ICFCCT-19

2nd International Conference on Future Communication & Computing Technology

Meerut, Uttar Pradesh

17th & 18th July, 2019

Organized by:

Meerut Institute of Engineering & Technology [MIET]

&

Institute For Engineering Research and Publication [IFERP]

Rudra Bhanu Satpathy,
Chief Executive Officer
Institute For Engineering Research and Publication.

On behalf of ***Institute For Engineering Research and Publications (IFERP)*** and in association with ***Meerut Institute of Engineering & Technology,*** Meerut, Uttar Pradesh. I am delighted to welcome all the delegates and participants around the globe to ***Meerut Institute of Engineering & Technology, Meerut, Uttar Pradesh*** for the ***"2nd International Conference on Future Communication & Computing Technology (ICFCCT-19)"*** Which will take place from ***17th -18th July'19***

Transforming the importance of Engineering, the theme of this conference is ***"2nd International Conference on Future Communication & Computing Technology (ICFCCT-19)"***

It will be a great pleasure to join with Engineers, Research Scholars, academicians and students all around the globe. You are invited to be stimulated and enriched by the latest in engineering research and development while delving into presentations surrounding transformative advances provided by a variety of disciplines.

I congratulate the reviewing committee, coordinator **(IFERP & MIET)** and all the people involved for their efforts in organizing the event and successfully conducting the International Conference and wish all the delegates and participants a very pleasant stay at ***Meerut, Uttar Pradesh***

Sincerely,

Rudra Bhanu Satpathy

Preface

The ***"2nd International Conference on Future Communication & Computing Technology (ICFCCT-19)"*** is being organized by ***Meerut Institute of Engineering & Technology,*** Meerut, Uttar Pradesh in association with ***IFERP-Institute for Engineering Research and Publications*** *on the 17th – 18th July, 2019.*

Meerut Institute of Engineering & Technology has a sprawling student –friendly campus with modern infrastructure and facilities which complements the sanctity and serenity of the major city of Meerut in Uttar Pradesh.

The ***"2nd International Conference on Future Communication & Computing Technology (ICFCCT-19)"*** was a notable event which brings academia, researchers, engineers, industry experts and students together.

The purpose of this conference is to discuss applications and development in area of **"Future Communication & Computing Technology"** which were given international values by ***Institute for Engineering Research and Publication (IFERP).***

The International Conference attracted over 128 submissions. Through rigorous peer reviews 62 high quality papers were recommended by the Committee. The Conference aptly focuses on the tools and techniques for the developments on current technology.

We are indebted to the efforts of all the reviewers who undoubtedly have raised the quality of the proceedings. We are earnestly thankful to all the authors who have contributed their research works to the conference. We thank our Management for their wholehearted support and encouragement. We thank our Principal for his continuous guidance. We are also thankful for the cooperative advice from our advisory Chairs and Co-Chairs. We thank all the members of our local organizing Committee, National and International Advisory Committees.

ICFCCT-2019

(Er. Vishnu Saran)
Chief Petron (MIET Group of Institutions)
ICFCCT-19

MESSAGE

I am very glad to know that the Department of Computer Science Engineering, Meerut Institute of Engineering & Technology, Meerut is going to organize Second International Conference on "Future Communication & Computing Technology" during July 17, 2019 to July 18, 2019.

International conferences provide appropriate platform for the professionals to come together to focus their attentions on the key issues and the new operating landscapes of the day. It is the place where the updated experiences of the specialists can be exchanged and the real professionals can be seen in action.

Since times immemorial, the field of Engineering & Technology has spurred the progress of mankind. The journey goes on with addition of new milestones at an ever increasing pace. The immense efforts of scientists and engineers across the globe pave the way towards the next generation of technology for a better world.

This conference will provide a good platform to share the latest development and research issues related to advance innovations in Computer Science and other related fields. Organizing an International Conference of this magnitude is a very appreciable work and my best wishes are always with the organizers for success of the conference.

VSaran

(Er. Vishnu Saran)

Chief Petron (MIET Group of Institutions)
ICFCCT-19

Er. Puneet Agarwal
Patron (MIET Group of Institutions)
ICFCCT-19

MESSAGE

I am delighted to note that the Department of Computer Science and Engineering is organizing International Conference on **"Future Communication and Computing Technology"** during 17th to 18th July, 2019.

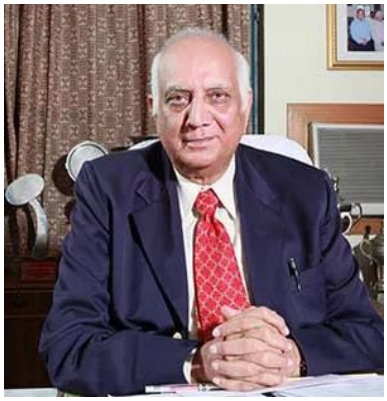
The conference will provide an opportunity to the participants to listen to the researchers and technocrats across the world. Being a shared platform among noted academicians, renowned professors, industrialists and technology enthusiasts, this conference is certainly going to help in promoting innovation and research and bridging the gap between industries and academia.

I am sure that conference would provide a good platform for academia, researchers and industry people to interact and bring forth new ideas to overcome challenges which may furtherlead to an enriching research environment along with rejuvenated desire for research among our youth.

I wish the organizers and participants a grand success in their endeavors.

Er. Puneet Agarwal
Patron (MIET Group of Institutions)
ICFCCT-19

Lt Gen J M Garga
Director General
ICFCCT-19



MESSAGE

Very rapid expansion of knowledge can be termed as "Explosion of Knowledge" as the advancements, particularly in the field of Computer technology and associated subjects, is very very fast.

The students of this Institute to keep themselves abreast has taken recourse of organizing symposia, seminars by sharing knowledge and keeping themselves abreast.

It is a very heartening approach in the world of today to be the front runner and make continuous efforts to remain there always and ever.

I CONGRATULATE the novel efforts of **Computer Science & Engineering Department** in organizing an **International Conference on "Future Communication & Computing Technology"** during July 17, 2019 to July 18, 2019 and calling delegates from different places, not only limiting to neighborhood.

I wish their deliberation are bring light to newer development and new knowledge, invention, discoveries to further hone their knowledge in this field.

(Lt Gen J M Garga)
Director General
ICFCCT-19

Prof. (Dr.) Mayank Garg
Executive General Chair
ICFCCT-19

MESSAGE

I am very glad to know that the Department of Computer Science Engineering, Meerut Institute of Engineering & Technology, Meerut is going to organize Second International Conference on "Future Communication & Computing Technology" during July 17, 2019 to July 18, 2019.

International conferences provide appropriate platform for the professionals to come together to focus their attentions on the key issues and the new operating landscapes of the day. It is the place where the updated experiences of the specialists can be exchanged and the real professionals can be seen in action.

Innovations in the field of Computer Science engineering is a vital factor for boosting the economy of any country. For this, we need research, as well as collaboration among industrialists, researchers and students of engineering streams.

This conference should provide a good platform to share the latest development and research issues related to innovations in Computer Science Engineering.

Organizing an International Conference of this magnitude is an appreciable work. I convey my best wishes for success of the conference.

Prof. (Dr) Mayank Garg
Executive General Chair
ICFCCT-19

Prof. (Dr.) D.K. Sharma
Executive General Chair
ICFCCT-19

Message

It is a matter of great pleasure to see the Meerut Institute of Engineering & Technology is organizing its second International Conference in the form of **"International Conference on Future Communication and Computing Technology"** during 17th to 18th July, 2019.

I congratulate the Department of Computer Science & Engineering for organizing this conference. I could see the amount of efforts put in by the all faculty members in organizing this conference. A good number of distinguished professors and researchers have agreed to deliver keynote addresses/ invited talks in the conference.

Young scholars participating in the conference will immensely benefit from these. I am grateful to IFERP for agreeing to be the Technical Co-sponsor of this conference and publish the papers presented in the conference in Scopus Index Journal.

I heartily welcome all the distinguished speakers, scholars presenting papers and the participants to this second international conference.

I wish the organizers and participants a grand success in their endeavours.

Prof. (Dr.) D.K. Sharma
Executive General Chair
ICFCCT-19

प्रो० विनय कुमार पाठक
कुलपति
Prof. Vinay Kumar Pathak
Vice-Chancellor

डॉ० ए०पी०जे० अब्दुल कलाम प्राविधिक विश्वविद्यालय
उत्तर प्रदेश, लखनऊ
Dr. A.P.J. ABDUL KALAM TECHNICAL UNIVERSITY
Uttar Pradesh, Lucknow

Dated: 10.07.2019

MESSAGE

I am delighted to know that Meerut Institute of Engineering and Technology, Meerut, is organizing an International Conference on Future Communication & Computing Technology (ICFCCT-2019) on 17th and 18th July, 2019.

I wish to congratulate the Meerut Institute of Engineering and Technology, Meerut for organizing an International Conference on Future Computing & Communication Technology (ICFCCT-2019) on 17th and 18th July, 2019. The newsletter is a testimony to all the quality teaching and research happenings in this Institute. It is a commendable effort that will bring quality to the columns and show case the events. I look forward to reading about the various activities, achievements and articles on research issues in this conference. Congratulations to the editorial team and I wish them good luck.

It is a great pleasure to welcome all delegates and participants to this conference, coming from different part of the country and Meerut Institute of Engineering and Technology, Meerut for their commitment and tremendous endeavour in organizing this International conference in Computer Science EngineeringDepartment.

I would also like to express my gratitude to all the conference sponsors, who have shown d interest in us.

(Prof. Vinay Kumar Pathak)
Vice-Chancellor

Prof .(Dr.) Ankur Garg
Convener ,ICFCCT-19

Message

On behalf of organizing committee of this an **International Conference on Future Communication & Computing Technology** (ICFCCT-2019) on 17th and 18th July, 2019, I extend warm welcome to our Chief Guest Honorable **Shri Vinay Mangal** (G.M.) EIL and keynote speaker, our panelists, delegates, paper presenters and the participants of this conference.

The presence of other dignitaries on the dais during the two day conference is a further testimony to our sincere pursuits to achieve nothing less than the 'best', which have long trails of success behind them. The paradigm shift in the world of technology is towards sustainability, globalization, more transparent systems, and change in technology relationships vis-à-vis society at large. Technology solutions are looked at not as the need satisfiers only, but to attain the level that bring happiness and prosperity to one and all.

