awareness about Intelligent Machine-Human Communication Interfaces leading to Intelligent Machine-Human society.

ITC18 : Network is Comm-puter

Narendra Kumar Shukla
Senior Technical Specialist, Aricent Technologies Pvt. Ltd, Gurgaon center India

As we do more and more online work, the network i.e. the Internet is now becoming an extension of our computers to the least, particularly with wireless technologies. Today big chunk of our computing lives sits out there in the haze of data and connections i.e. the Cloud. Presently attempts are being made to move even software to the cloud so that user can access application software using any cloud-friendly device. Thus today the network is a computer created out of Communication network or “Network is Comm-puter”. Since any computer is as powerful as its core and the same holds true for cloud computer as well. We will see that core of this network computer will rely heavily on wireless technologies like 3GPP LTE to create a network based computing grid where users can just plug in to get data, storage space and even processing power, cheaply and instantly. We will also discuss services offered by this network computer.

ITC19 : Transforming Organization through ICT

Harish Kumar,
Head Information Technology Division, Indian Council of Forestry Research and Education, Dehra Dun (Uttarakhand) E-mail: harish@icfre.org

Information communication technology (ICT) can be used effectively by organizations to transform the efficiency, effectiveness, transparency and accountability of informational and transactional exchanges within the organization, between agencies, citizens and businesses.

ICT initiatives involve capacity building around three aspects – People, Process and Technology. It is through equal focus on people, process and technology that any organization can successfully transform itself into a more responsive, knowledge oriented, and transparent system.

Any ICT initiative aims to enhance the convenience of the users and stakeholders in accessing information and services provided by the organization. For success, such initiatives must involve the stakeholders and end users during each phase of the project through institutionalized committees, trainings, workshops and through generating in-house talent pool (trained personnel nominated in the organization to facilitate ICT initiatives) and take a participatory approach towards process and technology development. Such involvement is appreciated by the participants and reduces the resistance to change.

Before developing any solution first the potential process improvement areas are identified. An exhaustive process study is conducted in the organization. These process improvement areas are discussed by the stakeholders so the pain areas are addressed and expectations of the stakeholders are met. This exhaustive process study is documented as As-Is Analysis document. The stakeholder recommendations and improvement areas in the processes are documented to prepare a To-Be Process Document. Success of any ICT initiative depends on the religious implementation of the To-Be processes.

ICT in business and administration of an organization is not simply e-commerce transactions; it is about using technology to redefine organizational models in order to extend relevance and maximize value. Organizations must build technical infrastructures flexible enough to absorb new technologies quickly and rapidly to adapt to changes in the government business model. There are again three aspects of technology capability building – the envisaged application for the organization, a data center to host the application and other services like email and website and a network to support the whole IT infrastructure. These components together facilitate communication, coordination and control within the organizational hierarchy from top to bottom level. Moreover, a robust network and connectivity also supports value added applications running on network such as VoIP and video conferencing. These optimize bandwidth utilization without any extra expenditure and benefit organizations from end-to-end, node to multi-node communication with the help of the IP telephony and video conferencing.

ICFRE has always been a step ahead in capitalizing on the e-governance frameworks and Information Communication & Technology developments taking place in the country.

The paper presents the technological improvement undertaken by ICFRE for improvement in working to bring efficiency and transparency in its Institutions.

PT11 : ICT & Global Warming

Rattan K Datta
Adjunct professor in Computer Science & Engineering
at Delhi University, GGS IndraPrastha University
Former Advisor, DST India

You get up in the morning, view a TV story, read a magazine or any news paper, you will be confronted with two main issues. These are i) panic caused by global warming through the indiscrete use of the resources of our planet & ii) explosive progress in ICT and its all pervasive applications. These issues may seem to be unrelated, but a serious examination would show a great relation ship. This paper is an attempt to bring out that other factors remaining constant , ICT & its applications can act both as a cause (through e-waist and energy utilization)as well as minimizing agent of the global warming.
Global warming is sometimes called 'green house gases' summer, as one of the main causes of global warming is increase in green house gases (GHGs) like carbon dioxide & other minor gases. It is also related to climate change and all the related adverse affects.
To decrease the confusion, in the first part, it is planned to demystify the scientific aspects of global warming especially related to anthropogenic causes. The second part explains the growth of ICT through three laws of technology, namely i) Moore's law, ii) Gilder's law & iii) Metcalf's law. These three laws are effectively working in symphony in shrinking the planet of ours to a global village. Further more the fast development of technology brings with it fast obsolescence and competition, sometimes unethical. This could bring in cascading effect and dumping of huge quantities of hazardous e- waist. It could then become another source of GHGs & global warming. This has led the author to propose another law of technology, a fourth law. This law will be elucidated in the paper.
In conclusion it is illustrated that, ICT, if applied judiciously & optimally through energy conserving processes, ICT can be boon. The construction of technology must be through non hazardous green material .Grid & cloud computing and future such technologies also help in optimal utilization of ICT. On the other hand ICT is using almost over 50% of the total energy (hence release GHGs) and dumping huge waist. ICT itself can help to simulate innovative techniques for minimizing the growth of GHGs. This and all other related features are discussed in the paper.

PT12 : Mathematical Modelling Of Transdermal Drug Administration In Human Subjects

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Transdermal drug Administration is used generally for ailments and diseases in dermal regions of human subjects. This talk presents diffusion models of drugs in this region retaining heterogeneiety of the tissues.The model incorporates biochemical reactions, absorption and effect of internal barriers. Some numerical solutions have also been suggested.

PT13 : Modelling and Analysis of some Bio flows

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Mathematical models can provide invaluable conceptual insight for some Bio flows in general. However we aim at discussing some issues of Blood flow, oxygen transport and drug delivery for chronical diseases. The importance to atherogenesis of arterial flow phenomena as flow separation, recirculation and stagnation, secondary flow motion, low and oscillatory wall shear stress and long particle residence time have become more and more evident during the past few decades. The homodynamic of flows through atherosclerotic vessels is of great interest, because these vessels present a substantial health risk and are a major cause of mortality and morbidity in the industrial world. Some of the studies in this regard have been done by us. Associated with bloods flow in drug delivery. Drug delivery can be controlled by the sophisticated techniques to cure a chrorical disease, which can be helpful in understanding the cellular and molecular basis for disease progression. Also, a better understanding of the genetic basis of disease helps in the design of drug. There is governing need for the controlled and effective delivery of such therapeutic agents which may not have adverse effect on the patient. It is evident that the relationship between chemical properties and movement of drugs throughout the body can be well understood by considering the pharmacokinetic properties of agents in the drug development process. Our attempts, particularly for cancer chemotherapy have been of success.

Oxygen is carried by the blood partly in physical solution in water but primarily in chemical combination with hemoglobin. Oxygen transport in peripheral nerves is affected by forward and backward reactions too. Since the peripheral nervous system provides an interface between the central nervous system and the environment, including both the external world and the body apart from the nervous system, the precise study of the oxygen transport in peripheral nerve is of importance. We have attempted to study such a flow.

PT14 : Empowering thru ICT

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Technology is the biggest labeler in this ever flattening world, therefore, Information and Communication Technologies need to be seen more as the converging technologies instrumental for accentuating the process of democratization. And there is no doubt that ICT has done it quietly remarkably. The human society has witnessed the tremendous information and knowledge explosion in recent decades and that is, indeed, attributed largely to the ICT. However, how effective it has been in bridging the divide between rural and urban, rich and poor is a matter to be assessed and addressed. The ‘Promise’ that the ICT envelopes with it and the ‘Performance’ that it ultimately delivers are something which can be realised through the Impact assessment. Nevertheless, there is no denying that the knowledge asymmetry with existed since time immemorial not only has been addressed by ICT but has been quite a revolution and , indeed, brought about a metamorphosis from the ‘exclusive’ to ‘inclusive’. The world over the power shift has been redefined and its coordinates depend largely on the ICT. Therefore, effective use of ICT can empower the human society through giving access and equity by means of e-democratization which is nothing but e-powering.

PT15 : Some New Trends in Mathematics: Mathematical Modeling & Computer Simulation

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Mathematics, because of its effectiveness, trust-worthiness, rich tools and techniques for analysis, is applied in a large variety of real world problems. This requires expressing real world problems in mathematical terms, using numbers, variables, parameters, functions, related through equations, in-equations, differential equations, integral equations, difference equations, etc. as a situation may demand. Computer simulation is the most widely used technique. It is a different ball-game, powerful and effective bag of techniques normally applied when mathematical formulations do not come handy in terms of tools like algebraic, differential, or difference equations, etc. Analytical solutions cannot be found but effective algorithms can be developed.

The skills needed to be successful in applying mathematics are quite different from those needed to understand concepts, to prove theorems or to solve equations. In Math modeling there is no theory to learn; only guiding principles. Being an active pursuit, mathematical modeling can be learned only by doing. We shall be doing a couple of modeling problems in some simply illustrative situations, like: traffic lights, price wars, winning a battle against odds.

The talk will include matter on random number generators, and will illustrate technique of computer simulation by examples like those of scheduling appointments in a hospital, and deploying field workers avoiding rainy-days. Briefly Monte-Carlo method will also be introduced.

ABSTRACTS OF CONTRIBUTED PAPERS IN MATH

ABSTRACTS OF CONTRIBUTED PAPERS IN COMPUTER SCIENCE & IT

CPC11. Software Reliability Growth Model (SRGM) with Learning Effects of Testing/Debugging.

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To produce reliable software is an objective of software developers and users. In order to prevent the faults/errors, the software developers must verify the software for all possible faults during the development or testing phase. In this paper two different factors namely autonomous error detection and learning factors are considered and their effects are examined in software reliability growth model. We present the parameter estimation of proposed model by using least square estimation technique. Furthermore, the expected maintenance cost for the software system is obtained. For the validity of analytical results, numerical results are facilitated.

CPC12. 3G Technology: An Interactive Concept of Mobile Education

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Fastest technology 3G or called as **3rd Generation.** 3G refers to the third generation of mobile telephony technology. The International Telecommunications Union defined the third generation (3G) of mobile telephony standards – IMT-2000 – to facilitate growth, increase bandwidth, and support more diverse applications. Here we get navigation worldwide any time, music, entertainment, medical science, can view email attachments faster, Updated 3D graphics and incredible gaming experience using 3rd Generation Dynamic Module Representation. All this are in our reach and in our hand, near to make dreams true achieve ambition of life. No need to drive long to get resources allover the world. It's 3G, its satellite era, where everything is Online. We call it as **E-learning** where its availability is 24x7 hours, no wait for registration, confirmation, status of material delivery, E- assignment, Online help 24x7 hours, status of student progress, and no need to say online results.

Here we are converting it into M-Learning, making it simpler by giving it into your hand with latest technology. IPhone3G Technology where user will experience *low latency* than *high bandwidth* means no barrier. Stepping in not in city, not in state, not even in country, we are stepping into world in single step. Now you can shoot video, edit it, and share it — all on your iPhone 3G. Then share your video in an email, post it to your Mobile Me gallery, publish it on You Tube, or sync it back to your Mac or PC using iTunes.

Surf the web from practically anywhere. Now you can share the 3G connection on your iPhone with your Mac notebook or PC laptop. Stocks on iPhone shows you charts, financial details, and headline news for any stock you choose. Rotate iPhone to see even more detailed information.

CPC13. Neural Network Time Series Forecasting of Financial Market

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The Neural Network Time series forecasting of Financial Market is one of the hot areas in neural network application. The paper, showed a method to forecast the stock index value using Artificial Neural Networks. Stock market prediction is very difficult because it depends on several known and unknown factors. In recent years, one of the techniques that have been used popularly in this area is Artificial Neural Network. The power of neural network is its ability to model a nonlinear process without a priori knowledge about the nature of the process. In this paper the Neural Network find out the effect of Exchange rate, FII Purchase, FII Sales on Closing Return of NIFTY. The data for the study comprises the daily stock returns of NIFTY, Exchange Rate Rupee/US Dollar, FII Purchase, FII Sales. The accuracy measure of Forecasting is defined in terms of the forecasting error, which is the difference between the actual and predicted value.

CPC14. A Metrics Methodology For Predicting Reusable Suite Of Component Based Software System

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Component based software system is a new paradigm in software development process. Component based software system approaches to the rapidly development, deployment and evolution of different components of complex software system with minimum engineering effort and resource cost. Component based software system has to this objective is the reuse of software component suite in developing process of multiple system. To achieve this goal, software engineers must apply effective metrics methodology with modern tool within the context of a mature software process to evaluate reusable suite of software system. In addition to predict high efficiency. CBSS demand software development to start from scratch with the help of metrics method which affect the efficiency, maintainability, reusability, and productivity and delivery time of the software. This paper also explores the acceptance of reusability characteristics and sub-characteristics defined in ISO9126 quality model for CBSS.

CPC15. A minimum connected dominating set based routing to improve mobile ad hoc network operations

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Routing remains a challenging problem in ad hoc networks due to the associated multi-hop nature and dynamic network topology. Connected dominating set based routing is a promising approach for enhancing the routing efficiency in the wireless ad hoc networks. However, finding the minimum dominating set in an arbitrary graph is a NP-hard problem**.** We propose a new evolutionary approach to constructing a stable connected dominating set in an ad hoc network. Since the mobile nodes that constitute an ad hoc network are constantly in motion, the network configuration is subject to constant change in a manner that resembles the biological process of mutation. Each change in the network topology may be viewed as a mutation in the sequence representing the nodes in the network, hence resembling an evolutionary process. Simulation studies are conducted to evaluate the performance of the evolutionary routing approach and compare it with known approaches. We show that our evolutionary routing approach outperforms the other routing algorithms with respect to end-to-end packet delay, throughput and packet delivery ratio across several different scenarios. Thus, we demonstrate the advantages of utilizing a genetic algorithm to construct a backbone that is used to effectively route packets in an ad hoc wireless network.

CPC16. A Survey Paper on Mobile IP

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Mobile Communication is becoming increasingly important due to the rise in the number of portable computers and the desire to have continuous network connectivity to the Internet irrespective of the physical location of the node. Transmission Control Protocol and Internet Protocol are the core protocols in this suite. IP requires the location of any host connected to the Internet to be uniquely identified by an assigned IP address. This raises one of the most important issues in mobility, because when a host moves to another physical location, it has to change its IP address. However, the higher level protocols require IP address of a host to be fixed for identifying connections. The Mobile Internet Protocol is an extension to the Internet Protocol proposed by the Internet Engineering Task Force that addresses this issue. It enables mobile computers to stay connected to the Internet regardless of their location and without changing their IP address. More precisely, Mobile IP is a standard protocol that builds on the Internet Protocol by making mobility transparent to applications and higher level protocols like TCP. In this paper author's surveyed design, advantages, and other technical issues related with Mobile IP.

CPC17. Fuzzy Reliability Evaluation of a Repairable System with Imperfect Coverage, Reboot and Common-cause Shock Failure

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In the present investigation, we have considered a repairable system consisting of two independent operating units. The coverage factor, reboot delay and common cause shock failure are also considered. Times to failure of the components, time to failure due to common cause, time to repair and time to reboot are assumed to follow exponential distributions. The coverage factors of both the operating units are same. We use fuzzy set theory for analyzing the system characteristics. This paper proposes a procedure to construct the membership function of the system characteristics .In order to construct the membership functions, the failure rates of both units and repair rates of first and second units are considered as trapezoidal fuzzy numbers. Then the expressions for computing the fuzzy mean time to failure and fuzzy availability following trapezoidal fuzzy numbers have been described. The repairable systems are presented more accurately and the analytic results are more useful for system designers because the system characteristics are governed by the membership function. A numerical example has been performed by using in-built function in MATLAB.

CPC18. External Memory Algorithm to Compute the length of LCS of two given strings

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The problem of finding longest common subsequence is a fundamental issue in various application areas like whole genome alignment, string editing, syntactic pattern recognition. The first solution to the problem was given by Wagner and Fischer in 1974.Since then many computer scientists have worked on this problem and they have given various solutions to the problem. The data set of the application areas of LCS problem are often too massive to fit completely into main memory. None of the available solutions take the size of data set and size of main memory into account. Hence the resulting input/output communication (or I/O) between fast internal memory and slower external memory (such as disks) can be a major performance bottleneck.
For large computational problems in which size of main memory is only a small fraction of size of the problem, external memory algorithms are designed. But for LCS problem no external memory algorithm is available till now. In the paper an external memory algorithm is proposed to compute the length of longest common subsequence of two strings which reduces the I/O communications between slow external memory and fast internal memory. Unlike the available solutions this algorithm takes the size of internal memory and size of data set into account and explicitly manage the data movement between main memory and secondary memory The I/O complexity analysis of the proposed algorithm shows that it reduces the I/O communication between main memory and secondary memory.

CPC19. Free Rectification Lifetime Warranty (FRLTW) Policy for a Repairable Product

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Now-a-days warranty has become a key concern for customer as well as manufacturers in the context of new products. The product sales mainly depend on the product price and design quality. Warranty involves the additional cost to the product, but with a good warranty policy, the high quality product may become a popular item inspite of day to day increasingly competitive market. In this paper we study the lifetime warranty of a repairable product; the numbers of failures of the product depends on the time period. It is assumed that as time increases the number of failures increases. The expected cost for the free rectification lifetime warranty (FRLTW) policy is obtained. The numerical results for supporting the analytical results have been provided.

CPC20. Reliability Analysis of Distributed Software and Hardware systems

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The reliability/availability, issues are key ingredients of the performance qualification of the distributed system design and development. The present investigation is concerned with a multi-host system with standbys. When all standbys are used, the system begins to work in degraded mode. Both software and hardware failures are taken into account along with the assumption that the software faults are constantly being identified and removed. The common cause failure which is an important factor to predict the availability of realistic system is also taken into consideration. A Markov model is developed by constructing the governing transient equations in terms of probabilities of various system states. These probabilities are also employed to obtain some reliability indices. Numerical experiment has been performed by using Runge-Kutta method with the help of MATLAB.

CPC21. The Use of 3D Electromagnetic Simulation Tools in the Design of Microwave Integrated Circuits: An Accuracy Assessment

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The accuracy of Ansoft's 3D EM Simulation Tools (in predicting real-life performance of radio frequency (RF) and microwave circuits) is assessed through investigating several original design examples. Generally speaking, the High Frequency Structure Simulator (HFSS) simulation tool displays much higher accuracy compared to the accuracy displayed by the Circuit Simulator Tool.

CPC22. A Typed Intermediate Language for Compiling Multiple Inheritances

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Type-preserving compilation can improve software reliability by generating code that can be verified independently of the compiler. Practical type-preserving compilation does not exist for languages with multiple inheritances. This paper presents EMI, the first typed intermediate language to support practical compilation of a programming language with fully general multiple inheritance. The paper demonstrates the practicality of EMI by showing that EMI can be used to faithfully model standard implementation strategies of multiple inheritance for C++, the most widely-used programming language with general multiple inheritance.

CPC23. A New Approach and Challenges Of 4g Wireless Networks

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This paper is concerned with focusing the attention of a 4G wireless network, present challenges and point to some proposed solutions. With the major wireless service providers planning to start deployment of 4G wireless networks by mid 2010, research and industry communities are racing against time to find solutions for some of the prominent still open issues in 4G networks. The growing interest in 4G networks is driven by the set of new services will be made available for the first time such as accessing the Internet anytime from anywhere, global roaming, and wider support for multimedia applications.4G will be based on OFDM (Orthogonal Frequency Division Multiplexing), which is the key enabler of 4G technology. Other technological aspects of 4G are adaptive processing and smart antennas, both of which will be used in 3G networks and enhance Rates when used with OFDM. Currently 3G networks still send there data digitally over a single channel, OFDM is designed to send data over hundreds of parallel streams, thus increasing the amount of information that can be sent at a time over traditional CDMA networks.The 4G data rates will vary depending on the number of channels that are available, and can be used. The channels that can be used will be cleaner thanks to technologies like adaptive processing, which detects interference on a channel and improves reception by actively switching channels to avoid interference. 4G networks will also use smart antenna technology, which is used to aim the radio signal in the direction of the receiver in the terminal from the base station. When teamed up with adaptive techniques, multiple antennas can cancel out more interference while enhancing the signal.

