ICRCET - 18

4th International Conference on Recent Challenges in Engineering and Technology

Tirupathi, Andhra Pradesh

31st Jan & 1st Feb, 2019

Organized by:

Annamacharya Institute of Technology & Sciences

and

Institute For Engineering Research and Publication (IFERP)

Rudra Bhanu Satpathy ,
Director,
Institute For Engineering Research and Publication.

On behalf of ***Institute For Engineering Research and Publications (IFERP)*** and in association with ***Annamacharya Institute of Technology & Sciences,*** Tirupathi, Andhra Pradesh. I am delighted to welcome all the delegates and participants around the globe to ***Annamacharya Institute of Technology & Sciences, Tirupathi, Andhra Pradesh*** for the ***"4th International Conference on Recent Challenges in Engineering and Technology (ICRCET-18)"*** Which will take place from ***31st Jan-1st Feb, 2019***

Transforming the importance of Engineering, the theme of this conference is ***"4th International Conference on Recent Challenges in Engineering and Technology (ICRCET-18)"***

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 & AITS)** 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 ***Tirupathi, Andhra Pradesh.***

Sincerely,

Rudra Bhanu Satpathy

Preface

The ***"4th International Conference on Recent Challenges in Engineering and Technology"*** is being organized by ***Annamacharya Institute of Technology & Sciences,*** Tirupathi, Andhra Pradesh in association with ***IFERP-Institute for Engineering Research and Publications*** *on the 31st jan & 1st Feb, 2019.*

Annamacharya Institute of Technology & Sciences has a sprawling student –friendly campus with modern infrastructure and facilities which complements the sanctity and serenity of the major city of Tirupathi in Andhra Pradesh.

The ***"4th International Conference on Recent Challenges in Engineering and Technology"*** 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 **"Engineering and Technology**" which were given international values by ***Institute for Engineering Research and Publication (IFERP).***

The International Conference attracted over 193 submissions. Through rigorous peer reviews 116 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.

ICRCET-18

Message from Hon' Secretary& Chairman

Sri. C. Gangi Reddy, M.Com. LLB.
Hon'rary Secretary & Chairman
Annamacharya Institute of Technology and Sciences, Tirupati
Annamacharya Educational Trust.

I am delighted to note that our institute Annamacharya Institute of Technology and Sciences, Tirupati is organizing **4th International Conference on Recent Challenges in Engineering and Technology-2018 (ICRCET-2018)** in association with Institute For Engineering Research and Publication (IFERP), Chennai during 31st Jan - 1st Feb 2019. The 'call for papers' areas identified by the departments are highly relevant in the present day scenario as the technology has gained a great momentum over the last few decades.

AITS, Tirupati has crossed many mile stones in its journey of academic and professional excellence and has created a coveted niche in the community of front ranking institutions. I believe, "Education is a powerful tool that can be used to change the world". AITS, Tirupati has been a harbinger of change and adaptability.

The conference aims at providing a platform for the researchers, academicians, and budding engineers to share their findings, observations and experiences with one another to explore the technologies for the growth in engineering.

I sincerely hope that the conference will get together the intellectuals from every nook and corner of the country and across the globe to deliberate various aspects related to the concerned fields of engineering and technology.

I am sure that the deliberations during the conference will result in fruitful recommendations. I am very happy to know that all the accepted scientific articles will be available for citation at reputed scientific repositories like Science Direct, Research Pedia and academic library. I congratulate the Principal, Convener, Heads of the Departments concerned and Organizing Team of ICRCET-2018 for making this event very useful and successful.

(C. GANGI REDDY)
Hon' Secretary & Chairman

Message from Vice Chairman

Sri C. Yella Reddy,
Vice Chairman,
Annamacharya Institute of Technology and Sciences, Tirupati
Annamacharya Educational Trust.

I take this opportunity to welcome you all to the 4th International Conference on Research Challenges in Engineering and Technology-2018 (ICRCET- 2018) at our institution.

AITS, Tirupati has been starving to achieve great heights in inculcating quality technical education for the past 12 years. I am extremely proud to proclaim that AITS, Tirupati has got accredited by NBA and NAAC with 'A' Grade for its quality in providing technical education. The institute had started with a dream to provide the best quality education incorporating ethical and moral values among the rural areas in Rayalaseema region.

I whole-heartedly welcome all the participants to the conference. I hope that the participants will take full advantage of the paper presentations and deliberations which will go a long way in the enhancement of engineering education in their scholarly pursuits.

My best wishes to all the participants for the great learning experience and congratulations to the organizers of the conference.

(C. YELLA REDDY)
Vice Chairman

Message from Executive Director

Er. C. Abhishek Reddy, **B.Tech., MBA(UK).,**
Executive Director & Member
Annamacharya Institute of Technology and Sciences, Tirupati
Annamacharya Educational Trust.

It is a great pleasure and an honor to extend to you a warm invitation to attend the 4th International Conference on Research Challenges in Engineering and Technology-2018 (ICRCET- 2018) at our institution during 31st Jan - 1st Feb 2019 being organized in association with Institute For Engineering Research and Publication (IFERP), Chennai.

I strongly believe that the ICRCET-18 will provide a wonderful forum for budding Engineers, academia and researchers to refresh their knowledge base and explore the innovations in Engineering and Technology.

I hope all the technical sessions and keynote addresses will give you rewarding experience and make you to excel in your research areas.

With best wishes.

(C. ABHISHEK REDDY)

Executive Director

Message from Joint Secretary

Smt. C. Poojitha Reddy,
Joint Secretary,
Annamacharya Institute of Technology and Sciences, Tirupati
Annamacharya Educational Trust.

On behalf of AITS, Tirupati it is my honour to invite the great scholars, academicians, young researchers and students to attend 4th International Conference on Research Challenges in Engineering and Technology, ICRCET- 2018 at our institution.

ICRCET-18 is a great platform for researchers, academicians and participating students to participate, share and exchange break-through ideas relating to recent developments in the relevant fields of Engineering and Technology.

I profoundly thank the delegates and other participants for taking part in ICRCET-18. I congratulate and thank the organizers for their diligent efforts in bringing this concept into reality.

(C. POOJITHA REDDY)

Message from Principal

Dr. C. Nadhamuni Reddy,
Principal,
Annamacharya Institute of Technology & Sciences,
Tirupati – 517 520

On behalf of the local organizing committee at AITS, Tirupati, the hosting institution and IFERP, I welcome all the delegates and participants to the 4th International Conference on Research Challenges in Engineering and Technology-2018 (ICRCET- 2018). With the blessings of Lord Venkateswara, the International Conference is being conducted in the premises of AITS, Tirupati during 31st Jan - 1st Feb 2019 in association with Institute For Engineering Research and Publication (IFERP), Chennai.

The idea to host the ICRCET-18 in AITS, Tirupati is to bring together the Researchers, Scientists, Engineers, Scholars and Students in the relevant fields of science, Engineering and Technology.

The world is in need of an algorithm which by the use of technology will strive to achieve circular economy and an eventual sustainable development. In order to meet all the requirements we face challenges almost on an everyday basis. ICRCET 2018 according to me will provide a platform to encourage people to face the challenges and to develop according to the demand.

The ICRCET-18 will foster discussions and hopes to inspire participants from a wide array of themes to initiate Research and Development and collaborations within and across disciplines for the advancement of Technology. I feel it is important to reiterate the need to translate Engineering & Technology into knowledge to help overcome societal challenges.

The various thematic sessions will showcase important technological advances and highlight their significance and challenges in a world of fast changes. I hope the delegates will have a great experience while attending the plenary sessions and oral presentations and will get an opportunity to interact with the conference participants.

I congratulate all the participants for having their research articles presented at ICRCET-18 and sharing a most pleasant, interesting and fruitful conference.

I congratulate and thank IFERP for their help in conducting ICRCET 2018 successfully.

With best wishes,

(Dr. C. NADHAMUNI REDDY)
PRINCIPAL, AITS, TIRUPATI

Message from Convener

Dr. Y Hariprasada Reddy
Professor in the Department ME, ,
Convener (ICRCET-18)
Annamacharya Institute of Technology & Sciences,
Tirupati – 517 520

On behalf of the Conference board, I welcome all the delegates and participants to ICRECT-18. The current society is already witnessing the stupendous growth of Engineering and technology over the past few decades. The ICRCET-18 will facilitate the young researchers, industries and research agencies especially, those, who are carrying out their research work in the relevant fields with valuable discussions in order to make the outcomes more realistic.

The main objective of ICRCET-18 is to provide an apt platform where awareness about novel researches can be disseminated, scope for further research can be investigated and challenges can be discussed. The delegates with high academic pursuits will join and share their experiences, views for coping up with the recent challenges. This prestigious conference is organized by Annamacharya Institute of Technology and Sciences, Tirupati in association with IFERP. The conference itself starts with the plenary session on 31st January 2019, where keynote speeches will be given by distinguished experts. I am happy to say that the outcome of this two day Conference is brought out in the form of proceedings. I would like to express my thanks to IFERP for their outstanding Support and association with us in constituting the Technical Program Committee with distinguished experts as members and the competent evaluation of the large number of submissions. All selected papers received by the deadline have been included in the conference proceedings and best quality papers will be published in Scopus Indexed Journals.

I congratulate the organizing committee in their endeavor and thank them for sweating hard to make this a successful conference. I thank the officials of IFERP who have left no stone unturned in finalizing the program and helping us to execute the event successfully.

On behalf of organizing team, I am thankful to our Management, Principal, Program Chairs, and Session Chairs for their extensive support and guidance to organize the conference. I wish all the participants to have a successful and rewarding experience from ICRCET-18.

(Dr. Y. HARIPRASADA REDDY)
CONVENER (ICRCET-18)

Message from Head of the Department – Computer Science & Engineering

Mrs. B. Rupadevi Singh
Head of the Department
Computer Science & Engineering
Annamacharya Institute of Technology and Sciences
TIRUPATI – 517520
Andhra Pradesh, INDIA.

I would like to welcome all delegates who have come across the country to our college, Annamacharya Institute of Technology and Sciences, Tirupati to present papers in the Conference.

Conference is a learning environment that encourages participants to exchange ideas and to seek path towards gaining and spreading knowledge from the latest technologies. The platform helps to learn beyond their field of interest. It offers a time of bonding and social networking.

I extend my good wishes to conference.

(B. RUPADEVI SINGH)
HOD (CSE)

Message from Head of the Department – Electronics & Communication Engg.

Dr. Irala Suneetha
Head of the Department
Electronics and Communication Engineering
Annamacharya Institute of Technology and Sciences
TIRUPATI – 517520
Andhra Pradesh, INDIA.

This ICRCET-18 will allow to talk to many different vendors face-to-face and establish a network as well. To hear, in talks, about how other groups are solving, most likely, the same problems we are trying to solve. It's a good place to initiate collaboration and try to brainstorm ideas for new concepts.

"A great event, packed with so much knowledge and great speakers, offering a unique balance between academic research and industrial applications. In short: offering a compact source of inspiration."

(Dr. IRALA SUNEETHA)
HOD (ECE)

Message from Head of the Department – Electrical & Electronics Engineering

Dr. C. Sasikala
Head of the Department
Electrical & Electronics Engineering
Annamacharya Institute of Technology and Sciences
TIRUPATI – 517520
Andhra Pradesh, INDIA.

I am extremely happy to note that Annamacharya Institute of Technology and Sciences, Tirupathi is conducting **4th International Conference on Recent Challenges in Engineering and Technology-2018 (ICRCET-18)** on 31st January and 1st February 2019.

I am sure that students and academicians participating in "**ICRCET-18"** will ensure the knowledge regarding all articles and new trending technology in present modern world.

This conference on recent trends will definitely provide congenial atmosphere for pursuing research and further advancements in their respective fields.

(Dr. C. SASIKALA)

HOD (EEE)

Message from Head of the Department – Civil Engineering

Dr. K. Narasimhulu
Head of the Department
Civil Engineering
Annamacharya Institute of Technology and Sciences
TIRUPATI – 517520
Andhra Pradesh, INDIA.

Civil Engineering Department, AITS is organizing 4th International Conference on Recent Challenges in Engineering and Technology (ICRCET) to bring eminent and distinguished researchers from all over India together. The scope of this conference is to share their knowledge and expertise in Civil Engineering through plenary, invited and contributory lectures. The conference will focus on research areas Structural Engineering, Geotechnical Engineering, Environmental Engineering, Water Resources Engineering and Transportation Engineering. This, in turn is expected to ignite interest among Indian researchers and kindle them to focus their research towards cutting-edge technologies in civil Engineering. We hope that ICRCET book of abstracts covering various topics from the frontier areas of Civil Engineering conference will stimulate the young Indian researchers and scientists to carry out quality research that are of national importance.

(Dr. K. NARASIMHULU)

HOD (CE)

Message from Head of the Department – Mechanical Engineering

Prof. K. Kumar
Head of the Department
Mechanical Engineering
Annamacharya Institute of Technology and Sciences
TIRUPATI – 517520
Andhra Pradesh, INDIA.

The ICRCET-18 primarily envisioned to provide a platform for academicians, industry professionals, research scholars, PG and UG students to interact and discuss the recent developments in the relevant fields of Sconce, Engineering and Technology. ICERCET-18 is going to be a prominent forum, where researchers and practitioners openly exchange ideas and report progress in the existing areas of Science, Engineering and Management.

Its my pleasure to invite keynote speakers, Authors and participants to ICRCET-18. I congratulate the organizing committee and IFERP for making this even a grand success.

(Prof. K. KUMAR)
HOD (ME)

Message from Head of the Department – Management Studies

Dr. N. Chandrika
Head of the Department
Management Studies
Annamacharya Institute of Technology and Sciences
TIRUPATI – 517520
Andhra Pradesh, INDIA.

I take great honor to pen this message on the occasion of ICRCET-18 (International Conference on Recent Challenges in Emerging Technology-2018) during 31st January - 1st February 2019 being organized by Annamacharya Institute of Technology and Sciences, Tirupati. I congratulate and compliment the organizers for their efforts in organizing the event. I also offer my good wishes and applause to the student community who participated in various events of the event. This occasion will certainly raise their level of competency and knowledge and makes them to serve the organization and the society at large.

The management's encouragement to such ventures will certainly provide a thrust to the coordinated activities of the faculties. I offer my greetings and best wishes for the success of the event.

(Dr. N. CHANDRIKA)
HOD (MBA)

Message from Head of the Department – Humanities & Basic Sciences

Dr. Lavanya Palakondu, **M.Sc, M.Phil, Ph.D**
Head of the Department
Humanities & Basic Sciences
Annamacharya Institute of Technology and Sciences
TIRUPATI – 517520
Andhra Pradesh, INDIA.

On behalf of HBS brings Warm greetings and congratulations to IFERP and Annamacharya Institute of Technology and Sciences, Tirupati. It's our privilege to have collaboration with IFERP and conduct 4th International Conference (ICRCET-18) during 31st Jan - 1st Feb 2019. The theme of the conference is quite appropriate and has great impact in present times. I hope this platform would be a professional setting for academicians, researchers, students to share their knowledge and experience

I Wish all the best for all the delegates and also believe that this conference will dwell at length on all the issues related to the themes of ICRCET-18.

In today's dynamic and rapidly changing environment, new technology and innovations are required every sphere of industry.

On this occasion, I send my best wishes to the organizers and Convener (ICRCET-18) for organizing the International Conference.