The conference aims to create the platform for discussions that provide insights into the abounding opportunities which the Technology world can leverage to effect the change that not just ensure profits, but the wellbeing of people, and planet also .

I seek your support and good wishes for this two day conference to be a grand success. I thank our sponsors for their financial support in the organizing of this conference.

Prof .(Dr.) Ankur Garg
Convener ,ICFCCT-19

Mr.Yogendra Narayan Prajapati
Co-convener, ICFCCT-19

Massage

It is a great honour for Meerut Institute of Engineering and Technology, Meerut of Compute science & Engineering to organize the **International Conference on Future Communication & Computing Technology** (ICFCCT-2019) on 17th and 18th July, 2019. in association with IFERP. The Conference was conceived with the idea to give fillip to the research activities in the field Computer and networking, expose our students to latest advancements in this field and to forge collaboration between academia, Industry and other scientific community. The response to the second such Conference has been very encouraging and it has strengthened our belief that such initiatives will benefit all participants. Telecommunications is a vital support infrastructure for growth and modernization of different sectors of economy. The unprecedented increase in the tale-density in the last decade and half has contributed substantial growth in the GDP of our nation.

The number of users and the complexities of the networks are increasing exponentially; these are posing challenges for development of new technologies to meet the user aspirations. The biggest challenge however remains in the development of human resource with skill set to operate the complex systems and undertake the research and development in this field.

I am sure this Conference will work out a roadmap to meet some of the challenges. I welcome all the participants and speakers to the conference and hope they benefit as much as we do during the Conference.

Mr.Yogendra Narayan Prajapati
Co-convener ,ICFCCT-19

ICFCCT-19

2nd International Conference on Future Communication & Computing Technology

Chief Guest

Vinay Mangal
G.M. - EIL, ICFCCT-19

MESSAGE

I am delighted to note that the Department of Computer Science and Engineering is organizing an International Conference entitled "Future Communication & Computing Technology" on 17th and 18th July, 2019.

Conferences are necessary to bring in the culture of information exchange and feedback on developing trends in technologies. This type of conference not only brings all the researchers and students on one platform, but it also inculcates an interest in research among the entire fraternity of education in the country, thereby, contributing to the development of nation.

The theme of the conference is aptly chosen conforming to the current industry demands in the fields of cloud computing, big data, analytics, IOT and Industry 4.0. Current emphasis of the world is towards automation and India is also deploying these technologies in the industry and in different segments of governance.

Among these advances, data security is of paramount importance and should not be ignored. The conference will definitely add more significance to this fact and assert the same.

I am confident that the discussions during the conference would be helpful to all the participants and it would provide them a platform for sharing knowledge.

I wholeheartedly appreciate the sincere efforts of the entire team of organisers and wish them a grand success.

Vinay Mangal

G.M. - EIL, ICFCCT-19

ICFCCT-19

2nd International Conference on Future Communication & Computing Technology

Keynote Speakers

Shri Prasenjit Das
Head- Cyber Security
Life Sciences Platform & Public Services Unit
Tata Consultancy Services

Message

Every sphere of our life is gradually getting influenced by digital means. This is primarily due to acceleration of technology advancement. Fast changing technology is in a constant state of flux in today's world. Understanding, learning and quick adaptation is now imperative in our system. Same can be considered as need of the hour, especially in academics ecosystem.

Exposure of changing technology is absolutely necessary for students and other stakeholders associated with education industry. Initiatives such as conducting International Conference on Future Communication & Computing Technology, brings lot of value to education system and its ecosystem.

Multiple events planned on technology advancement along with industry speaker invitations increase the focus on state-of-the-art technologies. Similar initiatives also elevate the education standard in institutions like MIET. It helps to develop industry ready budding professionals for future.

Shri Prasenjit Das
Head- Cyber Security

Dr. Mani Madhukar
Program Manager - University Relations
IBM India Pvt. Ltd.

Message

It gives me immense pleasure in being associated with ICFCCT-19. The International conference on Future communication & computing Technology brings together researchers from diverse domains to promote inter disciplinary brainstorming and generating out of the box research ideas to the fore.

ICFCCT-19 will provide a forum for researchers to come together and share their ideas, a forum in true sense where bright minds find breeding ground for innovating ideas. I am sure this conference will also provide a great platform for researchers to learn, collaborate and network to enhance academic excellence.

The conference also provides an interface with industry experts helping the academic fraternity with insights in upcoming technical domain. In current scenario of technological evolution it is of pristine importance for academia to stay updated with the latest and recent innovations happening in industry to stay relevant. Technology has never changed as rapidly as in this generation; academicians therefore have an added responsibility to stay updated and relevant to impart latest skills to their researchers and students.

In the end I would like to I congratulate the organizers for putting together a great conference with an excellent blend of industry and academic research, bringing together scores of learned resource persons for the entire participants to benefit from.

Dr. Mani Madhukar
Program Manager - University Relations
IBM India Pvt. Ltd.

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Dr S Jayanthu, FIE

PhD, M Tech, BE (Mining)
MS (Counseling & Psychotherapy)
Former Scientist of CMRI & NIRM
NATIONAL MINERAL AWARDEE

PROFESSOR
Dept of Mining Engineering

MESSAGE

I am happy to be a part of the 2nd International Conference on Future Communication & Computing Technology (ICFCCT-19). I wish to convey my felicitations to the organizers and to all the participating delegates for their input into the successful planning and execution of proceedings of the two days deliberations among the scientists, engineers, and technocrats. It gives students/scholars/academicians/industrialists/experts from various agencies a right platform to have an insight into various contemporary professional issues with due regard to the present trend of multi-disciplinary, in true sense, a transdisciplinary applications for holistic and sustainable development of the world class society as a whole.

This world conference is rightly being organized in this epoch of demand of all disciplines including Social sciences and Humanities, Global studies, Physical and Life sciences, Engineering and Technology, Health and medicine, Business and Economics etc to culminate and contribute holistically in all countries world over to deal with ever-increasing demand of the human kind for sustainable development of the world. With the acceleration in the efforts of interaction of almost all Industries and Institutes in the recent times by the initiative of various Government and Non-Government organizations throughout the world, I hope that this conference provides informative and innovative ideas to all the participants. Ground-breaking deliberations of various scholars and experts will further inspire the current and future generations to contribute their best. I look forward to the recommendations of the deliberations as useful inputs towards better understanding of the problems, issues, challenges and probable initiatives.

I extend my warm greetings to all the participants and best wishes for a grand success of the above Conference

(SINGAM JAYANTHU)

Dr. Himanshu K. Patel
Associate Professor, Nirma University.
Chair – Student Affairs,
International Society of Automation (ISA),
District ’14 (Asia-Pacific)

Message

It is indeed a matter of great pleasure to be a part of “International conference on Future Communication and Computing Technology (ICFCCT-19),” and to interact with zealous scholars and tech-savvy engineers’ gathering at Meerut Institute of Engineering and Technology, UP, India on July 17th and July 18th, 2019.

Today’s world is the outcome of quests for innovative technical and scientific inventions by the intellectual efforts of modern humanities. Accelerating research in every field has guaranteed enhanced and comfortable human life. However, at the same time, the environmental catastrophe should be accepted as the annoying outcome of the uncontrolled industrial advances. In spite of some exceptional and revolutionary discoveries in engineering and technology, few challenges like global warming, carbon emanation and the ecological deterioration are still in search of improved solutions.

Technological and scientific research and development seem to be the only resolution for the mankind to deal with such challenges. It has become mandatory that, the contemporary researchers and enthusiasts should cooperatively discover solutions to these issues through abiding perseverance and determination. The theme of ICFCCT is indeed in line with the demand of next-gen communication and computing technologies, without the same the solution of aforesaid challenges cannot match the expectations of the modern mankind.

The ideas and innovations in technologies need to be verified at universal level. International conferences like ICFCCT-19, provide supreme platform for peer investigators to discuss their innovative concepts and offer the opportunity for joint efforts in order to obtain enhanced results.

I hope at ICFCCT-19, students and researchers will acquire and exchange quality knowledge through various sessions. My sincerest thanks to organizing committee and best wishes for the prolific and enthusiastic conference.

Prof. (Dr.) Howard Chuan-Ming Liu
National Taipei University Technology
Taipei Taiwan

MESSAGE

I am delighted to know that Meerut Institute of Engineering and Technology, Meerut, India, is organizing an **International Conference on Future Communication & Computing Technology** (ICFCCT-2019) on 17th and 18th July, 2019.

I wish to congratulate the Meerut Institute of Engineering and Technology, Meerut, A.K.T.U. Lucknow,U.P.,(India) for organizing an International Conference on Future Communication & Computing Technology (ICFCCT-2019) on 17th and 18th July, 2019. The newsletter is a testimony to all the quality teaching and research happenings in this Institute. It is a commendable effort that will bring quality to the columns and show case the events. I look forward to reading about the various activities, achievements and articles on research issues in this conference .Congratulations to the editorial team and I wish them good luck.

It is a great pleasure to welcome all delegates and participants to this conference, coming from different part of the country and Meerut Institute of Engineering and Technology, Meerut,A.K.T.U.Lucknow,U.P.,(India) for their commitment and tremendous endeavour in organizing this International conference in Computer Science Engineering Department.

I would also like to express my gratitude to all the conference sponsors, who have shown interest in us. I am assertive that A.K.T.U. Lucknow, U.P.,(India),will turn out to be a top class university in coming future.

Thank you.