CPC24. Handling Imprecision In Software Engineering Measurements Using Fuzzy Logic

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The measurement of software is recognized as a fundamental topic in software engineering research and practice. Before initiating any project prior estimation about the time, cost and manpower involved in the project must be made to ensure the success of the project. Software effort, quality, reliability, maintainability and productivity estimation has become an increasingly important field due to increasingly pervasive role of software in today's world. It is noted that traditional estimation approaches can have serious difficulties when used on software engineering data that is usually scarce, incomplete, and imprecisely collected. As the uncertainties are best handled by using fuzzy logic, this paper emphasis on quantitative estimation of various software attributes using fuzzy technique. It can be seen that if some decision making or human communication is involved during development process we can use the concept of fuzzy logic to improve software development processes and products. The present paper is the study of prevailing software measurement techniques using fuzzy logic. The existence of large set of alternatives enables one to identify the best approaches of Software Measurements Techniques.

CPC25. Implementation Of FPGA-DPM Interface And To Develop A Basic Protocol For FPGA Based Floswitch

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Flosolver Mk8 is a parallel processing system, based on distributed memory concept and built around Intel Dual core Xeon processors, which acts as processing elements (PEs). Communication between processing elements is very important, this is done through hardware switch called Floswitch. Floswitch supports both message passing as well as message processing. Message processing is a unique feature of Floswitch.

This paper presents implementation of a Floswitch board, which is mainly based on FPGA (field Programmable gate Array) without involving processor operations with its chipsets, which provides 64-bit data path for the flow and processing of data at increased speed. We have developed a basic protocol for FPGA based Floswitch to increase the Speed of the Floswitch thereby boosting the overall super computer's efficiency. To achieve the required task, analysis of the timing requirements of all the component and design of the state machine using VHDL code for FPGA-DPM interface, and development of basic protocol for FPGA based Floswitch is carried out.

In the Proposed System of Flosolver Mk8, Floswitch is mainly based on FPGA and Dual Port Memory. The Interface between FPGA and Dual Port Memory (DPM) is important to enhance the Data transfer rate between the Floswich and Processing Elements (PEs). We propose a FPGA based Floswitch to achieve higher data transfer rate and processing of data at higher speed.

CPC26. The Potential Threats and Weaknesses of WAP security

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Wireless Application Protocol (WAP) is designed for access to Internet and advanced Telephony services from mobile phones. Wireless technology, by its nature, violates fundamental security principles. It does not ensure the identity of the user and the device (authentication), nor prevent the sender of the message from denying whether who has sent it. Wireless technology is hardly new, but its application space is immature and quite possibly disruptive.
In this paper we discuss the WAP specification, by the WAP Forum, partly addresses such concerns with the introduction of the Wireless Transport Layer Security (WTLS) protocol. WTLS is based on the Transport Layer Security (TLS) protocol, a derivative of the Secure Sockets Layer (SSL) protocol. This process has its weaknesses that WTLS allows for weak encryption algorithms.
With some WAP clients, users can even disable WTLS encryption entirely. The availability of such options severely limits the security of a WAP application.

CPC27. Data Warehouse Projects: Critical Success Factors

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This paper tries to identify the major critical success factors relating to Data Warehouse success in any organization. A Data Warehouse is a powerful tool that can be one of the best investments an organization can make - or it can drain valuable resources away from other projects and leave all involved disappointed and disillusioned. One of the most talked about information technology enabled business innovations during the past decades has been the emergence of Data Warehouses. A well-implemented Data Warehouse itself can bring manifold benefits to an organization.

Despite the recognition of Data Warehousing as an important area of practice and research, relatively few studies has been conducted to assess Data Warehousing practices in general and critical success factors in particular. We have examined the factors concerning Data Warehouse projects developments. The paper also includes reasons for failure of a Data Warehouse.

CPC28. Route Optimization and On-Demand Routing Protocols for Ad-hoc Networks

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This paper presents the design and implementation of Route optimization and on-demand routing protocols for Ad-hoc networks. Routing protocols are used to minimize control traffic overhead.
Current research work in literature cares about two aspects of the service provision capability of cellular networks. One is capacity, that emphasizes the user admission capability and the other is service quality that targets the connection continuity. However, actually achievable user accommodation capability is a cooperative result of both aspects. This paper reveals the impact of handoff protection, which is introduced to enhance connection robustness, on the capacity of cellular mobile systems. We first extract the basic mobility characteristics from the real world cellular environment to establish an ideal traffic model. Then a Markov approach is proposed to analyze the correlation between the user admission capability and the channel reservation, which is one strategy for handoff protection.
In recent years, protocols that build routes based on demand have been proposed, Host mobility is becoming an important issue due to the recent propagation of cellular phones and palmtop computers, the development of wireless network interfaces, and the growth in global internetworking.

The selection of an appropriate protocol will depend on a variety of factors, like reliability, accuracy, performance & efficiency based on requirement. It can give very accurate results for systems with both uniform and non-uniform traffic distributions.

CPC29. Analysis For Wavelength Assignment In Wdm Optical Networks

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WDM optical networks are high speed networks and provide very high capacity to transmit the data. It establishes communication between pairs of nodes and assign wavelength to each path. **Routing and wavelength assignment (RWA)** is the problem to select a suitable path and wavelength among the many possible choices for each connection such that maximize the connection established and minimize the blocking probability using limited resources. This paper proposes analysis of the wavelength assignment problem for the network with wavelength conversion and without wavelength conversion algorithm. These algorithms are compared on the basis of blocking probability; number of wavelengths per optical fiber and number nodes in network whereas the response of the algorithms is calculated by varying the load per link (in Erlangs).

CPC30. Philosophical and Scientific Presuppositions of Logical Artificial Intelligence

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Many ideas from philosophy, especially from recent analytic philosophy, are usable for AI. However, some philosophical points of view make assumptions that have the effect of excluding the possibility of AI. Likewise work on AI is not neutral with regard to philosophical issues. This paper presents what we consider the presuppositions of logical AI and also some scientific presuppositions, i.e. some results of science that are relevant. We emphasize the relation to AI rather than philosophy itself.

CPC31. REST Based Filtering in OpenSocial Shindig Container

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Social Networks have experienced a meteoric rise recently. They provide a number of functionalities such as network of friends or business contacts listings, content-sharing, profile surfing, discussion and messaging tools. Interoperability among Social Networks being a key challenge, the Google-powered OpenSocial alliance has partly solved it and unveiled a new breed of strategies to gather data from Social Network users. This work will trying to build on the OpenSocial functionality and combine it with filtering based on REST protocol and to enhance open social shindig container.

CPC32. An Improved Approach for Port Knocking using strong authentication

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Modern security system takes a multi-layered approach in which security levels are maintained by using different strategies. While these methods taken individually does not provide a desired level of defense, but when implemented together provides substantial amount of hurdle to malicious users.

Port knocking is a method of establishing a connection to a networked computer that has no open ports. Before a connection is established, ports are opened using a port knock sequence, which is a series of connection attempts to closed ports. The implementations till now use a fixed port knock sequence which can be sniffed and replayed.

In this paper, implementation of Port Knocking technique that does not require fixed port knock sequence and uses dynamic sequences has been discussed. Port Knock sequence is determined only when the client needs the server to open a connection port. Here, One Time Password design (OTP) is used that does not require saving user's password hashes on both client and server which is used for encrypting the packets used in communication. Thus, Replay attacks are minimized using OTP in conjunction with dynamic port knocking.

The client randomly generates dynamic port knock sequence and will be encrypted using the password. The server has $(n+1)^{th}$ computed hashes of the password used for encryption, client sends the $(n)^{th}$ hash and then the server computes the hash value using the function, if both matches then only the encrypted packets are sent by client to the server. Thus, OTP provides a strong authentication by which communication can be halted instantly and any replay attack can also be identified.

CPC33. Performance Measurement of Various Routing Protocols in Ad-hoc Network

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An *ad hoc network* is a group of wireless mobile computers (or nodes), in which individual nodes cooperate by forwarding packets for each other to allow nodes to communicate beyond direct wireless transmission range. An ad hoc network is a collection of wireless mobile nodes dynamically forming a temporary network without the use of any existing network infrastructure or centralized administration. A number of routing protocols like Destination-Sequenced Distance-Vector (DSDV), Ad hoc On-Demand Distance Vector Routing (AODV), Dynamic Source Routing (DSR) and Temporally Ordered Routing Algorithm (TORA) have been implemented. In this paper, a comprehensive attempt has been made to compare the performance of two prominent on-demand reactive routing protocols for mobile ad hoc networks: DSR and AODV, along with the traditional proactive DSDV protocol. A simulation model with MAC and physical layer models have been used to study interlayer interactions and their performance implications. The On-demand protocols, AODV and DSR perform better than the table-driven DSDV protocol. Although DSR and AODV share similar on-demand behavior, the differences in the protocol mechanics can lead to significant performance differentials. The performance differentials have been analyzed by varying network load, mobility, and network size.

CPC34. Analysis & Implementation of Signature Verification Technique Using Feature Point Extraction

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In this paper, we analyzed various techniques for offline signature verification and further implemented the new improved offline signature verification scheme. In this technique feature points are selected from the geometric centre of the signature and compare them with the already trained feature points. The classification of the feature points utilizes statistical parameters like mean and variance. The suggested scheme discriminates between two types of originals and forged signatures. The method takes care of skill, simple and random forgeries.

CPC35. Statistics and Data Mining

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This article considers the discussion on statistics and data mining. The schemes of finding patterns in large volumes of data have been given various names, but the *Data Mining* has become the most popular word. Data mining has the association of searching for data to fit preconceived ideas. The aim of this article is to discuss the similarities and differences as well as the relationships between statistics and data mining.

CPC36. Audio Watermarking: A new paradigm for Steganography

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Digital Steganography (information hiding) is concerned with embedding information in an audio, image, or video file in an imperceptible manner. Human auditory and visual imperfections, which lead to masking effects in hearing and vision, are exploited for modifying a host, or cover, audio or image in accordance with a given piece of cover information. Since the modification is carried out in the masked regions of perceptibility the 'stego' signal, appears to be the same as the original host signal.

Encryption of a media signal : an audio or image signal alters the signal itself to conceal its perceptual contents so that it becomes unintelligible; embedding, instead, uses the media signal as a carrier for hiding covert information without altering the perceptual quality of the carrier.

Recovery of embedded information without requiring the original host media signal – oblivious recovery – and robustness of the hidden information under adverse conditions during transmission are also essential in many applications.

Digital watermarking (intellectual property protection) allows a secret message to be hidden in a computer file, without the detection of the user. The watermark is not apparent to the user, and does not affect in any way, the use of the original file. Watermark information is predominantly used to identify the creator of a digital file, i.e. a picture, a song, or text. This paper will provide a review of audio watermarking using Steganography using spectral domain modifications.

CPC37. Mining Frequent Itesets Algorithm In Streaming Environment

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Frequent itemset mining is a core data mining operation and has been extensively studied over last decade. This project takes a new approach and implements a new algorithm for this problem and makes the two major contributions. First, it implements a one pass algorithm for frequent itemset mining which has the deterministic bound on the accuracy and does not require any out of core summary structure. Second, because this one pass algorithm does not produce any false negative it can be easily extended to a two pass accurate algorithm. The two pass algorithm is very memory efficient and allows the mining of datasets with large number of distinct items and/or very low support levels.

The detailed experimental evaluation on datasets shows the following. First, this one pass algorithm very accurate in practice. Second, the algorithm requires significantly lower memory than the previous solutions (Manku and Motwani's one pass algorithm and the multi pass apriori algorithm. The two pass algorithm outperforms apriori and FP-Tree when the number of distinct items is large and/or support levels are very low. In other cases it is quite competitive with the possible exception of cases where the average length of frequent item sets is quite high.

CPC38. How Data Mining And Knowledge Discovery Are Counterparts Of Each Other

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Data mining and knowledge discovery in databases have become a hot area of research. The amount of data doubling every three years has lead to the rise of new technologies. The paper provides an overview of this emerging field clarifying how data mining and knowledge discovery in databases are related to each other. The paper contains both research and practice of data mining and knowledge discovery, surveys and tutorials of important areas and techniques, and detailed descriptions of significant applications. The Coverage includes: Theory and Foundational Issues, Data Mining Methods, Algorithms for Data Mining, Knowledge Discovery Process, Application Issues.

CPC39. Prioritization based Regression Testing characterize over Requirement and History

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Regression testing is an important maintenance activity and has received extensive attention recently. As number of test cases increases, the time to run all the test cases also increases and it makes regression testing process complex and costly. This paper carries out an effective algorithm to select and serialize the test cases, based on three factors -complexity, priority and frequency of the program function or variable and test case execution history. To get the better trade off between cost and time of regression testing and to find faults earlier filter out some test cases and rest of the critical test cases are prioritize according to their usefulness. This work will help to the developers to save enormous amount of money during the life of software by providing way to reduce the time and effort required in regression testing by eliminating extra test cases.

CPC40. An Investigation Of The Effect Of Hall Current And Rotational Parameter On Dissipative Fluid Flow Past A Vertical Semi- Infinite Plate

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MHD stokes problem for a vertical semi-infinite plate in a dissipative rotating fluid with hall current will be considered. The partial differential equations governing the problem will be framed and then solved using numerical methods such as finite difference approximations and least square approximations. An analysis of effects of parameter on the velocity (both primary and secondary) profiles and temperature distribution profiles are shown graphically and the results are discussed.

CPC41. Development of Replenishment Policies for Decaying Items with Shortages

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An Inventory model shows the relationships and the interrelationship of action in terms of cause and effect. Since the model is an abstraction of reality, it may appear to be less complex than reality itself. A model efficiently evaluates alternative policies. The solution of model determines the values of controlled variables which optimize the objective function. The proposal is to develop computational algorithms solution of inventory models in different realistic business situations. Computational numerical algorithms are concerned with the trial or iterative and error procedures, through the use of numerical computation at each step. These numerical methods are used when some analytic methods fail to drive the solution. The proposal is to develop and analyze economic order quantity for deteriorating items with shortages with a known market demand rate. In some inventory systems for many stock such as fashionable commodities, the length of the waiting time for next replenishment become main factor for determining where backlogging will be accepted or not.
The purpose of this paper is to present a new heuristic procedure for the inventory problem of deteriorating items with time varying demand and shortages. We consider the inventory replenishment problem with shortages over a fixed time horizon for a product deteriorating at a constant rate. We do not put restrictions on the length of the replenishment cycles and the form of the demand function making our model a general one. For linearly and exponentially time varying demands, the results of a comparative work show that our heuristic is economically and computationally more efficient than the equal cycle approach.

CPC42. Semantic network in a free-software computer operating system

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A semantic interpretation has been given to the dependency network of a free-software operating system. To preserve uniqueness of operations in this network, the nodes (software packages) obey an exclusion principle, with no two nodes being exactly alike in their functionality. From a semantic viewpoint this implies that the meaning derived from a particular node is defined uniquely only by its dependency neighborhood. The frequency distributions of links in this network follow a scale-free power-law behaviour (specifically Zipf's law) for the intermediate nodes, but the external nodes exhibit a saturation behaviour as a result of the finiteness of semantic possibilities in the network. For the out-degree distribution, whose top nodes form the foundation of the entire network, the initial condition for a dynamic model, evolving towards a steady scale-free frequency distribution of nodes, determines the finite limit to the number of top nodes that the mature out-directed network can have. The primordial nodes of the out-degree distribution are the foundation of the entire network, and in a semantic sense, meaning flows from these nodes to the derivative nodes. In a mature network, semantic variations are more likely in the weakly-linked derivative nodes than in the primordial nodes, where all axioms are founded.

CPC43. Software Process Models: A window view

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Software engineering is the application of a systematic, disciplined, quantifiable approach to the development, operation, and maintenance of software products. Therefore, models are widely used to take care almost all parts of software development. Software process models help to manage the various tasks distributed in different phases of development. This work aid to explore the unsung aspects of process models, impact of framework and task of software development methodology from their inception so that process of software development may consume resources more effectively.

CPC44. Image Processing: An Image Exploration Strategy

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Image processing technique is a new growing efficient technique to retrieve the information about the images. If it is done by digitally, it produces more advance and enhanced results. This technique involves various tasks like how to represent the image, how to examine the image, how to reproduce the image, and how to enhance the image. Overall It is the art of examining, identifying and judging the impact of the Images so that one can be able to explore the significance of the image for study by the human interpreters. Most of the research has been done in the field of medical science, in this field many image-processing techniques were developed to process X-ray images and images from sophisticated body-scanning devices. There are some other domains also, in which people want to get the image and store it so that they may be able to extract some valuable information in the future. In this paper we have presented various assets of the image and how image processing are used in different applications like character recognition, medical analysis, robotics and remote sensing etc.

CPC45. Generation Of Hilbert Curves

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Sagan[1] has very clearly described continuous fractal space filling curves. Hilbert's pproach was geometric and he generated and studied the equal distribution of Hilbert curves. In this paper, we introduce one generalized approach, viz., superior iterations in the study of Hilbert curves and generated new variants of Hilbert curves using superior iterations. The new variants of Hilbert curves for unequal distribution are generated by running computer programs.

CPC46. A novel method of Color Medical Image Enhancement by color space transformation followed by gamma/logarithmic transformation

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Visual enhancement of image plays a very important role in the field of medical imaging. Enhanced medical images are more suitable for analysis and proper diagnosis. We present a novel method of enhancement of color medical images in this paper. We are transforming color space of the image from RGB to HIS followed by application of logarithmic and gamma transformation on saturation and intensity component respectively. Hence we obtain a visually enhanced version of the original image. We have obtained excellent color medical image enhancement results presented in this paper.

CPC47. Emerging Technology In Big Science: "The Grid Computing

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Like the Internet, the Grid Computing evolved from the computational needs of "big cience". The Internet was developed to meet the need for a common communication medium between large, federally funded computing centers. These communication links led to resource and information sharing between these centers and eventually to provide access to them for additional users. Grid computing offers a model for solving massive computational problems by making use of the unused resources (CPU cycles and/or disk storage) of large numbers of disparate computers, often desktop computers, treated as a virtual cluster embedded in a distributed telecommunications infrastructure. Grid computing's focus on the ability to support computation across administrative domains sets it apart from traditional Computer cluster or traditional distributed computing. Computing grids are software engines that pool together and manage resources from isolated systems to form a new type of **low-cost supercomputer**. Grid technologies promise to change the way we tackle complex problems. Science today is increasingly collaborative and multidisciplinary, and it is not unusual for teams to span institutions, states, countries and continents. E-mail and the web provide basic mechanisms that allow such groups to work together. But what if they could link their data, computers, sensors and other resources into a single virtual laboratory? So-called **Grid technologies** seek to make this possible, by providing the protocols, services and software development kits needed to enable flexible, controlled resource sharing on a large scale.

A grid system may include software to help jobs communicate with each other. For example, an application may split itself into a large number of sub jobs. Each of these sub jobs is a separate job in the grid. However, the application may implement an algorithm that requires that the sub jobs communicate some information among them. The sub jobs need to be able to locate other specific sub jobs, establish a communications connection with them, and send the appropriate data.

Although Grid computing is a new technology, it has already proven them useful and their future looks promising. As technologies, networks and business models mature, We expect that it will become commonplace for small and large communities of scientists to create "Science Grids" linking their various resources to support human communication, data access and computation. Grid computing represents unlimited opportunities in terms of business and technical aspects. The audience for this paper is all hungry minds looking for a collection of facts and data about this new and exciting realm.2

CPC48. Role of IT in rural Development in Kumaun Region of Uttaranchal Towards e-Governance

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India is a successful model for the growth of e-Education and Information technology. As Uttaranchal has more than 72 % literacy rate and Kumaun region has two major Universities, Kumaun University Nainital with its vast campuses in Kumaun Region and world famous GB Pant University of Agriculture & Technology, Pantnagar.
In Uttaranchal, e-Education in IT sector is vital, with technologies evolving ever faster, so in same manner people are required to learn new skills with the prominence of e-Education. With the number of colleges and equally well managed government schools, the information technology in education has been offered to the people as a social need and this has helped in bringing out the top class professional in Uttaranchal.
In Uttaranchal computer literacy rate is going up. e-Education can bring out and converge the nation to grow up extent of Electronic Information. The overall theme is, the steps enabling and empowerment of people to facilitate mass scale spread of Information Technology and its benefits to the people of Uttaranchal.
This paper focuses on e-Education, which leads to the formation of e-Government. E-Education focuses on rural masses, and their standards of living. Working group of Information Technology has come out with the idea of promoting IT education to the rural masses. Keeping it awareness on education will motivate the people to form a digital environment, which helps the formation of e-Government.