(Dr. P. LAVANYA)
HOD (H&S)

ICRCET- 18

4th International Conference on Recent Challenges in Engineering and Technology

Keynote Speakers

Dr. Vijay Tharad

Director Operations at Corporate Professional Academy
Technical Training & Career Development
Mechanical or Industrial Engineering

BIOGRAPHY

Dr. Vijay Tharad is currently Director Operations at Corporate Professional Academy for Technical Training and Career Development and caters to the Technical Training needs of employees of corporate world and provides consultancy services to Universities and Engineering Colleges for Career development of engineering students for smooth switch over from Academic world to corporate culture and work ethics. He has recently retired from Multinational Company Caterpillar India Private Limited after serving them for over 25 years where he was Chief Technical Training consultant for Cat products mainly Diesel Engine, Generator sets and Heavy Earth Moving Machines.

Vijay Tharad has an extensive background in diesel engine, modern electronic controlled diesel engine and latest after treatment technology since 1989. He was involved with training thousands of Cat employees and other corporate employees on emission control systems to help diesel and alternative combustion engines meet future regulated limits. He has authored training material on Diesel Emissions and Their Control, a comprehensive handout, and continues to present seminars in diesel engine technology, selective catalytic reduction for diesel engines, and exhaust gas recirculation.

Dr. Ande Murali Varaprasad

Professor & Director CIGS

BIOGRAPHY

Dr Ande Murali Varaprasad earned his Ph.D. in 1979 from IIT Bombay on Piezoelectric SONAR Technology followed by 3 years of Post Doctoral research experience at Microelectronics & Electrical Engineering Department of Trinity College Dublin, Ireland.

Dr Varaprasad is a reputed DRDO Scientist with 3 decades of experience in the field of Missile Technology at Research Centre Imarat / RCI ie located at Hyderabad. RCI is the brain child of Dr APJ Abdul Kalam and specialises on Avionics, Navigation systems, Control systems, Radar Systems for Agni, Prithvi, Dhanush and Air Defence/AD Missiles.

Dr. Varaprasad has been awarded Japan Matsumae International Foundation medal in 1987 and Materials Research Society of India MRSI medal in 1990.Other notable contributions of Dr Varaprasad include Piezoelectric SONAR systems for Indian Navy while working at NMRL, Bombay, during 1984-88 ie before moving over to RCI Hyderabad.

Dr varaprasad served DRDO for 28 years and retired from DRDO services in 2012. Presently, Dr Varaprasad is Professor of ECE Department at St Ann's College of Engineering & Technology, JNT University, Kakinada involved in teaching and research on Satellite Systems.

Dr.G.P.Ramesh

Professor and Head of Electronics and Communication Engineering
St.Peters Institute of Higher Education and Reasearch

BIOGRAPHY

Dr.G.P.Ramesh has completed his Ph.D. work in design of Luo converter for hybrid vehicles in 2010. He is working as a Professor and Head of Electronics and Communication Engineering in St.Peters Institute of Higher Education and Reasearch. He is serving in the field of teaching for the past 21 years at various levels. He is Involved in establishing laboratories in Electrical, Electronics and Communication Engineering departments. He has published more than 81 Research papers in the National/International Journals and 92 Research Papers in National/International Conferences. He has awarded 14 Ph.D's under his supervision in the field of Electronics and Communication Engineering and presently guiding 8 scholars. He has published 3 patents on his name .He has developed three funding products sponsored by MSME. He has organized 5 International Conferences and 4 National Conferences. He is an Active Committee member in Institution of Engineers Thiruvallur local center. He is a Branch Councellor for IEEE chapter in St.Peter's.

ICRCET-18

4th International Conference on Recent Challenges in Engineering and Technology

Tirupathi, Andhra Pradesh, 31st Jan - 1st Feb , 2019

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ICRCET-18

4th International Conference on Recent Challenges in Engineering and Technology

Tirupathi, Andhra Pradesh

31st Jan & 1st Feb, 2019

ABSTRACTS

ICRCET-18

Organized by

Annamacharya Institute of Technology & Sciences
and
Institute For Engineering Research and Publication (IFERP)

Mask-NHA Based Image Denoising With Random Walker Segmentation

K.M.Hemambaran, Research Scholar, Ece Department, Rayalaseema University, Kurnool
Dr. S.A.K. Jilani, MITS, Madanapalle.

Abstract:--

The search for well-organized image de-noising techniques is still a valid challenge at the crossing of functional learning and statistics. In spite of the refinement of the currently proposed methods, most algorithms have not yet succeeded a desirable level of applicability. In order to reduce the drawbacks in the earlier methods, a novel algorithm probabilistic method is associated as two-dimensional non-harmonic analysis called mask non-harmonic analysis such a way that the noise is degraded in the input image. In this, the entire region of the image is considered as homogeneous texture. But when the noise content is more, the segmentation of a noisy image into original images become more complex. Hence, Random walker segmentation is implemented for segmentation with canny detection algorithm in order to preserve edges. Then the regions obtained from the segmentation are analyzed using mask NHA algorithm. Theoretical analysis and experimental results are reported to illustrate the usefulness and potential applicability of our algorithm on various computer vision fields, including image enhancement, edge detection, image decomposition, and other applications.

Keywords:--

Image de-noising, 2D-NHA, Segmentation, Random Walker, Canny edge detection, Mask NHA

An Experimental Investigation for the permeability of chloride in self-compacting geopolymer concrete by using rapid chloride permeability test apparatus

P.Ukesh Praveen, Assistant Professor, Department of Civil Engineering, Annamacharya Institute of Technology and Sciences, Tirupati
K.V.L Swarupa, Assistant Professor, Department of Civil Engineering, Annamacharya Institute of Technology and Sciences, Tirupati

Abstract:--
In the present investigation a trial is created to seek out electrical phenomenon of the geopolymer concrete towards the penetration of chloride ions by replacing the fine aggregate with vermiculite and copper slag. The methodology concerned during this study follows the codal specifications of C1202-05.This is most significant and advantageous technique for the rehabilitation of structures and for various studies.

Keywords:--
Geopolymer concrete, Vermiculite, Copperslag, RCPT

Trauma resides in the Nervous System: Nomi Fredrickson in Anuradha Roy's, "Sleeping on the Jupiter"

S.Leena Devanesam, Senior Lecturer in English, Sri Durgadevi Polytechnic College,Chennai, Tamilnadu and Research Scholar, Bharat Institute of Higher Education, Chennai, Tamilnadu.

Dr.V.Manimozhi, Professor & Head, Department of English, Bharat University, Chennai, Tamilnadu.

Abstract:--

Human life comprises of Infanthood, Childhood, Youthhood and Old age. The childhood days are the days of enjoyment of a kid. A child is tuned, moulded during his/her days. Despite their birth the environment in which they are trained, grownup would exhibit them as perfect citizens. Childhood days are the days of happiness, enjoyment, innocence, undefined pure love etc., here is a girl named Nomi of six or seven years who witnessed slaughter of her father, brother. Later she was left in the hands of monster natured Guruji. As a child she lost her sweet smile, innocence and pure love. Instead she was entangled by horror, terror noises, brutal attacks, violent acts that led her to be traumatized which retained in her nervous system later bursted in her teenage as Post-traumatic stress disorder. At times she started to behave as Psychic trauma patient. This paper deals with "Trauma is not in the event itself; rather, trauma resides in the nervous system".

Keywords:--

Trauma, violent, dreams, guruji, emotions, memory, attacks, fear.

Speech Enhancement using Discrete Wavelet Transform and Non Local Means Estimation

V Sagar Reddy, Department of Electronics and Communication Engineering,VNR Vignana Jyothi Institute of Engineering and Technology, Hyderabad, 500090, India

Dr. K. Bikshalu, Department of Electronics and Communication Engineering, Kakatiya University, Warangal, 506009, India

Abstract:--

In this paper, we propose a novel speech enhancement algorithm based on wavelet decomposition and Non Local Means estimation. The NLM, a patch based de noising method is extensively used for two dimensional signals like Image, but its use for one dimensional signals is getting more attention recently. The NLM based approach is more effective in removing low-frequency noises based on non local similarities present among the samples of a signal. But it suffers from the issue of under averaging in the high frequency regions. The DWT is more efficient technique to removing high-frequency components but it requires more decomposition levels in order to remove noise from the low-frequency regionss. As speech is a non stationary, so NLM alone is not effective to remove the noise components from speech signal unlike Image de noising. To address these issues first, we decomposes the signal in to low frequency and high frequency region sas approximation and detailed coefficients respectively using discrete wavelet transform. The approximation coefficient is processed through NLM estimation toeliminate the noise component from low frequency regions. The high frequency noise components are eliminated by thresholding the detail coefficients at each level. The simulation result shows that the proposed method gives better speech enhancement in terms of objective quality measures under various noise environments with different SNR levels.

Keywords:

Speech enhancement, Wavelet Decomposition, De noising, Non Local Means.

Characterization of Jute Frp Composite for Structural and Electrical Applications

P L Srinivasa Murthy, Dept. of Mechanical Engg., Ramaiah Institute of Technology, Bangalore-54, India
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Abstract:--

The bio-based FRP composites are fast growing in industrial applications and fundamental research. Bio based fibers have been proved to be better alternative to synthetic fiber in automobiles, railway coaches and aerospace applications. Polymers are finding wide applications in our daily life due to their exclusive properties such as higher strength to weight ratio, lightness, economy, chemical resistance etc. Polymer composites are materials with many outstanding properties and in order to make them biodegradable or partially biodegradable, lot of efforts have been made to use bio based fibers as reinforcement. But the performance of these bio based composites depends on the properties of the reinforcing fibers and the bonding between the matrix and the fibers. The current research focuses on jute fiber reinforced polymer matrix composites that can be used for structural and electrical applications. In this work sawdust and wheat flour are used as filler material. Four samples of different compositions and fillers are developed by means of hand layup process. The investigation of tensile strength, flexural strength and impact energy are considered/taken up in present work. Surface morphology of composites have also been studied.

Key words:--

Lapox L12, saw dust, hemicelluloses, flexural test.

Peer – To – Peer Computing: Architectures, Applications and Challenges

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Abstract:--

In Peer – to – Peer (P2P) computing technology, several individual systems are grouped together and are characterized by direct access between peer systems for exchanging services without any centralized server. Unlike traditional client-server model, in Peer – to – Peer each peer can act as client as well as server based on its requirements and each peer has its own capacity & responsibility (as client it can raise requests for services and as server it can serve requests coming from other peers). With the availability of internet, distinct systems at distinct locations are being connected easily which enhanced the usage of P2P applications. In this paper, we present the overview of various P2P architectures, characteristics of P2P in addition to its applications and challenges.

Keywords:--

Peer to Peer Computing, P2P Architectures, Structured P2P & Unstructured P2P systems, virtual overlay

Cryptographic Algorithms Are Used In Cloud Computing For Security: A Study

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Abstract:--

Cloud computing is the technology for providing the computing services such as servers, storage, database, and networking etc over the internet on pay per use pattern. It is more popular in today's era as it helps in cost reduction associated with computing. Although it is one of the most prominent technology for such kind of services, the limitation of the technology is the "Data Security and Integrity" in the environment. Cloud computing is one of the latest technology trend of the IT trade for business area. Cloud computing security converged into a demanding topic in the sector of information technology and computer science research programs. Regardless of the fact that cloud computing offers great advantages to the end users, there are several challenging issues that are mandatory to be addressed. It offers an on demand and scalable access to a shared pool of resources hosted in a data centre at providers' site. The cloud computing is a way to deliver IT services on demand and pay per usage, and it can stores huge amount of data. But until now many companies don't wish to use cloud computing technology due to concerns about data secrecy and protection. So we need cryptographic algorithms that can provide a highly secure communication, data integrity and authentication, along with the non-repudiation communication and data confidentiality. It reduces the overheads of up-front investments and financial risks for the end-user. In This paper discusses about symmetric key cryptographic algorithms DES,3DES,AES,RC and Asymmetric key cryptographic algorithms RSA,ECC,Diffie-Hellman,DSS.

Keywords ::--

Cloud computing, confidentiality, cryptographic algorithms, data integrity, DES, AES, RSA, EC.

Synthesis of Dipole Array Antenna

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Abstract:--

In this paper, a dipole array antenna has been designed and simulated using Triangular amplitude distribution for a different range of elements to establish and arrive at the benefit of low side-lobe level. The level of side-lobes is the result of element excitation amplitude and their positioning in the array, hence an efficient amplitude distribution pattern has been implemented. The proposed non-uniform, element amplitude excitation design of antenna can be used for long-range, high-frequency and point-to-point communication applications. By implementing Triangular amplitude distribution (Non-Uniform) the side-lobe level has been significantly reduced when compared to the Uniform distribution. The simulated results confirm that the side-lobe level has improved by -15.2 dB, with the Triangular distribution. The problem of high sidelobes, large Beam-width and radiation spill-over can be suppressed with the proposed method of Antenna array element excitation design, then the Uniform-Amplitude element excitation.

Keywords:

Antenna Array, Array Synthesis, Dipole antenna, Radiation pattern, Side-lobes reduction, Triangular distribution

Study of Parameters that lead to Challenges in Sentiment Analysis

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Dr. A. Sharada, Professor, CSE Department, G.Narayanamma Institute of Technology & Science

Abstract:--

Decisions made by humans are ultimate for making a perfect market strategy. Human opinions posted in form of electronic text (e-text) are analyzed to conclude on a polarity of either positive or negative. This task is termed as sentiment analysis. An analysis is performed by some machine learning techniques which perform so well with some issues in some cases. This is performed on the human opinion given in e-text format posted on the Internet which faces some challenges. Sentiment analysis faces challenges which should be considered carefully to achieve efficient accuracy improvements. This paper discusses the various parameters which lead to challenges in sentiment analysis.

Development of Real Time Analytics of Movies Review Data using PySpark

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Abstract:--

The data play the vital role in every organization. The data can be divided into structured, semi-structured and unstructured. One can not process the unstructured data in real-time using RDBMS or Hadoop. Spark is an extension of Hadoop architecture which clubs the goodness of both Hadoop and Storm. Spark supports languages such as Scala, Java, Python, and R. The proposed method uses PySpark to analyze the movies review dataset of 50000 reviews by 36409 people for 1539 movies in real-time. Since movie reviews are written by many users in real-time, it is necessary for real-time data analysis. This method finds all the users who are very active in writing the reviews of the movies. This analytics may be used for giving incentives to the active reviewers. Further, the information about more popular movies based on reviews can be gained through analytics. To achieve these tasks basic map, reduce and filter functionalities have been applied. It is found from the analytics that the Movie code B002VL2PTU has been reviewed by the maximum number of people and also it is determined that maximum of 112 reviews were written by the single user with code A3LZGLA88K0LA0. The frequency count of words in the movie review is accomplished, and sentiment of the user can be analyzed using unigrams.

Keywords :-

Real-time Analytics; BigData; PySpark

Analysis of Retinal Blood Vessel Segmentation in different types of Diabetic Retinopathy

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Abstract:--

The extraction of retinal blood vessels from a fundus image is one of the solutions for the detection of number of diseases such as diabetes, hypertension and arteriosclerosis. The diameter of the vessels play an important role in the detection of retinal diseases. Blood vessel thickness(diameter) in Different types (stages) of Diabetic Retinopathy(DR) are analyzed in this work. In Normal and Proliferative DR thick vessels are affected and in Hypertensive and Non-Proliferative DR the thin vessels are affected. The objective of this paper is to employ image processing techniques for the enhancement of the retinal blood vessels to measure the dimensions of the retinal blood vessels. Retinal blood vessel segmentation is employed by implementing three techniques namely Gaussian method, mathematical morphology method and multi-scale analysis method. Gaussian method uses a Gaussian resolution hierarchy to detect thin as well as thick vessels. It is a faster technique but presents noise, hence suitable only for detecting thick vessels. Mathematical morphology method is suitable to detect the fine details of thin vessels more precisely. The third technique detects the thick and thin vessels without noise and is preferable for its invariant image analysis with respect to translation, rotation and size. To employ image processing techniques and measure the vessel diameter Lab VIEW software is used. A comparative study on these three techniques has been carried out on different retinal images with vessel related eye diseases. The work was carried out under the guidance of senior eye care doctors.