(Prof. (Dr.) Howard Chuan-Ming Liu)

ICFCCT -19

2nd International Conference on Future Communication & Computing Technology

Meerut, Uttar Pradesh, 17th - 18th July , 2019

Organizing Committee

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Dr. Ankur Garg ASSOCIATE PROFESSOR (CSE) Meerut Institute of Engineering & Technology, Meerut	**Mr. Yogendra Narayan Prajapati** ASSISTANT PROFESSOR - CSE Meerut Institute of Engineering & Technology, Meerut

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- **Mr.Sanjay Sonakar** - Assistant Professor, Meerut Institute of Engineering & Technology, Meerut
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- **Ms. Anjali Sharma -** Assistant Professor , Meerut Institute of Engineering & Technology, Meerut
- **Pragya Gaur -** Assistant Professor, Meerut Institute of Engineering & Technology, Meerut
- **Ms. Shaili Singhal -** Assistant Professor, Meerut Institute of Engineering & Technology, Meerut
- **Ms. Divya Rathi -** Assistant Professor, Meerut Institute of Engineering & Technology, Meerut

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Reception & Registration Committee :

- **Ms. Neelam Singh,** Assistant Professor MIET
- **Ms. Gunjan Sharma,** Assistant Professor MIET
- **Ms. Mariya Khursheed,** Assistant Professor MIET

Food and Refreshment Team:

- **Mr. Raghuraj Singh,** Assistant Professor MIET
- **Mr. Vishal Jayswal,** Assistant Professor MIET
- **Mr. Vivek Kumar,** Assistant Professor MIET

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- **Mr. Arpesh Singh,** Assistant Professor MIET
- **Mr. Manoj Kumar Patel ,** Assistant Professor MIET

Hostel Arrangement Team :

- **Mr. Baldivya Mitra,** Assistant Professor, MIET
- **Mr. Vijay Kr. Sharma,** Assistant Professor MIET
- **Ms. Sonika Jalotra,** Assistant Professor MIET

Anchor Team:

- **Dr. Nidhi Tyagi,** Professor, MIET
- **Ms. Deepika Gupta,** Assistant Professor MIET
- **Ms. Sonika Jalotra,** Assistant Professor MIET
- **Mr. Prashent Naresh ,**Assistant Professor MIET

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- **Ms. Priynaka Bhardwaj,** Assistant Professor, MIET
- **Ms. Shivani Rohilla,** Assistant Professor, MIET
- **Ms. Divya Rathi,** Assistant Professor MIET
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ICFCCT -19

2nd International Conference on Future Communication & Computing Technology

Meerut, Uttar Pradesh

17th & 18th July, 2019

ABSTRACTS

Organized by:
Meerut Institute of Engineering & Technology (MIET)
and
Institute For Engineering Research and Publication (IFERP)

Energy Efficient Cross-layer Routing Protocols for IoT Applications – An Empirical Study

Aditya Tandon, Department of Computer Science and Engineering, Amity University, Noida

Prakash Srivastava, Department of Computer Science and Engineering, Amity University, Noida

Abstract:--

The Internet of Things (IoT) is viewed as one of the quickest cum-developing advances giving a deep rooted arrangement towards getting to the moderate and clean vitality around the globe however has dependably requested a cross-layer way to deal with handle the basic prerequisites of each layer actualized in TCP/IP convention suite. The point of this examination paper is to convey a concise audit of vitality productive cross-layer steering conventions for IoT systems. The paper enrolls novel commitments by differed analysts over the world concerning steering conventions proposed. Moreover, the paper likewise displays relative investigation of directing conventions based on specialized details principally concentrating on vitality productivity. It was likewise discovered that a large portion of these conventions did not have the highlights of security and portability since they depended on either Wireless Sensor Networks (WSNs) or Mobile Ad hoc Networks (MANETs).

Keywords

WSN, routing, cross-layer, Internet of Things, energy efficient

Evolution of Blockchain Technology in Business Applications

Saugata Dutta, Research Scholar, Galgotias University, Greater Noida, Uttar Pradesh, India

Dr. Kavita, Galgotias University,Greater Noida, Uttar Pradesh, India

Abstract:--

Blockchain technology is an invention where digital transactions refer to distributed database without the need of third party intervention and authentication. In present time several organizations in various disciplines are adopting this technology which has transparency, integrity, efficiency in cost and time. Its unique technology is being adopted in various industries like banking, legal, healthcare, rentals, education and many more. The intention of this paper is to outline the Blockchain technology and its function in various domain.

Keywords:

Blockchain, bitcoins, cryptocurrencies, smart contracts, decentralization, encryption.

Comparative Analysis of Ensemble Learning Techniques for Card Fraud Detection

Pooja Pant, Amity University, Noida, India
Dr. Prakash Srivastava, Amity University, Noida, India
Dr. Ashutosh Gupta, UPRTOU, Allahabad ,India

Abstract:--

Machine learning have revolutionized fraud detection in various domains like telecommunication and e-commerce. Global statistics shows how billions of dollars are lost because of card frauds every year and millions of people falling the victims. Fraud detection systems used for credit card fraud detection 2 decades ago are still being used because of the trust and stability they have provided for so long. With a number of academic research being done in fraud detection their effect on the financial industry has been minimum. Even with high prediction accuracy using machine learning approaches like deep learning and stack ensemble most of these research gets directly rejected by the industry. Our research objective is to highlight the reason of rejectection which are mostly ignored by the researchers and there adverse effect on the results.

Keywords:--

Ensemble Learning , Machine Learning ,Fraud Detection.

Implementation of DBSCAN Clustering to Relate Various Parameters to Predict Primary Education Growth Based on Previous Data

Mayank Mittal, Assistant Professor, Dept. of CSE, DVSIET, Meerut
Nitin Goyal, Assistant Professor, Dept. of CSE, DVSIET, Meerut
Mohit Kumar, Assistant Professor, Dept. of CSE, DVSIET, Meerut

Abstract:--

Primary Education can be defined as first step of compulsory education which contributes in the development of future of country. Our aimis to develop a prototype based on DBSCAN Clustering Algorithm to monitor the primary education and corresponding utilization of previous data to estimate and predict the future growth of primary Education in India.The major goal of primary education is achieving basic literacy and numeracy amongst all people as well as establishing foundations in science, mathematics, geography, history & social sciences. DBSCAN Clustering Algorithm can be utilized to establish relationship between human resources, infrastructure, government expenditure, actual utilization of these resources and the outcome which is socio-economic makeover of Society of India. It would help to predict and formulate correct path to transform the process of growth of Indian Primary Education System.

SPRUCE-An Intelligent Surveillance device for monitoring of dustbins using Image processing and raspberry Pi

Navjot Rathour, Lovely Professional University, Phagwara Punjab, India

Anita Gehlot, Lovely Professional University, Phagwara Punjab, India

Rajesh Singh, Lovely Professional University, Phagwara Punjab, India

Abstract:--

In the current scenario, most recurrently we see that the Garbage bins or Dust bins placed at public places in the cities are swarming due to elevation in the waste every day. It creates filthy and unhealthy conditions for humanity which leads to spreading of lethal diseases. In addition to that, anyone can hide eruptive material under this sort of mess and that can lead to loss of lives. To avoid these wretched situations a Garbage Monitoring System using IoT-SPRUCE is proposed. In this proposed system there are multiple dustbins located throughout the city or campus; these dustbins are designed with low cost device which helps in tracking the level of garbage bins. In addition to that, SPRUCE can click the image and send it on server. This feature can help the monitoring authorities to identify as well locate them for further action. Moreover, these clicked images can help to identify the updated status of bins while sitting at their place only and an immediate action can be made to clean the dustbins.

Issues in Word Alignment from Hindi-English Languages

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Umesh Chandra Jaiswal, Department of Computer Science & Engineering , Madan Mohan Malaviya University of Technology, Gorakhpur, India.

Abstract:--

The paper discusses the various methods and issues related to word alignment. This paper focus on the main problem arises in word alignment because Hindi language is based on subject object verb "SVO" and for English language is subject verb objects "SOV". Hindi is morphology rich language, therefore correct alignment of word order from Hindi to English language is quite difficult. The paper presents survey on for foreign and Indian language of word alignment in the application of machine translation.

Index Terms

Word alignment; semi supervised; unsupervised; machine translation.

An Efficient Approach of Autoranking of Amazon Review Using Regressior Models

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Dr. Neetesh Gupta, Prof. Head of Dept. (CSE), TIT-S Bhopal

Abstract:--

Opinion of customers in e-commerce plays a crucial role in day to day usage. Whenever there is a need to take a decision or to purchase a product the opinion of other individuals on the same plays an important role. There are various social sites and review sites where a user can post their review or opinions towards any product or any issue, so various business and corporate organisation wants to know these opinions of users to take a decision. In e-commerce market, there is a need to analyse the social data or products review automatically, so there is a need to create a model which classify the huge amount of product reviews automatically. This paper fetching the real time reviews from an e-commerce site amazon and apply various text mining techniques to pre-process the data and then apply a machine learning approach through which results will evaluate the effectiveness of reviews through a well-known measure for goodness of fit. In this paper an advance model with a computational cost model is used. The optimized cost model with the word processing and ranking is used in given research.

Keywords:--

Automated Readability Index, Helpfulness Index, Goodness of Fit, Word Count.

A Novel Protocol for Detection and Optimization of Overlapping Coverage in Wireless Sensor Networks

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A.K. Daniel, Department of Computer Science and Engineering, Madan Mohan Malaviya University of Technology Gorakhpur, India

Abstract:--

Wireless sensor network (WSN) is an emerging area in which numbers of sensor nodes are deployed in two ways random and deterministic for data gathering. WSNs have expedited human life in diverse emerging fields: military, agriculture, structural health, perimeter access control, forest fire detection. A physical stimulus such as pressure, sound, light act as an environmental parameter on which the system is design to monitor and detect it for controlling the coverage area for assigned task. The nodes are deployed in the random manner in the given area for gathering the information and they may be overlapped so that the total area may not be covered. The proposed protocol uses radius and the residual energy as a function to increase the total coverage area so that the whole coverage area may be achieved. It also increases the life time of the network using Sleep and Wakeup protocol. Therefore the overall life time of the network increases.

Index Terms

Sensor, Residual energy, Coverage area, Network lifetime.

Design of Multi-band Antenna

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Abstract:--

A new method for designing the multiband antenna is presented in this paper. In this method, two split ring slots with opposite gap facing is mounted on circular patch antenna. This configuration uses probe feeding technique along with RT duroid 5880 substrate. To create different short circuits along the slots the electric field is manipulated The resonance frequencies are chosen to increase the number of bands at which antenna can operate. Advance Design system 2011-10 is used for the simulation of this design. Results verify its multiband operation.

Keywords:--

Multiband, probe feed, patch antenna, resonant frequencies.

Smart Farm Irrigation through Internet of Things

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Abstract:--

Our research is on the development of a Smart Farming System with smart tube well operating system which can control ON/OFF state of tube Well. As well as to keep an eye on the continuity of electricity received and to check whether the 3 phase electricity is available to run the 3 phase pump motor. This system can monitor the soil health, conserve water , measure temperature, measure humidity, measure pH, measure TDS level present in the soil.

We came to this solution after analyzing the problems of villagers who wait for electricity at night for irrigation and to operate it manually at night time. And it is also for small plant nurseries to achieve better growth and for the monitoring of the whole system. We have built a single integrated system that will operate it automatically by setting the timer or by manually switching it ON/OFF from his phone at the time, when water is needed and after work when to switch off the system it will also record a dataset of all the physical factors and to monitor the soil health and directly sink all data to our database for further monitoring.