CPC49. An Analysis on Hacking – A Threat to software quality & Ethical Hacking – A Need to e-society

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Software engineering defines *how and what* software is all about to develop & maintain Quality Software. This *Paper* attempts to initiate about hacking which has become a significant threat to network exposed to internet. Once the target is mapped, hackers proceed to map vulnerabilities and gain access by cracking passwords, using phishing data, or spoofing the IP address of trusted machines. Hackers can then interrupt internal traffic or searches other hosts for company secrets.

Finally, a hacker can clean up system logs in order to conceal the fact that attack occurred. Further in this paper we explain how this hacking on the contrary is good when uses in positive direction which is termed as Ethical Hacking. Ethical hacking is testing the resource for a good cause and for the betterment of technology. Technically Ethical Hacking means penetration testing which is focused on securing and protecting IT Systems. Proper Plan for Ethical hacking during software engineering may be in coming scenario be the boon to Software industry to maintain software quality and a need to e-society.
During phases of software development life cycle in risk assessment it should also calculate the risk from hacking and plan to create customized platform to restrict the hackers by moving data at physical level and altering the *views* in conceptual level at regular intervals without affecting users interface.

CPC50. Mobile Learning Technologies and the Move towards 'User-Led Education'

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Recent advances in media technologies are deeply intertwined with an overall shift towards more user-led content production models in a large variety of fields – some observers escribe this as the move towards a 'Generation C' of active and intercreative users, or towards a hybrid user/producer or 'produser', replacing traditional production/consumption models. The increasing adoption of such user-led, community-based, collaborative models for the co-creation of 'content' requires current and future graduates to display skills and capabilities which are significantly different from what has been expected of students in the past, and therefore needs teaching approaches which not only describe these literacies, but live them – modes of teaching which are themselves user- (or student-) led, collaborative, and flexible, and address the needs of Generation C. This paper provides a strong argument for this shift in pedagogical paradigms. It examines cur rent needs in industry and society to argue for this shift, provides some pointers to possible solutions, and considers the role mobile and wireless technologies can play in this project.

CPC51. E-Stamping: A Mechanism to Authenticate Printed Documents

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The research is focused on the printed document authentication mechanism called Electronic stamping (E-stamping) which is based on the frequency domain watermarking techniques designed for images. Discrete Fourier Transformation (DFT) is used in the E-stamping mechanism, since its robustness to the print-scan process. The proposed mechanism can be used for different kind of applications like electronic stamp, secured identity card, passport, driver license, certificate identification, electronic ticketing, etc. Especially, it can be used in wide variety of E-government applications.

The main purpose of E-stamping is to digitally embed a signature which contains identification information on the document to prevent its illegal reproduction. E-stamping consists of two major processes, namely, digital signature embedding and signature extraction. In the embedding process, the digitally-signed data relevant to the application can be embedded not only to gray scale images but also to color images imperceptibly prior to it being printed. At the data verification process, the printed image that contains the embedded signature is converted into digital form using a scanner. The signature is extracted from the scanned image and verified it using public key. Verified signature is compared with the content of the document to check the validity. A 64 bit digitally-signed binary data can be inserted to an image with size of 256 X 256 pixels with high accuracy and low visual distortion. The major advantage of this is the simplicity and cost effectiveness in implementing. The original image to which required information is embedded is not required for the verification process.

CPC52. Virtualization for Corporate Governance

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Virtualizing IT resources can be thought of as squeezing an enterprise's computer processing power, memory, network bandwidth and storage capacity onto the smallest number of hardware platforms possible and then apportioning those resources to operating systems and applications on a time-sharing basis.
A number of corporate governance mandates have placed stronger privacy, security and auditing requirements on organizations. This has led enterprises to a more consolidated computing and networking infrastructure. It is inherently more manageable to set and enforce policies and to configure software from a central, common console than in a distributed fashion, which makes it difficult to keep software versions synchronized. In this regard the concept of server virtualization can be thought of a solution. This paper tries to virtualize several computing infrastructure components such as servers, desktops, storage, networks resulting in lower expenses, high availability, fast installation, reduction in security risks including fault tolerance and optimum utilization of resources.

CPC53. Effect Of Hindrance On The Wind Pressure Distribution Around High-Rise Buildings

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The importance of wind velocity in case of high-rise building is predominant for its design. The presence of a nearby structure influences the wind pressure distribution on a high-rise building due to interference. Wind loads acting on building frames at various floor levels are calculated using wind load coefficients and wind velocity acting at the respective floor level after selecting a suitable velocity profile. The wind pressure coefficients available in the design codes are based on experimental studies carried out on the isolated models of high-rise buildings in wind tunnels. The presence of any obstruction *i.e.* low-rise building upstream of a high-rise building affects the wind environment around it. Separation of flow developed at the top of the low-rise building results in shooting velocity on some segments of the high-rise building. In the present paper an experimental study has been carried out on rigid models of buildings in a boundary layer wind tunnel in order to study the interference effect offered by low-rise buildings on the high-rise buildings. A model of low-rise building is placed upstream of a high-rise building model and the wind environment between the two is observed in terms of velocity distribution. Spacing between the two models is varied in order to study the importance of spacing on the wind environment between the two models. It is observed from the present study that the wind environment between the two models of the buildings is changed and therefore, wind pressure/force on high-rise buildings is adversely affected.

CPC54. Hiding Sensitive Association Rules in Data Mining

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Data mining techniques have been widely used in various applications. However, the misuse of these techniques may lead to the disclosure of sensitive information. Researchers have recently made efforts at hiding sensitive association rules. Nevertheless, undesired side effects, e.g., non sensitive rules falsely hidden and spurious rules falsely generated, may be produced in the rule hiding process. In this paper, we present a novel approach that strategically modifies a few transactions in the transaction database to decrease the supports or confidences of sensitive rules without producing the side effects. Since the correlation among rules can make it impossible to achieve this goal, in this paper, we propose heuristic methods for increasing the number of hidden sensitive rules and reducing the number of modified entries. The experimental results show the effectiveness of our approach, i.e., undesired side effects are avoided in the rule hiding process. The results also report that in most cases, all the sensitive rules are hidden without spurious rules falsely generated. Moreover, the good scalability of our approach in terms of database size and the influence of the correlation among rules on rule hiding are observed.

CPC55. Data Mining and KDD Two Paradigms

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In recent years, the Indian Economy has shown tremendous growth. Due to advances in data storage and networking technologies, large amounts of data are now available. Data mining and knowledge data discovery techniques can be applied to these large volumes of data to come up with meaningful information that can help in making businesses more competitive and sustain economic development in the long run. Consider knowledge as a fuel and energy source for your business, a power source. This paper focuses on specific areas of potential applications of data mining and Knowledge Discovery in Databases in the growth of the Indian economy

CPC56. Content based shape matching using wavelet transform

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Object contour matching is essential in content based indexing and retrieval of digital images. In this paper, we propose a new approach for shape recognition using the wavelet transform modulus maxima. We apply it to the problem of content based indexing and retrieval of fish contours. Initially, a wavelet transform modulus maxima (WTMM) image is produced by a one level biorthogonal wavelet transform. This WTMM image contains curvature points of the contour. Then the high curvature points (HCP's) are kept in the WTMM image and the less important points are discarded. These HCP's are used to locate the centroid of the object contour. Finally, the description scheme and the similarity measures proposed here are simple and take into consideration the way our visual system perceives objects and compares them. The proposed scheme is invariant to translation, rotation and scale changes. This scheme allows reconstruction of the shape boundary from the feature vector used to describe it. The experimental results and comparisons have demonstrated that the proposed system can accurately and efficiently match the true object contour.

CPC57. Appraising a decade of Research in the field of Grid Computing: "The next big thing"

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Grid computing (or the use of a *computational grid*) is applying the resources of many computers in a network to a single problem at the same time - usually to a scientific or technical problem that requires a great number of computer processing cycles or access to large amounts of data. A well-known example of grid computing in the public domain is the ongoing **SETI** (Search for Extraterrestrial Intelligence) @**Home** project in which thousands of people are sharing the unused processor cycles of their PCs in the vast search for signs of "rational" signals from outer space. According to John Patrick, IBM's vice-president for Internet strategies, "**the next big thing will be grid computing.**" The paper is an attempt to appraise the work done in last one decade in the field of Grid Computing and also to highlight its future prospects.

CPC58. Texture gradient based segmentation of images

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The segmentation of images into meaningful and homogenous regions is a key method for image analysis within applications such as content based retrieval. An image segmentation algorithm aims to assign a class label to each pixel of an image based on the properties of the pixel and its relationship with its neighbors. Examples of image segmentation applications include remote sensing, medical image analysis and diagnosis, computer vision etc. The watershed transformation is a technique for segmenting digital images that uses a type of region growing method based on an image gradient. It effectively combines elements from both the discontinuity and similarity methods . However, watershed segmentation is often not effective for textured image regions that are perceptually homogeneous. In order to properly segment such regions the concept of the "texture gradient" is introduced. Texture information and its gradient are extracted using a combination of complex and packet wavelet transform. A large class of natural textures can be modeled as a quasi-periodic pattern and detected by highly concentrated spatial frequencies and orientations. The multi channel multiresolution approach helps a lot in this process. The pyramid-structured wavelet transform decomposes a signal into a set of frequency channels that have narrower bandwidths in the lower frequency region. The transform is suitable for signals consisting primarily of smooth components so that their information is concentrated in the low frequency regions. However, it may not be suitable for texture whose dominant frequency channels are located in the middle frequency region. To analyze quasi-periodic signals, the concept of wavelet bases has been generalized to include a library of modulated waveform orthonormal bases, called wavelet packet bases(WPT) . Thus, an appropriate way to perform the wavelet transform for textures is to detect the significant frequency channels and then to decompose them further. WPT is associated with a best basis selection algorithm. The best basis selection algorithm decides a decomposition structure among the library of possible bases, by measuring a data dependent cost function. MSE or entropy has been some of the choices for cost function. A novel marker location algorithm is subsequently used to locate significant homogeneous textured or non-textured regions. The marker based watershed algorithm is then used to properly segment the identified regions. The combined algorithm produces effective texture and intensity based segmentation for the application to content-based image retrieval.

CPC59. Preventing the Database from SQL Injection Attacks

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The database is the heart of most Web applications: it stores the data needed for the Websites and applications to deliver specific content to visitors and render information to customers, suppliers, employees and a host of stakeholders. It stores user credentials and sensitive financial information, invoices, payments, inventory data, etc. It is through the combination of a database and Web scripting language that we as developers can produce sites that keep clients happy, pay the bills, and most importantly run our businesses.

But sometimes it has been observed that our critical data may not be safe. These data can be hacked by unauthenticated user through the technique called Structured Query Language (SQL) Injection. SQL injection is a type of security exploit in which the attacker adds SQL code to a Web form input box to gain access to resources or make changes to data. SQL injection attacks potentially affect all applications, especially web applications that utilize a database backend. These attacks are generally against the applications and not the database directly. In this paper we explain about an SQL injection attack and examine threats from it. This paper also discusses some prevention techniques through which you can prevent your database from it.

CPC60. Maximum Entropy Approach For Optimal Repairable $M^x/G/1$ Queue With Bernoulli Feedback And Setup

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The model developed in this paper has been designed to analyze the behavior of $M^x/G/1$ queueing system with balking. The server initiates the service only if there are N customers accumulated in the system. To make the model more versatile, the assumptions of unreliable server, general phase repair, Bernoulli feedback, startup and setup times are taken into consideration. Using the supplementary variable technique and the generating function method, the stationary distribution of the queue length and various other queueing characteristics are established. Using the maximum entropy approach, we intend to determine the approximate results for the steady-state probability distributions of the queue length. The method of Lagrange's undetermined multipliers to maximize the entropy function subject to the relevant constraints is used. Moreover, we derive the approximate formulae for the expected waiting time of an arbitrary customer in the queue. A comparative study between the exact results obtained using supplementary variable technique and the approximate results obtained using maximum entropy approach has been facilitated by taking numerical illustration.

CPC61. Time – Frequency Domain Based HRV Analysis

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Analysis of heart rate variation has become a popular noninvasive tool for assessing the activities of the autonomic nervous system (ANS). Heart rate variability (HRV) refers to the beat-to-beat alterations in heart rate. HRV analysis is based on the concept that, fast fluctuations reflect the changes of sympathetic and vagal activity which results in variability of intervals between R waves i.e. "RR intervals". The heart rate is analyzed using the various time domain parameters and frequency domain parameters.

Initially R peaks are detected from the ECG and RR interval signal is obtained which is further used to get the HRV signal. Spectral analysis of this HRV signal is done to estimate the power content in different frequency bands. Two frequency bands play a vital role in the power spectrum, a low frequency and a high frequency. Simultaneously, for time domain analysis, parameters such as mean of RR interval signal, standard deviation, coefficient of variance, root mean square of standard deviation are evaluated from RR interval signal and analyzed for different arrhythmias.

It is observed that mean of RR interval signal and coefficient of variance plays an important role and can be used in classification along with the power content in low and high frequency bands.

The method is applied to normal, ST change, CU Ventricular Tachyarrhythmia, Malignant ventricular arrhythmia signals. In this work, the different linear and frequency domain parameters evaluated show a particular range for various cardiac arrhythmias.

CPC62. Closed Sequence Pattern Mining without Candidate Maintenance Based on Time series

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Sequential pattern mining is an important mining technique which discovers frequent sub sequences from a sequence database. However, it is very difficult as it generates explosive number of sub sequences in candidate generation and test approach. Frequent pattern mining algorithm should mine only the closed ones because it leads to compact and complete result set but also better efficiency. Especially it is very complex for time series data as the amount of data is enormous and highly time sensitive. In this paper, we adopted a projection-based, sequential pattern growth approach for efficient mining by applying Bi-Directional Extension

CPC63. Biometric Technology in Context of E-Card security

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"Signature can be copied, Numbers can be traced, Characters can be seen, cards can be theft, but a human biometrics is still not be copied, traced or theft".

The best way to secure a credit card transaction is to relate Biometric technology with the credit card transaction security system. System can be based on verification of biometrics information of credit card holder stored in credit card itself.

The use of card holders' unique physical features such as fingerprints, facial appearance, and speech patterns to verify individual identities has been around for decades. But thanks to rampant credit card fraud and falling technology costs which leads to development of crime-fighting tools such as fingerprint recognition, electronic-signature verification and voice recognition. These developments made credit card transactions safe and convenient for consumers to make credit card purchases. Biometrics is now being used in a number of ways to enhance the customers' shopping experience as well as demanding security.

Frank Riso, Motorola spokesman says," With fingerprint technology, people don't have to fish through their wallet or purse to try to find their credit cards".

This paper is about, the designing an architectural background for storing, verifying and accessing biometric information along with other relevant information of credit card holder. This study uses the concept of advance database, data-mining, intelligent software, and advance hardware technology to design such architecture.

CPC64. Cross Layer Design For Routing & Security In Multi-Hop Wireless Networks"

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Multi-hop wireless networks are facing some research issues regarding routing protocols and security mechanisms. Multi- hop decentralized architecture, media access delay, lower link life, and multi-layer security threats are the key challenges which need to be address. The selection of optimal path for routing and the detection of multilayer security attacks cannot be achieved with the traditional approaches. Cross layer design is the only solution to cope with these kinds of challenges in multi-hop wireless networks. In this paper, we discuss the importance of cross layer security mechanisms and routing protocols for multi-hop wireless networks by critical comparison.

CPC65. A Prototype System for Retrieving images using Color Features

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In this paper we had studied and developed the work[1] in the area of content based image retrieval system and had explored the work proposed in the area of image organization and retrieval in Image Databases using global color features and spatial color distribution of images. We suggest extending the use of image histograms to characterize the global and local color properties of an image and to preserve its intrinsic geometric information. We have developed the proposed algorithm for image organization and retrieval by color features, presented as ORCF. The algorithm is robust in the sense that it can deal with scale and rotation variances in images. On the basis of this algorithm we have developed a prototype system for content base image organization and retrieval.

CPC66. Checkpointing Algorithm in Alchemi.NET

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The Grid is rapidly emerging as the means for coordinated resource sharing and problem solving in multi-institutional virtual organizations while providing dependable, consistent, pervasive access to global resources. The emergence of computational Grids and the potential for seamless aggregation and interactions between distributed services and resources, has led to the start of new era of computing. Tremendously large number and the heterogeneous nature of grid computing resource make the resource management a significantly challenging job. Resource management scenarios often include resource discovery, resource monitoring, resource inventories, resource provisioning, fault isolation, variety of autonomic capabilities and service level management activities.

Out of this fault tolerance has become the main topic of research as till date there is no single system that can be called as the complete system that will handle all the faults in grids. Checkpointing is one of the fault-tolerant techniques to restore faults and to restart job fast. The algorithms for Checkpointing on distributed systems have been under study for years. These algorithms can be classified into three classes: coordinated, uncoordinated and communication-induced algorithms. In this paper, a Checkpointing algorithm that has minimum Checkpointing counts equivalent to periodic Checkpointing algorithm has been proposed. Relatively short rollback distance at faulty situations and produces better performance than other algorithms in terms of task completion time in both fault-free and faulty situations. This algorithm has been implemented in Alchemi.NET because it did not currently support any fault tolerance mechanism.

CPC67. Comparison of coefficients used for DNA Analysis by PRAPD

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The alterations caused by eight different similarity coefficients were evaluated in the clustering and ordination of 27 common bean cultivars analyzed by RAPD markers. The Anderberg, simple matching, Rogers and Tanimoto, Russel and Rao, Ochiai, Jaccard, Sorensen-Dice, and Ochiai II's [4] coefficients were tested. Comparisons among the coefficients were made through correlation analysis of genetic distances obtained by the complement of these coefficients, dendrogram [2] evaluation. The employment of different similarity coefficients caused few alterations in cultivar classification, since correlations among genetic distances were larger than 0.86. Nevertheless, the different similarity coefficients altered the projection efficiency in a two-dimensional space and formed different numbers of groups by Tocher's optimization procedure[25]. Among these coefficients, Russel and Rao's was the most discordant and the Sorensen-Dice was considered the most adequate due to a higher projection [9] efficiency in a two-dimensional space. Even though few structural changes were suggested in the most different groups, these coefficients altered some relationships between cultivars with high genetic similarity. The total eighteen algorithms of coefficient are used in PRAPD. The output of final result can be clustered by UPGMA tool which classifies the species hierarchical.

CPC68. Cross Layer Design for Routing with Available Bandwidth at MAC Layer in Ad-hoc Networks

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Multi-hop wireless networks are facing some research issues regarding routing protocols and security mechanisms. Multi-hop decentralized architecture, media access delay, lower link life, and multi-layer security threats are the key challenges which need to be address. The selection of optimal path for routing and the detection of multilayer security attacks cannot be achieved with the traditional approaches. Cross layer design is the only solution to cope with these kinds of challenges in multi-hop wireless networks. In this system, we will discuss the importance of cross layer security mechanisms and routing protocols for multi-hop wireless networks by critical comparison.

CPC69. Challenges for Hippocratic database -Limited Disclosure

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With the exponential growth in data collection and number of users, the privacy preservation becomes the major issue in design and implement of various database system. Today the basic privacy solution is considered to be Hippocratic database. Our major concern is to get the solution of problems in LD of Hippocratic database. Hence we will formulate the basic privacy laws.
On the basis of there laws we will give a chain antology based model to get the solution of LD.

CPC70. Information Retrieval From Unstructured Data

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Information Retrieval is a challenging domain of ongoing research as the users' queries and text documents represents ambiguities and complexities of natural language processing; an information retrieval process begins when a user enters a query into the system. queries are formal statement of information needs for example search word in a web search engine .in information retrieval a search word might not be uniquely identify as a single object in the unstructured data.

The proposed tool can be implemented into two phases: The paragraph identification process and deciding page-vicinities of relevant text. It is suggested that the target paragraphs can be best identified by page-numbers as the accession parameters. Henceforth, paragraph-tagging process justifies itself to be a prelude step for tracking up target and their relevant pages. In the subsequent phase, the semantic content filtering needs the congenial representation of the extracted content from the tagged paragraphs. The notion of n-gram dependency triplets is used to give the semantic interpretation to the core sentences and their neighboring components.
The semantic vicinities of search key phrases now can be learnt, by analyzing levels of term-to-term associations from the underlying conceptual dependencies of the extracted content. This is supported by the assumption that indirectly co-related terms may elaborate the search topics from target pages onto adjacently forward page-ranges until pure repetition of already identified term-co-relations is found, indicating that the topic is being concluded in its last few paragraphs, having been covered in depth. In this way, by filtering out the pages with meaningfully related content, the degree of relative relevance for the subject-specific topics can be further investigated.