Keywords:

Gaussian method, Mathematical morphology, Multi-scale Representation, Vessel enhancement.

Prominence of Bio-Fuels as an Alternate Fuel in CI Engines

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Abstract:--

CI engines have always been the engine of choice for on-road and off-road operations. On-road operations are dominated by CI engines because of their better efficiency, fuel availability and fuel economy. Worldwide, nearly 14% of greenhouse gas emissions are releasing from the world's highest energy demanding sector, transportation. The day-by-day increase in diesel engine's use associated with the aspiration of underdeveloped or developing countries to improve their economic status has led to increase the demand for diesel fuel supply, which is causing depletion of fossil fuel very shortly. The increasing fuel usage will increase the level of air pollutants in the atmosphere, which are threatening human health and the environment. Fossil fuel depletion and harmful exhaust gas emissions has driven the research interest for the development of renewable and green alternative fuel from renewable sources. Since the last two decades, researchers are showing interest to develop an alternative fuel from biomass-based feed stock. Fuels developed from biomass-based feed stock are referred as biofuels. These biofuels can be categorized into bio-alcohol and biodiesel, which can be used as an alternative fuel for SI and CI engines, respectively. Biodiesel is more suitable for CI engines due to its high cetane number. Based on feed stock, biofuels can be classified into different groups such as first generation (food crops), second generation (non-food and discarded biomass from food crops) and third generation (aquatic cultivated). Among first, second and third generation biofuels, third generation biofuels are gaining the attention for biofuel production for the future years. The main advantages of aquatic biofuel are potentially high yield, no need for arable land and fresh water resources. This paper presents the exhaustive review of literature on testing of different renewable alternative biofuels under different testing conditions in CI engine to replace petroleum diesel and to have effective control over the harmful exhaust emissions. The paper also gives insight of recent trends in development of fourth generation biofuels based on photobiological solar fuels and electro fuels, which are expected to bring fundamental breakthroughs in the field of biofuels.

Keywords:

CI Engine, Alternate Fuel, Biofuel, Engine Performance, Engine Emissions.

Identifying Email Threats Using Predictive Analysis

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Abstract:--

Malicious messages and email posture generous dangers to businesses. Regardless of whether it is a malware connection or a URL prompting malware or phishing, attackers can use these emails to get into any organization. To battle email dangers, especially targeted intentionally on a system, email filtering both have their weaknesses. In this paper, we are going to perform a predictive analysis which will differentiate between malicious emails and legit emails effectively.

Keywords:--

Malicious emails, Threats, Phishing, Classifiers, Feature selection, Emails, URL, Machine Learning.

High Speed Constant Vector Multiplication Based On Improved Signed Digit Approach

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Abstract:--

Real-time implementation of many digital signal processing (DSP) algorithms and multimedia applications are limited by the available speed, energy efficiency, and area requirement of multiplication. The multiplier-free implementation of the constant vector multiplication is reexamined. A novel improved signed digit representation technique is proposed to overcome the two main drawbacks of the current multiplier-free techniques: 1) computational redundancy and 2) circuit irregularity. The fundamental difference between the proposed technique and the existing multiplier-free techniques is a novel optimization framework based on vector decomposition. Experimental results demonstrate that the proposed technique outperforms the existing multiplier-free techniques in less operations and more regular circuit structure. In proposed system we use parallel prefix adder like Brent Kung adder (BKA) for optimizing the performance parameters like area and delay. The proposed multiplication scheme is coded in Verilog HDL and simulated using Xilinx ISE.

Keywords:

Canonical signed digit (CSD), Improved signed digit (CSD), Vector multiplication, Brent Kung Adder (BKA)

Experimental Investigation and Optimization of EDM Process parameters on Al6061 by using TOPSIS and comparison with Genetic Algorithm

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Abstract:--

Electrical Discharge Machining (EDM) is a non-traditional machining process where intricate and complex shapes can be machined. Only electrically semiconducting materials will be machined by this method and is one amongst the necessary machining processes for machining high strength, temperature-resistant alloys. For achieving the most effective performance of the EDM method, it's crucial to hold out constant style responses like Material Removal Rate, Surface Roughness etc. it's essential to think about most variety of input parameters to induce the higher result.. In this work, an investigation of the effect and optimization of process parameters on the material removal rate, Surface Roughness of Al6061alloy with the help of electrical discharge machining . proper setting of those method parameters were determined by victimization Taguchi methodology victimization four factors every at three levels to understand the behavior of responses like material removal rate, Surface Roughness. Finally, Technique for order of preference by similarity to ideal solution (TOPSIS) algorithm has been applied for multi-objective optimization of the responses of EDM process on Al6061 alloy. The optimal performance of the TOPSIS algorithm is compared with the genetic algorithm (GA). It is observed that the TOPSIS algorithm performs better than the GA with respect to the optimal process response values.

Keywords:--

EDM, MRR, Surface Roughness, Al6061 alloy, TOPSIS.

Performance and Emission Evaluation with Effect of Injection Pressure and Injection Timing on a Single Cylinder Diesel Engine

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Abstract:--

An attempt is made in this paper to conduct experiments to study the effect of different fuel injection pressure with different fuel injection timing of a Single cylinder Diesel Engine and evaluate performance and emission characteristics. Engine performance characteristics like Brake Power, Break Mean Effective Pressure, Specific Fuel Consumption. Performance and Emissions have been evaluated by varying the Injection Timings of 19°, 23° and 27° bTDC at Injection Pressures of 200 bar and 220 bar. The experiments are conducted at different Load conditions of 0%,,25% ,50%,& 75% and Full Load by varying injection pressures of 200 and 220 Bar with different injection timings at19°, 23° and 27° bTDC. Output results shows that engine operating at 220 bar pressure gives nearly 1% more brake thermal efficiency than lower pressure irrespective of the injection timing whereas the brake specific fuel consumption is found to have significant changes at the initial conditions. It is also shows that the CO emissions decrease with increase in injection pressure and advancement in injection timings at 220 bar and 27º bTDC but also those conditions yield the lowest CO emission. Whereas, the NOx emissions increase with increase in injection pressure and also by advancement of injection timing.

Keywords:--

Single cylinder, Brake Power, Performance, Emission Characteristics

Investigation on impact resistance of Fibre reinforced concrete

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Abstract:--

In this investigation, an attempt is made to study the impact resistance of fibre reinforced concrete. In this study, a simple, practical and economical drop weight test was performed on fibre reinforced concrete as per ACI committee 544. Fibres containing steel, polypropylene, sisal were used as the reinforcing in four different volume fractions such as 0%,0.5%,1%,1.5%. The results indicated that increasing the volume fraction of fibre increased the impact resistance of concrete specimen compared to conventional concrete. The results also demonstrated that steel fibres are more effective at increasing the impact resistance than other fibres.

Keywords:--

About Fibre reinforced concrete, Steel, Polypropylene, Sisal, Drop weight test, Impact energy.

Modeling of a Radio Controlled Plane with Analysis of Lift Generation Using Ansys Fluent

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Abstract:--

Aircraft are important, because they allow people and goods to be transported quickly over great distance and over all types of terrain. From the only last century we were all certain that the aircraft flies The basic forces that are associated with the flight are the Lift, Drag, Thrust and Weight. We are clear with the Thrust is created by the fly motors because of the response powers produced by fumes gases and is given by Newton's third law and Due to the consistency of air when aircraft travels through air we have Drag over the aircraft and any item having mass will have Weight due to earths pull But we are not clear how the Lift is generated which is most important of the four forces acting on aircraft. There are two different ways of clarifying the lift generation on wing. One is the numerical description which is depicted by utilizing course ideas and the other is the physical depiction of lift. Despite the fact that we have numerous physical portrayals of lift does not fulfill in all conditions Thus we demonstrated an airplane with cambered aerofoil alongside the investigation is made in Ansys Fluent that how the lift is created which is the verification for the Actual physical depiction of lift.

Keywords :—

Lift, Drag, coanda effect and RC (Radio Controlled) .

An Experimental Investigation on Strength Properties of Concrete by Partial Replacement of Cement with Fly Ash and Fine Aggregate with Stone Dust

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Abstract:--

Concrete is the commonly used construction material. The widely used raw material in the concrete are coarse aggregate, fine aggregate, cement, and water. Cement production leads to CO2 emissions generated during calcinations of CaCO3 and by burning of fuel, is responsible for about 5% of the CO2 emissions in the world. This can be reduced if the pozzolanic materials such as a fly ash can be used as cement replacement within the limits. Now-a-days river sand availability is also reduced and becomes difficult to find due to which there was a need to find an effective alternative. Stone dust, is found as an economic alternative material for river sand as it is a waste material which is obtained from the crusher plants. It can be used to replace river sand in concrete. In the present investigation, we have investigated the strength properties of the concrete made with stone dust as partial replacement of fine aggregate in concrete and fly ash as cement. M30 grade mix design is developed using IS design for conventional concrete and replaced mix. Cube specimens (150mm X 150mm) were prepared for both conventional and 30%, 60%, 100% replacement with quarry dust which were further modified by partially replacing cement with 10%, 20%, 30% and 40% of low calcium fly ash. Tests were conducted on the specimens after 3days, 7days, 28days, 56days and 90 days curing to attain its maximum compressive strength. Graphs were drawn and results are compared with the controlled mix.

Keywords :—

Compressive Strength, Flexural Strength, Replacement and Split Tensile Strength.

Mechanical Properties of Recycled Coarse Aggregate Concrete by Partial Replacement of Cement with GGBS and Fly Ash

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Abstract:--

In this Investigation, it is made to study the strength properties of recycled coarse aggregate by partial replacement of cement with GGBS and fly ash. In this investigation, compressive strength, split tensile strength and flexural strength of the recycled concretes by partial replacement of cement with different percentages of GGBS and fly ash. The results obtained is compared with the conventional concrete.

Keywords:--

Compressive strength, Split tensile strength, Flexural strength, Recycled aggregate.

Mechanical properties of sustainable concrete incorporating manufactured sand and rice husk ash

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Abstract:--

Because of high constructional activities, use of concrete is very extensive and its ingredients, i.e. cement, sand and gravel becomes scarce. Many studies were carried out by researches for partial or optimal replacement of cement, sand and gravel by alternate materials. Cement production leads to global warming as CO2 is released in atmosphere during its production, equal to seven percent of total CO2 emission in world. Therefore partial replacement of cement is done by rice husk ash (RHA) as it contains high silica content. Large space in concrete (35%) is filled by sand. Natural sand may get exhausted in future because of its high demand. Digging of sand in huge quantity nearby rivers is hazardous to environment as it effects ground water level and causes soil erosion. Therefore manufactured sand (MS) is used as a replacement material for natural sand as MS is obtained on crushing of granite rocks which are easily available at nearby places. Use of MS reduces the transportation cost of carrying natural sand from far-off river beds. In the current study, cement is partially replaced by RHA by 10% and sand by MS by 25%, 50%, 75% and 100% to get desired strength concrete. Various tests like compressive strength for cube, split tensile strength for cylinder and flexural strength for beam were conducted on specimens. Present study revealed that to get M20 concrete, 100 % sand replacement with MS is the optimum proportion for 10% cement replacement with RHA.

Keywords:

Rice Husk Ash (RHA), Manufactured Sand (MS), Fly Ash (FA), Compressive strength(CS), Split tensile strength(ST), Flexural strength(FS).

Digital Signature Verification Using Artificial Neural Networks

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Abstract:--

Identification and verification of hard written signature from images is major issue. This is very difficult as even human eye does not have that much visual ability to identify every detail of the in handwritten. Signature changes every time so it is difficult for humans to identify the original and forged ones. By using deep learning which uses the sophisticated is digital configured replica of human brain, we can identify the forgery done in signature with higher accuracy.

Keywords:--

deep learning, digital configured replica, forgery, signature

Efficiency of Natural Zeolites in Concret

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Abstract:--

Natural zeolite is a mineral admixture containing large quantities of reactive silica and alumina. Because of this zeolite is used as a partial pozzolanic replacement material for cement, like such as silica fume and fly ash. Also, being a very fine material, zeolite as is the case with silica fume, contribute to the strength of concrete both through the filler effect and the pozzolanic reaction. The present paper attempts to evaluate this strength efficiency of natural zeolites in concrete. As was the case with the other pozzolans, the strength efficiency was found to be a combination of the general efficiency factor which is a function of the age and the percentage efficiency factor which varies with the replacement percentage. The overall efficiency thus evaluated helps to reduce the water to cementitious material ratios of zeolite concretes at the different replacement levels to that of the normal concrete, paving the way for a conventional mix design at any specific replacement percentage.

Keywords : -

Natural zeolite, efficiency, compressive strength, w/c ratio.

"The Impact of SLBM on stock market Liquidity and Momentum"

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Abstract:--

A model to gain Liquidity and Momentum in Securities lending and borrowing Mechanism is developed and empirically investigated in this study to achieve a more balanced finding and an event study methodology is carried out to find whether regulatory interventions have impact on volume in this particular market. A self -administered questionnaire is designed and total of 53number of valid cases are determined and the sample of 100 respondents is selected randomly. To analyse data and test hypotheses spss software is used. This study draws upon ideas from Short selling and single stock futures literature to develop a rich model and proposition linking the features of stock futures and securities lending and borrowing with reference to liquidity and momentum. The purpose of this study is to explore the impact of securities lending and borrowing on stock market Liquidity and Momentum and impact of regulatory interventions on its volumes.

Short selling is permitted in various stock exchanges, but it had been banned in many exchanges in different countries because of inevitable reasons. If short selling is banned it declines the market quality and ultimately reduces liquidity in market. Hence Indian stock market have lifted the ban on short selling that raised liquidity and trades in market ,that had positive impact of economy. But that increased Naked short selling in market which were against regulations. Regulators came up with mechanism of stocks can be borrowed and then traders can short that borrowed shares. The needed platform for this mechanism is SLBM, where lenders can gain on their idle shares and borrowers can have arbitrage profits on stocks. But this market remained illiquid because of wide gap between bid ask spread, this low liquidity is acting as a hindrance for raising the momentum of SLBM.

Keywords:--

SLBM, Single stock futures, Short Selling ,Liquidity, Momentum

Fresh Properties of Self Compacting Concrete using fly ash and Alccofine

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Abstract:--

Self compacting concrete (SCC) is emerging technology in the construction industry. SCC has the ability to flow and fill the formwork without using any external vibrations. In this study, fresh properties of ternary blended SCC using fly ash (FA) and alccofine (AF) are investigated. In this study, SCC mixes are manufactured in two categories. In the first category, the replacement level of FA was kept at 30% for all concrete mixes with varying dosages of AF (0%, 5%, 10% & 15%). In the second category, the replacement level of mineral admixtures (FA and AF) was kept at 35% with varying dosages of AF (0%, 5%, 10% & 15%). SCC fresh properties were investigated using slump flow, V-funnel & L-box tests. From the first and second category test results, it is observed that the optimum replacement of alccofine can be taken as 10%.

Keywords:--

Self Compacting Concrete, Cement, Fly Ash, Alccofine, Fresh Properties.