Blockchain Technology use in Student attendance monitoring system in Engineering Institutes

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A.K.Solanki, Department of Computer science and Engineering, Meerut Institute of Engineering and Technology, Meerut, UP (India)

Abstract:--

Attendance of students in engineering colleges is decreasing. It is directly impacting the result of the institutes and performance of the students. It is also hurting to the expectation of the parents. It is observed that students remain in hostel or at their home and they claim that they were present in the classroom. They claim that teacher intentionally marked them as absent. Sometimes parent also favors their warden in this context unknowingly. In this work we proposed a solution to this conflict by using Blockchain technology. One of the features of Blockchain hyperledger is that it is append only in nature. We will utilize this feature in our system to give attendance to students. All the three stakeholders (Parent, student, and teacher) are supposed to mark the attendance at their part by using their smart phones if they want to cross-monitor. Parent marked attendance will be considered as student went to college for study at that particular day. Student will mark his attendance himself. Teacher will mark present to the student if he is physically present in the lecture or practical session. At the end of the day each stakeholder can verify it. If there is any inconsistency (only if it is done intentionally by any stakeholder) can be rectified easily on the same day. Proposed system utilizes append only feature of hyper ledger, so it will remain always consistent.

Keywords:

Blockchain Technology, Hyperledger, Student attendance, Cross-monitoring.

Data acquisition from mobile phone using MOBILedit

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Vimal Kumar, Computer Science and Engineering, Meerut Institute of Engineering and Technology, Meerut, Uttar Pradesh, India

Abstract:--

Mobile forensic is a subsidiary of digital forensic that is flourishing constantly. As per current scenario, mobile phones not only mean traditional mobile phones that were developed and used in late 1990s but also include smart phones that offer an array of functionality. Mobile phones developed in 1990s also known as feature phones provided limited functionality such as calling and messaging as they were subjected to provide communication facility. But at present, mobile phones are used not only for communication but also for executing face to face interactions, shopping using various applications, trading and internet surfing, etc thus making mobile more feature-variant and making them smart. Since, mobile phone market is constantly rising because of increased and improved features; usage of mobile phones in criminal activities or illegal activities has also increased. The crime scene can be re-created by identifying the series of actions that has taken place when crime was committed by using compatible mobile forensic tools. Current attack could not be prevented, but the investigator can attain all crucial evidences present on the crime scene in order to reduce similar kind of attacks in future. The capturing and recording of crime scene, collecting and analyzing the evidence and finding the culprit and reason of committing crime is the art of mobile forensics. In this paper, we are going to discuss the implementation of proposed framework by using tool MOBILedit.

Index Terms

Mobile Phones, Smart Phones, Mobile Forensic.

Predictive analytic for mental Health disease

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Ankur Garg, Computer Science and Engineering, Meerut Institute of Engineering and Technology, Meerut, India

Abstract:--

Many people are suffering from some kind of mental illness and this number is increasing day by day. Despite major revolutions in medical science exact identification of factor that leading to mental illness is still unknown to the world. Due to its ambiguous nature, mental state of person is a major focus on research these days. With the emergence of smart phones, PCs, internet of things. The amount of data human kind produce everyday is huge and only accelerating. These data are stored in a semi structured way and used to get meaningful relationships and trends in data. Data mining techniques can be efficiently used on this data to find hidden patterns between different attributes of data. This paper describes the prototype to use data mining technique namely Random forests classification to determine person's mental state based on attributes such as age, gender, life style, education, Occupation, personal income, vision, sleep, mobility, hypertension, diabetes. The system will predict whether a patient is suffering from mental illness or not.

Keywords:--

Data mining, Random Forest, Decision tree, Knowledge Discovery

Evaluation of Parallel System using Process Algebra

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Abstract:--

In this paper we discuss method for efficiency testing of a concurrent processes execution system. We use the concept of process algebra, it is an algebraic technique for the study of execution of parallel processes. Mathematical language is use for building models of computing system which make records about the execution of the procedure. We use PEPA tool, TAPA tool for making model. These tools provide formal explanation of computing system models. The execution related data about the system will be use to check the execution efficiency of the procedure. Here we use concept of markov chain analysis for execution of the concurrent processes.

Key Words:

Process Algebra, PEPA, TAPA, Parallel System

Enhanced Weighted Round Robin Load Balancing Algorithm in Cloud Computing

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Abstract:--

The cloud/utility computing model requires a dynamic task assignment to cloud sites with the goal that the performance and demand handling is done as effectively as would be prudent. Efficient load balancing and proper allocation of resources are vital systems to improve the execution of different services and make legitimate usage of existing assets in the cloud computing atmosphere. Consequently, the cloud-based infrastructure has numerous kinds of load concerns such as CPU load, server load, memory drain, network load, etc. Thus, an appropriate load balancing system helps in realizing failures, reducing backlog problems, adaptability, proper resource distribution, expanding dependability and client fulfillment and so forth in distributed environment. This thesis reviewed various popular load balancing algorithms. Modified round robin algorithms are popularly employed by various giant companies for scheduling issues and load balancing. An enhanced weighted round robin algorithm is discussed in this paper concentrating on efficient load balancing and effective task scheduling and resource management.

Keywords:

Load balancing algorithms, Task scheduling, Resource allocation, Cloud computing.

Manufacturing Defect Detection in Ceiling Fans using Image processing

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Pradeep Pant, Computer Science & Engineering, Meerut Institute of Engineering & Technology, Meerut, (U.P.), India.

Abstract:--

During manufacturing process of ceiling fans there may be possibility that any step of manufacturing process can be skipped or improper completion due to malfunctioning of the system. In manufacturing process of fans, the outer plate, stator, rotor, axle and other parts are manufactured and assembled. If the winding machine is not working properly and improper windings is done and no-one can acknowledge that winding machine is not working properly then the whole batch should be designed with defect and this will surely create negative impact on the production process of the industry. So the proposed work will overcome this problem. The paper guides to detect whether the windings are proper or not and detection is carried out by taking picture of armature-windings. If there is any problem in the windings then our system will generate an alert so that other armatures can be protected from failures. Manual results are not so accurate all the time but in manufacturing process we need high accuracy. For this skilled labor is required and for skilled labor we have to pay more, this automated system reduce the need of skilled labor. If fan manufacturing industries use this image processing system then this will be very helpful in increasing production of fans within the completion time with more accuracy.

Keywords:—

Image, defect, detection, manufacturing, fan, rotor.

An Efficient Type 4 Clone Detection Technique for Software Testing

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Rohit Aggarwal, Meerut Institute of Engineering and Technology, Meerut, UP

Abstract:--

Software testing is a procedure which is utilized to distinguish the bugs and reveal it. Software testing is a procedure and control moreover. It is not quite the same as programming improvement. It ought to be viewed as that is a piece of programming improvement. Clone testing is one of the sorts of testing. It is utilized to check the guile in the product. While build up any product for sparing time and exertion, programming designer. Reorder program code over and over. So if any bug found in one module is duplicated in each duplicate. There are numerous duplicates of code present and no record of such duplicates is available. This will make hard to fix such bugs and upkeep of existing programming. Code clone is one of the components making programming upkeep increasingly troublesome. There are various kinds of clones present, Type 1, Type 2, Type 3, Type 4. The current calculation has identified clone in Type 3 as it were. In the proposed work we will improve algorithm which will probably identify clone in TYPE 4 too. This expands the presentation of the framework.

Keywords:

Software testing, clone testing , algorithm, code clone.

Autonomous Compliance Implementation in Grid Environment

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Abstract:--

Progress in IT and software technology has led to an explosive development in computer systems and apps that affect all elements of our lives. Computing devices are anticipated to be efficient and helpful when implemented first and are still helpful in changing conditions. Their design, their setup and leadership difficulties override current instruments and methodologies with increasing complexity of devices and apps. This makes the scheme unsafe and unmanageable. Thus the notion of autonomous computation is developed to create the devices self-manageable and safe. Autonomous computation provides a possible answer to these difficult issues in studies. Grid computation is the fundamental implementation region for autonomous computation. The IT inventions include both autonomic computation and cloud computation. Autonomic computation seeks to solve the rapid growth of complexities in the IT sector by endeavoring to share shared computer assets and information assets in the cloud computing sector. The fundamental objective is to achieve grid-related autonomous computation, such as autonomous job distribution and grid management and independent resource allotment.

Keywords:

Computer autonomy, Grid computing.

Comparison of Models-Decision Tree and Random Forest Classifier using Rattle on Diabetes Disease

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Abstract:--

This Diabetes is the disease which is growing now a days in human body and there are a number of patient who are suffering by this diabetes in the world. The data related to medical area is very huge which is related to the many disease. So the first thing is that we have to choose a mining tool which give best result for the given databases. Because, this medical data is statistical and most of the researchers using this type of data. Data mining tool is used for the extracting better result in accuracy for the diabetes data base. By the data mining techniques the medical expert and researchers analyze the result and provide the best treatment for this disease. In this paper we are using diabetes data and apply it on the Rattle a open source tool of data mining and perform two classification method decision tree and random forest tree for classify the data and show that which classification algorithm is best for diabetes dataset.

Index Terms:—

Data mining, Diabetes, Rattle tool, Decision Tree, Random Forest Tree

Comparative Study of Eucalyptus, Open Stack and Open Nebula

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Rohit Aggarwal, Professor, Department of Computer Science & Engineering, Meerut Institute of Engineering and Technology, Meerut.

Abstract:--

The quantity of cloud the executives programming identified with a private foundation as-an administration cloud is expanding step by step. The highlights of the cloud the board programming shift altogether and this makes a trouble for the cloud customers to pick the product dependent on their business prerequisites. With the expanding quantities of Cloud Service Providers and the relocation of the Grids to the loud worldview, it is important to have the option to use these new assets. Also, an enormous class of High Performance Computing (HPC) applications can run these assets without (or with minor) adjustments. In this work we present the structure of a HPC middleware that can utilize assets originating from a situation that make out of numerous Clouds just as old style HPC assets. Utilizing the Diet middleware, we can convey an enormous scale, disseminated HPC stage that ranges over a huge pool of assets accumulated from various suppliers. At last, we approve the engineering idea through cosmological reenactment Ramses.