CPC71. Data Protection by using RAID System

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The purpose of this document is to give an over view of what RAID is, why we need it and how it works and how Different levels of RAID can be combined to provide faster recover from disk drive failure at minimum cost without degrading disk drive and application performance.
An individual drive has a certain life expectancy before it fails, as measured by MTBF. Since there are many drives, potentially hundreds or even thousands of drives in disk array, the probability of a drive failure increases significantly. As an example, if the MTBF of a drive is 750,000 hours, and there are 100 drives in the array, then the MTBF of the array becomes 750,000 / 100, or 7,500 hours. RAID (Redundant Array of Independent Disks) was introduced to mitigate this problem. RAID arrays enable you to increase capacity, provide higher availability (in case of a drive failure), and increase performance (through parallel access)

CPC72. Data Security By Alter The Meassage

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In this paper new method for data security is presented. In this method we are having a new idea regarding the data security. According to this method we provide a illusion to the unauthorized person who want to access the data without our permission.
We keep two package of data in a single unit and one package will contain the original data while other will contain the data which provide the illusion to the unauthorized person (Hacker) or misguide him that he has cracked our data.
For this purpose, the original data kept in one package we will provide a password to the original data. And the data which is providing illusion to the unauthorized person that data can be open by any other password except the original password . and as any unauthorized person will enter the wrong password at least for once he will get the wrong data and the data which we wanted to send can be send without any disturbance or modification by any unauthorized person hence data can be send more efficiently without any problem. There are many more aspects about this idea from which this idea can be implemented for data security purpose.

CPC73. Remaining distance indicator with respect to remaining fuel

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In this paper we proposed an idea how much kilometer a vehicle can run on a road in remaining fuel. It is seen that most bike or car owner experience a problem which is not resolve yet, problem is how long I can drive in remaining fuel. Because it is totally dependent on a engine efficiency .A digital display unit is used every where to get information about how much fuel is remaining in fuel tank. We have used this information to calculate remaining kilometer vehicle can run. In this idea feedback system is used to calculate remaining kilometer vehicle can run. In our feedback system memory device is used for tracking the records as for a specified amount of fuel, how much a vehicle ran. Feedback system measured data continuously so that a accurate result can be calculated. Basically feedback system measures how much kilometer vehicle is running in a fixed amount of fuel. Accuracy is required in measurement so that a accurate result may obtained. The idea is very useful for those vehicle owners which makes long journey, those drive in night, those have old vehicles .In this paper we also proposed a way through we can efficiently use remaining fuel.

CPC74. Diarrhea Management Children below Five age Indore District M.P.

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This study was conducted to assess and manage the problem of diarrhea and time of initiation of its management in children below five age of different socio economic status, in three different area of Indore Madhya Pradesh.

CPC75. Distributed Object-Based On Design of Real-time System

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This paper presents an objective of DO is to develop a method for the design of real-time (RT) systems that: is practical for systems of large scale and complexity; includes support of object-oriented (OO) techniques for achieving reusability in implementations; helps with visualizing and testing design concepts during the early stages when the big decisions are being made. This output will be useful to designers of real-time systems to help them do their job better, and to designers of future tools (including future versions of Objective) to help them identify the capabilities required. There is no big object-oriented-method-in-the-sky that will satisfy the objectives by itself, so our approach is to develop a loosely-coupled set of modified versions of existing OO and RT methods. Important tasks are: development of a new design method that focuses on a concept we call time threads, the method is called Time thread-Driven design; visualization techniques for OO frameworks and design guidelines for frameworks; research into integrating the ideas of our design method into CASE tools.

CPC76. Digital Petrometer

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A digital numeric "petrometer" is a trained system by which we can measure numeric value of petrol in our vehicle (in four-wheeler/two-wheeler).
In this paper we present a new method to display petrol measurement in our odometer's display. This circuit has been designed with some measurement instruments in which we use 'P to I and 'A to D converter. We can measure liquid in liter and pressure in n/m the concept behind this mechanism convert pressure measurement into the liquid measurement. This mechanism can solve our various problem which occurred during getting fuel on petrol pump. Today we do not know how much quantity of petrol is being filled in our vehicle. This system provides us the facility to display the numeric value of petrol in our vehicle. By this system we solve the petrol steal problem as well as we can easily judge the amount of quantity of petrol in our vehicle .so it will also help us in emergency time to indicate fuel is going to empty.

CPC77. Performance Analysis of Dynamic Source routing protocol in mobile Ad hoc Network

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In the next generation of wireless communication systems, there will be a need for the rapid deployment of independent mobile users. Significant examples include establishing survivable, efficient, dynamic communication for emergency/rescue operations, disaster relief efforts, and military networks. Such network scenarios cannot rely on centralized and organized connectivity, and can be conceived as applications of **Mobile Ad Hoc Networks**.

The Ad hoc Network because of dynamic changing topology, limited bandwidth and limited power capacity requires altogether a different approach towards routing than conventional routing in wired networks.

There are proactive and Reactive (Demand driven) protocols used in ad hoc network.

The Demand driven approach merits the proactive approach. As the overhead in proactive approach can be significantly minimized thereby improving the performance of the system in reactive approach. In this paper we focus on Dynamic Source Routing Protocol a reactive protocol in an ad hoc network. After exhaustive analysis of the current state of the DSR we intend to propose future simulation to determine the feasibility of the DSR in ever changing constraints of an ad hoc network.

CPC78. Edge Detection with Applications

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In real world machine vision problems, numerous issues such as variable scene illumination make edge and object detection difficult. There exists no universal edge detection method which works well under all conditions. In this paper, we propose a logarithmic edge detection method based on Parameterized Logarithmic Image Processing (PLIP) and a four-directional Sobel method, achieving a higher level of independence from scene illumination. We present experimental results for this method, and compare results of the algorithms against several leading edge detection methods, such as Sobel and Canny. To compare results objectively, we use Pratt's Figure of Merit. We demonstrate the application of the algorithm in conjunction with Edge Preserving Contrast Enhancement (EPCE), which is an image enhancement method dependent on the raw output of an edge detection kernel. This shows that the use of this edge detection algorithm results in better image enhancement, as quantified by the Logarithmic AME.

CPC79. Dynamic channel allocation scheme using genetic algorithm in cellular Network

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The demand for mobile communications has grown remarkably in the last years. An efficient allocation of communication channels is essential for ensuring good performance of cellular networks, given the limited spectrum available. Here, we proposed and simulate the "**Dynamic channel allocation scheme using genetic algorithm in cellular Network**" to maximize the channel usage and minimize the call blocking Probability while also achieving the target signal to noise ratio throughout the service or coverage area. Our proposed dynamic channel allocation system used minimum reuse co-channel distance but greater than specified reuse co-channel distance and maximum SNR but greater than specific SNR. We know that channel assignment problem is an Optimization Problem to assign a minimum number of channels under certain constraints to requested calls in a cellular radio system. So we use the genetic algorithm which is useful tool in solving optimization problems & provide an optimal solution for channel allocation problem. The mat-lab 7.5 simulator is used for simulating the "Dynamic channel allocation using genetic algorithm" for cellular mobile & then results are compared with the existing distributed dynamic channel allocation.

CPC80. Dual Firewall Technology For Vpn Network

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The term "VPN," or Virtual Private Network, has become almost as recklessly used in the networking industry as has "QoS" (Quality of Service) to describe a broad set of problems and "solutions," when the objectives themselves have not been properly articulated. This confusion has resulted in a situation where the popular trade press, industry pundits, and vendors and consumers of networking technologies alike, generally use the term "VPN" as an offhand reference for a set of different technologies. This paper attempts to provide a common sense **definition of a VPN, Security of VPN using Dual Firewall Technology** and an overview of different approaches to building them.

CPC81. Enhancement of Web Page Clustering: A Study

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Web page clustering is technology that puts semantically related web pages into groups and is useful for categorizing, organizing and refining search results. But finding clusters that are semantically meaningful to users is difficult. QDC is a web page clustering algorithm which uses the user's query as part of a reliable measure of cluster quality. QDC provides substantial improvement in performance over other algorithms. In QDC, A base cluster is described by a single word and consists of all the pages containing that word. In this paper we present an algorithm that uses phrases to identify base clusters. It treats documents as a string, not simply a set of words, thus making use of proximity information between words.

CPC82. Image Retrieval Techniques based on Image Features: A State of Art approach for CBIR

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The purpose of this Paper is to describe our research on Feature extraction and Matching techniques in designing a Content Based Image Retrieval (**CBIR**) system. Due to the enormous increase in image database sizes, as well as its vast deployment in various applications, the need for CBIR development arose. Firstly, this paper outlines a description of the primitive feature extraction techniques like: texture, colour, and shape. Once these features are extracted and used as the basis for a similarity check between images the various matching techniques are discussed. Furthermore, the results of its performance are illustrated by a detailed example.

CPC83. Robust Congestion using ECN

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Explicit congestion notification (ECN) mechanism enables a router to signal congestion to the sender without trusting the receiver or other networking devices. A misbehaving connection would exceed its bandwidth. This improved mechanism is robust .The ECN-nonce enables the sender to verify the correct behavior of the ECN receiver and that there is no other interference that conceals marked (or dropped) packets in the signaling path.
It protects against accidental or malicious concealment of marked packets from the TCP sender. It improves the robustness of congestion control by preventing receivers from exploiting ECN to gain an unfair share of network band width. It is efficient for both routers and hosts.
The encapsulation of IP packet headers in tunnels is used in many places, including IPsec and IP in IP .Explicit Congestion Notification (ECN) is an experimental addition to the IP architecture that uses the ECN field in the IP header to provide an indication of the onset of congestion to applications. ECN provides this congestion indication to enable end-node adaptation to network conditions without the use of dropped packets.

CPC84. $In_{0.53}Ga_{0.47}As$ based photo-FET for microwave applications

Gaytri M. Phade, B. K. Mishra

An optoelectronic and photonic integrated circuits bring both the advantages of the classical optics: insensitivity to the electromagnetic noise and the advantage of integration: miniaturization, better reliability, low cost. $In_{0.53}Ga_{0.47}As$ is a good substrate for such circuits. Here we are reporting the $In_{0.53}Ga_{0.47}As$ based photo-FET that replace both the photodiode and the amplifier and can be used for microwave applications. Ternary compound semiconductor In_xGa_{1-x}, As is a promising material for advanced optoelectronic devices. $In_{0.53}Ga_{0.47}As$ lattice matched to semi-insulating (SI) InP has higher low field mobility, peak electron velocity, and intervalley separation than InP [2]. Thus, InGaAs MISFETs have potential for superior microwave performance. The simulation of photo-FET is implemented using MATLAB.

CPC85. Computerization and e governance in Madhya Pradesh

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Imagine a situation in which all interaction with government can be done through one counter 24 hours a day, 7 days a week, without waiting in lines. Each citizen can then contact the government through a website where all forms, legislation, news and other information will be available.

Toady citizen of Madhya Pradesh got the lot of facilities through the internet and e government.

Our Madhya Pradesh is undergoing rapid economic and political change, accompanied by developments in e-government, with radical implications for citizens. The article considers the modernization of government organization, and challenges of technology management.

CPC86. E-BANKING - Dependency on IT based product and services for competitive survival

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Technology has become the fuel for rapid change; it implies the integration of information system with communication technology and confined to management information system. The development of technology brought a revolution in the banking industry. The banks appear to be on fast tract for IT based product and services. Deregulation, Liberalization in the financial sector has stimulated financial innovations. Breath taking developments in the technology of telecommunication and electronic data processing have further accelerated these changes. The proposed paper on "E-Banking-:The Upcoming Technology And Innovations In It" tries to seek that what all changes have taken place with the introduction of new and upcoming technology, how customers are benefited , The study has been done by taking all the banks in totality. The study focuses on the growth of technology in banking sector and what segments of society it has covered, how technology is being upgraded.

CPC87. Fifth Civilization: Virtual Worlds, Opportunities and Challenges

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Fifth Civiliaztion is talking shape with innovative tools and approcahes of virtual world. A virtual world is characterised by computer-based interactive and simulated environmnet which is accessed by multiple users through an online interface. Virtual worlds are popular as digital worlds, simulated worlds, MMOG (massively multiplayer online game) etc. In a virtual world users interact with each other through avatar. Avatars are communally depicted as two or three dimensional graphical representations. Computer-simulated virtual world presents perceptual stimuli to the user. User can configure the modeled world and can experience telepresence upto some extent. In this world user can unfold his or her fantasies which is difficult to achieve in real world. The virtual world is also governed by some rules like the real one. "***Second Life"*** is free 3D virtual world software where users can socialize, connect and create using free voice and text chat. Virtual worlds have been created for many different purposes which include Commercial Gaming, Socializing / Online Community Building, Education, Political Expression, Military Training.

This paper emphasizes on the role and scope of virtual world and its opprotunities and challenges in shaping new epoch of civilization i.e. Fifith Civilization. Virtual world has a broad spectrum of opprotunities and challenges. Virtual world has many opportunities like Event Planning, Education, Building/Designing, Professional Services, Trade platforms etc. The challenges include business, social, political, communication, educational, technical, ethical, and legal issues. These opprotunities and challenges require a great endevour and attention to explore the frontiers between reality and virtuality.

CPC88. Introduction of Digital Image processing & algorithms

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Digital image Processing is a subset of the electronics domain where in the image is converted to an array of small integer called Pixels, representing a physical quantity such as scene radiance, stored in digital memory and processed by computer or other digital hardware. Digital image processing, either as enhancement for human observers or performing autonomous analysis, offers advantage in cost, speed and flexibility and with the rapidly falling price and rising performance of personal computers it has become the dominant method in use. This is the review paper of Introduction of Digital image Processing & Algorithms of Image enhancement i.e. point transform, neighborhood operation.

CPC89. Analytical Hierarchical process(AHP): Solution to evaluate ERP Implementation

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An enterprise resource planning (ERP) system is an integrated software solution, typically offered by a vendor as a package that supports the seamless integration of all the information flowing through a company. Business information systems are an area of the greatest significance in any business enterprise today. ERP projects are a growing segment of this vital area. The objective of customization in ERP implementation is to achieve a fit between the ERP system and the process that the system supports. Widespread literature review has been done to study the issues in ERP implementation. Customization is found to be the major problem in most of the ERP projects. AHP is the preeminent slant among the various methodologies applied to ERP projects in the past for prioritizing the attributes. Hence, in this paper we have applied the analytical hierarchy process (AHP) to a framework for evaluating ERP implementation choices. The upshot of the study is the identification of various customization possibilities for ERP implementation. This study is meant to help managers think about the various feasible customization options available to them.

CPC90. Distributed System: Fast and Accurate Projection of Large Itemset

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Modern information needs have resulted in very large amounts of data being used in geographic information systems. Problems arise when trying to project these data in a reasonable amount of time and accuracy, however. Current single-threaded methods can suffer from two problems: fast projection with poor accuracy, or accurate projection with long processing time. A possible solution may be to combine accurate interpolation methods and distributed processing algorithms to quickly and accurately convert digital geospatial data between coordinate systems.

CPC91. Partial Discharge Pattern Analysis And Classification Of Lv Winding Of 1-Φ Transformer

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This paper proposed a partial discharge analysis and its pattern classification in LV winding of single phase Transformer using straight or electrical technique. Getting different pattern by this method by changing fault location we can classify these pattern according to their position in the LV winding.partial discharge is the commencement of failure of insulation of electrical device those are used at high voltage.if such discharge is not detected so these foult may increase at the working duaration.basically partial discharge are the couses of failure of insulation in electrical equipment.the insulation of electrical equipment deteriorates due to thermal, mechanical, electrical and environmental stresses.

To measure the partial discharge we have different technique like direct or electrical method, acoustic measurement, balance measurement etc.here we used electrical method in which PD Analyzer DDX-9101 are used in which we get the 2-D pattern in sinusoidal waveform at different voltage level changing location of fault in LV winding.when we vary voltage level with changing location of fault in LV winding we get variation in peaks level and also peaks location i.e. in +ve and –ve half cycle. By analysis of these peak level and peak location at different fault location we can analysis these pattern and also recognize or classify these partial discharge pattern with the help of suitable algorithm.

CPC92. Flow Oriented Routing Protocol for Wireless Ad-Hoc Networks

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An on demand routing protocol for wireless ad hoc networks in one that searches for an attempt to discover a route to some destination node when a sending node originates a data packet addressed to that node. In order to avoid the need for such route to discovery to be performed before each date packet is sent, such routing protocols execute the path finding process and exchange routing information only when a path is required by a node to communicates with the destination.. This paper presents an analysis of the effect of different design choices for routing previously discovered .This paper presents an analysis of the effect of different designs choices for on demand routing protocols in wireless ad hoc networks, dividing the problem. Our analysis is based on Flow Oriented Routing Protocol (FORP) [8] which operates entirely on demand. This protocol has been proposed for supporting time sensitive traffic in ad hoc wireless networks.

CPC93. Multi-objective Fuzzy Vehicle Routing Problem: A Case Study

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The Vehicle Routing Problem (VRP) is a well-known problem studied by researchers in Operations Research and it deals with distribution of goods from a depot to a set of customers in a given time period by a fleet of vehicles. The solution of a VRP is a set of minimum cost routes, which satisfy the problem's constraints, and fulfill customers' requirements. The conventional approaches or formulae's cannot handle the real situation that depicts VRP. Any real life application of VRP is influenced by many variables that have uncertainties and vagueness. Heuristics are methods which produce good solutions in practice but do not guarantee optimality. Metaheuristics give better solutions and Genetic Algorithm (GA) is one of the most popular Meta heuristic. But application of fuzzy set in VRP is very effective in dealing with the multi objective problem of VRP. In this study, we have developed a model, Multi objective Fuzzy Vehicle Routing Problem, which is based on fuzzy logic and genetic algorithm approaches with attributes: maximization of customer's satisfaction grade, distance minimization and waiting time minimization. The case study of Jain University of Bangalore in Karnataka which provides bus services to pick up and deliver students and staff from/to home and university is considered to demonstrate the effectiveness of this newly developed model.

CPC94. Data Discovery in Material Science: New Informatics Techniques

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Dependence of the material science on data discovery is obvious. Seeking structure-property relationships is an accepted paradigm in materials science, yet these relationships are often not linear, and the challenge is to seek patterns among multiple lengthscales and timescales. Also, various entities have brought about transformations that utilize computerization to better serve the population. One consequence of this evolutionary nature has been that data resides in the data warehouses of individual entities. The concerns as well as sharing regulations challenge traditional knowledge discovery and data mining techniques. This paper outlines a process termed 'materials informatics' that allows one to survey complex, multiscale information in a high-throughput, statistically robust, and yet physically meaningful manner. The application of such an approach is shown to have significant impact in materials design and discovery.

CPC95. HRMIS: An overall review

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The progress and growth of any organization basically depends on its human capital, hence it needs careful, proper and planned management. As managing human resources is as much crucial as managing other important resources in any organization, human resource management always remain an import task in today's business scenario. Private and public both of the sectors are spending a lot of time, effort and money in order to manage their human resources effectively and efficiently.

Human resource management information system is a system which provides regular information about the status of its human wealth, their skills, intelligence, working capabilities, in form of various reports. It also manages the recruitment, selection, evaluation, training and development of the employees of an organization.
Prior to HRMIS, government departments operated primarily with a highly clerical, manual paper process of recording payroll and position transactions which were then forwarded and processed centrally at the Department of Finance. As part of the delivery of HRMIS, these processes were standardized, automated and decentralized to departments for data entry and inquiry purposes, with some functions remaining central for purposes of ensuring necessary security and control standards. Additionally, new and enhanced functionality was delivered in many areas which did not previously exist such as Group Insurance Administration, Seniority Administration, Position Administration, Classification Administration, etc.

CPC96. Enhancement and Manipulation of Color Images by Scaling the DCT Coefficients

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This paper presents a new technique for color enhancement in the compressed domain. The proposed technique is simple but more effective than some of the existing techniques reported earlier. The novelty lies in this case in its treatment of the chromatic components, while previous techniques treated only the luminance component. The results of all previous techniques along with that of the proposed one are compared with respect to those obtained by applying a spatial domain color enhancement technique that appears to provide very good enhancement. The proposed technique, computationally more efficient than the spatial domain based method, is found to provide better enhancement compared to other compressed domain based approaches.
In this paper, we investigate how illuminant estimation techniques can be improved, taking into account automatically extracted information about the content of the images & we considered image manipulation for RGB color space.