Reduction of voltage sags and harmonics by using Dynamic voltage restorer

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Abstract:--

a Dynamic voltage restorer (DVR) is introduced to reduce voltage sags and harmonics is preferred. In this work, the construction of the DVR has shunt and series converters coupled back to back by a dc- to dc step up converter. The existence of the dc to dc step up converter access the DVR to reduce voltage sags for longer period. The series converter coupled to the supply side and the shunt converter coupled to the load side. By this, no requirement for using long dc capacitors in this. The control strategy of the recommended DVR is rests on the hysteresis voltage control. The recommended DVR is simulated using MATLAB/SIMULINK. Time domain simulations are preferred to examine the working and behavior of the DVR with linear and non-linear loads.

Keywords:--

Dynamic voltage restorer; total hormonic distortion; dc-dc step upconverter; harmonics; voltage sags

Blackchain Technology: Its Importance, Implementation and Impact on Customer Experience

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Abstract:--

Blockchain Technology is considered as one of the technological revolutions after the internet technology. The ideablockchain is a decentralized, secure and transparent ledger distributed among users and it can be relevant to many different fields. It has the potential to revolutionize the digital world by enabling a distributed consensus where each and every transaction in the blockchain technology of past and present involving digital assets and that can be verified at any time in the future. This paper covers significance and use of blockchain technology and limitations of the technology. The paper provides various applications of blockchain technology in insurance, banking, marketing and non financial sectors. The findings of the study are applications of block chain are seen as a solution that has been developed, such as Internet of things (IoT), smart contracts, smart properties, digital content distribution and P2P broadcast protocols. Finally; a concluding section presents some overall remarks and potential use of customers through blockchain development.

Index terms:--

Blockchain technology, Cryptography, Insurance and banking, challenges

Parsis Milieu in the Crow Eaters by Bapsi Sidhwa

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Abstract:--

India is a country of tremendous religious and cultural diversity. Almost every religion of the world is represented in Indian sub-continent and the important religions in the country are Hinduism, Islam, Sikhism, and Christianity. Other than that, there are many minor religious groups like Buddhists, Jains, Jews, and others. Prominent among the other groups are Parsis. Bapsi Sidhwa has specially designed the novel The Crow Eaters to capture the quintessential Parsi ethos, culture, and diaspora. She was the first feminine writer from the Parsi Community in Lahore who reveals the secrets of Parsi religion, Parsi culture and Parsi taboos to the world. Like other religion writers, Sidhwa is very conscious to introduce Parsi characters and Parsi culture wherever it is possible in her works. The Parsi milieu in the novel does not mar the comic effect of the novel. On the contrary, it makes the novel both entertaining and educative, as the Parsi elements add to its texture.

Key Words:

Parsi culture, immigration, Zoroastrianism, Parsis development, chameleons.

Impact of digital marketing on the consumer behavior in retail industry

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Abstract:--

In this world of digitization, digital marketing is a vogue that is sweeping across the whole world. The trend of digital marketing is growing day by day with the concepts of Internet marketing that is turning into an important platform of digital marketing along with the electronic gadgets like the digital billboards, mobile, tablets and smart phones, gaming consoles, and many such gadgets that help in digital marketing. Digital marketing is going to be top on the agenda of many marketers, and they might be looking for innovative ways to market online, reduce cost per lead, increase click-through-rates and conversion rates, and discover what's hot in digital marketing.

With the extensive technology development which has undertaken by the world, traditional concept of marketing with a digital mode that brings the whole world to the customer's doorstep in one click. The rising penetration nature of the internet and various faster digital communication channels, wider networks and new devices and their connectivity with marketers made consumers more informative and knowledgeable regarding the value they expected to return to the cost they incurred. The utmost purpose of the study is to identify the impact of digital marketing in consumer behavior with special reference to retail industry. Secondary sources of data has used for the study and based on the results of the secondary data analysis, conclusion has derived with the findings. Accordingly, the research study was addressed on how digital marketing has changed the retail industry and how it effects on the consumer behavior. With the analysis, it has recommended strategic response to face the changes made from digital marketing in the retail industry. Also it has identified on how the skills, attitudes and the behavior of the professional marketers should be shaped in strategizing the customer relationship marketing to the retail industry in the digital platform.

Index Term:--

Digital marketing; Customer relationship marketing; Consumer behavior, Retail Industry.

Brain Tumour Detection using Graph Cut Method

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Abstract:--

Image segmentation denotes a process of partitioning an image into distinct regions. Clustering methods have been extensively investigated and used among a large variety of segmentation approaches. This process includes image pre-processing, image segmentation, feature extraction and classification technique. This present work proposes a method to detect the tumor regions effectively from the brain MRI scan images. In this paper, Graph Cut Method algorithm to Detect Tumour regions is proposed for medical image segmentation. A new unsupervised MR image segmentation method based on Graph Cut algorithm for the Segmentation is presented. This paper describes a segmentation method consists of two phases. In the first phase, the MRI brain image is acquired from the patient database from which artifacts and noise are removed. In the second phase (MR) image segmentation is to accurately identify the principal tissue structures in these image volumes. MATLAB is used for the study of brain tumor detection from MRI scan images.

Key words: --

Graph Cut Algorithm, Image Analysis, Segmentation, Tumour Detection

Study of behavior of optimal replacement model for a block of Air conditioners using Markov chains considering the influence of inflation

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Abstract:--

Mathematical and stochastic models are usually tailored to fit into specific real life problems. A known fact is that it is difficult to conceive a model that reflects the reality as close as possible and simple for analysis at the same time. Consequently, different models each representing one or more parameters associated with real life situations are developed. This paper focuses on development of discrete-time stochastic model (using Markov chain) with finite state space that helps in evaluating optimal replacement decisions for a block of items (Air conditioners) with intermediate repairable states viz. minor repair, semi-major repair, and major repair between functional and complete failure states that are more realistic in practice. Further to make the model more realistic, the effect of inflation and time value of money on 'replacement decision' is considered. Real interest rates are computed using Fisherman's relation that takes into account the inflation. First order Markov process, a stochastic process, is employed to compute the probabilities of transition from a given state to any other state for future time periods. Also, an attempt is made to develop block replacement model using higher (second) order Markov chains. To understand the behavior of the block replacement model, the influence of variable maintenance cost (High initial maintenance cost and lower increments during later periods, and Low initial maintenance cost and higher increments during later periods), and different trends in inflation (Rapid uptrend, Gradual uptrend, Rapid down trend, Gradual down trend, Sluggish uptrend and sluggish downtrend) are considered and the model is evaluated.

Index Terms:--

Wholesale Price Index, Block replacement, Markov process, Inflation, Transition Probability Matrix, FOMC, SOMC.

A Novel Secure For Smart Home System Using IoT

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Abstract:--

Human services industry has been on the front line in appropriation and usage of the data. Internet of Things have opened up new paths for R&D in different fields including security and safety for home, Industries, Banking Sector. Here, IoT module and RFID labels are used for home security. It provides user authentication for only authorized users and avoids unauthorized access. It also detects gas or smoke inside the home and displays in a LCD Display. Lights glow after its authentication and identification of absence of gas or smoke. Another application is Health Care monitoring system inside the home using BP sensor, Temperature sensor and Heart beat sensor. It sends message to the specific SIM using GSM Technology. This Smart home combines both home security and medical data of an individual.

Keywords:--

GPRS, GSM, IoT , LCD, RFID.

Real-time Facial Expression Recognition System using Raspberry Pi

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Abstract:--

In present day technology human-machine interaction is growing in demand and machine needs to understand human gestures and emotions. Emotions can understand by text, vocal, verbal and facial expressions. Facial expressions are a rich source of communicative information about human behaviour and emotion. Facial Expression Recognition is challenging problem up till now because of many reasons, moreover, it consists of three sub challenging tasks face detection, facial feature extraction and expression classification. Automatic facial expression analysis is an interesting and challenging problem which impacts important applications in many areas such as human-computer interaction and data driven animation. Deriving effective facial representative features from face images is a vital step towards successful expression recognition. Most of the systems are able to recognize basic prototype emotions like Happy, Sad, Surprise, Anger, Fear and Disgust. These general expressions are detected using certain variations of the facial features like broadening of mouth, closing of eyes, twitching of nose, etc.
The proposed method achieves a fast and robust facial feature extraction based on consecutively applying filters to the image. The proposed method implements the real time emotion recognition from facial image using three steps face detection, features extraction and classifier for classification of emotions. The proposed method uses raspberry pi for implementing emotions recognition.

Index Terms -

Feature extraction, Active shape Model, Adaboost classifier, Raspberry pi

Energy Efficient Sensor Positioning in Wireless Sensor Networks

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Abstract:--

Wireless sensor networks spread everywhere in our daily life from health care to environment monitoring. In these applications sensor positioning plays a crucial role. The existing sensor positioning techniques are resulted in increased cost, energy consumption, connectivity failure and less accuracy. In the present work, Range-free sensor positioning based on Bacterial Foraging Algorithm is applied to reduce energy consumption by sensor nodes in hexagonal geographical area. The results are compared with Artificial Bee Colony algorithm. The results show, the improvement in accuracy, shortest path computation, residual energy, and an energy efficient wireless sensor network and the proposed method is implemented using NS-2.

Keywords:

Sensor Positioning, RSPBFA, Shortest path, Residual Energy and Energy Consumption.

Efficient of Noise and Energy of CMOS Amplifier for Neural Recording Applications

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Abstract:--

Inside neural checking frameworks, the front-end speaker shapes the basic component for flag identification and preprocessing, which decides the loyalty of the biosignal, as well as effects control utilization and indicator estimate. In this paper, a novel joined criticism circle controlled methodology is proposed to make up for info spillage flows created by low commotion speakers when in coordinated circuit shape close by flag spillage into the information inclination arrange. This circle topology guarantees the Front-End Amplifier (FEA) keeps up high info impedance over all assembling and operational varieties. In the proposed strategy displays a low power and low clamor neural speaker IC for handling both activity potential and nearby field potential flags in neural embed gadgets. In view of a capacitive input topology, the center operational trans-conductance speaker uses a two-organize structure with current cushion accomplishing wide data transmission, expansive yield swing, and little region. The proposed neural speaker is planned utilizing 1μm CMOS process and accomplishes 5.268dB gain.

Keywords:--

Neural amplifier; neural recorder; capacitive feedback; operational trans-conductance amplifier, CMOS technology, low-noise amplifiers, neural recording.

IoT using Air Quality Monitoring System

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Abstract:--

The dimension of contamination has expanded with times by part of components like the expansion in populace, expanded vehicle use, industrialization and urbanization which results in unsafe impacts on human prosperity by specifically influencing strength of populace presented to it. So as to screen nature of air, a Wireless sensor organize (WSN) based new structure is proposed which depends on information procurement and transmission. The parameters of nature to be checked are picked as temperature, dampness, volume of CO, volume of CO2, recognition of spillage of any gas - smoke, liquor, LPG. The estimations of these parameters are transmitted by utilizing Zigbee Pro (S-2) to a base station where they are being checked. The estimation of temperature and mugginess are transmitted over Bluetooth additionally so every individual in the scope of the framework can check it over their PDAs and workstations as these parameters hold significance to everybody. CO, a perilous parameter is checked with an additional precautionary measure. An instant message is sent to the base station through GSM module at whatever point its volume surpasses a specific safe limit expected for a specific application.

Keywords:

WSN, Air Pollution, Arduino, GSM-GPRS, Bluetooth

IoT using Smart Energy Meter for Home

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Abstract:--

This paper is portrayed to gauge vitality utilization in the house and produce its bill consequently utilizing IOT correspondence. This can help in decreasing vitality utilization in house as the proprietor is consistently being informed about the quantity of units that are devoured. It objective is to create bill naturally by checking the power unit's utilization in a house and in an approach to decrease the difficult work. The figuring's are performed consequently and the bill is refreshed on the web by utilizing a system of Internet of Things. The bill sum can be checked by the proprietor anyplace all inclusive. Structure and execution of task is for the most part dependent on Node MCU controller utilizing IOT idea. In power transmission human association isn't required. Purchaser pays the power bill for the expended power. On the off chance that on the off chance that buyer neglects to pay the bill on time, power transmission can consequently killed. Likewise control burglary can be identified if any altering happens it will send the data to the server just as it will cut the power naturally. WIFI plays out the IOT task where and through which the data is sent to the Web server.

Keywords:-

Energy meter, IoT

A Blind Watermarking Technique using Redundant Wavelet Transform for Copyright Protection

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Abstract:--

A digital watermarking technique is an alternative method to protect the intellectual property of digital images. This paper presents a hybrid blind watermarking technique formulated by combining RDWT with SVD considering a trade-off between imperceptibility and robustness. Watermark embedding locations are determined using a modified entropy of the host image. Watermark embedding is employed by examining the orthogonal matrix U obtained from the hybrid scheme RDWT-SVD. In the proposed scheme, the watermark image in binary format is scrambled by Arnold chaotic map to provide extra security. Our scheme is tested under different types of signal processing and geometrical attacks. The test results demonstrate that the proposed scheme provides higher robustness and less distortion than other existing schemes in withstanding JPEG2000 compression, cropping, scaling and other noises.

Keywords:

blind watermarking technique; modified entropy; watermark insertion; watermark extraction; redundant wavelet transform

Implementation Based on Dual Background & Modelling for detection of moving shadows

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Abstract:--

Moving object images in video sequence are obtained by subtracting the background images with the current frame images, background extraction is an important process. Firstly, in this paper, the background and moving objects are extracted by using the improved Gaussian mixture background modeling. Then, the previous moving object and moving object of frame difference are effectively integrated into a moving foreground object we are interested in. Finally, we extract the background region under the moving foreground object. Due to the influence of illumination, the foreground objects contain moving shadows, which affect the performance of moving object detection. This paper proposes a simple and effective method which uses the difference of texture feature and color information in gray foreground image and gray background image to remove the shadow of the foreground object, and then detect the real foreground object.

Keywords: -

Gaussian mixture background models; color information; texture feature; shadow detection

Wireless Detection of Landmines by Using GPS & GSM

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Abstract:--

This system uses the Global Positioning System (GPS) tracking technology in combination with Global System for Mobile (GSM) technology. An integrated system employing latest tracking techniques using satellite receiver in the form of GPS Modem, integrated with a robotic vehicle can be used to detect the exact location of metal in the field. Then the GSM module transmits the received data to the authorized Mobile user. Main purpose of this project is to detect landmines by using a GPS enabled remotely controlled robot.

Keywords:-

Microcontroller, GSM Module, GPS module, Sensors

Implementation of Fast Binary Counters Based on Symmetric Stacking

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Abstract:--

In this short, another twofold counter structure is proposed. Wallace tree multipliers give a power-proficient methodology to rapid duplication. The utilization of rapid 7:3 counters in the Wallace tree decrease can additionally enhance the multiplier speed. And furthermore we actualize 128bit Vedic Wallace multiplier give fast and expends not so much power but rather more productively. Consequently in proposed strategy we create 8X8 Wallace tree multiplier stacker and Vedic Wallace 128X128 piece stacker. These proposed strategies have preferred execution enhancement over 6 TO 3 Bit stacker and 7 TO 3 bit stacker. In existing technique, It utilizes 3-bit stacking circuits, which bunch the majority of the "1" bits together, trailed by a novel symmetric strategy to consolidate sets of 3-bit stacks into 6-bit stacks. The bit stacks are then changed over to paired checks, delivering 6:3 counter circuits with no xor doors on the basic way. This shirking of xor entryways results in quicker plans with effective power and zone usage. In VLSI reenactments, the proposed counters are 30% quicker than existing parallel counters and furthermore expend less power than other higher request counters. Furthermore, utilizing the proposed counter-based Wallace tree multiplier models diminishes inertness and power utilization for 128-piece multipliers.