Keywords-

Cloud, IaaS, Open Nebula, Multi-Clouds, DIET, Open Stack, RAMSES, cosmology

Numerical Analysis of Flow Heat Transfer through Micro Channel of Mems Device

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Abstract:--

Micro-channel has been increasingly applied in MEMS devices and electronics devices due to its higher efficiently heat dissipation rate, more compact size and lower cost. The present work demonstrates that the theoretical analysis of single phase micro channel has been investigated. To predict the behavior of micro-channel, the non-linear thermal hydraulic equations are developed namely mass, momentum and energy conservation, these equations are solved to predict the thermal physical properties and hydrodynamic behavior of the fluid in micro-channel.

The configuration geometry of the problem has been made in design modular of commercial software ANSYS 15.0 Workbench and meshing of it has been done in ANSYS 15.0 Workbench fluent. Water is used as the working fluid in the micro-channel and the problem has been solved in ANSYS 15.0. To analyze the thermal behavior of micro-channel in force convection for various input power. Numerical simulation is carried out to calculate the wall temperature of the micro-channel, heat transfer coefficient (HTC) values etc. Next more simulation have been performed to investigate the parametric effect on the circular micro channel in terms of different diameter and length, and optimize the geometric parameters and coolant flow rate to maintain the critical temperature of the MEMS device (geometry and thermodynamic performance of micro-channel).

Keywords

cfd:-computational fluid dynamics, mems: micro-electrical and mechanical system, dw:- distilled water, mchx:-micro-channel heat exchanger, mchs:- micro-channel heat sink .

Implementation and Evaluation of User Activity System as a Web Service

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Abstract:--

Web service is a service which allows different systems to connect with each other via World Wide Web (www). It uses technology like Http (Hyper Text Markup Language). It was originally designed for human to machine communication, but now used for machine to machine communication. We have to develop an application that is platform independent and can be availed by anyone from anywhere, it would be only possible if it is platform independent that is there is no restriction of the language which is to be used for running the application as it will be using web services to fetch the data and showing the desired results and we would be showing the comparison between the Standalone and the web based services. Developing file service as web services have many benefits such as interoperability, low cost of communication, supports remote procedure calls, supports document exchange etc. In this thesis file services efficiency measured with the help of performance criteria non as F-measure.

Simulating Sunlight Color Temperature for the Application of Indoor Lighting

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Tarash Tejwani, Students, Department of Electrical and Electronics Engineering, Manipal Institute of Technology
Phebe Ann Samuel, Students, Department of Electrical and Electronics Engineering, Manipal Institute of Technology
Ravin Chikhalikar, Students, Department of Electrical and Electronics Engineering, Manipal Institute of Technology
C R Srinivasan, Faculty, Department of Instrumentation and Control Engineering, Manipal Institute of Technology

Abstract:--

Good lighting quality plays a key role in an interior environment. In order to maintain and comforting environment for the occupants it becomes crucial to maintain appropriate lighting. This paper illustrates an LED color control algorithm which modifies illuminance and color temperature according to daylight. The combination of six different colors of LEDs i.e., Red, Green, Blue, Amber, Lime and White (2200K) creates white light. It aims to illuminate indoor spaces to mimic daylight. Daylight changes over a range of color temperatures. The color mixing algorithm varies the LED luminance ratios and with the combination of both natural light and artificial lights the room is illuminated thereby saving the overall energy consumption without compromising quality of light

Index Terms –

color temperature, daylight, illuminance, LED, energy saving, color mixing algorithm

An IoT enabled home automation system

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Guru Charan, Department of Instrumentation and Control Engineering, Manipal Institute of Technology,Manipal Academy Of Higher Eductation(MAHE), Manipal

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Abstract:--

Internet of things, in the current trend of engineering, is one of the most widely researched field of technology. IoT has become a technological revolution that helps in making our lives better. The development of IoT triggered a huge demand for "Smart Devices". A "Smart Device" is laden with sensors that collects data of their surroundings, processes it and relays it for further analysis. For an IoT device, the data is sent to the Internet using various means. This feature makes IoT special from other systems, but also more prone to cyber-attacks. Proper means of security can minimize such risks. This article emphasizes on the need of Smart Homes, the risks and security concerns and ways to overcome them, list of various methods of Home Automation and discussion of Smart Homes using IoT. The main objective is to control the home appliances using a remote device utilizing the Home Wi-Fi-Network.

Keywords –

Internet of Things, IoT, Smart Homes, Home Automation, Security, Privacy

Constructing and Training a Classifier using weka for Twitter Sentiment Analysis

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Shailendra Sharma, Dept. of Computer Science & Engineering, Translam Institute of technology and Mgt.,India

Abstract:--

The process of retrieving information about a consumer's perception of a product, service or brand is popularly known as sentiment analysis[29]. If we need to know exactly how people feel about our business, sentiment analysis can do the trick. Specifically, social media sentiment analysis takes the conversations our customers are around the social space and puts them into context. Twitter offers corporations an effective thanks to analyze customers' views towards the essential to success within the boundaries of market. To computationally measure customers' perceptions, we can construct a program for sentiment analysis. In this paper, we have created a SVM with weka + libsvm so that it can be later utilized to perform sentiment analysis on tweets. To do sentiment analysis on tweets, that is, predict the sentiment of any tweet if it is either positive or negative, we have to train a classifier with a set of hand labeled tweets. Each tweet has been labeled with a class attribute of '-1' for negative sentiment or '1' for positive sentiment. The training set is then passed through a cleansing process, eliminating all useless characters and words (like @mentions and URLs) from the text. It can be done using regular expressions. Then the text is being tokenized and converted into a TF-IDF vector. All the tf-idf vectors, together with their label, are then utilized to train a Support Vector Machine (SVM) with RBF (Radial Basis Function kernel). One can then use the trained SVM to classify new tweets.

Keywords

sentiment analysis; weka; twitter ; classifier; RBF; SGD; NLP; SVM; microblogging; machine learning; deep learning.

T-PLATED Microstrip Antenna for Dual Band Wlan and Wimax Applications

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Sakshi Kanojia, Student, ECE Department of MIET, Meerut
Chandan, Assistant professor, ECE Department of MIET, Meerut

Abstract:--

The article is all about the multiband microstrip patch antenna designed for WLAN and WiMAX applications. The proposed antenna consists of a T-shaped patch which gives dual band. The multiband characteristics are obtained by adding a T- shaped rectangular patches on a substrate of 0.8mm height. The designed antenna is a dual band antenna. The two bands lie in frequency range (2.36-2.71GHz)/2.49GHz and (5.26-5.52GHz)/5.39 GHz includes all the operating bands of WLAN and WiMAX applications as per IEEE 802.11a/b/g/n standards with 14% and 4.81% impedance bandwidth respectively.

Square Shaped Multiband Patch Antenna For UMTS,WiMAX And WLAN Applications

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Chandan, Assistant professor, ECE Department of MIET, Meerut

Abstract:--

The article introduces an omnidirectional antenna having dimensions as 20x20x0.8mm cube. It consists of square radiation patch, defected ground and operates at wireless local area network (WLAN) (4.3-5.9GHz),wide interoperability for microwave access band(WiMAX)(3.4-3.6GHz)and universal mobile telecommunications system (UMTS) (1920-2170MHz) band and hence is suitable for all general purpose communication features. The antenna is compact in size

Keywords-

Multiband antenna, small size, wireless communication system, microstrip patch antenna

Microstrip fed Key-Patched antenna for WLAN and WiMAX applications

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Sanskriti tyagi, Student, ECE Department of MIET, Meerut
Chandan, Assistant professor, ECE Department of MIET, Meerut

Abstract:--

The proposed design is for triple band monopole antenna. The antenna consists of a patch that is compared to a key shape. The multiband characteristics of antenna are obtained by rectangular patch with key shaped slot, also bandwidth is improved by adding patches of different shapes and widthsThe volume of proposed antenna is 30×30×0.8 which is quite compact and covers the operating band of (2.367-2.71 GHz)/2.475 GHz, (3. – 3.3 GHz)/3.15 GHz and (5.2 – 5.6 GHz)/5.4 GHz which covers operating bands for WLAN and WiMAX applications as per IEEE 802.11a/b/g/n standards with 14.1%, 9.1% and 7.4% of impedance bandwidth respectively.

Secure Video Compression

Shailendra Singh, Assistant Professor ,MIET Meerut.
Devesh Som, Assistant Professor ,MIET Meerut.

Abstract:--

Video is any type of visual moving information. Security is out the protection of assets. Security refers to protective digital privacy measures that are applied to prevent unauthorized access to computers, databases and websites.

Cryptography is evergreen and developments. Cryptography protects users by providing functionality for the encryption of data and authentication of other users. Compression is the process of reducing the number of bits or bytes needed to represent a given set of data. It allows saving more data. The project aims to implement security algorithm for data security. The data will be first encrypted using security techniques and then compression techniques will applied. If encryption and compression are done at the same time then it takes less processing time and more speed.

Keywords:--

Cryptographylength, Huffman, LZW, RLA , GZip RC4, Cipher text

Novel Algorithms for Protective Digital Privacy

Vivek Kumar, Assistant Professor MIET Meerut
Ajay kumar, Assistant Professor MIET Meerut

Abstract:--

Video is the recording, reproducing, or broadcasting of moving visual images. Visual multimedia source that combines a sequence of images to form a moving picture. The video transmits a signal to a screen and processes the order in which the screen captures should be shown. Videos usually have audio components that correspond with the pictures being shown on the screen. Video compression technologies are about reducing and removing redundant video data so that a digital video file can be effectively sent over a network and stored on computer disks. With efficient compression techniques, a significant reduction in file size can be achieved with little or no adverse effect on the visual quality. The video quality, however, can be affected if the file size is further lowered by raising the compression level for a given compression technique. Security is about the protection of assets. Security, in information technology (IT), is the defense of digital information and IT assets against internal and external, malicious and accidental threats. This defense includes detection, prevention and response to threats through the use of security policies, software tools and IT services. Security refers to protective digital privacy measures that are applied to prevent unauthorized access to computers, databases and websites. Cryptography is closely related to the disciplines of cryptology and cryptanalysis. Cryptography includes techniques such as microdots, merging words with images, and other ways to hide information in storage or transit. However, in today's computer-centric world, cryptography is most often associated with scrambling plaintext (ordinary text, sometimes referred to as clear text into cipher text (a process called encryption), then back again (known as decryption). Cryptography is evergreen and developments. Cryptography protects users by providing functionality for the encryption of data and authentication of other users. Compression is the process of reducing the number of bits or bytes needed to represent a given set of data. It allows saving more data. The project aims to implement security algorithm for data security. The data will be first encrypted using security techniques and that are done at the same time then it takes less processing time and more speed compression techniques will applied. . If encryption and compression are done at the same time then it takes less processing time and more speed.