CPC97. History Of Simulation Software: 1955-2009

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Simulation and modeling of a system is widely used in different areas like, manufacturing, network, flight dynamics, control systems, communication and health. Simulation run for hours and days can be converted to few minutes' simulation run with the help of computer simulation. Firstly it was used for military in World War II, to model the process of nuclear detonation. After that simulation and simulation techniques are continuously in use for different objectives in different areas. Advanced computer programs can simulate weather conditions, electronic circuits, chemical reactions, atomic reactions, even biological processes. This paper follows simulation software just after the first discovery. It also highlights features and use of simulation software in different kind of industries. Finding of survey traces concept, parameters, requirement and use of variety of simulation software. This paper presents detailed information about the simulation software.

CPC98. Human Iris Patterns as a form of Biometric Identification

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A wide variety of systems requires reliable personal recognition schemes to either confirm or determine the identity of an individual requesting their services. The purpose of such schemes is to ensure that the rendered services are accessed only by a legitimate user and no one else. Examples of such applications include secure access to buildings, computer systems, laptops, cellular phones, and ATMs. In the absence of robust personal recognition schemes. Iris recognition is regarded as the most reliable and accurate biometric identification system available. Most commercial iris recognition systems use patented algorithms developed by Daugman, and these algorithms are able to produce perfect recognition rates. However, published results have usually been produced under favorable conditions, and there have been no independent trials of the technology. In this paper we give a brief overview of iris patterns in form of biometric identification and summarize some of its advantages, disadvantages, strength, limitations, and related privacy concerns.

CPC99. Web Usage Mining on Server Logs to Discover User Access Patterns

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Web Usage Mining is an aspect of data mining that has received a lot of attention in recent years. It deals with the extraction of interesting knowledge from web usage data produced by web servers. An extensive array of tools has developed that perform several data mining algorithms on log files in order to identify user behavior on a particular web site. In this paper, we survey about the different aspects of web usage mining on server logs to discover user access patterns.

CPC100. Implementation of Relational Algebra Interpreter using another query language

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Relational database systems have succeeded commercially because of their straightforwardness and well-built theoretical foundation. This paper "Implementation of Relational Algebra Interpreter using another query language" has been designed, implemented and tested in such a way so that queries written in relational algebra can be compiled into SQL and executed on a relational database system. The implementation takes a relational algebra statement as input, does syntactic and lexical parsing on it. In the event of an error in the syntax of the expression it will forward the error to user. If the syntax is correct the relational algebra expression is converted into a SQL statement and executed on an RDBMS. This application can serve as a basis learning Relational Algebra for students as well as for different class of users, as they will be given immediate feedbacks about their queries.

CPC101. Knowledge Management Enabled ERP: An Innovative Approach For Resource Optimization

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Knowledge exists in many forms as a valuable and distinguished intangible asset in all kinds of organization, this prevail the incorporation of knowledge capabilities in ERP. This blending enables the ERP systems' capabilities and horizon up to great extent.

A knowledge management (KM) capability helps the transformation of information into knowledge through creative insight of organization. Existence of business organizations greatly depends upon efficiently managed corporate knowledge to cope up with the ever-changing global economy.

Knowledge Management is a tedious task as it includes all kinds of users in the organization ranging from top to bottom, internal to external. The integration of all their expertise and knowledge for efficient and optimum resource utilization needs KM potential and ERP to be placed concurrently in a single frame.

This paper focuses on how ERP can be strengthened by adding up KM capabilities for enhancing and automating various organizational activities within and outside the organization. The aim of this study is to gain focus on the implementation of ERP Systems with extended capability of knowledge base. Knowledge Management Enabled ERP equipped the organisation to get strategic initiative for providing competitive advantages.

CPC102. Intrusion Detection System Using Advanced Honeypots

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Filtering unauthorized accesses has become one of the major concerns of a server administrator. Intrusion Detection System (IDS) distinguishes between the traffic coming from clients and the traffic originated from the attackers or intruders, in an attempt to simultaneously mitigate the problems of throughput, latency and security of the network. We then present the results of a series of load and response time in the terms of performance and scalability tests, and suggest a number of potential uses for such a system. The results are analyzed using Network Simulator 2. The exponential growth of computer/network attacks is becoming more and more difficult to identify and the need for better and more efficient intrusion detection systems increases in step. The main problem with current intrusion detection systems is high rate of false alarms. Use of honeypots provides effective solution to increase the security and reliability of the network.

CPC103. Using Data mining techniques for HRIS

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Organizations that are enlightened enough to recognize the importance and value of their data often have difficulty in actually *realizing* that value. Their data is often disconnected, inconsistent, and inaccessible. They have valuable, untapped raw data that is hidden in the reams of transactional data they collect daily. Information sharing among departments and functions is difficult. Unlocking the intelligence trapped in mountains of data has been, until recently, a relatively difficult task to accomplish effectively. HR data primarily concerns transactional processing-getting data into the system recording it for reporting purpose. Understanding the Human Resource (HR) data is vital to any firm's effective HRIS.

This paper studies the adoption of data Mining techniques on HRIS (Human Resources Information System) in any organization and presents Data Mining with respect to HRIS effectiveness.

CPC104. Performance Comparison Of Two Manet Routing Protocols Aodv And Dsdv

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Wireless networks can be classified in two types: infrastructured wireless networks and infrastructureless (ad hoc) wireless networks. Ad hoc networks are characterized by the need for efficient routing protocols. According to previous research, the Destination-Sequenced Distance-Vector (DSDV) routing protocol and the Ad Hoc On-Demand Distance Vector (AODV) routing protocol are two good representatives for each routing protocol category, Table-Driven category and On Demand category respectively. We compare via simulation their performance with respect to the pause time of nodes movement. We find which routing protocol is appropriate for certain network conditions. When the nodes move continually then AODV seems to be better than DSDV. When nodes stay unmoving for a long time then DSDV is preferable.

CPC105. Linear Filters

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In this work we propose an alternative animation approach to the traditional key frame based interpolation model. By way of illustration we propose a set of nodes that apply these principles to the X3D standard. In contrast to predefined key frame animations our way of defining animations allows an application to dynamically respond to the current situation and calculate an animation on the fly, while the content author can work with an extremely simple mental model for the animations. It is also our opinion that the way these nodes calculate an animation creates smooth and thus pleasing transitions. In addition, our node set can be used to approximate the effects of inertia, without the requirement and overhead of a heavy physics engine being present. With only a little of this inertia effect applied, objects (e.g. a slider thumb) can subjectively appear to have more physical substance.

CPC106. Data Mining with Credit Scoring Tree-based Optimization

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Consider a large collection of objects, each of which has a large number of attributes of several different sorts. We assume that there are data attributes representing data, attributes which are to be statistically estimated from these, and attributes which can be controlled or set. A motivating example is to assign a credit score to a credit card prospect indicating the likelihood that the prospect will make credit card payments and then to set a credit limit for each prospect in such a way as to maximize the over-all expected revenue from the entire collection of prospects. In the terminology above, the credit score is called a statistical attribute and the credit limit a control attribute. The methodology we describe in the paper uses data mining to provide more accurate estimates of the statistical attributes and to provide more optimal settings of the control attributes. We briefly describe how to parallelize these computations. We also briefly comment on some of data management issues which arise for these types of problems in practice. We propose using object warehouses to provide low overhead, high performance access to large collections of objects as an underlying foundation for our data mining algorithms.

CPC107. Rapid Dynamic Image Registration of the Beating Heart for Diagnosis and Surgical Navigation

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This paper presents a general framework for registration of medical images. Comparing with other registration frameworks, this framework is quite simpler in structure but much quicker in image processing and application development. The input data to the registration process are two images: one fixed image and one moving image. The output data are one result image represents the differences between the fixed image and the moving image after registration. Aside the input and output data, the framework can be separated into three parts: interpolator, measurer and optimizer. Interpolator is used for evaluating moving image intensities at nongrid positions. Measurer provides an appraisal method of how well the fixed image is matched by the transformed moving image. Optimizer can optimize the measure criterion with respect to the transform parameters. These three parts act as different roles in medical images registration and construct a simple, rapid and stable medical images registration framework. Dynamic cardiac magnetic resonance imaging (MR) and computed tomography (CT) provide cardiologists and cardiac surgeons with high-quality four-dimensional (4D) images for diagnosis and therapy, yet the effective use of these high quality anatomical models remains a challenge. Ultrasound (US) is a flexible imaging tool, but the US images produced are often difficult to interpret unless they are placed within their proper three-dimensional (3D) anatomical context. The ability to correlate real-time three-dimensional US volumes (RT3D US) with dynamic MR/CT images would offer a significant contribution to improve the quality of cardiac procedures. In this work, we present a rapid two-step method for registering RT3D US to high quality dynamic 3D MR/CT images of the beating heart. This technique overcomes some major limitations of image registration (such as the correct registration result not necessarily occurring at the maximum of the mutual information (MI) metric) using the MI metric. We demonstrate the effectiveness of our method in a dynamic heart phantom (DHP) study and a human subject study. The achieved mean target registration error of CT+US images in the phantom study is 2.59 mm. Validation using human MR/US volumes shows a target registration error of 1.76 mm. We anticipate that this technique will substantially improve the quality of cardiac diagnosis and therapies.

CPC108. Clint Technology – Web Based Service Oriented Mobile Augmented Reality System

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Various types of technology available in market for developing mobile Client - Web based Service Oriented, like Open Source – PHP , ROR, .NET, JAVA are few popular web development technology. Mobile has its own limitation – mobile OS, it's network standards, memory, processing capacity etc. developing client for mobile augmented reality system focus mainly two technology for its advance features - 1) Microsoft technology and 2) Java based technology. Both technologies have its own constraints for mobile but which are very comfortable for scalability, portability, and language independent.

CPC109. Bidirectional Television

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In this paper we use the concept of television in more better way as a bidirectional device,basically a television is a device which is used only for watching the shows,news,movies,songs and all the current affairs and for the entertainment purpose this all are the advantages of tv
Now a days all the changes and modifications are going only on computers so why don't we do any changes in tv? The change is the use of the concept of bidirectionality as we can see the whole world in tv so why they people can't see us as for example generally in news channel they ask for questionaries which we can ask them in tv with live shows but with the help of telephone so why don't we use the television for direct contact with that channel and it is more convenient way to chat with that person and they can see each other also.this is used in computer called as vedio chat with the web camera so this concept is quite better for television also and we use the co-axial cables in tv which is more advanced than twisted wires which is used in telephone wires this can be done in tv and i think it is a great technology for the television world so this is the birirectionality concept.

CPC110. Association Rules Modification for Sensitivity Without any Loss of other Desired Information

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One known fact which is very important in data mining is discovering the association rules from database of transactions where each transaction consists of set of items. In this paper we discuss confidentiality issues of a broad category of association rules. Two important terms support and confidence are associated with each of the association rule.
Actually any rule is called as sensitive if its disclosure risk is above a certain privacy threshold. Sometimes we do not want to disclose sensitive rules to the public because of confidentiality purposes. There are many approaches to hide certain association rules which take the support and confidence as a base for algorithms ([1], [2], [6], [7] and many more).
Our work has the basis of reduction of support and confidence of sensitive rules but in our work we are not editing or disturbing the given database of transactions rather we are introducing some new terms for the purpose of hiding the sensitive information. These new terms are $M_{confidence}$ (modified confidence), $M_{support}$ (modified support) and Hiding counter. Actually our algorithm use some modified definition of support and confidence so that it would hide any desired sensitive association rule without any side effect.

CPC111. Beamforming for Wireless Ad Hoc Networks

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This paper presents cooperative beamforming for wireless adhoc networks. Via collaborative beamforming, nodes in wireless network are able to transmit a common message over along distance in an energy efficient manner. To improve the performance, we have developed a cooperative beamforming algorithm. The idea of cooperative beamforming is to take the help of neighboring nodes to form a beam of electromagnetic energy i.e. the idea of antenna array is used. Since, in this type of network the nodes cannot have antenna array to implement beamforming, we take the help of nearby node to participate in beamforming process. Different source nodes in the network are allowed to transmit simultaneously. Collaborating nodes receives linear mixtures of the transmitted packets. Subsequently each collaborating node transmits a weighted version of its received signal. The weights are such that one or multiple beams are formed each focusing on one destination node and reinforcing the signal intended for a particular destination as compared to the other signals. Each collaborating node computes its weight based on the estimated channel coefficients between source and itself. The proposed work achieves higher throughput and improved SNR in the adhoc network.

CPC112. Applications of Matlab in digital signal processing

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Matlab's rich and powerful functions have made it a fundamental teaching tool in the course of linear algebra, signals and systems, control theory, digital signals processing, image processing. Matlab has provided many main signal and system processing functions such as convolution, Fourier transform, Laplace transform, z-transform, etc, which simplify the calculation process greatly.
This paper describes the applications of Matlab in signals and systems and digital signal processing DSP. Matlab provide various methods to analyze the signals and systems, including both continuous and discrete situations. Some methods can simplify the complicated calculation; some finish the same functions in accordance with the mathematical processing; and some can save operation time via efficient algorithms. Matlab can be used at different levels to solve problems quickly and efficiently, to understand the signal processing procedures deeply and to develop new algorithms.

CPC113. Finite Decimal Ratio Image Resizing

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In this Paper we propose algorithm for finite decimal factor down-sizing of precoded Image. Algorithms proposed so far in literature construct the 8 X 8 output DCT blocks separately. We demonstrate that the target DCT frame as a whole can be constructed in one go, from the 8 X 8 DCT blocks in the original frame, without explicit pixel-domain processing.
We also demonstrate that the basic operation in resizing task can be identified as multiplication by fixed matrices by employing factorization of 8-point DCT matrices. Traditional two-step approaches to realize finite decimal resizing by rational factors i.e. up-sampling followed by down-sampling and its reverse, have both merits and demerits. Former is computationally expensive but provides better quality picture whereas later is computationally less expensive but provides degraded picture. The proposed approach is general enough to realize down-sizing and up-sizing with finite decimal factors (integral and rational both), conforming to the syntax of 16 by 16 macroblocks in image coding standards, in single step.

CPC114. An E-Learning Approach: Distance Education & Technologies

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Distance education is defined as a formal educational process in which the instruction occurs when student and instructor are sited in the different places. Distance education is a method of education in which students can study in their own time, at the place of their choice (home, work or learning centre), and without face-to-face contact with a teacher. Distance education may employ traditional correspondence study, or technological medium (TV, audio, video) or online computer technologies.

Distance learning or open learning must be scalable as well as flexible. Open-ness has particular implications for the use of technology. If no-one is to be denied access, then technologies that are available to everyone need to be used.

Technology is a critical element of distance education. In the recent year distance education comprised in the form of education in which there is normally a separation between teacher and learner and the means of instruction occurs through related technologies i.e. the telephone, the television, computer conferencing or teleconferencing etc. Distance learning also includes a computer-based training (CBT) system and communications tools to produce a *virtual classroom.*

Now distance learning is not new, recent years we have seen an explosion in the mechanisms and tools available for its implementation and support. Distance learning has successfully integrated new communication technologies with effective and efficient manner. In the context of rapid technological change the education system is challenged with providing increased educational opportunities without increased budgets and it can get only through online technologies. *Web-based training*, a generic term for training and/or instruction delivered over the Internet or an intranet using a Web browser.

CPC115. A Survey on Data Stream Association Rule Mining to Estimate Missing Sensor Value

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Association rule mining finds interesting associations and/or correlation relationships among large set of data items. Association rules show attributes value conditions that occur frequently together in a given dataset. A typical and widely used example of association rule mining is *Market Basket Analysis.*

A ***data stream*** is an ordered sequence of items that arrives in timely order. Different from data in traditional static databases, data streams have the following characteristics.

Data streams can be further classified into offline streams and online streams. *Offline streams* are characterized by regular bulk arrivals. Among the above examples, generating reports based on web log streams can be treated as mining offline data streams because most of reports are made based on log data in a certain period of time. Other offline stream examples include queries on updates to warehouses or backup devices. Queries on these streams are allowed to be processed offline. *Online streams* are characterized by real-time updated data that come one by one in time. From the above examples, predicting frequency estimation of Internet packet streams is an application of mining online data streams because Internet packet streams is a real-time one packet by one packet process. Other online data streams are stock tickers, network measurements and sensor data. They have to be processed online and must keep up with the rapid speed of online queries. They have to be discarded right after arrived and being processed. In addition, unlike with offline data streams, bulk data processing is not possible for online stream data.

Data stream mining is the process of extracting knowledge structures from continuous, rapid data records. A data stream is an ordered sequence of instances that in many applications of data stream mining can be read only once or a small number of times using limited computing and storage capabilities. Examples of data streams include computer network traffic, phone conversations, ATM transactions, web logs and sensor data. Data stream mining can be considered a subfield of data mining, machine learning, and knowledge discovery. Due to the characteristics of stream data some challenges for stream data association rule mining are

1. a one scan of data and compact memory usage of the association rule mining technique is necessary.
2. Drifting problem: the mining method of data streams needs to adapt to their changing data distribution
3. Due to the high speed characteristics of online data streams, they need to be processed as fast as possible; the speed of the mining algorithm should be faster than the data coming rate
4. Owing to the unlimited amount of stream data and limited system resources, such as memory space and CPU power, a mining mechanism that adapts itself to available resources is needed.

Some generally used statistical method to estimate missing data are *Mean Substitution,Simple Linear Regression*, *Cold Deck Imputation*, *Hot Deck Imputation*, *Expectation Maximization Maximum Likelihood, Multiple Imputations* .Papadimiriou and Sun introduced SPIRIT (Streaming Pattern discovery in multiple Time series) which uses auto-regression as its basic forecasting model to estimate missing values in datastreams. TinyDB is a query processing system for extracting information from a network of special type of sensors. Halachev and Gruenwald propose a technique to estimate a missing value from data stream known as

WARM (Window Association Rule Mining). Gruenwald, chok and Aboukhamis proposed FARM (freshness association rule mining), a method to estimate missing sensor value based on damped or time faded data stream processing model.

CPC116. Applied Graph Theory and Networks

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In the Present communication we focus on all the latest terminologies related to graph theory and how this is implemented in network analysis, static and dynamic properties of network. Although graph theory is one of the younger branches of mathematics and computer science, it is fundamental to a number of applied fields, including operations research, computer science, and social network analysis. The field of Network Theory has only recently focused its attention on the study of dynamic models in which the topology of the network endogenously drives the evolution of the network. These models assume that the evolution of the links in the network is driven by the dynamics of a state variable, associated to each node, which depends, through the network, on the state variable of the other nodes. Such interplay is crucial in many biological systems and especially in socio-economic systems. Here we will discuss the basic concepts of graph theory from the point of view of social network analysis.

CPC117. Data Mining and Knowledge Discovery

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Data mining is primarily used today by companies with a strong consumer focus - retail, financial, communication, and marketing organizations. Data mining is concerned with the extraction of useful knowledge from various types of data. data mining is the process of analyzing data from different perspectives and summarizing it into useful information - information that can be used to increase revenue, cuts costs, or both. Knowledge Discovery is the **non-trivial process** of identifying valid, novel, potentially useful, and ultimately understandable patterns in data. Data mining used synonymously with knowledge discovery, while other times it is used to refer to the machine-learning phase of knowledge discovery. While large-scale information technology has been evolving separate transaction and analytical systems, data mining provides the link between the two. Data mining software analyzes relationships and patterns in stored transaction data based on open-ended user queries. Several types of analytical software are available: statistical, machine learning, and neural networks. Data mining commonly involves four classes of task like Classification, Clustering, Regression and Association rule learning. Although data mining is a relatively new term, the technology is not. Companies have used powerful computers to sift through volumes of supermarket scanner data and analyze market research reports for years. However, continuous innovations in computer processing power, disk storage, and statistical software are dramatically increasing the accuracy of analysis while driving down the cost.

CPC118. Mobile Without Charger

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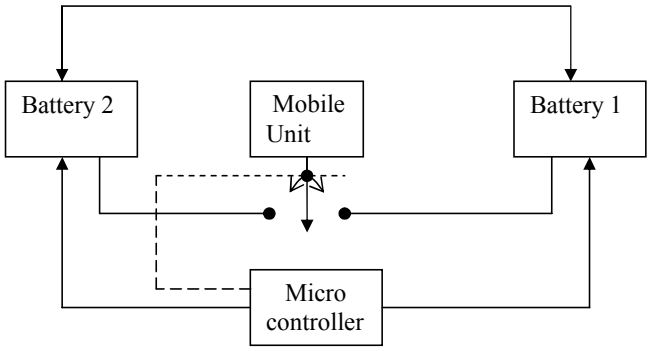
This paper describes the basic problem of a cellular mobile system. A cellular system involving the mobile unit as a major component has a major disadvantage of charging a mobile unit at a repetitively interval of time. A lot of time and power is wasted in doing so. Charging a mobile unit repetitively can be reduced to a great extent if instead of using a single battery (as the present unit uses) we use two batteries. Not only by using two batteries will give us the remedy for this problem, for enhancing the life of two batteries that we are using we must use the two batteries as a backup to each other.