Keywords:--

Counter, high speed, low power, multiplier,VLSI, Wallace tree.

Investigation on Properties of Concrete using GGBS as Fine Aggregate

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Abstract:--

In this investigation a series of experiments is done on physical, chemical and mechanical properties of concrete by using Ground Granulated Blast Furnace Slag (GGBS). The workability of fresh concrete, mechanical properties of hardened concrete such as compressive strength and durability were studied at 7and 28 days. The results demonstrated that the workability of concrete decreases with increase in the percentage of GGBS. The compressive strength increases highly at 25% replacement and decreases beyond 50% replacement. From the results, it is concluded that GGBS performs better up to 50% and then loss in strength was observed for 75%, 100% replacement due to water absorption in concrete. The concrete with GGBS as replacement of sand has shown no effect towards carbonation.

Keywords:

Ordinary Portland cement, Ground Granulated Blast Furnace Slag, Fine Aggregate, Properties

ATM Security with Biometric Authentication

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Abstract:--

There is an urgent need for improving security in banking region. With the advent of ATM though banking became a lot easier it even became a lot vulnerable. The chances of misuse of this much hyped 'insecure' baby product (ATM) are manifold due to the exponential growth of 'intelligent' criminals day by day. ATM systems today use no more than an access card and PIN for identity verification. This situation is unfortunate since tremendous progress has been made in biometric identification techniques, including finger printing, retina scanning, and facial recognition. This paper proposes the development of a system that integrates facial recognition technology into the identity verification process used in ATMs. The development of such a system would serve to protect consumers and financial institutions alike from fraud and other breaches of security.

Importance of Artificial Intelligence in Human Resource Management

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Abstract:--

Human Resource Management is managing the human resources effectively. HR plays very important role in employing the right kind of people at right time and at right place within the Organization. It focuses on policies and on systems which are designed to enhance employee job performance. In the era of digitalization, Artificial Intelligence is redesigning the functions of HR. Artificial intelligence is intelligence demonstrated by machines, in contrast to the natural intelligence displayed by humans and other animals. Nothing can beat the human brain when it comes to problem-solving. The purpose of this article is to review the extant literature on importance of Artificial intelligence in Human Resource Management.

Keywords: -

Human resources, artificial intelligence, Artificial Stupidity

VLSI Design of Dynamic Logic Based Successive FFM

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Abstract:--

This paper, a high-speed power-efficient VLSI implementation of a finite field multiplier in GF(2m) is presented. The proposed design has a serial-in parallel-out architecture and performs the multiplication operation using a reordered normal basis. The basic idea is to implement the main building block of the multiplier in dynamic logic to reduce the critical path delay. Reduction in dynamic power consumption is achieved by limiting the contention current between the keeper transistor and the pull-down network at the beginning of the evaluation phase by employing a new keeper control circuit. The semicustom layout of the multiplier was realized in 65-nm CMOS technology. The post place-and-route simulations showed that the multiplier can perform multiplication correctly up to a clock rate of 3.85 GHz and consumes marginally less power than the static CMOS counterpart (also implemented with custom placement and route). The size of the multiplier is currently recommended by the National Institute of Standards and Technology for binary field multiplication in elliptic curve cryptography. The proposed design methodology can also be used in the implementation of similar finite field multipliers possessing regular architectures.

Key words:-

Dynamic logic, elliptic curve cryptography (ECC), finite field arithmetic, reordered normal basis (RNB), serial-in parallel-out (SIPO) finite field multiplier.

Electrical Line Man Safety using Finger Print Sensor

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Abstract:--

Electrical mishaps to lineman are ascending amid electric line fix because of absence of correspondence between the support staff and electric line man. This proposed framework gives an answer that guarantees security of electric lineman i.e., line man on distinguishing a blame in electric line the line man detects his finger in unique finger impression scanner and the primary line is turned off which is again exchanged on subsequent to comprehending the blame by again detecting his finger, along these lines it spares the life of lineman taking a shot at electric line. The proposed framework is completely worked on Arduino.

Keywords:

Fingerprint scanner, Arduino, RFID Reader.

Solar Energy measurement using Arduino Board

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Abstract:--

The Aim of this project is to measure the solar energy using arduino board. In this project, the parameters that are going to be measured are temperature, light intensity, voltage and current. Temperature sensor measures the temperature while the LDR sensor measures the light intensity. The voltage was measured by using the voltage divider since the voltage generated by the solar panel are large for the arduino as receiver. Finally the current will be measured by using the current sensor module that can sense the current generated by the solar panel. These parameters receives the input value from the arduino and the output was displayed at the LCD screen. The LCD screen displays the output of the temperature , the voltage and the current value. The function of the arduino is to convert analog input of the parameter to the digital output and displays it through LCD screen

India to foster Entrepreneurship and Start-ups: Present Status & Challenges

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Abstract:--

The present paper is a theoretical exposition on the need and importance of entrepreneurship, start-ups development and the challenges ahead. It provides a brief review on entrepreneurship, start-ups, its role and contribution for the economic development. Entrepreneurship has assumed immense importance in the economic development of a developing nation like India as well as that of the developed nations. India's economic progress, as a developing economy, is bound up with entrepreneurs who are enthusiastic and committed to maximize production as well as profitability of their respective organiations. The role of people and their abilities have to play in this stupendous endeavour is supremely important, and any negligence or under estimation of the human factor would only enfeeble the economic prosperity of the country. Tapping the many hither to unused and locally available resource is what is immediately required. All possible support-physical, material, technical have to be extended to the entrepreneurs to enable them to achieve industrial success. Today, it is dire need to encourage and bring the human to the main stream of industrial economy.

Keywords:--

Entrepreneurship, Women Entrepreneurs, Start-up India, Stand-up, Start-up ecosystem.

Automatic EM Based Video Deraining and Desnowing using Temporal Correlation and Low-Rank Matrix Completion

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Abstract:--

Image dehazing plays a vital role in the field of image processing. Previously, many researchers have suggested many techniques like histogram equalization and gamma transformation in order to achieve the target. But these techniques have many limitations like different degree of polarization, different kind of weather conditions or depth information of pixel in image. The existing work has tried to develop a more effective and reliable image quality assessment method that can evaluate the quality of the proposed dehazing algorithms. The proposed algorithm to get rid of rain and snow streaks from the video collection using temporal correlation and low-rank matrix finishing touch. We convert input video series into number of frames and take a frame. We attain a preliminary rain map with the aid of subtracting temporal warped frame from present frame. Based totally on sparse representation, we decomposing the rain map into foundation vector. Then, we break up the idea vector into rain map as soon as and outlier with the aid of using SVM. Eventually, we cast off the rain streaks with the aid of the usage of low matrix set of rules.

Keywords:--

Rain Streaks Removal, Low Rank Matrix Completion, Sparse Illustration, And Temporal Correlation

IoT Based Smart Health Monitoring System

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Abstract:--

Web of Things is the new upheaval that isgoing to affect each feature of our lives. Web of Things (IoT)is the new innovation which incorporates the gathering of Sensors,Actuators, processors and other improvement sheets (eg.Raspberry pi, Arduino and so on.,) to gather the information from differentsources relying on area of use, process theacquired information before sending to far off cloud or mobileapplication relying on the requirement[7].The mostpromising utilization of IoT is in the field of human services segment.

In a few nations, individuals still don't approach quality healthfacilities inferable from various obstructions. The physical distancebetween patient and facility is one of the principal reasons. Thispaper examines the use of IoT in medicinal services area and asystem is proposed to screen the ECG of the patient.Inthe proposed framework the Bio signals are gathered from the Bodyof the patient utilizing ECG sensor and after the requiredprocessing utilizing advancement sheets, sent to far off cloudnamed as Think talk, for furtheranalysis by a doctor or other approved individual and furthermore estimated temperature ,stickiness , oxygen levels.Think Speak cloud utilizes Think speak (Message Queuing Telemetry Transport)protocol which is utilized to show ECG, temperature,humidity, oxygen levels esteems and relating diagrams showed.

Keywords:--

IoT, healthcare, ECG

River Float Waste Cleaning Automation

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Abstract:--

This task accentuation on plan and creation of the stream squander cleaning machine. The work has done taking a gander at the flow circumstance of our national waterways which are dump with crore liters of sewage and stacked with poisons, poisonous materials, trash and so on. The legislature of India has assumed responsibility to clean streams and put tremendous capital in numerous waterway cleaning ventures like "Namami Gange", "Narmada Bachao" and many major and medium tasks in different urban areas like Ahmadabad, Varanasi and so on. By contemplating this, this machine has intended to clean stream water surface. These days practically all the assembling procedure is being atomized so as to convey the items at a quicker rate. Robotization assumes a vital job in large scale manufacturing. In this task we have created the remote worked stream cleaning machine. The fundamental point of the venture is to diminish the labor, time utilization for cleaning the waterway. In this task we have mechanized the activity of stream cleaning with assistance of an engine and chain drive game plan. A few needs of robotization are depicted beneath. Here utilizing RF transmitter and beneficiary are to control the cleaning machine. Robotization can be accomplished through PCs, hydrodynamics, pneumatics, mechanical autonomy, and so forth., of these sources, pneumatics frame an alluring mode for minimal effort mechanization.

Key words:
Motor, chain drive, propeller, Conveyor, Bluetooth, Aurduino micro controller.

Multiresolution Fusion Techniques for Medical Images

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Abstract:--

In severe situations like accidents occur, majority of registered cases are for bone or head injury. For proper diagnosis, both CT scan and MRI scan are required to study the damage occurred for skull as well as for the internal organ injury of brain for the development of any brain tumors. If a combination of both images is present in a single image, then diagnosing the patient would be easier. Image Fusion is a method used to combine two input images to generate a combined complementary information contained image. For medical image processing, the resultant image is required to be highly reliable, low cost in terms of storage cost, uncertainty, etc. Also the information in both CT scan and MRI scan must be retained in the fused image for reliable study and assessment for diagnosis. This paper deals with pixel level fusion methods and their generic multiresolution fusion scheme. This scheme utilizes the low pass residuals and high pass residuals to segregate the information of two input images that are to be fused. The linear and nonlinear methods are used to develop the fused image. The fused image is evaluated in terms of fusion metrics such as standard deviation, entropy, fusion mutual information, etc. The methods like laplacian pyramid, ratio pyramid, principal component analysis, average methods prove to be better options for medical image fusion.

Keywords:

Image Fusion, PCA, LUT, FPGA, Optimal filter, etc

IoT based Water Level Alert system and Quality Measurement

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Abstract:--

To adjust to catastrophe conditions honestly, it is basic to perceive the cataclysm scale and give the correct information of the site to the best possible masters including disaster site and Central Disaster Management Center, adjacent request post, etc and offer the information gave. In particular, sharing information on calamity conditions should control the catastrophe quickly to shield the disaster situation from persevering and developing. In any case, in the event of an immense scale disaster, delay is caused in the present business arrange and along these lines, the catastrophe situation can't be conferred quickly and accurately. Remembering the true objective to choose the situation accurately if there should be an occurrence of a failure, security and accessibility of the framework and stream of data are fundamental. Another circumstance is Water defilement is one of the best sentiments of fear for the green globalization. To keep the water sullying, first we have to measure the water parameters like pH, turbidity, conductivity, etc, as the assortments in the estimations of these parameters point towards the proximity of poisons. At present, water parameters are perceived by substance test or research focus test, where the testing supplies are stationary and tests are given to testing sorts of rigging. Thusly the recurring pattern water quality checking system is a manual structure with troubling procedure and is amazingly repetitive. In the proposed system, we acquaint a sensor with evaluate water level in conduits, lakes, lagoons and streams. For such reason and to show our thought, we sketched out a pilot reach out through a scaled down scale show that is worked with a water level estimation sensor in light of a fundamental open circuit that closes when in contact with water and probably attempted into a water holder under a controlled area. Exactly when the water level risings and accomplishes the resistors, moves the impedance, this exhibits the genuine water level and so on for different statures. The information from water level sensor is transmitted by methods for Wi-Fi to a convenient PC, and after that this information is in like manner found in cutting edge cells, where customers can see the water level in streams

Keywords:--

Continuous monitoring; GSM modem; Real time; Sensors; WSN

Smart Security for Irrigation System

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Abstract:--

Modernization of the cultivating procedure is one of the critical strides for a nation like India, which needs to import enormous measure of grains and agro items from different nations to take care of the demand of 1.2 billion populaces. One of the real difficulties of the agribusiness is the correct checking of the dirt wellbeing, nature, and modifying the water system and in addition the plant clear as per this perception. Issues concerning horticulture, wide open and agriculturists have been continually preventing improvement. The main answer for these issues is rural modernization. Another situation is giving security from assaults of rodents or creepy crawlies, in fields or grain stores. Modernization in farming is actualized through 'Web of Things' based gadget which is fit for detected data and transmitting it to the client. This gadget can be controlled and checked from remote area to give security to grain stores and agrarian fields.

Keywords:--

IoT, WSNs, Sensors, Raspberry Pi

Threat Alarm for Protection of Forest Trees Against Poaching Implementing IOT

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Abstract:--

Smuggling/theft of trees in forests, acts a serious trouble to forest capital, causes significant economic damage and eventually has quite a shocking effect on the environment over the all creation. Smuggling of trees has run to increased risk of Natural Resource getting smothered. Animals are losing their Natural Environment, thus resulting total imbalance in Nature. Proposed work on a micro-controller based anti-poaching system provide work on Wireless Sensor Networks(WSNs) technology, which is accomplished of sensing theft by monitoring the signal produced by the cutting of trees using a 3 axis accelerometer. A low power MSP430 micro-controller is used along with RF modules. WSN is widely cast-off technology in monitoring and controlling for the remote applications. The system architecture and the hardware designs are designated in detail.

Keywords:--

WSNs, 3 axis accelerometer, MSP 430 Microcontroller, RF module CC2500.

Binary PSO approach for CEED problem in power system including solar energy

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Abstract:--

The harmful ecological effect by the emission of gaseous polluted from fossil fuel power plants can be reduced by proper load allocation among various generating units of the plant, but this load allocation may lead to increase operating cost of generating units and non-commensurable fuel cost. Various types of economic dispatch in power systems such as multi area economic dispatch with tie line limits, economic dispatch with multiple fuel options, combined economic and emission dispatch problem. This Combined Economic Dispatch and Emission Dispatch problem is a Multi objective problem. This Multi objective problem can be converted in to single objective problem by using penalty factor. This project presents Combined Economic Dispatch Models developed a system consists of multiple photovoltaic plants. Reliable and inexpensive electricity provision is one of the significant objective have been developed in order to address the challenge of continuous and sustainable electricity provision at optimized cost. Problem formulated was implemented on two test cases and results obtained from lambda-iteration, as conventional technique and proposed technique results are compared in terms of Cost, Emission, Convergence and No of iterations.

Keywords:--

Economic Dispatch, Renewable energy, Solar PV generation, Penalty factor.

Research on Cloud Computing By using SaaS Model

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Abstract:--

Distributed computing is a quickly developing industry with expansive prospects for advancement. In any case, this new innovation confronted the security issue difficulties. This circumstance is exceptional. Scientists in the IT and data security fields need to mutually investigate and take care of these issues. This article presented the dangers of distributed computing model confronted. At that we examined the influenced components of Programming as-an Administration (SaaS) securitydemonstrate. As per the present status of SaaS security demonstrate, the paper proposed the novel strategy joined with RBAC instrument and cloud 3D square model. This methodology is supportiveto fabricate a SaaS protected mode.