Keywords:

security, cryptography, encryption, compression, authentication

Big Data Privacy for End to End Delivery

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Dr. Nidhi Tyagi, Professor, MIET, Meerut

Abstract:--

Data privacy is an area of concern to process massive datasets in Big Data applications. Assortment of Big Data-sets is tough to be handled using, on-hand management tools or traditional processing techniques. Big Data is characterized by three V's, Volume, Varity and Velocity. Privacy to such Big Data could be a massive snag which might be achieved by Anonymization technique. Datasets like Financial data, Health Records and other confidential information of various organizations, needs privacy to protect from the intruders and malicious entities. The aim of Big Data Anonymization is to shield the privacy of the individual and make it legal to share the information while not obtaining permission from people. The research paper discusses the basics of Big Data, technology behind it and various challenges.

Keywords:

Big Data, Hadoop, HDFS, Map Reduce, Data Anonymization, Kerberos Security System.

Smart Cycle

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Abstract:--

We will make a solar tri-cycle for the local rag pickers. We will fix solar cells on the tri-cycle that tri-cycle which will be pollution free and will be environment beneficial. It will also have a rag detection sensors that special sensor will detect that rag whether it is recyclable or not by the amount of humidity, smell and state of garbage that will help the rag pickers to find the waste in identical way.

Intelligent Accident Identification Using GPS

Yogendra Narayan Prajapati, Meerut Institute of Engineering and Technology, Meerut.

Dr. Ankur Garg, Meerut Institute of Engineering and Technology, Meerut.

Manoj Kumar, Meerut Institute of Engineering and Technology, Meerut.

Abstract:--

Recently technological and population development, the usage of vehicles are rapidly increasing and at the same time the occurrence accident is also increased. Hence, the value of human life is ignored. No one can prevent the accident, but can save their life by expediting the ambulance to the hospital on time. The objective of this article is to minimize the delay caused by traffic congestion and to provide the smooth flow of emergency vehicles. The concept of this paper is to give the location of accident automatically with the help of GPS. So that the ambulance can reach the spot on time and human life can be saved and the accident location is identified and sends the accident location immediately to the main server. The main server finds the nearest ambulance to the accident zone and sends the exact accident location to the emergency vehicle. This paper is automated, thus it locates the accident spot accurately, provide information to emergency contacts, provide the shortest path to reach the location and to the hospital on time.

Power Efficient Localization schema for Wireless Sensor Network

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Pradeep Chauhan, Assistant Professor , Meerut Institute of Engineering and Technology, Meerut.

Abstract:--

This paper examines localization error will be minimal after adjusting the radio range of beacons' and error performance tradeoffs. Anchor based-range-free schema for Wireless Sensor Network. Localization algorithms are different in different network environments. My work is to find out an efficient localization algorithm for wireless sensor network. The idea is to use anchor nodes for localization. Anchor nodes are special nodes that know their physical location. Anchor nodes are connected to GPS to find out their location. Wireless sensor nodes that do not know their location are known as unknown nodes. Unknown nodes communicate with anchor nodes. Anchor nodes use beacons and broadcast it within the range and make the proximity. The beacons have the information of anchor node as follows: Anchor's ID, Anchor's absolute coordinate, Anchor's power level. Its estimated maximum distance that beacon can travel.

Keywords:

WSN, GPS.

EEG-based Attention Tracking for Security

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Abstract:--

Nowadays technology is raising slopes, we should also note the increasing immoral activities. Safety and Security are two important things that are to be concerned in today's life. Theft is a non –ignorable crime that should be highly prevented, and at the same time it directly affects the economy of a nation. The Brainwaves are to authenticate different set of people that can be used to identify feeling and behavior of different people. This article talks about the application of brainwave in security through analyzing the mental activities of brain using EEG signals based on Brain- Computer Interface (BCI) technology.

Index Terms: -

EEG (Electroencephalography), Brain wave Sensor, Brain- Computer Interface (BCI) technology, micro controller.

Design and Analysis of Textile Antenna

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Pramod Singh Y, Electronics and Communication Engineering, Miet, Meerut

Abstract:--

In this paper comprehensive analysis and design of textile antenna is presented. Low dielectric constant of textile material makes them suitable to be used as substrate. The proposed antenna is fabricated on jeans substrate having dielectric constant of 1.6.The proposed textile antenna has hexagonal shape with microstrip line feed .U shape slot on the patch and defected ground structure is incorporated in the design to obtain desired passband and stopband. The dimension of proposed hexagonal patch is 6.44mm and its area is 108mm2which is very compact as compared to previous works .This antenna can be used in two frequency bands one is centered at 3.9 GHz with bandwidth of 2.5 GHz and another is centered at 8.6 GHz with bandwidth of 2.4GHz.Along with these passband there is one stop band in the frequency range 5.1GHz to 8.1 GHz. Due to wide bandwidth this antenna can also be called as an ultra wideband antenna with notch band to avoid electromagnetic interference with WLAN (5.1 -5.8 GHz) and satellite application.

Assessment of Security Issues in Cloud Computing

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Abstract:--

Cloud computing is the computing model in which the computing resources such as software, hardware and data are delivered as a service through a web browser or light-weight desktop machine over the internet (Wink, 2012). This computing model abolishes the necessity of sustaining the computer resources locally hence cuts-off the cost of valuable resources (Moreno, Montero & Llorente, 2012). A distinctive cloud is affected by different security issues such as Temporary Denial of Service (TDOS) attacks, user identity theft, session hijacking issues and flashing attacks (Danish, 2011). The purpose of this study is to bridge the research gap between the cloud security measures and the existing security threats. An investigation into the existing cloud service models, security standards, currently adopted security measures and their degree of flawless protection has been done. The theoretical study helped in revealing the security issues and their solutions whereas the empirical study facilitated in acknowledging the concerns of users and security analysts in regards to those solution strategies. The empirical methods used in this research were interviews and questionnaires to validate the theoretical findings and to grasp the innovativeness of practitioners dealing with cloud security.

Key Words

computing, security, attacks, user identity theft, session hijacking issues, flashing attacks.

Analyzing Major Issues and Challenges in Adoption of Internet of Things

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Ruby Singh, Assistant Professor, SRM Institute of Science & Technology, NCR Campus, UP, India
Niraj Singhal, Professor, Shobhit Institute of Engineering & Technology, UP, India

Abstract:--

Internet of Things is attracting many eyeballs due to its groundbreaking ability of connecting every device throughout the globe to the Internet. With the giant amount of records captured from IoT gadgets, businesses can make necessary upgrades to deliver extra custom designed services to their customers. For ensuring a successful IoT deployment, industries ought to examine the hurdles and discover approaches to overcome the challenges at the earliest. The fundamental purpose of IoT is to connect gadgets to each other via Internet. With more gadgets obtaining connectivity, there are potential risks of virtual burglary, malware ingestion and statistics breaches. Industries should leverage cutting-edge technology, which includes biometrics or cryptography to overcome this hurdle. To ensure success in IoT adoption, there's a need for powerful and reliable community connectivity but even nowadays, about 39% of America's rural populace does not have right of entry to fast and speedy internet connectivity. This is one of the many demanding situations confronted with the aid of industries in IoT adoption. We already know that IoT gadgets gather a huge quantity of information. But, for industries to advantage significant and actionable insights from the information to make informed commercial enterprise decisions, there is a need for the proper analytics tool and skillful analysts. Hiring the right skills having niche capabilities is crucial for IoT implementation.

Keywords:

Connectivity, IoT, IT Experts, Security

Smart Irrigation System Using Moisture Sensor and Arduino

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Abstract:--

In India, agriculture plays an influential role for development in food production and also for the economy and development of a country. In the agriculture's field, use of proper method of irrigation plays a paramount role. Indian agriculture is mainly reliant on the monsoon which is not a reliable source of water. Therefore there is a need for a smart irrigation system in the country which can provide sufficient amount of water to the farms according to their soil's moisture content. Many areas of agricultural fields are effectively over or under irrigated due to spatial variability in water infiltration and runoff of rainfall and irrigation. Under-irrigated areas are subject to water stress, resulting in production loss, while over-irrigated areas suffer from plant disease and nutrient leaching. Relevant soil water level is a mandatory called for optimum plant growth. As, water is a prerequisite element for life sustenance, there is the necessity to avoid its undue usage. Irrigation is a dominant consumer of water, which consumes lot of groundwater. A need occurs to regulate water supply for irrigation purposes. In this model or project an trial has been made to automate farm or other irrigation's fields (like garden, nursery etc.) that allows farmers to give sufficient amount of water. This work is best suit for those places where water quantity is scarce and where it should be used in a reserved quantity. Also, the other countries of the World can also afford this model. As it a simple project and results in a cheap solution for irrigation and obtain good yield's crops. Beside irrigation this method can be used in homes (for garden, flower bed etc.). This module makes the irrigation system automated. With the use of sensors whose cost is low and with simple circuitry this experiment aims in low cost solution, which can be bought even by a poor farmer and it is also easy to implement.

Keywords –

Smart irrigation, Arduino, moisture, autonomous, low cost.

Fuzzy Logic Based Voice Recognition as Per Their Gender and Age Group

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Ashish Agrawal, Asst. Professor, Dept. of CSE, SRMSCET, Bareilly, India
Prabhakar Gupta, Professor, SRMSCET, Bareilly, India

Abstract:--

Human voice is the very important field in digital speech processing. In the coming technologies every system will be based on the human voice. The system will be locked and unlocked by human voice. In this research, we classify the voice according to their age groups. We can recognize the voice by calculating many various parameters such as pitch, power amplitude and THD and many more. There are many approaches through which we can recognize the gender's voice such as Hidden Markov Model [HMM], Dynamic Time Warping [DTW] etc. This paper is basically depending on the voice perception system which helps in to differentiate the voice between the gender's voice and also differentiate the voice depends on age gp to 12yrs children voice with the use of SVM and Gaussian membership function.