CPC119. Multi-Agent Systems for Adaptive and Efficient Job Scheduling Service in Grids

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In this paper we propose an adaptive efficient job scheduling service model on Grids using multi agent systems and a market like Service level Agreement (SLA) negotiation protocol based on the Contract Net model. This job scheduling service model involves four types of agents: service user agents, service provider agents, local scheduler agents and inter-grid agents. Service provider agents provides services to service user agents by allocating resources using local scheduler agents.
The SLA negotiation protocol is a hierarchical bidding mechanism involving negotiations between the four agents. . In this protocol, the agents exchange SLA announcements, SLA-bid, and SLA-awards to negotiate the schedule of jobs on Grid Compute resources. To deal with the presence of uncertainties, re-negotiation is used to allow the agents to re-negotiate the SLA in failure

CPC120. Preventing Unknown Malware Attack by using Intelligence intrusion Multi detection prevention Systems

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This paper is intended to provide a model for "**Preventing Unknown Malware attack by using Intelligence Intrusion Multi Detection Systems"** , It describes the state's overall requirements regarding the acquisition and implementation of intrusion prevention and detection systems with intelligence (IIPS/IIDS). This is designed to provide a deeper understanding of intrusion prevention and detection principles with intelligence may be responsible for acquiring, implementing or monitoring such systems in understanding the technology and strategies available.

With the need for evolution, if not revolution, of current network architectures and the Internet, autonomous and spontaneous management will be a key feature of future networks and information systems. In this context, security is an essential property. It must be thought at the early stage of conception of these systems and designed to be also autonomous and spontaneous.

Future networks and systems must be able to automatically configure themselves with respect to their security policies. The security policy specification must be dynamic and adapt itself to the changing environment. Those networks and systems should interoperate securely when their respective security policies are heterogeneous and possibly conflicting. They must be able to autonomously evaluate the impact of an intrusion in order to spontaneously select the appropriate and relevant response when a given intrusion is detected.

Autonomous and spontaneous security is a major requirement of future networks and systems. Of course, it is crucial to address this issue in different wireless and mobile technologies available today such as RFID,Wifi, Wimax, 3G, etc. Other technologies such as ad hoc and sensor networks, which introduce new type of services, also share similar requirements for an autonomous and spontaneous management of security.

Intelligence Intrusion Prevention Systems (IIPS) are designed to aid in preventing the compromise of information systems and thus help preserve the basic triad of all security, confidentiality, Integrity and availability (CIA), not only of information but the infrastructures that store and transmit it as well.

Intelligence Intrusion detection systems (IDS) refer to any technology or strategy that allows us to detect the attempted compromise of our systems and information, and as before, preserve the CIA of the information and infrastructures.

In many cases these two systems work together and with the networking infrastructure to do their jobs. As IIPS/IIDS technology has improved over the last few years, prevention and detection have been consolidated into one network device, or as it is commonly referred to, one "appliance." In other cases the IPS is a separate technology, usually a software package or "agent" that runs on a desktop or host to detect attempted compromise.

CPC121. Migrating Crawlers: A Survey

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WWW is increasing at a tremendous rate and there is also high change frequency of documents, maintaining and fetching up-to-date information is becoming a challenge .The traditional crawling methods are no longer able to catch up with constantly updating and growing web. Realizing the problems an alternative distributed crawling scheme with the use of migrating crawlers is needed which will minimize network utilization and also keeps up with document changes. This paper provides a review for the available migrating crawlers.

CPC122. Implementation Of Ethernet Control System (Ecs)

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This paper deals with the design of an Ethernet Control System (ECS) based on LPC2294 16-bit/32-bit ARM Microcontroller. In order to realize communication over Ethernet in 16bit/32-bit mode, we describe a method using Microcontroller LPC2294 with temperature control experimental setup. The entire system is developed around LPC2294 ARM Microcontroller and RTL8019as Realtek Ethernet Controller. The control system firmware is developed in 'C' and written 100% in Keil-Vision3's Micro Assembler. It includes RTL8019as control functions, all needed communication protocols (ARP, IP, ICMP, TCP) i.e. TCP/IP protocol stack, HTTP web server with inbuilt HTML page for temperature controller and all I/O peripheral routines. This control system firmware is ported to ETM150. ECS hosts a small web page, which is served with the dynamic data upon the client HTTP request. This system enables a user to monitor and control any physical quantity from a remote location through Internet, which in turn provides the capability to communicate with every corner of this planet.

CPC123. Result Analysis By Decision Tree And Naïve Bayesian Network Classifier

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Data mining is a powerful tool for academic intervention. The educational institutions can use classification for comprehensive analysis of students' characteristics. When data mining is used in developing methods for discovering knowledge from data which come from educational environment it becomes Educational data mining. In our work, we collected student's data from database course, and then apply Decision tree and Naïve Bayesian Network classification methods for classifying students based on their Final Grade obtained in their Courses. We compare both algorithms of classification and check which algorithm is optimal for classifying students' based on their final grade.
By this task we extract knowledge that describes students' performance in end semester examination. This work will help to the institute to improve the performance of the students.

CPC124. Neural Network Time Series Forecasting of Financial Market

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The Neural Network Time series forecasting of Financial Market is one of the hot areas in neural network application. The paper, showed a method to forecast the stock index value using Artificial Neural Networks. Stock market prediction is very difficult because it depends on several known and unknown factors. In recent years, one of the techniques that have been used popularly in this area is Artificial Neural Network. The power of neural network is its ability to model a nonlinear process without a priori knowledge about the nature of the process. In this paper the Neural Network find out the effect of Exchange rate, FII Purchase, FII Sales on Closing Return of NIFTY. The data for the study comprises the daily stock returns of NIFTY, Exchange Rate Rupee/US Dollar, FII Purchase, FII Sales. The accuracy measure of Forecasting is defined in terms of the forecasting error, which is the difference between the actual and predicted value.

CPC125. Constructing Ontology for the University Person: Process and Application

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Ontology is a discipline that is part of the knowledge representation. Ontology plays an important role to improve organization, management, sharing and understanding of information. It has become common on the www. Many experts have given the definition of 'ontology'. We show that much of the work is done and may be viewed as practical applications of ontologies.
In this paper, we are interest to common goals with process of building ontology and supporting different technologies for faster progress. Different types of ontology are used in various areas and they may be applied to different fields. It is difficult to create ontology for any particular domain. The main goal of this paper is to present process of ontology development that is highly usable, easier to build, and maintain. Further, we focus on the different application of the recent work. Also, we identify specific ontology application scenarios. Finally, contemporary research works has been reviewed and presented, and future research work has been proposed.

CPC126. Optimizing Packet Sniffers To Better Intrusion Detection Systems

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Network intrusion detection systems (NIDS), by definition, gather network traffic for analysis and detection. These provide extra security from intrusion from outside and as well as from the inside of a network. These systems intercept packets as they travel across the network. The intercepted packets are analyzed by comparison with a database of known signatures or/and by searching for anomalous activity that suggests inappropriate behavior (for eg:- presence of SYN/FIN simultaneously) . Optimizing packet sniffers with various user defined and other common signatures may help a standalone firewall better protect a network from both inside and outside. This paper discusses the various optimizations that can be applied to packet sniffers so that they can secure a network from the 'bad guys'.

CPC127. Emerging Trends in Software Engineering: Software as a Service

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Software is everywhere – in devices in our pockets, in the vehicles we travel in, in our banks, hospitals and homes - and its correct operation is essential for our health and well-being. Software systems are growing. Over the past decade, software applications have grown significantly larger and more complex in terms of the sheer size of their descriptions and the capabilities they are designed to implement.

Between now and 2025, the ability of organizations and their products, systems, and services to compete, adapt, and survive will depend increasingly on software. As is being seen in current products (automobiles, aircraft, radios) and services (financial, communications, defense), software provides both competitive differentiation and rapid adaptability to competitive change. It facilitates rapid tailoring of products and services to different market sectors, and rapid and flexible supply chain management. The resulting software-intensive systems face ever-increasing demands to provide safe, secure, and reliable systems; to provide competitive discriminators in the marketplace; to support the coordination of multicultural global enterprises; to enable rapid adaptation to change; and to help people scope with complex masses of data and information. These demands will cause major differences in the processes currently used to define, design, develop, deploy, and evolve a diverse variety of software-intensive systems

Software engineering (SE) is about developing, maintaining and managing high-quality software systems in a cost-effective and predictable way. SE research studies the real-world phenomena of SE and concerns (1) the development of new, or modification of existing, technologies (process models, methods, techniques, tools or languages) to support SE activities, and (2) the evaluation and comparison of the effect of using such technology in the often very complex interaction of individuals, teams, projects and organizations, and various types of task and software system.

The ultimate goal of this paper is to educate the reader that in some cases traditional software applications remain the right choice, but in other cases deploying SaaS applications provide a better business case.

CPC128. Optical Code Division Multiple Access: The New Generation Of Communication

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This paper is consists multiplexing techniques for fiber networks attempt to access the vast bandwidth of the optical fiber with the aim of including multiple-access capability. Among the multiplexing techniques, Optical Code Division Multiplex Access (OCDMA) has attractive characteristics that make it appropriate for high- speed fiber networks.

CPC129. Call Admission Control (CAC) and Resource Allocation of Wireless Networks

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In the next generation wireless communication, orthogonal frequency division multiplexing (OFDM) is a potential key technology. Call admission control is an important measure in wireless network to guarantee the quality of communicating links. In this investigation, a call admission control scheme is proposed for a batch arrival queueing model for subcarrier allocation in OFDM based wireless multiservice network. The call connection requests are divided into two classes (i) narrow band calls and (ii) wide band calls. The traffic is characterized as batch arrival process for both classes of the calls, so that each call may request multiple subcarrier to satisfy its quality of service (QoS) requirement. There is a provision of buffer for narrow band calls, whereas the subrating scheme is used for wide band calls. The successive over relaxation (SOR) method is employed to solve the set of steady state equations governing the traffic model. Various performance measures such as blocking probability of wide band calls and narrow band calls, overall blocking probability of the calls, bandwidth utilization, etc. are established. The sensitivity analysis has also been carried out to depict the effects of various system parameters on the performance measures.

CPC130. QoS Performance Analysis in Implemenation of DiffServ Support of MPLS

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MPLS-based networks are becoming popular with the service providers because it enables wire-speed switching of packets while retaining the flexibility of IP. IP provides support for quality of service through Differentiated Services (commonly referred to as DiffServ) and MPLS-based networks enable service providers to preserve this feature. .Moreover, metrics such as delay and jitter can be tracked at different levels of granularity, such as, for each class of service (DiffServ Code Points or DSCP), for each customer, for each MPLS tunnel and for each physical network pipe. Most importantly, it is necessary to visualize these metrics in a graphical form across the entire service provider's network and identify and isolate any performance anomalies or faults If some link of the path is congested, packets will be dropped and QoS cannot be guaranteed.Congestion avoidance algorithm such as WRED are used in this research.In this paper, the QoS performance is analyzed for different type of services including VoIP, Real time Video, and best effort data traffic. The results show that for assured forwarding classes ,Class 2 shows better performance in comparison to class 3 and class 4 for delay and jitter.

CPC131. Implementation Of Cordic Algorithm On Xilinx-Virtex4 Fpga

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CORDIC, which stands for Coordinate Rotation Digital Computer, is an algorithm developed by Volder in the fifties which allows you to calculate trigonometric functions using simple shift and add operations. This is an advantage for hardware implementations where multipliers are normally resource demanding. The algorithm can be adapted to also compute fix/floating point multiply, divide, log, exponent and square root. It calculates the trigonometric functions of sine, cosine, magnitude and phase (arctangent) to any desired precision. It can also calculate hyperbolic functions.

While there are numerous articles covering various aspects of CORDIC algorithms, very few survey more than one or two and even fewer concentrate on implementation in FPGA.This paper attempts commonly used functions that may be accomplished using CORDIC architecture, explain how the algorithm works, and explore implementation specific FPGA's.

CPC132. Weighted Adaptive Routing in Dynamic Ad-hoc Network

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Dynamic ad hoc networks are mobile ad hoc networks (MANETs) where network characteristics, such as network density and node mobility, change significantly over time and space. Sometimes, dynamic ad hoc networks resemble a dense ad hoc network. At other times, they resemble a delay tolerant network. Many real networks follow the paradigm of dynamic ad hoc networks. Military networks, wildlife tracking sensor networks, and vehicle networks are some of these examples. In dynamic ad hoc networks, conventional routing schemes fail when the network characteristics do not fall into their applicable scenarios. In this thesis an improvement of Adaptive Routing in Dynamic Ad Hoc Networks (AROD) is being proposed in order to include some of the aspects of ad hoc networks. This is being done by including new metric to evaluate routes. This evaluation is based on intermediate nodes. Weight computed by combining the stability and the battery power of nodes are chosen the most stable and powered nodes for packet forwarding.
An approach called Weighted AROD is being proposed to calculate the battery power of intermediate node. The idea is incorporated into the AROD routing protocol. The result of the simulation indicates an increase in delivery ratio and smaller delay. The approach may also be applied to other routing protocols with appropriate modification.

CPC133. Regression Testing of A Relational Database

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Relational databases are tabular databases that are used to store target related data that can be easily reorganized and queried. They are used in many applications by millions of end users. Testing database involves three aspects:

- Testing of the actual data.
- Database integrity.
- Functionality testing of database application.

These users may access, update, delete or append to the database. The modified database should be error free. To make the database error free and to deliver the quality product, regression testing of the database must be done. Regression testing involves retesting of database again and again to ensure that it is free of all errors. It is a relatively new idea in the data community. Agile software developers take this approach to the application code. In our paper, we will focus on the following issues in regression testing:
Why test an RDBMS?
What should we test?
When should we test?
How should we test?
Who should test?
To this end the problem will be approached from practical perspective.

CPC134. Web Navigation Analysis Using Association Rule Model

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Web sites are providing large amount of information to users but most of the content is not targeted at any specific group or layer. The huge variety of content caused an information overloading problem. Through navigating pages from pages, it is not uncommon for users to get lost or have numerous of ambiguous result as there is only small portion that is truly relevant or useful to one specific group .To the users who have enquiry goals, this is exhausting and time consuming .Much time and effort has to be spent to filter irrelevant information .For those who have eventually missed the goal through the navigation, they may regard the site as not useful and leave. Such result would be big failure for one resourceful site. To address this problem we consider the previous web page access history of users those visited the site. We have used apriori algorithm from association rule mining technique find out the frequently visited web pages from user historical data .We have stored this frequently accessed web pages into trie which is suffix tree data structure. This frequent item sets termed as patterns then used to find out the user specific rules termed as user profiles are stored into database. In future when any user browse web site we first analyze the current session to know its requested pages and forms the current profile. Then matching profile from database is retrieved and corresponding web page links are diverted to client browser as recommendations using association rule mining technique.

The implemented module computes fix point sin and cosine values from the given angle. The resolution can be changed using generics. Testbench will be created which compares the output with pre-calculated values from textfile.

CPC135. Relevance Improvement By Selective Retrieval Strategies In Meta Search Engines

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A metasearch engine is a system that provides integrated access to multiple existing search engine mechanisms. Once a query is executed on a metasearch engine, the system passes the query to its participating component search engines, collects the individual results and merges them into a single ranked list. Metasearch engines increase the search coverage of the Web, help solve the extendibility issues in searching the Internet, and improve the retrieval effectiveness, and consequently the relevance, of results. Result merging is a key constituent of metasearch engines. When results from several search engines are collected, the metasearch system has to merge them into a unified list. The effectiveness of the metasearch mechanism and the relevance of the result set are closely related to the result-merging algorithm used. In this paper some new algorithms are introduced along with some existing methods of re-ranking are revised. These algorithms are suggested to be better than the ones produced by traditional result merging methods.

CPC136. Web Usage Mining- A Survey

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This paper aims to give an overview about the web usage mining. Web usage mining is application of data mining techniques to discover usage patterns from web data, in order to better serve the needs of web based applications. The user access log files present very significant information about a web server. A Web usage mining system performs five major tasks: i) data gathering, ii) data preparation, iii) navigation pattern discovery, iv) pattern analysis and visualization, and v) pattern applications. Each task is explained in detail and its related technologies are introduced. . Web usage mining, also known as web log mining, aims to automatic discover the patterns from web browsing data stored in the log files. In this paper we present an overview of the various research issues, techniques and development efforts in various step of Web Usage Mining and finally conclude this paper by listing some application of this extracted knowledge.

CPC137. Receptive fields based Camera calibration

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Camera calibration is to identify a model that infers 3-D space measurements from 2-D image observations. In this paper, the nonlinear mapping model of the camera is approximated by a series of linear input–output models defined on a set of local regions called receptive fields. Camera calibration is thus a learning procedure to evolve the size and shape of every receptive field as well as parameters of the associated linear model. Since the learning procedure can also provide an approximation extent measurement for the linear model on each of the receptive fields, calibration model is consequently obtained from a fusion framework integrated with all linear models weighted by their corresponding approximation measurements. Since each camera model is composed of several receptive fields, it is feasible to unitedly calibrate multiple cameras simultaneously. The 3-D measurements of a multi- camera vision system are produced from a weighted regression fusion on all receptive fields of cameras. Thanks to the fusion strategy, the resultant calibration model of a multi-camera system is expected to have higher accuracy than either of them. Moreover, the calibration model is very efficient to be updated whenever one or more cameras in the multi-camera vision system need to be activated or deactivated to adapt to variable sensing requirements at different stages of task fulfillment. Simulation and experiment results illustrate effectiveness and properties of the proposed method. Comparisons with neural network-based calibration method and Tsai's method are also provided to exhibit advantages of the method.

CPC138. Designing an efficient dynamic web site

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Now a there is major drift is observed from static website to dynamic the websites. The dynamic websites deliver the customized contents to their users. The response time, user satisfaction, performance and scalability are important issues for these websites. To serve and deliver the contents efficiently for dynamic website content, researchers have proposed several server-side and cache-side mechanisms with an aim to reduce the construction overhead to improve the response time as well as reusability of its contents. Server-side techniques basically reduce the burden on the server by allowing reuse of previously generated content to serve new requests. The popular sever side techniques include delta encoding, data update propagation and fragment-based page generation. Cache-side techniques, exemplified by systems such as Active Cache, Gemini, CONCA and Wills et al.'s content assembly technique, attempt to reduce the latency of dynamic content delivery by moving some functionality to the network edge. These approaches all view the document in terms of a quasistatic *template* (expressed using formatting languages such as XSL-FO or edge-side include (ESI) , which is filled out with multiple individually cacheable and/or uncacheable *objects*. This object composition assumption enables surrogates and downstream proxy caches to reuse templates and cached objects to efficiently serve subsequent requests and additionally reduces server load, bandwidth requirements and user-perceived latencies by allowing only the unavailable objects to be fetched. In this paper we analysis of various techniques used to creating an efficient dynamic web site.

CPC139. An Algorithmic approach for finding occurrence of range of input Integers in open and closed bound domain

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The word "algorithm" is the heart as well as a magical word for computer science because the imagination of any branch of computer science like Computer Network, Artificial Intelligence, Advanced algorithms , Data structure, Combinatorial Optimization, Advanced Natural language processing ,Robot Motion Planning, Perceptual recognition, Approximation Theory, Abstract and concrete complexity, Arithmetical algorithms, Soft Computing ,Human Computer Interaction, Compiler Designing ,Theory of Automata and Formal Languages etc. is impossible without the word "algorithm". Designing of robots as intelligent as human being is impossible without Algorithm. The analysis of algorithms using mathematicals tool like asymptotic notation is as important as designing of algorithms. Designing of an algorithm is not easily reduced to simple recipes, but it requires the sort of integrative thought that is commonly referred to as "creativity". Generally , the structured ways to express the algorithms are Pseudocode and flowcharts that avoid many of the ambiguities common in natural language statements, while remaining independent of a particular language implementation. In this paper ,An algorithm is presented for given n input integers in the range from 0 to p, which gives solution about how many of the integers fall in to a range (c _ _d] where c & d are also given in input. The proposed algorithm has linear time complexity of θ(n).