Keywords:--

Distributed computing; SaaS demonstrate; RBAC mechanism; cloud block display

Robust Reaching Law for Chattering Mitigation in Sliding Mode Controlled DC-DC Buck Converter

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Abstract:--

The new robust reaching law based sliding mode control is used for chattering suppression, minimization of steady state error and reaching speed kept minimsed. Here saturation function is used instead of signum function. With fine tuning of parameters of reaching law, the sliding mode reaches the equilibrium point at the earliest. The immovability of the proposed reaching law is analyze with Lyapunov stability. In one hand, they promise the system attain the sliding surface quickly and stay on it, in another way they decline the chattering successfully, even unmatched certainties' and disturbances. Such that the scheme reply can better realize the unification of rapidity. The robust reaching law is compared with traditional reaching law. A proposed reaching law applied to SMC DC-DC buck converter to reduce chattering, because switching devices are existing in the model, it reduces the switching losses in the switching devices of the dc-dc converter. In turns efficiency of the buck converter increases. MATLAB Simulation results gives significant reduction of chattering by robust reaching law compared to constant plus proportional pace reaching law. and very less sensitive on line and load variation Feature work of this article be to apply solar power stations.

Keywords:--

Variable structure system, Buck converter, Chattering, Sliding Mode Control, Robust Reaching Law, Reaching law.

The Solutions of SQL Injection Vulnerability in Web Application Security

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Abstract:--

Web Applications are commonly using all the services made available online. The rapid development of the Internet of Things (IOT), all the organizations provides their services and controlled through an online, like online transaction of money, business transaction of buying and selling the products, healthcare services, military and GPS Systems. Web application development and maintenance is very difficult based on the security. Attacks are many forms to stealing the secure, personal information and privacy data from a web application. The Open Web Application Security Project (OWASP) is the major open source community providing information, development and validation of web application projects to make application to be secure. In this paper, we are discussing detection and prevention methods of Injection risk out of the top 10 OWASP risks. Due to the injection risk, impact on business that may lead to loss of information, unauthorized access of personal and secure information.

Keywords

Web application Security, Information Flow, Injection flaw, Secure Compositions coding

Slope Stability Analysis of Overburden Dumps Using Geostudio Software

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Abstract:--

In open cast mine projects, Slope stability of overburden dumps plays an important role . Flyash released from the coal based thermal power plants is increasing day by day. This should be disposed properly such that it does not cause any harm to the environment. So in the present study the flyash is used as an admixture for the improvement of slopes by utilizing it in proper way making it environmental friendly. The stability investigation of overburden dump for various rates of flyash has been finished utilizing GEOSTUDIO software and concluded that among all the Limit Equilibrium methods, Morgenstern price method gives best results Various tests are performed on soil to find parameters like cohesion, angle of internal friction, density which are the inputs to GEOSTUDIO software, to find slope stability.

Keywords:--

Limit Equilibrium methods, Angle of internal friction, Backfill, Cohesion, Morgenstern price method.

FPGA-Based Implementation of Basic Image Denoising Techniques with Improved Genetic Algorithm

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Abstract:--

In this paper, a novel Denoising Techniques with improved Genetic Algorithm(GA) have been introduced to remove noise from digital images assumptions with frequency content of the image, implemented with FPGAs, Field Programmable Gate Arrays (FPGAs) is also known as Reconfigurable hardware in the form of has been proposed as a way of obtaining high performance for applications such us Image Processing (IP), even under real-time requirements. The programming capability of FPGAs gives them software while keep the act advantages of an application detailed solution. The results show the robustness in the improvement of PSNR, SSIM.

Index Terms -

image, denoise, FPGA, accuracy

An Experimental Investigation for the permeability of chloride in self-compacting geopolymer concrete by using rapid chloride permeability test apparatus

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Abstract:--

In the present investigation a trial is created to seek out electrical phenomenon of the geopolymer concrete towards the penetration of chloride ions by replacing the fine aggregate with vermiculite and copper slag. The methodology concerned during this study follows the codal specifications of C1202-05.This is most significant and advantageous technique for the rehabilitation of structures and for various studies.

Key words:

Geopolymer concrete, Vermiculite, Copperslag, RCPT

Error Detection and Correction Methods for Memories used in System-on-Chip Designs

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Abstract:--

Memory is the basic necessity in any SoC design. Memories are classified into single port memory and multiport memory. Multiport memory has ability to source more efficient execution of operation and high speed performance when compared to single port. Testing of semiconductor memories is increasing due to the high density of current in the chips. Due to increase in embedded on chip memory and memory density, the number of faults grow exponentially. Error detection is used to check the received data is correct or not without having a copy of the original data. It uses the concept of redundancy, by adding extra bits for detecting errors near destination. Error correction is done in two ways: one is receiver have the sender retransmit the entire data unit and other is a receiver can use an error-correcting code, which automatically corrects certain errors. Error detection and correction can be done in two ways. One is Single bit and other is multiple bit. Single bit error detection and correction is categorized into two as Classical Algorithm and March Algorithm. Multiple bits error detection and correction is categorized into Adjacent codes and Random codes. Different methods are applicable for different types of faults that manifest as errors.

Keywords:

Faults and its types, Error Detection and Correction, Single error detection and correction, Multiple Error detection and correction.

Durability studies on Self-Compacting Concrete replacing fine aggregate partially with High impact polystyrene granules

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Abstract:--

This work is focussed on the durability studies of Self-Compacting Concrete (SCC) replacing fine aggregate partially with electronic plastic waste High impact polystyrene (HIPS). Cement is replaced with fly ash in the binder content of 497 kg/m3 and HIPS granules with varying percentages from 0-40% are replaced for sand in SCC. Water-to-cementitious content ratio of 0.36 is used in all SCC mixtures. Water absorption and sorptivity tests are conducted for durability analysis on SCC specimens at 28 and 90 days curing age. Fly ash fills the pores at interfacial transition zone and sufficient compaction reduced. So, low volume HIPS replacement up to 30% in SCC has lower porosity. Values are linearly declined up to 30% in the both tests at all curing ages. The smooth surface and spherical shape of HIPS granules leads to weak bonding at cement paste and aggregate interface. Thus porosity increases at high volume replacement starting from 40% due to the less packing density among the matrix. Water absorption and sorptivity values are higher at 40% replacement compared to SCC mixes contained 0-30% HIPS. E-waste HIPS can be incorporated in concrete to solve issues related to environmental pollution and SCC designed with HIPS up to 30% is more durable.

Keywords:--

Durable, electronic plastic waste, Self-Compacting Concrete, Sorptivity, Water absorption.

Design and Implementation of 2-4 Mixed-Logic Line Decoders for unsupervised learning

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Abstract:--

Recent advancement in CMOS technology involve materials progress which led to new design structures and new design techniques in nanoscale circuits. The 90nm design rules uses CMOS circuits and materials for metal interconnects, allow the design of basic circuits with low power consumption, low delay and less transistor numbers. In this paper, mixed-logic implementation of 2-4 line decoders, combining pass transistors, static CMOS and transmission gates. Comparative spice simulations show that the circuits present a significant improvement in power and delay, outperforming CMOS in almost all cases. Unsupervised learning is used for decoding which can be further used in many applications.

Index Terms—

Line decoder, mixed-logic, pass transistor logic, transmission gate logics, unsupervised learning.

Performance analysis of a pulse-triggered D-flip-flops design for ultra-low power applications

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Abstract:--

In this paper, a novel architecture is presented for the pulse-triggered D-Flip-Flop in the CMOS 250nm technology. This novel architecture utilizes a transmission gate to control the input data and leakage power. The pulse generator is also modified to reduce the number of required transistors and the clock pulse delay. In addition, pull-up PMOS transistor is controlled by input data to reduce the power dissipation. The proposed architectures have improvement in terms of different architectures that are implemented using 250nm technology to reduce the power delay performance in comparison with different D-Flip-Flop architectures. The proposed D-Flip-Flop architectures are simulated using Top Spice. By using mobile applications, we can implement these architectures in cadence using 90nm technology.

Index terms-

clock pulse delay, Delay performance, leakage power, Pulse-triggered flip-flops, power dissipation, Transmission gate

Multi Dimensional Modeling of the In-Cylinder Fuel Sprays Combustion and Emission Formation in D.I. Diesel Engine

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Abstract:--

D.I. Diesel engines are the monetarily utilized vehicles in day by day practice. The execution of D.I. Diesel engine to a great extent relies upon the ignition elements inside the cylinder. Thus, such combustion is affected by the shower qualities, fuel substance and afterward the movement of the cylinder. The primary issue with diesel engines is discharges of nitrogen oxides (NOx) and particulates. So as to limit the discharges, it is important to structure the diesel engine with better in-cylinder stream (air-fuel blending) and combustion procedure. Computational Fluid Dynamics (CFD) reproduction comprehends the Diesel engine temperature circulation and NOx species fixations as for time. A little direct injection (DI) engine was picked for the examination. CFD re-enactment results were contrasted and that of engine emission tests. This paper likewise shows the reproduction after effects of direct infusion diesel motor in-chamber stream (air fuel blending) and combustion.

Keywords:--

CFD, Diesel engine, combustion modelling, Turbulent In-cylinder Flow Modeling.

CFD Numerical Simulation for Intake Flow Field Design and Effects on Combustion and Emissions of DI Diesel Engine

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Dr. Hemachandra Reddy K, Professor, Department of ME, JNTUA

Abstract:--

This paper examines the after effects of numerical simulation with swirl improving alterations on a DI diesel engine. Six holes at a tangent on every piston with diameters of the hole varying from 2, 2.5, 3 and 3.5 mm are made in the piston with reasonable inclinations as for the cylinder axis Numerical forecasts are the best exchange to give clear accepting of the fluid flow phenomenon in a DI Diesel Engine. Results uncover that the extraneous opening of 2.5 mm deliver a superior combustion and more pressure. The swirl development just as motor vitality imperativeness increment with the changing opening widths. The cylinder with 2.5 mm opening make a most essential execution improvement while the cylinders with higher breadth than 2.5 mm convey a to some degree bring down execution. While the development in distance across expands the stream field attributes like swirl, the execution decays past 2.5 mm. Considering the execution perspective a 2.5 mm diameter hole provides better combustion and hence highest pressure for the same fuel injected. Alternate holes like 2 mm, 3 mm and 3.5 mm have slightly higher soot emission. Since numerical outcomes proved that 2.5 mm provides a superior performance. Of all the considerable numerical adjustments the 2.5 mm piston gives better performance and reduces the cost and time consuming trial and error experiments.

Keywords:--

Computational Fluid Dynamics, DI Diesel Engine, Swirl motion, Star CCM, Tangential holes.

Sarcasm Detection in Twitter using Sentiment Analysis

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Abstract:--

Designing efficient and robust algorithms for detection of sarcasm on twitter is one of the exciting challenges in the field of opinion mining. Sarcasm means the person speaks opposite of what he means, expressing negative feelings using positive words. It helps for the marketers to know the opinions of the customers. Sarcasm is mainly used in social networks and micro blogging websites, where people mock or criticize in a way that makes it difficult even for humans to tell if what is said is what is meant. In the existing systems logistic regression technique is used to detect these sarcastic tweets, it has a drawback as it cannot predict for continuous variables. In the proposed methodology Sentiment Analysis, Naive Bayes classification and Adaboost algorithms are used are used to detect sarcasm on twitter. Using Naive Bayes classification the tweets are classified into sarcastic and non sarcastic. Adaboost algorithm is used to make the weak statement to strong statements by iteratively considering the subset of training data. Sentiment Analysis is used to mine opinions to identify and extract subjective information from texts. By using these two techniques, sarcastic statements can be easily classified and identified from twitter.

Comparative Assessment on Privacy Preservation in Health Care Sectors coupled with IoT

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Abstract:--

Safe and high-quality healthcare service is of supreme significance to patients. Security and patients' privacy of healthcare data are imperative problems that will have a large impact on the upcoming accomplishment of Healthcare with IoT. A major problem in the IoT dependent healthcare system is the fortification of privacy. Usually, a healthcare service contributor receives data from its patients and distributes them with healthcare experts or registered clinics. The contributor may perhaps share out the data to pharmaceutical companies and health insurance companies. Hence, for overcoming the challenges existing in security, this paper has come out with a privacy-preserving technique with significant data extraction from IoT devices linked with healthcare sector. According to the adopted scheme, the information obtained from IoT devices is processed for preserving the sensitive data, such that unknown people are prohibited to access them. Here, Grey Wolf Optimization (GWO) scheme is proposed to recognize the optimal key. The objective of the proposed scheme is to minimize hiding failure rate, modification degree, and true positive value for better preservation of sensitive data. Moreover, the implemented technique is distinguished with conventional schemes like Genetic Algorithm (GA), Particle Swarm Optimization (PSO), Ant Bee Colony (ABC), Firefly (FF) and Differential Evolution (DE) algorithms in terms of performance. Also, the statistical analysis of the presented method is measured for three test cases, and the effectiveness of the implemented method is revealed.

Keywords:

Internet of Things; Healthcare; Privacy Preservation; Sanitization; Hidden rate; Modification Degree, True Positive rate.

Securing IOT Network through Quantum Key Distribution – A Review

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Abstract:--

Current cryptographic techniques broadly specified as conventional cryptography is solely based on the solidity of the mathematical concepts. The advancements in quantum computing can use reversible logic to compute the keys and easily break the existing security in conventional computers. From the analysis of the network structure of Internet of Things (IOT) it is very clear that the entire backbone of the system would collapse if it is attacked or hacked. IOT is a wireless technology that connects "ANYTHING" around to the Internet. IOT is a revolution which should be protected from the attackers as it would lead to several losses which could even be fatal. Hence a strong provision for securing users data in IOT is a real challenge. This paper is attempted to review the fundamentals of Quantum Key Distribution, security aspects for IOT and to address how QKD can be used to secure a IOT system. The challenge encountered is to increase the range and increase the transmission rate of data in QKD systems and to check for a possible solution to adhere these systems with existing information security solutions.

Keywords:

Eaves dropping , Internet of Things , Protocols, Quantum Cryptography, Quantum Key Distribution.

Spectral Efficient Massive Mimo Multi Cell 5g Cellular Environment Using Optimal Linear Processing Schemes

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Abstract:--

In this paper, the optimal scheduling of UEs per cell is carried out to increase the spectral efficiency of 5G wireless networks with massive MIMO antennas in multi-cell systems. The scheduling of UEs is carried out in terms of several system parameters. The scheduling is carried out by considering a multi-objective function that optimizes of arbitrary pilot reuse, power control and random user locations. Expressions are derived to validate uplink and downlink transmission with power control and random user locations to increase the performance of UEs.The inter-cell interferences are suppressed using linear processing schemes in a coordinated beamforming fashion.

Keywords:--

UE, Massive MIMO Antennas, linear Processing Schemes, System Parameters

Design of Sub-Array for UHF Spaced Antenna Wind profiler Radar

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Abstract:--

This paper emphasizes the design and development of Seven element microstrip patch sub-array to minimize peak side lobe level, half power beam width and improve the gain for UHF spaced antenna wind profiler Radar which operates at 445MHz. The Antenna array system is employed with Space Antenna Technique to derive atmospheric winds and turbulence. Rectangular microstrip patch antenna is used as an element for Sub array with 50 ohm coaxial feed. Power Divider is used to distribute the microstrip patch elements with use of LMR 400 cable for RF feed. UHF Spaced Antenna wind profiler Radar is intended to be used for lower atmospheric studies and research applications..