Index Terms

voice recognition system, fuzzy logic, genetic algorithm, age based voice classification, Support Vector Machine (SVM), Gaussian Mixture Model(GMM)

Effiecient DIAGNOSIS OF BREAST CANCER USING Optimization Techniques of Machine Learning

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Dr. Manisha Jalia, Banasthali Vidyapeeth, Rajasthan

Abstract:--

According to WHO, breast cancer is the most common cancer among women worldwide, claiming the lives of hundreds of thousands of women each year and affecting countries at all levels of modernization.Breast cancer is the second leading cause of cancer death among women.Many different algorithms are introduced to improve the diagnosis of Breast Cancer, but many have less efficiency. In this work, we have diagnosed breast cancer with different algorithms including Artificial Bee Colony Optimization, Particle Swarm Optimization, Ant Colony Optimization, and Firefly Algorithm. The performances on these algorithms have been measured for UCI Wisconsin Diagnostic Breast Cancer dataset, and the results have been calculated using different classifiers on the selected features. After the experiment, it is seen that BPSO has shown maximum accuracy of 96.45% and BFA has shown considerable results of 95.81% with 6 features which is minimum of all algorithms

Index Terms

Breast Cancer, Artificial Bee Colony Optimization, Particle Swarm Optimization, Ant Colony Optimization, Firefly Algorithm, Feature selection, Decision Tree, Linear Support Vector Machines, K-Nearest Neighbor, Random Forest Classifiers.

Synthesis of Model Predictive Controller for an identified model of Multi Input Multi Output Quadruple Tank process

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Abstract:--

Model Predictive Controller (MPC) technology has been researched and developed to meet varied demands of need to control industrial power plants and petroleum refineries. This development has paved the way for the MPC technology too many other fields like automotive, aerospace, food processing industries in this paper, primary importance has been paid to the development of a MPC for an identified model of Multiple Input and Multiple Output process. In this paper, a Four Tank System has been considered for generation of input-output data. This data i.e. generated input output data is used for the estimation of two polynomial model, name ARX model (Autoregressive exogenous) model and OE (Output Error) model. With each of model output generated, the Fit-Rates of models are compared to find out most efficient model. The model equations are now considered as plant for developing a Model Predictive Controller (MPC). Two sets of results are obtained after the development of MPC and tested. One is without noise and one is with noise. Both sets of results were a success as the output signals traces step input signals after some steady oscillations in real time with in a very short period of time which indicated a good response time. The MPC developed can be applied to any polynomial model with a good Fit-Rate, it predicts and control the process variables automatically.

Keywords:

Auto Regressive Exogenous (ARX), Output error (OE), Model Predictive Controller (MPC)

Renewable Energy: An Ideal Solution of Energy Crisis and Sustainable Development in India

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Abstract:--

For every developing country energy is a very important supply for economic & industrial development. India is a growing economy of the globe and it would require an assured supply of 3–4 times than the whole energy consumed today. In developing country like India both issues as environment and industrial development are concerned. Environment issues which are related with coal, oil and crude oil as non –renewable energy can be resolved by renewable energy sources like wind, solar and thermal which are sustainable and have a huge potential to satisfy Indian energy consumption need .The country has set a target of 175GW renewable power by 2022.Up to 100% FDI is allowed under the automated route for the renewable energy generation and distribution. India's renewable energy sector is anticipated to draw investments of up to US$ 80 billion within the next four years. This study has made an attempt to review the renewable energy sources, drivers, challenges and policies. It can be concluded from review of literature and other information provided in paper that Renewable energy have a huge potential in India and with effective technologies use it can fulfill India's energy demand in future. There is a strong positive correlation between energy use and the quality of life. The paper also focused on Government regulations and institutions which are contributing in renewable energy up-gradation.

Index Terms -

Renewal Energy, Sustainable Development, Economic development, biomass, solar energy.

Neuro-Fuzzy Approach for Detection of Faults in an Underground Cable Distribution System

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Dr.Sanju Saini, Department of Electrical Engineering, DCRUST, Murthal, Haryana , India

Abstract:--

Nowadays, the interest of power system engineers In Indian Power System has increased towards the use of underground cables with the advent of cross-linked polyethylene (XLPE) insulated cables having high capacity for transmission of power. Underground cables are preferred in the densely populated regions where there is environmental constraint and right of way poses a big problem. The key limitation of underground cable is to locate and detect different types of faults in view of the fact that the cables are lying down under the surface. It is necessary that the fault must be cleared in minimum time on account of protection issues. As conventional methods for detection and classification of faults are time consuming, so, this work uses intelligent techniques for fast and more accurate detection of location and classification of faults in underground cables.

Overall work has been performed in three steps, the first step is to develop a MATLAB/Simulink Model of a distribution system using underground cable with a provision to develop fault. In second step, an Artificial Neural Network (ANN) using DWT is used for fault detection & classification. In third step, ANN is hybridized with fuzzy system and discrete wavelet transform (DWT) methods to improve its performance. The training sets of adaptive neuro fuzzy inference system (ANFIS) are energy components of three phases of cable under fault (used as inputs) and fault type or different distances of faults in the cable(used as outputs). All the simulations have been carried out in MATLAB/ SIMULINK environment.

Key-words:

Underground Cables, Fault detection, Adaptive neuro fuzzy inference system (ANFIS)

Radon Transform based modified nonlinear approach for segmentation of Mammogram application

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Abstract:--

In this paper a novel and application oriented mammogram segmentation using Nonlinear level set method and Radon Transform proposed. Handing medical images as a part of segmentation issues plays a critical phase. The proposed approach of nonlinear method of segmentation for which specific images of mammogram are considered using probability weighted force stopping function and Bayesian rules to extract the weak boundaries. This proposed method leads to get true extract boundaries and also minimizes the boundary leakages using this approach. Applying the radon transform on the output LSF image will be shown with experiment demonstration.

Index Terms

LSF, Radon transform, Segmentation, Mammogram.

Effective Search Engine Spam Classification

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Abstract:--

Search engine spam is created by the spammers for money making benefits. Spammers applied different strategies in web pages to display the top ten web search results. These strategies may avoid displaying good quality webpages in the top of search results. Nowadays there are many algorithms available to filter search engine spam. Even though search engines are still affected by search engine spam. There is a need to detect search engine spam in an efficient manner. The proposed system detects spam in search engine. Spammers try to use most popular search keywords, popular links and advertising keywords in web pages. This strategy helps to increase ranking to display the top of search results. The proposed method is used important features to detect spam pages which are classified using decision tree C4.5 classifier. This method produces better performance when compared with existing classification methods.

Index Terms:

Search engine spam, Classification, Spamdexing, Decision Tree, popular search keywords, Popular links, and advertising words.

A Survey on Wind Power Forecasting Techniques

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Muskaan Ahuja, Department of Electrical Engineering, DCRUST, Murthal, Haryana , India

Abstract:--

Wind Power forecasting has an important contribution towards power system planning, operation, real time balancing and reliable wind power integration (large scale). Accurate forecasting of wind is of concern due to the uncontrollability and randomness of wind power. Various forecasting models (physical, statistical, historical and intelligent models) associated with wind power and wind speeds are briefly reviewed in this paper. Mainly, this review paper briefly explain the need of wind power/speed forecasting and make a brief review of all techniques used.

Key words:-

wind power forecasting, Numerical weather prediction, statistical models persistence models, machine learning models, Hybrid models, multistep ahead forecasting.

Liver Cancer Recognition and Categorization Based On Optimum Hierarchical Feature Fusion with PESOA and DVW Technique

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Dr. B. Uma Maheswari, Assistant Professor, Department of Computer Applications, PSG College of Arts & Science, Coimbatore.

Abstract:--

Liver malignant growth extends the demise rate on the grounds that the symptoms can't be recognized even the disease is in its propelled stage. The early analysis and steady watching is the most ideal approach to control the advancement of the harm and to spare the lives. Ultrasound imaging is a champion among the most as often as possible used determination instruments to recognize and characterize inconsistencies of the liver which is likewise a non-obtrusive, safe procedure for patient examination, being anything but difficult to apply, efficient than the CT, MRI, PET based liver tumor recognition. Conventional liver disease recognition systems have high calculation time and multifaceted nature. So as to decrease the multifaceted nature in the computational method and to upgrade the symptomatic precision in this paper we propose another ideal progressive component combination dependent on Penguin Search Optimization Algorithm (PeSOA).

Index Terms

Data mining, liver cancer, classification, detection and PeSOA, DVW

Analysis of WiMAX Networks with Bandwidth Allocation Algorithms (Round Robin and Strict Priority)

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Bandhu Kailash Chandra, Mewar University, Department of Computer Science and Engineering

Abstract:--

IEEE 802.16 is today playing a promising and challenging role in wireless network and thus it is considered to be a substitute solution to agitated technologies. Availability of network in all the way is an important challenge for WiMAX networks. Lesser availability of network in rural, hilly, lakes and sea shores is a major issue today. Various algorithms in wireless networks are available for allocation of data and services today. This paper focuses on evaluating the performance of WiMAX networks with increasing number of nodes and distances. This paper proposes two important algorithms Round Robin for Relay and Strict Priority in WiMAX Networks. By analyzing it in WiMAX networks, in terms of throughput and Goodput, could play a supportive role for industries and researcher for implementing it in real scenarios. Implementing these algorithms in WiMAX networks at base stations could be efficient for sustaining maximum number of users in terms of data usage and calls.

Key words:-

802.16, Light WiMAX Simulator (LWX), Broadband Wireless Access (BWA), Round Robin (RR), Strict Priority (SP)

Investigation of Dispersion Compensation Methods for the Data Rates of 2.5 and 10 Gbps Using Standard and Dispersion Compensated Fibers

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Abdul Touhid Bar, Aliah Universit, IIA/27, New Town, Kolkata
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Md Asraful Sekh, Aliah Universit, IIA/27, New Town, Kolkata

Abstract:--

We have investigated pre-, post-, and symmetry dispersion compensation methods for the data rates of 2.5 and 10 Gbps using standard and dispersion compensated fibers using optisystem. The performance characteristics like bit error rate (BER), eye diagrams, Q factor of the received signal is studied by different system configurations. The results of three compensation methods have been compared and it is found that the symmetrical compensation method is superior to pre and post compensation methods.

Key Words:--

Dispersion Compensation, EDFA, DCF

Deep Learning — an Advancement of Artificial Neural Network

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Abstract:--

Deep learning algorithm has rapidly become a methodology of choice for the analysis of huge unstructured data using unsupervised learning. In this paper I have discussed Deep learning as a successor of Artificial neural network, types of Deep learning network, its application in different areas, its strengths and challenges.