CPC140. An Era of Social Computing

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In this paper the historical view, present view and the future view of social computing is described with the change in technology of computer systems from first generation computers to intelligent systems .At present, the pervasive use of computer systems and networking across the world provides unprecedented environment for most of the social activities among human being. Now days a large number of interdependent and interdisciplinary systems have been created for the purpose of interaction among different communities, groups etc. Every person has to be involve in social activities to fulfils his/her needs. The changes in the trends in the technology are described in the systematic way. Due to continuously decline in the cost of computing from past to present, Social Computing systems are in good demands from universities, government, research institutions, business etc. As Behavioral modeling is the part of social computing which helps us to study of deep understanding of social behavior, potential outcomes after experimenting the behavior. The applications of soft computing such as Facebook, Myspace, LinkedIn etc. which improves social interactions through collaboration and coordination among systems are also described briefly. The many forms of social computing including social technology and its examples are also described. In future there will be continuously rise in social computing which supports the collaborative construction of knowledge.

CPC141. Positioning of computer related education in Rural India

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India is a land of farmers & agriculturist 74% of Indian population lives in villages and to position computer & related education to rural India is a serious task to perform by marketers it requires:-7 Key's of P's to solve fundamental problem related with marketing of computer's & related education to rural India, basically approach of paper is how to sense the educated rural customer and also to device simple strategy for appropriate marketing of computers & related education for rural techno growth of India..

7 Key's of P's

1. Purchasing Psychology.
2. Precise Positioning.
3. Precise planning
4 Penetrating marketing strategy.
5. Precise segmenting & targeting.
6. Prompt communication
7. Prompt after sales services

These are the 7Key's of P's for solving problem of rural market for computers & related education in India.

CPC142. A proposed adaptable quality framework for an effective process design

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The importance of architectural design has grown rapidly in the last few years, since the need for evolutionary system and component based development has increased. The goal of this work is to introduce a new framework of process design and to show the relevant quality attributes involved in the process design. This framework is introduced to improve the quality of the process design to achieve efficient and effective deliverables from this phase.

CPC143. Quantum Cryptography for securing Mobile & wireless communication systems

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Cryptography is a promising solution towards absolute security in Mobile & wireless communication Systems. While the use of quantum cryptography in Mobile & wireless communication gets significant advances. Research on the application of quantum cryptography in mobile & wireless network is still premature. Quantum Cryptography is a form of cryptography for which the key can be an arbitrary string and in particular, a string that identifies the user who holds the associated key, like his email address. The original motivation for that was to simplify the securing process, but it has many other applications. In this paper, we analyze the interests of using quantum cryptography in Mobile & wireless communication and propose a scheme for securing communication with the concept of quantum cryptography.

CPC144. The Study Of Influential Data Mining Algorithm

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This paper presents the some top data mining algorithms identified by the IEEE International Conference on Data Mining (ICDM): Apriori, FP-Growth, C4.5, *k*-Means, Naive Bayes, and CART. These algorithms are among the most influential data mining algorithms in the research community. With each algorithm, we provide a description of the algorithm, discuss the impact of the algorithm, and review current and further research on the algorithm. These algorithms cover classification, clustering, statistical learning, association analysis, which are all among the most important topics in data mining research and development.

CPC145. An overview on MSR: Mining Software Repository

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Software systems are continuously changing and adapting to meet the needs of their users. A good understanding of the evolution process followed by a software system is essential. This would permit researchers to build better tools to assist developers as they maintain and enhance these systems. Furthermore, it will pave the way for the investigation of techniques and approaches to monitor, plan and predict successful evolutionary paths for long lived software projects.

Software artifacts such as source code and design documents are produced in an inherently incremental manner via continuous change. They undergo changes due to factors such as defect corrections, feature additions, and design improvements. Software evolution is a particularly complex phenomenon in case of long-lived, large-scale systems. It is not uncommon for a long-lived, large software system to progress through years of development history, a number of developers, and millions of lines of code. Therefore, realizing even a tad bit of change in such a large-scale software system may not be always straightforward. In this paper we are going to analyze the software repository and we are finding a relationship in good SRS with software evaluation.

CPC146. Distributed Database: Concepts and Applications

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The author want to submit the endeavor about the Distributed Database storage concepts and usefulness in large enterprises. One of the most useful storage technique for Distributed Database is sharding and the concept of database sharding has gained popularity over the past several years due to the enormous growth in transaction volume and size of business-application databases and database security also. Database sharding can be simply defined as a "shared-nothing" partitioning scheme for large databases across a number of servers, enabling new levels of database performance and scalability. If you think of broken glass, you can get the concept of sharding—breaking your database down into smaller chunks called "shards" and spreading them across a number of distributed servers.

High performance web applications often reach the limits of one database server. Such systems require a smart distribution of data. Sharding is a mechanism that helps the application to scale horizontal and gain responsibility by splitting information across multiple servers. The paper will give an introduction on sharding and possible implementations as well as covering problems with this approach.

CPC147. Performance Analysis of Bit Plane Complexity Segmentation (BPCS) for Color Images in Spatial Domain

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The watermarking techniques for grayscale images can be easily extended to handle color images, for this purpose, watermark casting is done by generating three different watermark patterns $\mathbf{S_R, S_G, S_B}$, one for each RGB channel and modifying for each channel, the intensity of the pixels that belong to the corresponding sets $\mathbf{A_R, A_G, A_B}$. The watermark casting and detection procedures for color images are exactly the same as for the corresponding procedures for grayscale images. Instead of marking the three R, G, B components we can choose to mark the luminance and the chrominance components of the image. In this paper **Bit Plane Complexity Segmentation (BPCS)** watermarking technique, for color images in Spatial Domain, is considered for implementation and the performance analysis is done on the basis of different performance measures for various types and formats of images.

CPC148. Remote Supervisory Control & Acquisition Through Reconfigurable Board

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Globalization has been a key for the growth of the industries worldwide, but if we look back & see what was the catalyst for this Globalization is “INTERNET”. Internet made transfer of data so faster which helped most of the software industries to work in different parts of world & deliver on the customer requirements. The Engineering Industry was least benefited in this globalization as it needs actual Hardware to test & validate the designs, so we are proposing a concept which will overcome this problem & even Hardware Engineers can work across the globe & have the feel of actual hardware hence we call this concept as Remote Engineering, which is one step ahead for real Globalization. Remote Supervisory control & acquisition provides a design platform, which helps Hardware Engineer to generate necessary aveforms required for Design Under Test (DUT) & view the response on PC. The standalone PC then can be accessed remotely using LAN/INTERNET.

This new methodology can significantly increase the performance and efficiency in number of applications such as:

1. To test actual H/W response to verify the simulation results, specifically for FPGA based designs.
2. To perform group work on designs, where the partners are distance away .
3. To allow the external reviewers and evaluators to test and verify the hardware.
4. To remotely monitor the performance of systems located at distanced sites.
5. Teaching experimental and lab-intensive courses through Internet .

Instead of FPGA we can use any Reconfigurable Board as per the requirement. So the name “Remote Supervisory control & acquisition through Reconfigurable Board.” The use of Hardware Description Languages and FPGA for digital design today changes the way of designing and testing the digital circuits. We can use software tool to design and test circuits and then use Hardware tools “FPGA Board” to implement designs in a real hardware implementation using FPGA chip, which is a programmable chip that can be configured with a custom digital design.

CPC149. Role Of Decision Support Systems In Pharmaceutical Industry

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Decision Support Systems (DSS) are a specific class of computerized information systems (But not limited to computerised system only) that supports business and organizational decision-making activities.
Almost one decade ago, the decision making process in the pharmaceutical industry was relatively simple and the application of technology was limited. However, as we progress into a more integrated world where technology has become an integral part of the business processes, the process of decision making has become more complicated. Today increasingly technology is being used to help the pharmaceutical firms manage their inventories and to develop new product and services.
A variety of decision support capabilities will be necessary to increase the productivity of medical personnel, analyze care outcomes, and continually refine care delivery processes to remain profitable while holding the line on costs and maintaining quality of care.
The paper explains the role of Decision Support Systems in pharmaceutical industry and demonstrates the ability of DSS in improving the quality of decision making process in pharma industry.

CPC150. Uses of AI and ANN in Business- An analytical study

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A computer-based analysis increases the accuracy and it is vital thing for any business organization in any form either in a financial matter or in production. Artificial Intelligence can be used in business in the form of many application namely automatic programming, case-based reasoning, neural networks, decision-making, expert systems, fuzzy logic, natural language processing, pattern recognition and speech recognition and complex decision support techniques. AI can be used for forecasting and production also. With the help of AI techniques, we can make the analysis of more complex data.

The integration of use of AI has already become the most preferred and well-established techniques for pattern recognition, particularly of images, data streams and complex data sources. AI has emerged as a modeling backbone for a majority of data-mining tools available in the market. Some of the key business applications of AI/ANN include fraud detection, cross selling, customer relationship management analytics, demand prediction, failure prediction, and non-linear control. ANN can be used in Share market, Cross market analysis and Sales revenue analysis for the analysis of data and to predict the result on the basis of data.
In this paper, we have tried to give an analytical study of uses of AI and ANN in business arena. This is a brief study about the tools using for the analysis purpose.

CPC151. Emerging trends In Biometrics Technology

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An identification and authentication device based on physical attributes like fingerprint, palm print, iris pattern, etc. is called biometric system. Many body parts, personal characteristics and imaging methods have been suggested and used for biometrics systems: fingers, hands, feet, faces, eyes, ears, teeth, veins,voices, signatures and gaits. Literature contains wide range of techniques occupying a large number of implemented algorithms regarding biometrics. In this paper we focus on iris recognition system in biometrics.

CPC152. Designing safety-critical systems: A Convergence of Technologies in Software Fault tolerant Computing

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Software is the primary determinant of function in many modern engineered systems, from domestic goods (such as washing machines) through mass-market products (such as cars) to civil aircraft and nuclear power plant. In a growing number of cases, the software is safety critical or safety related, i.e. failure or malfunction could give rise to, or contribute to, a fatal accident. In general, where software is a key element of a safety critical system, it is developed in accordance with a set of guidelines or standards produced by the industry, or imposed by a regulator. Designing safety-critical systems is a complex endeavor particularly if extensive use of advanced electronics and information technology is used. Safety-critical systems have many requirements that stem from several engineering disciplines. The main disciplines having a direct bearing on designing safety critical systems are: domain engineering, embedded systems engineering, protocol and network engineering, safety engineering, reliability engineering, real-time systems engineering, and systems engineering. The techniques of software fault tolerant computing like fault avoidance, fault elimination (detection and removal), fault tolerance, fault evasion become techniques for enhancing safety when the fault avoided, removed, tolerated or evaded is one which might have contributed to a hazard .

For reliability analysis it is studied whether the system can deliver the required service and one can assume a 'perfect' execution environment, i.e. one which adheres to some specification. The scope of safety analysis is different, meaning that it is another sort of faults that should avoided/eliminated/tolerated/evaded. On one hand safety analysis is only concerned with the fault that have consequences for safety (or mission, or whatever is deemed critical), not with all the other functional and non-functional requirements that are put forward for a system. On the other hand, in safety analysis, it is necessary also to consider what happens if the system environment somehow changes in an extreme fashion, and what happens if parts of the system, in spite of all efforts, do not behave as prescribed.
This paper reviews existing software safety standards, guidelines and other software safety documents and also examines the technologies in fault tolerant and issues associated with the use of current software safety standards.

CPC153. Security criteria for E-voting: A biometric approach

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E-voting has more importance in India. Voter Registration is an important issue in election process. In order to protect the election accuracy it is necessary to have an accurate count of eligible voters while practicable solution are being implemented, more question arise concerning alternative possibilities for a secure and viable authentication. The specific requisites of secure and authentication of a system are various and for a sensitive area like e-voting are also challenging.

This paper focuses on biometric approach that actually uses biometric data to authenticate the E-voting system. This methodology is used for automatically recognizing or verifying the person's identity and guarantees that no vote in favor of a given candidate are cast or lost, due to improper tallying of the various counts.

In this paper we will restrict ourselves to present just a subset of different biometric properties and proposed the use of biometrics system to increase the voter identification accuracy of voters that make a remote registration and authentication. It also explores ideas, which can increase the percentage of voting leading to change in dynamics of existing electoral process.

CPC154. Self Generating Bike

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At present ,the main problem of bikes are consuming fuel & electric bikes are installing and charging after few kilometers.

Another disadvantage of fuel consuming bikes are creating environmental pollution. We present this bike to solving the problem of electric & fuel consuming bikes. In this paper, we design a bike that generate its own energy i.e. electricity on driving. This bike design on the principle of turbine, gears, rechargeable battery.

We know that fuel on earth is in small amount and is for next few years. With these bike ,we saves fuel energy for future requirement & decrease amount of pollution caused by bikes. Self Generating Bike uses domestic electricity only and only if battery gets fully discharge. It is pollution free bike.

CPC155. Data Security In Manet Network

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In future MANET network will more popular in use. Mobile Ad-hoc network is extensively used in military and civilians applications. MANET have dynamic topology and because of this any node can join and leave the network at any time .This characteristics of MANRT has increases the vulnerability of attack s like Man-in-the-Middle Attack, Compromised-Key Attack, Sniffer Attack etc. Ad hoc networks provide a possibility of creating a network in situations where creating the infrastructure would be impossible or prohibitively expensive. Unlike a network with fixed infrastructure, mobile nodes in ad hoc networks do not communicate via access points (fixed structures). Each mobile node acts as a host when requesting/providing information from/to other nodes in the network, and acts as router when discovering and maintaining routes for other nodes in the network.
In this paper we present that solution of these attacks by using secure routing of data packets. We have a mechanism by which we can achieve secure data transfer.

CPC156. Three-Dimensional Structure Prediction of E.coli Cold Shock protein D (CspD)

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With the development of techniques in Bioinformatics that allow rapid identification, isolation, and sequencing of genes, we are now able to infer the sequences and structure of many proteins. However, it is still a time-consuming task to obtain the three-dimensional structures of these proteins. A major goal of structural Bioinformatics is to predict the three-dimensional structure from the sequence, a pursuit that has not yet been realized. Thus, alternative strategies are being applied to develop models of protein structure when the constraints from X-ray diffraction or NMR are not yet available.
One method that can be applied to generate reasonable models of protein structures is homology modeling. This procedure, also termed as comparative modeling or knowledge-based modeling, develops a three-dimensional model from a protein sequence based on the structures of homologous proteins
Thus, here in this homology modeling exercise, we are attempting to develop models for Cold Shock Proteins D whose structure is not known to us. We are going to model the protein by using Homology Modeling Method from homologous proteins those are highly homologues to Cold Shock Protein D and whose structure is known to us, so that we can use them as a template. These proteins will have some measure of sequence similarity but we are relying on the conservation of folds among homologues to guide us as well.

CPC157. Security issues in Grid Computing

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A Computational Grid is a collection of heterogeneous computers and resources spread across multiple administrative domains (Virtual Organizations) with the intent of providing users easy access to these resources. There are many ways to access the resources of a Computational Grid, each with unique security requirements and implications for both the resource user and the resource provider. A comprehensive set of Grid usage scenarios is presented and analyzed with regard to security requirements such as authentication, authorization, integrity, and confidentiality. A broader goal of these scenarios is to increase the awareness of security issues in Grid Computing. These scenarios are designed to provide guidance for the Grid user, the Grid application developer, and the Grid resource provider.

CPC158. Service Oriented Architecture and Web Services

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With the emergence of Web Services application vendors and organizations with heterogeneous software architectures have started to move towards Service-Oriented Architectures (SOAs). In a SOA, software functionalities are represented as discoverable services that are accessed through a network. SOA is a promising approach for Enterprise Application Integration problems. As computing becomes ubiquitous and users are supported by a wide range of mobile devices, enterprises have to think about integrating mobile clients into a SOA. We introduce an architecture that supports communication between mobile devices and Enterprise Resource Planning (ERP) systems equipped with a Web Services Façade. Theoretical foundations of Web Services and SOA and a prototypical implementation of mobile Web Services for an ERP system are discussed

CPC159. The Study and Performance issues of ICA algorithms for ECG signal analysis

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The morphology of the cardiac signal is very important in most of diagnostics based on the electrocardiogram (ECG). Many attempts have been carried out to remove noise or artifacts such as interference (few Hz), electromagnetic emission, muscle activities and others from ECG signal. Even if mixed signals in the ECG recordings have overlapped tendency they can be separated easily by BSS(Blind Source Separation) but ECG recording corrupted by noise or breathing artifacts needs ICA algorithms which will ultimately separate out main signal. Here, we try to analyze different ICA algorithms like Robust ICA , JADE, Kernel ,fastica,EGLD-ICA. Etc for ECG recordings. Analysis shows that ICA is effective tool for analyzing high density ECG signals ,its interpretation and diagnosis. The quality and performance ICA algorithms on signals is carried out like PI ,SNR etc.

CPC160. Modeling Approaches of Software fault tolerant Computing

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High efficiency computers are being used in almost every walk of life in the present age of IT. Computers are embedded in wristwatches, factory equipment, automobiles and aircraft and almost in every facet of our day-to-day life. In the field of medicine, banking, business enterprises, aero planes, control of nuclear reactor, space travel these computers are used in abundance. In fact many of these jobs cannot be performed without computers. These are such significant areas that even a minor mistake or error can be **proved fatal** and **life-threatening**. A failure in a computer-based system that controls critical applications may lead to significant **economic losses** or even the **loss of human lives** It might not only cause monetary loss but might also cast devastating effects leading the loss of a large number of human life. Research laboratories, aero planes, space travel and research in the field of nuclear reactors require the involvement of a large number of people and anything that happens in case of a computer failure may spoil the labour of many years resulting in hampering advancement in the field of science and technology. **It would prove great loss for an entire nation.**

A number of fault tolerant system and techniques were developed such as ESS telephone switching system, OAO computers, JPL-STAR computers, NASA aircraft control, Tandem approach, CRAFT, railway interlocking systems, SFTDA., N-version programming, N-self checking programming, recovery blocks, consensus recovery blocks, majority voting etc

Software fault tolerant computing is concerned with all the techniques necessary to enable a system to tolerate software faults remaining in the system after its developments. These software faults may or may not manifest themselves during systems operations, but when they do, software fault tolerant techniques should provide the necessary mechanisms of the software system to prevent system failure occurrences. The present investigation was conducted to study the design diversity and dependability of computer system and assess software reliability modelling, to study the fault tolerant computing and software reliability growth modelling to find out basic components of software fault tolerant computing and to analyse modelling philosophy of software fault tolerant and on the basis of past experiences to provide guidelines for the evaluation of high integrity software.

A number of models has been described here of the purpose of detecting the bugs in the software. These models are the latest in the area of fault tolerance. The availability and reliability models, reliability block diagrams, reliability graphs, fault trees, stochastic process algebra, Precedence graphs, Markov model, DTMC, CTMC, Queuing networks models, Markov Rewards models, Petri Nets, GSPN, Performability models will be discussed in details and their utilities for reliability of the computer system will also be discussed.

CPC161. E-Waste Management

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E-Waste is a popular, informal name for discarded electronic products, such as computers, VCRs, and cameras, which have reached the end of their “useful life.” Discarded electronic products contain a stew of toxic metals and chemicals such as lead, mercury, cadmium, chromium, and PCBs. In this paper, we attempt to answer the question “What should be done with old electronic products?”, discuss opportunities for reducing ,recycling and reuse of e-waste.

CPC162. Image Matching With Edge Detection

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Image matching, which measures the degree of similarity between two image sets that are superposed upon one another, plays a key role in many areas such as pattern recognition, image analysis and computer vision. Matching two images requires the images to be matched go through a number of operations before the similarity is determined. This paper presents a method in which the edges of the given images are matched with the new entries using different algorithms and it determines its validity with the available pictures. In many areas of business, these systems are entrusted to verify identities of personnel before allowing access to restricted information or facilities. In the area of criminal investigation, these same systems are entrusted to find, match and identify criminals. In order to enhance important features accurately in the image matching, methods in edge detection are applied.

CPC163. Speaker identification and voice authentication system

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The purpose of this paper is to study and implement a text dependent identification system making use of cepstral coefficients with vector quantization classification technique. The identification system will make use of Mel-frequency cepstral coefficients (MFCC) and the effects of utilizing these vs. just cepstral coefficients will be examined. MFCC speech features are to be extracted from voice recording and subjected to vector quantization classification technique. The data resulting from the analysis will serve as the key characteristic in identifying the person to whom the recorded voice belongs.