Keywords:--

Sub-Array, wind profiler Radar, microstrip patch, spaced antenna technique, power divider

Structure and FE Examination of Hybrid Composite Motor Protective Helmet

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Abstract:--

The helmet is defensive thing, used to shield head from foremost injuries. The head protector fundamentally ensures the skull and mind amid lethal mishaps. So the fundamental subject of the protective helmet is to safe watch the rider (or) the talented operator amid mishaps. It is essential for the rider to wear head protector, amid the riding of the vehicle as its exceptionally basic nowadays, that the little to significant mishaps occurring, not on account of the riders speed, might be a result of the environment, current streets, busy works of the general public and a few exposures on street. So the mishaps are unavoidable however we must be progressively watchful. Yet at the same time we ought to have clear knowledge of the injuries those might cause deadly passing of the rider. Thus the head protector is must for rider security. From that point onward, the comfort of the rider all through the journey is additionally critical worry for the helmet business to increase best market for their own item. So to meet the fundamental worries of the rider, it's most vital to build up the best comfort with a light weight, high quality, and high effect safe and better feel for the rider.

The present work manages the geometrical improvement of the current head protector utilizing CAD programming apparatus and after that the basic investigation of the current model utilizing ANSYS workbench, straight examination, the outcomes, distortion, stress, and strain plots was been contrasted and entrenched outcomes. At that point the elective model with different mixes had been produced and broke down for the basic investigation and the outcomes had been contrasted and the current head protector. Toward the finish of the protective helmet with predominant quality, attributes with low material cost will be accomplished through the exploration.

Keywords:--

Helmet, deformation, stress, strain, structural analysis.

A Review on Data Migration and Replication Issues In Cloud Computing

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Abstract:--

Cloud service providers have more reputation for data storage service and offering unlimited storage, data availability, better scalability due to this benefits so many clients are motivated to store their data in cloud storage. But cloud service providers always can't guarantee the quality of service or may be violating the SLAs due to this data migration is required so cache as service can overcome migration issues. Cache is a significant part of any client-server application due to its advantages can reduce the delayed access of any form and provide conventional latency and fast response time to reach the growing mass of users. Implementing a Cache-as-a-Service across the data centres will allow multiple data centres to access managed in-memory cache instead of a direct datacenter.

Keywords:--

CSP, SLA, Migration, Replication.

A Review on Data Security Issues and Mechanisms in Cloud Computing

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Abstract:--

Now a day's due to rapid growing of cloud storage many users are outsourcing their data to the cloud but cloud owing security challenges so outsourced data is not secure, the goal this paper is to recommend new mechanism or framework that should overcome all the existing limitations, first to understand security issues in cloud storage this paper reviews various authors work and from that it finds the problem statement and limitations, so in order to overcome the security issues security framework is recommended and it should include secure data auditing, access controls, efficient key management and Secure Multiparty Computation.

Index Terms—
CSP, data security, ABE, Access controls, Data integrity.

Development and Applications of HHO Water Based Flame Torch

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S. Swetha, VNR VJIET Bachupally, Hyderabad, India.

Abstract:--

Saving fossil fuels and using alternate sources of energy which aid in reducing pollution in manufacturing industries has been a prime motto for present researchers. This led in achieving the generation of HHO (Oxy-hydrogen) water based technology which can be used in various operations such as polishing, welding etc. This paper presents the development and applications of HHO based flame torch having a flame length of one inch which is used to melt, heat, cut ores or metals and also to join materials such as iron and ceramics.

Keywords

Applications, Flame torch, HHO water based technology, Manufacturing.

Bidirectional DC-DC converter for an onboard EV battery charger with V2H application

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Abstract:--

Power electronics based power converters are used to charge High voltage traction battery of Electric vehicles from the grid. The same battery can also be discharged using bidirectional converter and energy can be fed back to the grid. Such a bidirectional converter consists of front end bidirectional AC-DC converter followed by a bidirectional DC-DC converter. This paper focuses on control strategy of the Dual Active Bridge (DAB) bidirectional DC-DC converter to regulate battery charging and discharging process.

Keywords:--

On Board battery charger, Bidirectional DC-DC converter, Electric vehicle, charging, discharging, CC-CV charging

Design and development of wall Climbing Swarm Robot

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Abstract:--

With the advent of construction technologies, there has been a rise in the number of tall buildings. At such heights, it is dangerous and difficult for human life to reach. So, the design and control of the locomotion of a wall climbing swarm robot which uses adhesion force which enables it to climb multiple robots at same time on vertical surface with the swarm intelligence in order to reach high place. The design and control of robot is such that it can be operated for any place like vertical and horizontal. A wireless communication link is used with swarm intelligence that involves the usage of multiple robots which coordinate among themselves to complete a wall mission. With simultaneous communication between two robots, it tends to ease the work load and improves the time used in rescue or surveillance operations. The three major advantages of Robotic approach are that it is scalable, flexible and robust.

Keywords:

Robot, climber, (glass/wall), locomotion, adhesion force, communication link, swarming

Power Optimization Techniques for Energy Efficient Low Power Architectures – A Review

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Abstract:--

The demand for low power consuming devices and the need to limit power consumption in very high density ULSI chips have led to rapid and innovative developments in low power design during the recent years. Also the requirements for low power consumption should meet with equally demanding goals of high chip density and high throughput. Though Low Power is a well established domain, adiabatic logic is an interesting solution to meet the above requirements.

Adiabatic logic circuits are widely employed in Low power VLSI circuits because it reuses the energy rather than dissipation. The basic principle in adiabatic logic circuits is to slow down the logic transition varying from logic 1 to logic 0 and vice versa, aiming in reducing the power dissipation. This paper investigates different CMOS based low power adiabatic logic families, which can be classified as partially and fully adiabatic. The results show the comparison of power dissipation between conventional CMOS circuits and adiabatic logic based circuits. It is observed that the adiabatic logic circuits can reduce the power dissipation effectively than conventional CMOS circuits.

Key Words —

Low power, Adiabatic logic, Partially Adiabatic Logic, ECRL, PFAL, 2PASCL, GFCAL

Energy and Delay Efficient of CMOS PLC Receiver Design for Low Power Applications

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Abstract:--

The PLC is one in which the power pins and the power distribution networks of ICs are used for data communication as well as power delivery. PLC is used in order to reduce the number of input pins that an IC needs to couple the test data signals to each and every node. Hence to extract the test data signals from this power lines, so many receivers are in need at each and every nodes of the ICs or at places where we have to apply the test. For this purpose, PLC receivers are already design as the circuit complexity increases, the number of internal nodes increases proportionally, and individual internal nodes are less accessible due to the limited number of available I/O pins.

To address the problem, we proposed power line communications (PLCs) at the IC level, specifically the dual use of power pins and power distribution networks for application/observation of test data as well as delivery of power. A PLC receiver presented in this paper intends to demonstrate the proof of concept, specifically the transmission of data through power lines. The main design objective of the proposed PLC receiver is the robust operation under variations and droops of the supply voltage rather than high data speed. The PLC receiver is designed and fabricated in CMOS 1-μm technology under a supply voltage of 1.2V

Index Terms-

Design-for-testability (DFT), PLC at ICs, PLC receiver, power line communications (PLCs).

Enhancement of Vocabulary and Communication Competence through the ICTs and Multimedia

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Abstract:--

Give a man a fish, and you feed him for a day. Teach a man how to fish, and you feed him for a lifetime."

The Modern technological advancements are leading English language teaching into new dimensions, which are ever changing. It is obvious that Information and Communications Technology (ICT) and Multimedia devices have delivered a huge paradigm shift in the teaching learning procedure of English language. They provide more freedom to the learner as well as the teacher. Internet learning has turned out to be prominent and giving more adaptable access to a variety of skill development and enabling teachers to handle several challenges while looking after learning. The Systematical incorporation of both ICT and Multimedia with language in curriculum can make complicated tasks and concepts simple. One of the major challenges of modern English teacher is to enhance vocabulary competency in students. Competitive exams test verbal ability of the candidates in order to estimate their communication competency. In addition to this, the students' comprehension of the four integrated skills of the language depends on the vocabulary competence acquired by them. Therefore, it is high time teachers excelled in utilizing these devices in teaching learning process.

The following paper endeavors how the tools of Multimedia and ICT like Ted Talks, podcasts, Discussion forums, chat rooms and Advertisements empower students for acquiring Vocabulary, communication competency, targeted skills, Entrepreneurship skills and advantages.

Key words:

ICTs, Multimedia Tools, Web Based Learning, Vocabulary, Ted Talks, Podcasts, Discussion Forums and Chat rooms

A Short Review: Design and Simulation of Surface Acoustic Wave based Sensor for Gas Sensing Application

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Abstract:--

Several methods have been reported for detecting gas based on surface acoustic wave (SAW) technology. In this article, designing and simulation of different SAW based sensors is reviewed. Design, modelling and simulation using COMSOL Multiphysics software are discussed to study the effective active layer and electrode arrangement to achieve enhanced resonant frequency. Several simulation reports are reviewed to understand the parameters affecting the performance of the SAW device. The sensitivity of the sensor could be improved by varying dimension of the device, thickness of the intermediate layer, and the gap between the electrodes. This paper highlights the fundamentals to modern design developments, modeling and simulation of SAW devices for gas sensing application.

Keywords:--

Gas sensor,COMSOL,ZincOxide,Electrode

A review on the use of Producer gas in Internal Combustion Engines

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Abstract:--

Energy is a crucial requirement for economic and social improvement of any country. Sky rocketing of fossil fuel prices has lead to rising interest in various alternative fuels like producer gas, CNG, alcoholic fuels, vegetable oils. Producer gas is relatively a low calorific value fuel gas which can be used in compression ignition and spark ignition engines. Producer gas will be generated from any carbonaceous material as well as from different types of biomass. The engine power de-rating is usually 15-30% when producer gas is used in CI engines instead of diesel. It is mainly because of the variation in stoichiometric air/fuel ratio requirements for producer gas and diesel.

Index Terms

Biomass, Internal combustion engine, Producer gas, Engine power

Planning and Characterization of Green Synthesized Ferric Oxide (Fe_2O_3) Nanoparticles

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Abstract:--

The ongoing improvement and execution of new advancements have prompted new time, the nano-transformation which unfurls the job of plants in bio and green combination of nanoparticles which appear to have drawn significant unequivocal consideration from a perspective of blending stable nanoparticles. Green standard courses of orchestrating have risen as a choice to defeat the confinement of ordinary strategies among which plants and microorganisms are significantly misused. Thus the present investigation imagines the biosynthesis of nanoparticles from plants which are developing as nanofactories. Ferric Oxide (Fe2O3) nanoparticles were incorporated via completion of water under the surrounding conditions. Ferrous Sulfate and Sulfur were broken up in Salt Petra with a molar proportion of 2: 1. Citrate particles were utilized as nucleation stabilizers. The reactor was loaded up with a latent argon environment and the NPs were gradually accelerated by dropping of KAI (SO4) under an overwhelming blend. The moderate arrangement of nanoparticle seeds was trailed by a quicker development of centers and a moderate development of shells balanced out by citrate particles for the entire time. The tanish red item was accelerated with CH3)2CO, centrifuged for 5 minutes at 2,500 rpm, and the pellet scattered in argon-foamed water. This means they were rehashed twice to dependably wash the NPs. In the present work the writer contemplates Synthesis and Characterization of Fe_2O_3 nanoparticles.

Index Terms

Plants, Nanoparticles, Green synthesis, Ferrous Sulphate, Fe_2O_3 and SEM

Discrete Wavelet Analysis based Processing of Short-Duration Voltage Variations

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Abstract:--

The aim of this paper is to obtain information about sinusoidal voltage signals, in which variations occur for a short duration, using wavelet analysis based signal processing methods. Sag, swell and interruption are short-duration voltage variations. The changes that occur in supply voltage are to be analyzed properly to initiate correct preventive measures. Multiresolution analysis based discrete wavelet transform is used for decomposing the original signals into five levels of approximations and details. Energy for wavelet decomposition and entropy are used for feature extraction and an attempt is made to obtain an information from the disturbance signals. Pure sinusoidal signal is used as reference and all the voltage variations are generated using SIMULINK in MATLAB environment. Energy values of one approximation and of details corresponding to all levels one to five are obtained. Shannon, log energy and norm entropy values are obtained for five level approximations and details. The term level refers to decomposition level. An observation is made between the obtained energy and entropy values of all the signals and for each variation, energy and entropy values are distinguishable for different disturbances.

Index Terms—

Approximations, details, discrete wavelet transform, energy, entropy.

Design and Simulation of Single Phase Inverter for Standalone Active and Reactive load

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Abstract:--

This work presents the single phase inverter with suitable control strategy including LCL filter design. So in the proposed work dead beat PI controller is adopted as it is very unique for single phase inverter with suitable LCL filter design to get sinusoidal output voltage 230 Vrms at load side, the current and voltage THD are below IEEE 1547 Std.

Keywords:--

Single phase inverter, LCL filter, controller.

Transmission Loss Allocation with TCSC Using BSO Algorithm in Deregulated Power System

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Abstract:--

This paper focus on the issue of Transmission Loss minimization and loss allocation with the insertion of TCSC Modelling in Load flow analysis using Brain Storm Optimization Algorithm (B.S.O.A). This Modelling is based on the modification of traditional Load flow analysis and is used for the minimization of Transmission loss. Since accurate power tracing for a particular transaction is very difficult and to allocate the losses for a particular transaction, there are several methods are used out of these, here in this paper postage Stamp method and power flow tracing method is used to fairly allocate the losses to all the transactions based on the usage of the power in the system. These methods are tested on standard IEEE-14 Bus system and IEEE-30Bus system. The simulation results are obtained with MATLAB/Simulink environment and compared with the proposed methodologies

Keywords:--

Brain Storm optimization Algorithm, Transmission Loss Allocation, Deregulation, Power Flow Tracing (PFT)

Geo- Spatial Distribution of Physico Chemical parameters of Groundwater and water Quality Index of Palar Basin Using Spatial Technique

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Abstract:--

The present work is aimed toward assessing the water quality index wqi for thewater quality index (WQI) for the ground water of Palar basin. This method has been determined by collecting groundwater samples and subjecting the sample to a comprehensive physico chemical analysis. The physico-chemical results were compared to the quality guideline values as recommended by the World health organization for drinking and public health in Order to own an summary of this groundwater quality. For calculating Groundwater quality Index following 11 parameters have been considered: pH, Totalhardness, chlorides, Dissolvedsolids, calcium, Magnesium, sulphate, Nitrate, Flouride, Alkalinity, and sodium. The Water quality index for these sampl values ranges from 55.85 to 191.26. The maximum value of Water quality index has been found to be mainly from the higher values of Total hardness, chlorides, Dissolved solids, Magnesium and alkalinity in the ground water. Using GIS contouring methods with ArcGis 10.1 Spatial distribution maps of pH, Total hardness, chlorides, Dissolved solids, calcium, Magnesium, sulphate, Nitrate, Flouride, Alkalinity, sodium and WQI have been created. Water quality index was used to appraise the suitability of groundwater from the study area for human consumption. From the WQI assessment over 90% of the water samples fall in poor water categories. The investigation reveals that the groundwater of the area needs some degree of treatment before consumption.

Keywords:--

Physico-chemical analysis, Water Quality Index (WQI), Geographical Information system,Spatial analysis, Palar basin.

Intelligent System to estimate ASTA values of Dry Red Chillies using Artificial Neural Network

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Abstract:--

Dry Red Chilli (Capsicum Annuum) is one of the most commonly used spice crops that forms an essential part of all cuisines around the globe. Dry Capsicum Annuum has both pharmaceutical and culinary applications. Dry Capsicum Annuum is widely used throughout the world for its pungency and colouring properties. Oleoresin extracted from Capsicum Annuum is extensively used in the food processing and pharmaceutical industry. Colour value of Capsicum annuum is usually expressed in terms of ASTA colour value. This paper uses an Artificial Neural Network to estimate ASTA value using the using the B Component of the Images of Capsicum Annuum and the results obtained from using Chemical Analysis.