Key Words:--

Deep learning, artificial neural network, unsupervised learning.

Study on load sensitive power generation in Hybrid Solar-Wind system using Metaheuristic Algorithms based -EMS control

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Dr. Nasim Ali Khan, Aliah University

Abstract:--

In recent years, power demand increases due to rapid increase in industrialization, transportation and population. Under this circumstance, for getting ecofriendly, sustainable, clean, reliable and cost-efficient source of energy, we need to develop renewable energy resources (RES). Solar and wind are highly potential resources therefore by integrating these two renewable resources has gained immense attention globally and given a new integration system, named Hybrid wind solar PV system. In this paper the emphasis is made on developing a load sensitive energy management system (EMS) control function or battery charging and discharging control model for Solar PV-wind HRES system. Our proposed model encompasses Solar PV-Wind HRES with bi-directional converter, Li-ion battery storage, variable speed controlled PMSG WT generator and EMS control units. Our proposed model applies two metaheuristics algorithms assisted PID controller. In this paper, metaheuristics algorithms like Flower Pollination Algorithm (FPA) and Hyper-Spherical Search (HSS) have been developed to be used for online PID tuning. The simulation results reveal that our proposed HSS-PID controller-based EMS control system exhibits better charging-discharging control even under dynamic load and non-linear power generation.

Key Words:--

Renewable Energy Sources; Hybrid-RES; Non-linear Load-Generation Sensitive EMS control; Metaheuristics Algorithms.

Verifying Hardware Security Aspects of SoC using Formal Property Verification Applications (Apps)

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Chiradeep Mukherjee, Department of ECE, University of Engineering & Management Jaipur, India
Saradindu Panda, Department of ECE, Narula Institute of Technology, Kolkata, India
Asish Kumar Mukhopadhyay, Department of ECE, Narula Institute of Technology, Kolkata, India
Bansibadan Maji, Department of ECE National Institute of Technology, Durgapur, India

Abstract:--

This paper presents Formal Property Verification (FPV) to verify the robustness of secure data access and the absence of functional paths touching secure areas of design. Recently, we have seen an increasing demand for industrial hardware design to verify security information. Complex system-on-chips, such as those for cell phones, game consoles, and servers contain secure information. The potential business loss, direct and indirect, is large, and verifying whether the secure information can be leaked is hard to achieve with conventional resistor-transistor-logic (RTL) validation methods. The security requirements are not easily expressible by regular SVA assertions; therefore, it is not practical to achieve validation with standard formal verification tools. Formal Property Verification App is part of a wide spectrum of apps for verification domain. Formal Verification has been widely accepted as a powerful approach to catch corner case issues and to reduce design risks.

Key Words:--

System-on-Chip (SoC), Formal Property Verification (FPV), AXI Protocol.

Printed Ring Monopole Antenna for Medical Application

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Abstract:--

The Ring printed monopole antenna has been proposed for broadband application. The printed monopole ring microstrip line feed antenna is simulated on IE3D and its impedance matching bandwidth and the return loss and current distribution are shown, along with radiation pattern. The bandwidth measured in the laboratory is in the range of 1.87 to 4.6GHz. The proposed antenna has achieved fractional bandwidth of 167%.

Key Words:--

Ring microstrip line feed antenna, VSWR, return loss, impedance bandwidth, current distribution.

ATM Theft Detection by Integrating LDR with GSM

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Abstract:--

Going through the ATM theft strategies, there are possibilities of physical damage of the ATM machines, which involves in breakage of the machines and scrapping out the whole machine itself with heavy machineries. Thieves also threaten to hand over money from the victims at an ATM and in rural area cutting off the power to the cameras and to spray paints that can help them to keep their identity hidden; this seems to prevail among most of the thieves. Thefts, accounting for more than Rs.18.48 crore lost across India, according to information released by Reserve Bank of India (RBI) in 2017.

Analysis of Startle Type Epileptic Seizures Using Empirical Mode Decomposition and Machine Learning Technique

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D. Najumnissa, Professor Department of Electronics and Instrumentation Engg, BSA Crescent Institute of Science and Technology, Chennai, India;

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Abstract:--

Epilepsy is a neurological disorder of the brain. The electroencephalogram (EEG) is a clinical tool for analyzing the brain's electrical activity. In this paper, the EEG signals is pre-processed and emitted by using Empirical Mode Decomposition (EMD), the signal is decomposed into Intrinsic Mode Function (IMF) and subsequently used for extracting features. Statistical features like Inter-Quartile Range (IQR), Mean Absolute Deviation (MAD) and Entropy are extracted. A Machine learning technique is used for classifying the abnormalities in the electrode. Support Vector Machines (SVM), Naïve Bayes (NB) and Nearest Neighbor are used to classify the abnormalities in the electrode. We have obtained an accuracy rate of 93.75 % for SVM, 99.02 % for NB and 97.32% for NN. From this we infer that the event is provoked at the central of frontal and parietal region of the brain.

keywords:

EEG, Seizure, Empirical mode decomposition, IQR, MAD, Support Vector Machine, Naïve Bayes, Nearest Neighbor

Energy-Conserving Multi-Mode Clusters Maintenance for Hierarchical Wireless Sensor Networks

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Abstract:--

Since the beginning of the era of wireless sensor networks energy conservation has been a major concern because it is limited in nature. An energy-conserving multi-mode clusters maintenance method is proposed which works on event driven mechanism. This method is different form the conventional cluster maintenance model as it involves periodic re-clustering based on New Hierarchical Stable Election Protocol (NHSEP) algorithm among the whole network. The triggers of this method includes node's nodes residual energy being under threshold, joining or exiting from any cluster, and so on and so forth. Depending upon the damaged cluster, whether node is a member of different cluster or same cluster we can begin inter cluster maintenance or inner cluster maintenance. The enhanced method can save a considerable amount of energy to maintain the damaged network thus prolonging the network life. Simulation is done using NS2 and parameters such as Energy Remaining, Bit error rate, Packet Delivery Ratio, Throughput and control overhead are compared.

keywords:

NHSEP, hierarchical, WSN, Lifetime

Structural Characterization of PANI\MnO2 polymer Nanocomposites

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E.Kumar, School of Science, Tamilnadu Open University, Chennai, Tamilnadu, India.

Abstract:--

Polyaniline \ manganese dioxide (PANI/MnO_2) nanocomposites have been synthesized MnO_2 nanoparticles into the PANI matrix by in situ polymerization method. The composite formation and structural changes in PANI/MnO_2 nanocomposites were investigated by X-ray diffraction (XRD), Scanning Electron Microscopy (SEM) and Fourier transform infrared spectroscopy (FT-IR).XRD pattern of PANI/MnO_2 nanocomposites exhibited sharp and well-defined peaks of tetragonal phase of MnO_2 in PANI matrix. SEM images of the composites showed that MnO_2 nanoparticles were dispersed in the PANI matrix. The FT-IR analysis revealed that there was strong interaction between PANI and MnO_2..

keywords:

MnO_2 , Polymer nanocomposite, in situ polymerization, XRD,SEM.

PSNR Based Optimization Applied To Maximum Likelihood Expectation Maximization for Image Reconstruction in A Multi-Core System

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Abstract:--

Image Reconstruction Techniques (IRTs) has been conceded using various reconstruction algorithms. Compared to Analytical image reconstruction method, Statistical image reconstruction methods best suites to reconstruct a high quality image. However, time complexity is involved in it. To overcome the time complexity Maximum Likelihood Expectation Maximization (MLEM) algorithm is parallelized in a multi-core environment. This work concentrates on parallelizing MLEM to reconstruct an image on a shared memory environment in order to reduce the reconstructing time. An attempt is made to optimize the Iteration to reconstruct an image. The performance analyses are employed to know the timeliness, speedup and efficiency for both Sequential and Parallel MLEM. Phantom data set of various sizes under different number of projections is used in our present study. The research shows that the multi-core environment provides the source of high computational power leading to reconstruct an image promptly.

keywords:

Image Processing, Image Reconstruction, Iterative Image Reconstruction, Maximum Likelihood Expectation Maximization, Parallel Processing, OpenMP

Traffico-Advanced Traffic Controller

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Abstract:--

Traffico is an Arduino based Advanced Traffic Controller. The main idea of the project is to minimize the traffic in populated cities. The project focuses on monitoring and managing the moving traffic efficiently. This project is indigenously designed and developed for Indian Roads which helps densely populated area to clear the traffic and in the process, smoothens the traffic. There would be sensors attached to the cameras which would detect the density on the road, and according to the availability of the next signal it operates the signal, rather than the old school way of timing the signals.

This is real-time signal management rather than the process of waiting for the signal to open even if the road is cleared. The use of Heat Maps enhances the view of roads and traffic. The project includes various features such as automatic traffic control system, CCTV monitoring etc which would be widely beneficial for managing the traffic. The inductive loop detector which is the most widely used sensor in modern traffic control systems will be used in the project.

keywords:

Inductive Loop, CCTV, Arduino, Density Control Sensor, Heat Maps.

Progressing Biometric Security concern with BlowFish Algorithm

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Abstract:--

Today the world is completely secured with most recent advancements. Subsequently the security is still in huge issue. Biometric furnishes high security with more precision which recognizes the individual dependent on their physiological or conduct qualities of a person by utilizing biometrics innovation. It reasons that the biometric will build security, dependability and agreeableness in the most recent innovation of PC framework. The mainstream MIPS based cryptography processor is utilized for equipment and programming items and guidelines require cryptography keys length for higher security level. Consolidating biometric with MIPS cryptography processor is as a conceivable arrangement. We utilize new way to deal with Network security utilizing MIPS constructed crypto processor situated in light of contactless palm vein biometric framework. This methodology considers NOC limitations and its topology. It gives greater security less key length and there is no compelling reason to store any private key anyplace. Blow fish algorithm is more secure to analyze other symmetric key calculations, and deliver best outcome for less handling time and adjusts. To builds the key size of blowfish calculation.

keywords:

Security, Cryptography, Biometrics, MIPS and Blowfish algorithm.

Oscillation Criteria for Class of Third Order Nonlinear Difference Equations

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Abstract:--

In this paper, a class of third order non-linear difference equations and a deviating argument is considered. Sufficient conditions for oscillation and almost oscillation are obtained. Examples are provided to illustrate the results.

keywords:

Difference Equations, Non-linear, Oscillation, Almost Oscillation, Quickly Oscillation.