CPC164. A Survey on Sequence Mining Association Algorithms

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Mining sequential patterns in a very large database is an important research work. Mining of sequential data is a costly affair due to the vast amount of data in the real world. Various techniques involved in Sequence mining are Sequence Association, Sequence classification, Sequence clustering, and Sequence prediction. Sequence analysis the comparison of sequences in order to find similar sequences called Sequence alignment. Sequence mining include building efficient databases , extracting the frequently occurring patterns, comparing sequences for similarity, and recovering missing sequence members, clustering sequences, and classifying sequences. In this paper we concentrated on survey of various sequence association algorithms. The future work considers the issues approaches and performance comparisons related to the various sequence mining algorithms, and then with the experimental analysis of the below mentioned algorithms on different real time data sets.

CPC165. Web Mining for personalized system

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Web mining is the application of data mining techniques to extract knowledge from web data, i.e. web content, web structure, and web usage data. This can help to discover global as well as local structure "models" or "patterns" within and between Web pages. Web usage mining is the automatic discovery of user access patterns from Web servers and tries to discover valuable information from users' transactional data. It is the application of data mining techniques to discover interesting usage patterns from web usage data, in order to understand and better serve the needs of the web-based applications. There are various algorithms used for web usage methods of usage pattern discovery, like simple k-means clustering algorithm, fuzzy relational subtractive clustering algorithm, fuzzy mean field annealing (MFA) clustering and Hidden Markov Model (HMM). These algorithms are compared on metrics like prediction strength, hit ratio, precision, prediction ability and F-Score. A Web personalization system is defined as any system that tailors the Web experience for a particular user/a group of users, in this paper the study of these techniques is done on the analysis of the web mining metrices. Many web mining techniques have been used in web personalization systems to discover usage patterns from Web data such as clustering techniques, association rule mining, and click pattern analysis.

CPC166. Software Engineering – Risk Based Testing

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The more complex a software system is, the more likely it is that programmers will make mistakes that introduce faults which can lead to execution failures. A risk in a software system can be viewed as a potential problem. The risk based testing method comprises defining a process or system to be tested, identifying a plurality of risks associated with the process or system, quantifying each of the risks with a risk value, defining a test plan including a number of test cases, wherein testing of the test cases is prioritized based on the risk value, and executing the test plan. Risk-Based Testing helps to find the ***right quality level*** that can be delivered in limited schedule and resources by identifying business and technical requirements for an application and prioritizing these requirements on the basis of likelihood and impact of
failure. Effective traditional testing means finding the right bugs whereas risk based testing involves deferring the *right bugs*. This technique makes it easy for the QA organizations to deliver the right level of quality as a response to changing business requirements. This fact sets it apart from the strategies, benefits and limitations involved in the traditional form of testing.

CPC167. Using Software Defect Analysis Techniques In Software Quality Estimation

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Software development goes through a number of stages before a final product is delivered. Each stage may give rise to defects or bugs which can eventually lead to increased cost of development and reduced quality of software. The worst part can be getting a product different from what was expected. This paper uses software defect analysis techniques to detect defects generated at each stage of software development. Defects may arise not only in code but also in design and specification. At each stage of software development generated output is compared with the required output. Defects are categorized and percentages of defects belonging to each category are recorded. The defect data from previous projects is also taken into account. The basic aim is to avoid rippling of defects originated at one stage to other stages so as to reduce cumulative defects at any particular stage. A graph of number/percentage of defects at each stage from previous projects and current project is plotted and analyzed to predict the quality of software .The paper also addresses some defect analysis techniques that are used by some leading organizations to improve quality and productivity of their software.

CPC168. Clustering on Web usage data using Approximations and Set similarities

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Web usage mining is the application of data mining techniques to web log data repositories. It is used in finding the user access patterns from web access log.User page visits are sequential in nature. In this paper we presented clustering web transactions based on the set similarity measures from web log data which identifies the behavior of the users page visits, order of occurrence of visits. Web data Clusters are formed using the Similarity Upper Approximations. We present the experimental results on MSNBC web navigation dataset which are sequential in nature. Clustering in web usage mining is finding the groups which share common interests and behavior by analyzing the the data collected in the web servers. This study contributes the topic clustering of web usage data and shows the interests and behaviors of the various user visits.

CPC169. Implementation Of Frequency Synthesizer And Frequency Analyzer Using Vhdl

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In this paper, we propose a VHDL based design of a frequency synthesizer and a frequency analyzer along with a proposed design for their incorporation in a single FPGA. The module was developed by using direct digital frequency synthesizer and a Fast Fourier Transform algorithm for frequency analyzer. For FFT, radix-2 decimation in time algorithm of n-point samples was adopted. Structural and Behavioral modeling was implemented using VHDL to describe, simulate, and perform the design. The resulting design was simulated, synthesized and tested using Xilinx 9.1i and ModelSim SE 6.3f.The simulation results are presented in this paper**.**

CPC170. Stock Movement prediction using Neural Network Modeling

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This paper suggests an overview of the modeling processes of artificial neural networks (ANN) in stock movement prediction. Based on the most commonly used methods a step-by-step procedure is presented, showing the difficulties came across modeling of such neural networks. Other techniques are also brought up as neural networks are not the only tools used to

CPC171. The Effecvts And Concicuences Of Accomplishment Of Erp In Public Sector

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The implementation of ERP systems is a complex undertaking, which has a wide-reaching impact on key stakeholders including staff and customers. This research-in-progress paper summarizes the first stage of a research project which investigates the role of governance in ERP systems implementations. It presents a matrix which maps well-documented ERP risks and influences on success against their locus of control: project governance, IT governance or organizational governance. The matrix will be applied to an in-depth case study of ERP implementation in a large service organization.

CPC172. Power Law Distribution in World Wide Web

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The past decade has witnessed the birth and explosive growth of the World Wide Web. The exponential growth in the number of web servers, from a few dozen in 1992 to more than 10 billion. Today it may be used practically by everybody and it's countless uses may include shopping and entertainment, but the World Wide Web was originally conceived and developed at CERN for the purpose of large high-energy physics collaborations, which require instantaneous information sharing between groups all over the world. The underlying technology for the Internet had been available for few years, it was only after the release of the Hyper Text Transfer Protocol (HTTP) by CERN in 1991 that the Web really took off. Now, the physicist who have recently focused it's attention on studying and modeling the massive system which the Web has thus, this long job is taken by physicists to study large complex systems found in our universe and formulate their knowledge in terms of a few beautifully simple rules or laws. We apply methods of statistical mechanics to the numerous random processes with the Web fosters with special reference to when lead Power-laws in the link distribution interesting properties of the network.

Power-law distributions in website sizes, traffics, and links, develop stochastic theory .The Power-law link distributions have shown to lead to network characteristics which are especially suitable for scalable localized search. It has been also demonstrated that the Web is a "small world": to reach one site from any other, takes an average of only hubs, while most related sites cluster together. The Web is a very large system, generated by the collective actions of millions of individuals. The power-law network, utilizes such nodes to speed up search. The additional knowledge of clustering, a characteristic of small world networks, allows us to group and order search results. Even the random walk provided to us with an insight into the Web structure.

As the Web structure continues to evolve, new and interesting patterns may emerge. In our study of online markets, these patterns need not apply only to the virtual space of the Web, but can extend to interactions and transactions in the real world. As information obtained online grows richer, these methods will provide further insights into the dynamics of information and how people interact with each other.

CPC173. Disaster Recovery through Synchronous Replication of Remote Storage

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Storage replication is one of the essential requirements for network environments. While many forms of network attached storage (NAS), storage area networks (SAN), and other forms of network storage exist, there is a need for a reliable synchronous storage replication technique between distant sites (greater than 1 mile). Such technology allows setting new standards for network failover and failback systems for virtual servers, specifically addressing the growing need for effective disaster recovery (DR) planning. The purpose of this manuscript is to identify the newest technologies, such as SAN/iQ and Storage VMotion, which allow for remote storage synchronous replication for virtual servers. This study provides an analysis and a comparison of various SANs that create solutions for an enterprise's needs. Additionally, the inter-operability of these technologies with the industry's leading product, VMware ESX Server, will be discussed.

CPC174. Towards Studies on Security Issues on Mobile Computing

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Mobile computing is pervading our society & our life styles with a high momentum. It is Network information System that help to increase productivity and operational Efficiency . The technique also increase the risks for sensitive information supporting Critical functions in the organization which are open to attack. The fundamental aspects of mobile computing is that the information will be accessed From outside of organization . It is easier to control information in the close environment In a better way but when the information is outside the controlled environment . We do Not have much control either from its usage or usage patterns . Today all the computers of the world are interconnected through extranet . Wireless media works in a majority of cases , Mobile computing uses wireless networks. Wireless media works on the principle of Broadcast , Information is radiated to everyone through radio waves range thus increase the securiy threats . Unlike a physical attack , Cyber attacks can be replicated quite easily. Therefore unless special care is taken , All systems are open to attack and we have special several different techniques to secure information over mobile computer environment.

Cryptography is one of the relevant most technique to secure information . It includes several algorithm to encrypt and decrypt our message from Source to Destination like:- RSA(Rivest Shamir Adleman) algorithm. Diffie Hellman Algorithm, Hashing Algorithm

RSA is very famous algorithm that works more efficiently on Cryptography technique. **Our Objective** Is to work and deep study on RSA and other relevant techniques and develop new relevant algorithm technique to provide security of information .

CPC175. A Mechanism for Preventing Wireless Ad Hoc Network from wormhole attacks

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A wireless ad hoc network is an autonomous system of mobile hosts connected by wireless links. The nodes are free to move randomly and organize themselves arbitrarily; thus network's topology may change rapidly and unpredictably. Unlike traditional wireless network, ad hoc network do not rely on any fixed infrastructure. Instead, hosts rely on each other to keep the network connected. One main challenge in the design of these networks is their vulnerability to security attacks. Ad hoc networks are vulnerable due to their fundamental characteristics, such as open medium, dynamic topology, distributed cooperation and constraint capability. Routing plays an important role in security of adhoc network. In Ad hoc network, there are mainly two kinds of routing protocols: proactive routing protocol and on demand routing protocol. In general, routing security in wireless ad hoc network appears to be a problem that is not trivial to solve.

In this paper, we introduce the wormhole attack, a severe attack in ad hoc networks that is particularly challenging to defend against. The wormhole attack is possible even if the attacker has not compromised any hosts and even if all communication provides authenticity and confidentiality. In the wormhole attack, an attacker receives packets at one point in the network, "tunnels" them to another point in the network, and then replays them into the network from that point. The wormhole attack can form a serious threat in wireless networks, especially against many ad hoc network routing protocols and location-based wireless security systems. For example, most existing ad hoc network routing protocols, without some mechanism to defend against the wormhole attack, would be unable to find routes longer than one or two hops, severely disrupting communication.

In presentation a technique to identify wormhole attacks in wireless ad hoc network and a solution to discover a safe route avoiding wormhole attack will be presented. It is time-based calculation, which requires minimal calculation.

CPC176. Addressing the problem of convergence delay in interdomain routing protocol.

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The interdomain routing protocol needs relief from a stresses of some inherent problems within, the amount of time it takes to get a complete correct view of the network, number of hello message exchanged followed by a failure, the amount of time taken to get best possible alternate path following the failure, the way size of routing table increasing, and security issues like integrity and privacy of routing tables and routing updates exchanged among the routers, are also important to be considered.

CPC177. Issues of Wireless Telemedicine System in Uttarakhand : A Brief Overview

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The state of Uttarakhand is bounded by Nepal in the east, the Tibet Autonomous Region of China in the north, Himachal Pradesh in the west and Uttar Pradesh in the south. The total geographical area of the state is about 53,483 sq. km. According to the Census, the State's population was 84.89 lakhs (8.5 million) in 2001.There are 15,638 inhabited villages and 86 urban settlements in the state.
However, it is very tough to create policies based on health care conditions due to everely constrained hilly regions of this state as well as due to various physical, geographical and environmental problems in Uttarakhand.According to this paper we are going to discuss the impact of various wireless technologies for health care system in Uttarakhand.

CPC178. Prediction of Financial failure using Cellular automaton and Genetic Algorithm: A survey

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Although some of these methods studied for differentiation between healthy and bankrupt firms. First we review financial failure prediction with emphasis on cellular automaton and genetic algorithm model. Second, we develop cellular automaton and genetic algorithm based financial failure prediction model. This CA-GA model, in which genetic algorithm was executed on cellular automaton parameter values; the results will show our model has high prediction accuracy in financial crisis prediction. Measuring the risk accurately allows banks or organizations to engineer future lending transactions, so as to achieve targeted risk characteristics.

CPC179. User Identification by voice identification system

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The purpose of this paper is to study and implement a text dependent identification system making use of cepstral coefficients with vector quantization classification technique. The identification system will make use of Mel-frequency cepstral coefficients (MFCC) and the effects of utilizing these vs. just cepstral coefficients will be examined. MFCC speech features are to be extracted from voice recording and subjected to vector quantization classification technique. The data resulting from the analysis will serve as the key characteristic in identifying the person to whom the recorded voice belongs.

CPC180. Hippocratic Database- Persisting privacy in e-banking

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Preserving the private information in the era of web is one of the most challenging issue. Web services (e-health, e-commerce, e-banking) collect data from users and use them for other purposes. Sometimes data is shared with other purposes. Recent advances in Hippocratic databases promise the privacy in e-banking.
This paper tackles the issues in applying Hippocratic database design to e-banking. The solution is proposed at middleware level. Hippocratic database is integrated to APPEL preferences to support the privacy.

CPC181. Enhanced Security for Audio Signals Using Steganography

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In the current internet community, secure data transfer is limited due to its attack made on data communication. So more robust methods are chosen so that they ensure secured data transfer. One of the solutions which came to the rescue is the audio Steganography. But existing audio steganographic systems have poor interface, very low level implementation, difficult to understand and valid only for certain audio formats with restricted message size.

In the proposed system which is based on audio Steganography and cryptography, ensures secure data transfer between the source and destination. It uses most powerful encryption algorithm in the first level of security, which is very complex to break. In the second level it uses a more powerful modified LSB (Least Significant Bit) Algorithm to encode the message into audio. It performs bit level manipulation to encode the message.

The basic idea behind this paper is to provide a good, efficient method for hiding the data from hackers and sent to the destination in a safer manner. Though it is well modulated software it has been limited to certain restrictions. The quality of sound depends on the size of the audio which the user selects and length of the message. Though it shows bit level deviations in the frequency chart, as a whole the change in the audio cannot be determined.

CPC182. A Hybrid Meta-Clustering Technique For Document Searching

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Document Clustering is an important tool for application such as Web search engine. Clustering document enables the users to have a good overall view of information contained in the document .A simple query composed of common words sometimes have hundreds even thousands of results making it practically impossible for the user to verify all of them, in order to identify a particular document .In this paper we propose a Meta-Clustering technique which is the combination of merit of efficiency from the partitioning approach and the hierarchical structure from agglomerative approach & concept optimization. Meta-Clustering technique means the use of more clustering algorithm simultaneously for the same purpose for better efficiency. It also provides the autocorrecting flexibility.

CPC183. Future challenges in Artificial Intelligence

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In this paper, the future of artificial intelligence is discussed which will result into fully intelligent systems which can perform each and every task as performed by human being. Presently designing fully intelligent systems is big challenge for scientists. In future designing of fully intelligent robots will be a remarkable achievement for scientists which will be beneficial for human society. In future, AI will provide new and powerful tools like Full-size humanoid robots that can think, plan, take decision, walk, climb stairs, open and close doors, and pick things up etc. Humanoid robots will be act as server for human being which can do those important tasks as being assigned by human being. In future Humanoid robots can be used for teaching, research, inspiring people to be optimistic; can remove the sadness of person etc. In future Humanoid robot will fully replace human being and will do almost all tasks as being performed by human being. In this paper, some of the capacities of a humanoid robot may include like self-maintenance, autonomous learning, avoiding harmful situations to people, property, safe interacting with human beings, environment as well as some future tasks of intelligent sysytems is also described.

CPC184. Consumer Attitude and Preferences towards e-tailing

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Online shopping different from traditional shopping behavior, is characterized with uncertainty, anonymity and lack of control and potential opportunism whereas trust is a key factor to fester traditional shopping. Hence, the objective of this paper is to look into the various aspects and dimensions of online shopping and to identify those factors that affect and help the development of attitude of common people towards online shopping.

The proliferation of online shopping and marketers craving for a large share of internet market necessitates an understanding of the impact of demographic characteristics on purchasing behavior of the customer over the internet. Such knowledge will help the managers understanding and segmenting their market to implement appropriate market strategies. This study is empirical study primarily based on the primary data but secondary data have also been collected from various sources. By using convenience sample size of 150 from population who actually use internet to buy online. This study explores in depth the range of beliefs held by consumer about online shopping in general and e-retailing in particular.

CPC185. Customer Satisfaction Survey Of Mobile Phone Handset Brands

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Customer satisfaction survey is an important part of marketing research in industrial organizations since it is the key to formulating customer value strategies and to continuously improving implementation of these strategies. Today, manufacturing and service companies, large and small, use 'satisfaction research' to determine critical product and service attributes that provide customer satisfaction.

Indian market is one of fastest growing mobile phone market in the world with about 10 million subscribers added each month. This research shows customer satisfaction level of mobile phone users in Jammu City with handset brands. A multiplicative-additive model has been used to determine overall customer satisfaction level.

Product Distribution Network, Appearance, Ease of Operation, Product Quality, Pricing and After Sales Service were identified as parameters which contribute to overall satisfaction of mobile phone users with their handset brands.

CPC186. A Survey On Importance Of Data Preparation For Data Analysis

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Data preparation is a fundamental stage of data analysis. While a lot of low-quality information is available in various data sources and on the Web, many organizations or companies are interested in how to transform the data into cleaned forms which can be used for high-profit purposes. This goal generates an urgent need for data analysis aimed at cleaning the raw data. In this paper, we first show the importance of data preparation in data analysis, and then introduce some research achievements in the area of data preparation.

CPC187. Shadow Network Management

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This is the 4th successive endeavor about "An E- Learning Approach", in continuation of main paper (AN E-LEARNING APPROACH: LEARN ON DEMAND (LOD)). E-learning covers the issue of web-based learning environments that breaks the myths of traditional teaching. In E-Learning, medium of instruction is computer technology in which digital technologies with computer network are involved particularly.

Now a days Network has become generalized term as computer interconnection aspect as well as Telecommunication aspect. To achieve network security with performance is always bottleneck for network administrators. This paper covers the alternate way named as **"Shadow Network Management"** to resolve this problem. The term **Shadow** means another alternate of real network through which the reciprocal relation in between Security and Performance can be changed into proportional relation .

Shadow Network Management System integrates network security, reliability without degrading the performance. The underlying paradigm is to make possible security and operational efficiency co-exists rather than compromise one for another. Now large educational organizations (like national level open universities) tend to have larger network which crosses boundaries of cities, states and countries. Each unit of this kind of educational organizations may have different security policies and network culture at their own level. In **Shadow Network Management System** these network sub-cultures are integrated together without degrading security, performance and reliability.

CPC188. Techno-Socio Imperatives of Information and Communication Technology in Higher Education of Uttarakhand

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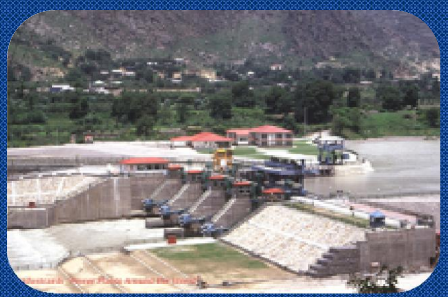
The objective of the project is to develop Comprehensive model for techno socio imperatives of ICT for Higher education System of the state to enhance access to quality education, making available knowledge modules and optimal utilization of available resources i.e available infrastructure, ICT enabled Institutions etc. To use ICT for educating the masses especially those inhabiting in remote areas and places at disadvantage. Comprehensive model for Techno-Socio imperatives of ICT for Higher education System of the state to enhance access to quality education, making available knowledge modules and optimal utilization of available resources i.e available infrastructure, ICT enabled Institutions etc. To use ICT for educating the masses especially those inhabiting in remote areas and places at disadvantage.

Jaypee University of Information Technology

Jaypee Hotels

Sardar Sarovar Project



Jaypee Hydropower Plant

Yamuna Expressway

JAYPEE GROUP

NO DREAM TOO BIG

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