Keywords:--

Dry Chilli, Capsicum Annuum, ASTA, colour estimation, and Artificial Neural Network.

Multi Object and Dynamic Query Based CBIR System using DCT Incorporated with HOG and HTF

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P.Mukunthan, Professor, Sri Indu College of Engineering and Technology, Hyderabad.

Abstract:--

This work contributes multi object detection and dynamic query image based retrieval system. Generally, finding relevance and matching user expectations is very critical based on query key information and these results irrelevant responses which will produce low similarity index. Consequently, CBIR system took a major responsibility of identifying new objects, retrieving similar objects or contents based on multi query and dynamic keywords with improved recall and precision as per requirement of the users. At this juncture, Discrete Curvelet Transform with the incorporation of HOG and HTF based approach is proposed to handle commercial image, medical images and types of multi model images. This proposed approach mainly focuses on extracting scaled features for finding correlation among the query and database images. To start with the process, query image is decomposed into multi level sub images to extract set of texture features at two levels. These features are estimated by Gray Level Co-occurrence Matrix (GLCM) and HOG descriptor based techniques is adapted to find scaled vectors with reduced dimensionality. This method outperform compared as compared to existing method is authenticated from experimental results.

Keywords

Image Retrieval, HOG, curvelet transforms, GLCM.

Power Management for a Renewable System Using Standalone Energy Storage Unit

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Abstract:--

This paper presents about power management, active and reactive power flow control in wind energy conversion system using energy storage system.The control strategy for the generator-side converter with maximum power extraction is presented. The stand-alone control featured is constant output voltage and frequency that is capable of delivering to variable load. The main attention is dc link voltage control deals with the chopper control for various load condition.And also a battery storage system with converter and inverter has to be used to deliver continuous power at the time of fluctuated wind. We also have briefly surveyed the characteristics of the boost inverter for different voltage levels and prescribed a range of modulation index for which the system can perform perfectly for each of these voltage levels. It is seen that both real power and reactive power are affected upon the change in the modulation index of the inverter and proper phase shift controller in Energy storage system. Real time has been presented for inverter outputs and laboratory experimentation has been implemented.

Keywords:

PMSG, boost converter, inverter, driver circuit and wind energy conversion.

Detection Approach for Botnets with Cross Cluster Correlation

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Abstract:--

Botnets are presently the key stage for some Internet assaults, for example, spam, dispersed foreswearing of-benefit (DDoS), fraud, and phishing. The vast majority of the current botnet identification approaches work just on particular botnet order and control (C&C) conventions (e.g., IRC) and structures (e.g., brought together), and can progress toward becoming insufficient as botnets change their C&C strategies. In this paper, we present a general identification structure that is autonomous of botnet C&C convention and structure, what's more, requires no from the earlier information of botnets, (for example, caught bot parallels and henceforth the botnet marks, what's more, C&C server names/addresses). We begin from the definition and fundamental properties of botnets. We characterize a botnet as an organized gathering of malware occurrences that are controlled by means of C&C correspondence channels. The fundamental properties of a botnet are that the bots speak with some C&C servers/peers, perform malevolent exercises, and do as such in a comparative or related way. As needs be, our identification system groups comparative correspondence activity and comparative malevolent movement, and performs cross group connection to recognize the hosts that offer both comparative correspondence designs also, comparable vindictive movement designs. These hosts are in this way bots in the checked system. We have actualized our BotMiner model framework and assessed it utilizing numerous genuine system follows. The outcomes demonstrate that it can recognize certifiable botnets (IRC-based, HTTP-based, and P2P botnets including Nugache and Tempest worm), and has a low false positive rate.

Structural and Modal Analysis of Simulation System for Dynamic Optimization of Mechanical Structures

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Dr.Y. Hari Prasada Reddy, Dept. of Mechanical, G Pullareddy Engineering College (Autonomous), Kurnool

Abstract:--

Structures pertaining to industrial, naval, automotive and aerospace applications will experience vibration during the service mount conditions. Three basic dynamic parameters namely Mass (M), Stiffness (K), and Damping (C) will influence the structure to the input vibration. These critical parameters needs to be configured properly for a particular structure, or else the input vibration energy gets intensified to a greater extent and drive the structure towards catastrophic failure. No practical means are available till now so as to evolve optimal combination of the said dynamic parameter. This paper proposes design and analysis of a dynamic simulation system which bids a capable solution to facilitate various inversions of quantity, rigidity and curbing over specific range. Further projected ploy can be agitated with desired rate and bounty by escalating it on a vibrator and retort of the device can be measured for an itemized input. The prime permutation of forceful parameters can be evolved with the offered simulator which becomes input to constitute the design of a particular structure. The planned system is intended for the purpose of intangible demo in order to begin with baseline configuration and also to detect the subsystems. By attaining the controls from design all the systems will be sized. Assembled configuration of the system is drove out using 3D CAD modelling software i.e. UNI GRAPHICS. Structural analysis is carried out so as to ensure design adequacy using ANSYS software.

Influence of Advertising for Purchase of Online Products on Youth in India

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Abstract:--

Facebook has over 1.69 billion users, this has made Businesses prefer advertising on Facebook. It is very easy and reasonable to advertise on Facebook. A business owner can customize his/her advert, set a parameter for the ad to be displayed, choose his/her viewers, set a time limit for the display of the ad, et cetera. Youth are defined as those aged 15 to 29 according to Indian National Youth policy of 2014(Ministry Youth affairs and Sports Government of India). The 2011 census counted 563 million young people from 10-35 according to 12th five year plan of India (2013). This paper presents the results of an exploratory research conducted to identify the influence of Facebook adverts on the Indian users and their buying behavior towards the advertised products. This paper concludes by providing a set of research questions that can be used to conduct an in-depth study to determine the impact of Facebook adverts on the Indian Youth and their buying behavior.

Keywords:

Facebook, Advertising, Social Media, Convenience sampling, Digital Marketing, Facebook demography.

Software Project Effort Duration and Cost Estimation Using Regression Testing and Adaptive Firefly Algorithm (AFA)

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Abstract:--

Software project estimation is the process of defining the quality of the software projects in terms of effort, duration and cost. The better software construction should take less effort with ensured short duration and cost. Estimating the software project EDC estimation is a more difficult task which is focused by various researchers. COCOMO is found to be most successful software project cost estimation model. However this research work requires complete information for the decision making. And also this research method would lead to more computational overhead for the decision making process. This is focused and resolved in the proposed research methodology by introducing the new software EDC estimation process namely Regression Testing based Software EDC Estimation Technique (RTSEDCET). The experimental analysis is carried out on two datasets namely NASA 93 and COCOMO datasets. The proposed regressing testing model would generate the various test cases by comparing the attribute values of these datasets to predict the quality of the software in terms of effort, duration and cost. Based on these test case values, software project estimation can be done efficiently. In this work, adaptive firefly algorithm is utilized for the efficient test case generation which would combine the multiple attributes of the dataset to generation optimal test cases with the concern of ranking. The overall evaluation of the research work is conducted on the java simulation environment from which it is proved that the proposed research technique leads to ensure the optimal outcome than the existing research techniques.

Keywords.

Project quality, Effort, Duration, Cost, Regression testing, Multi attribute merging

Conservation of "natural sand "and a substitute of "natural sand "- in constructions is the need of the hour

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Udayashankara H N, Dept. of Civil Engineering Manipal Institute of Technology Manipal

Abstract:--

Sand is the product of rock mechanized for weathering. Geological history describes the formation of soil and paleo-climatic study has revealed the formation of sand along the river side, estuaries and the shore. Conservation of sand in saving he environment change is the need of the hour. Sustainable development is the essence of today's climate change. Infrastructure development in cosmos and metros have created a threat in the earth`s ecosystem. The affluent in construction industry created a demand in natural sand and there was an immediate diminution on natural sand which became a threat to the ecosystem. The threating call on ecosystem from sand mining forced the authority to stop their activities as per direction given by honorable supreme court and NGT (national Green Tribunal) banning to conserve natural sand. The implementation on sand ban by local authority forced the law breakers to find an alternative to sand for construction activities. Crushed rock sand, Mud grains, recycled C&D waste sand, Fly Ash, cementing waste are some of the alternatives for natural sand. An attempt to understand the amount of natural sand used by construction and building industries are documented in this study. The negative impact on environment by the continuous mining of natural sand is also recorded and highlighted. Indian scenario of using alternative sand, its need, various type, and its development stages are emphasized in this study. Discussion also include with the possible initiatives to promote alternative sand in construction by International construction experts.

Keywords-

Sand, Weathering, Crushed rock sand, Ecosystem, Fly ash, Substitute sand

Contextual action recognition in videos using TUBE-CNN

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Abstract:--

For image classification and object detection Deep learning has been exhibited to accomplish great results. the impact of deep learning on video analysis has been limited due to complexity of video data and lack of annotations. In this paper, we propose an end-to-end deep network called Tube Convolutional Neural Network (T-CNN) for action detection in videos. The proposed design is a bound together profound system that can perceive and confine activity based on 3D convolution highlights. A video is first partitioned into break even with length cuts and next for each clasp a lot of cylinder proposition are created dependent on 3D Convolutional Network (ConvNet) highlights. Finally, the tube proposals of different clips are linked together employing network flow and spatio-temporal action detection is performed using these linked video proposals. . This top-down action detection approach explicitly relies on a set of good tube proposals to perform well and training the bounding box regression usually requires a large number of annotated samples. This bottom-up approach effectively avoids tube proposal generation by leveraging the pixel-wise annotations of segmentation. The segmentation framework also can be readily applied to a general problem of video object segmentation.

Keywords:

Action recognition; T-CNN

Towards Reference Models for Requirements Traceability

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Abstract:--

A Reference model in systems, enterprise and software engineering is abstract framework or domain specific ontology consisting of an interlinked set of clearly defined concepts produced by an expert or body of experts in order to encourage clear communication. There are many uses of reference models. Main use of reference model is to create standards for both the objects that inhibit the model and their relationships. By creating the standards, the work of engineers and developers who need to create objects that behave according to the standard is made easier. In this paper we are proposing S-cube model of Quality reference model. Reference models are therefore an abstraction of best practice, condensed from many case studies over an extended period of time, followed by more case studies to refine and evaluate the proposed reference model. There are challenges towards the service-based systems. The network of excellence on software services and systems (S-cube) performs cross –discipline research to develop solutions for those challenges. In this paper we outlined the S-cube reference model life cycle and how is used to know how a service is developed. S-cube knowledge model which is a continuously updated on-line encyclopedia and a reference library. In this paper we are presenting about S-cube framework which is used to align and bring together the involved disciplines and co-existing of services.

Plants Health Monitoring System Using Aurduino Microcontroller

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Abstract:--

Plant wellbeing the board is the science and routine with regards to comprehension and beating the progression of biotic and abiotic factors that limit plants from accomplishing their full hereditary potential as harvests, ornamentals, timber trees, or different employments. Plant observing is a standout amongst the most essential assignments in any farming based condition. In this paper, we talk about the execution of a plant wellbeing checking framework. Which will check some condition parameters like temperature, mugginess and light force that has consequences for plants. What's more, recover the dirt dampness. This data is sent by Arduino Uno dev sheets to the Ubidots IoT (Internet of Things) cloud stage. On the off chance that there are any deviations in the put away sensor esteem, ready message is sent to the client's cell phone.

Keywords

IoT; Wireless Sensors Network, Embedded Processing, ZigBee, Plants Health, Larvae.

An Experimental Study on Partial Replacement of Cement by Various Percentages of Phosphogypsm in Cement Concrete

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Abstract:--

The growth in infrastructure sector led to scarcity of cement because of which the cost of cement increased incrementally. In India, the cost of cement during 1995 was around Rs. 1.25/kg and in 2018 the price increased approximately 10 times. In order to combat the scarcity of cement and the increase in cost of concrete under these circumstances the use of recycled solid wastes, agricultural wastes and industrial by-products like fly ash, blast furnace slag, silica fume, rise husk, phosphogypsum, etc., came into use. Phosphogypsum is a by-product in the wet process for manufacture of phosphoric acid (ammonium phosphate fertilizer) by the action of sulphuric acid on the rock phosphate.

An experimental investigation was carried out to evaluate the influence of phosphogypsum on mechanical properties of concrete for M30 Grade. In this work cement is replaced by 5%,10%,15% and 20% of phosphogypsum. The optimum dosage of phosphogypsum is determined based on the tests conducted on concrete. Mechanical characteristics of Concrete is evaluated for compressive strength, split tensile strength and flexural strength at different ages 7 days, 28 days and 90 days.

The results revealed that Workability of the concrete was slightly decreased with increase in the percentage replacement of cement by phosphogypsum. The strength of concrete is increased upto 10% replacement of cement with phosphogypsum.

Key words:

Phosphogypsum Concrete; Normal Curing; Mechanical characteristics.

Optimization Modeling and Scheduling for Workflow based Applications using Constraint programming

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Abstract:--

The Quality of Service and the cost of execution for workflow based applications are the most important concerns for workflow execution on cloud. Multi-target planning of logical dependent applications in distributed computing is expanding research consideration. Cloud providers need inclusive resource management that manages both computational and network resources. Effective noteworthy budgetary schedule reduces the excessive assets uses and make increase into cost. In this paper IBM Cplex Optimization Toolkit is utilized to give choice for resource mapping and improvement. In this technique Amazon Elastic Cloud Computing Costing Model is utilized. The proposed arrangement gives better execution by enhancing asset use.

Key words:

Scientific workflows, Resource Optimization, Cloud computing, Constraint Programming, Optimization modeling.

Effect of Concentration of Sodium Hydroxide Solution on Compressive Strength of Geopolymer Concrete

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Dr.D.V.Prasada Rao, Professor,Civil Engineering Department, S.V.University College Of Engineering, Tirupati, India

Abstract:--

This paper contains results of the tests carried out to find the effect of different concentrations of sodium hydroxide solution on the strength of the geo-polymer concrete. Now a days, a big problem facing by the world is carbon dioxide. The production of Ordinary Portland cement causes emission of Co2 which leads to environmental pollution. Supplementary material like fly ash can be used in place of ordinary Portland cement to reduce Co2. The Concrete made by activation of Fly ash with highly alkaline liquids is known as geo-polymer concrete. The alternative material which is sustainable and eco-friendly to Portland cement concrete is Geo-polymer concrete (GPC). Highly alkaline liquids like Sodium Hydroxide (NaOH) and Sodium Silicate (Na2SiO3) are used in this investigation for the polymerization process. Different concentrations of sodium hydroxide solution i.e. 8M, 10M, 12M, 14M and 16M were taken in preparing different GPC mixes and the compressive strength of each mix were obtained .The size of specimen used for testing is 100mm X 100mm X 100mm.Oven curing was adopted in this investigation and cubes are kept in an oven for 1 day,3 days,7 days and 28 days and then GPC specimens were tested for Compressive strength.. The result shows that compressive strength of GPC increases with increase in molarity of Sodium Hydroxide solution.

Key words:

Alkaline Solution, Concentration, Fly ash, Geo-polymer concrete, Sodium hydroxide, Sodium silicate, Molarity.

A Novel Mean-Based Technique for Feature Selection

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Abstract:--

In machine learning application or for any predictive model where the decision depends on a subset of features derived from a large set of features, feature selection technique plays a significant role. To recognize these optimal number of relevant features, different feature selection algorithms can be used. The feature selection technique uses search method and evaluation measure as a criterion to reduce the dimensions. A huge number of the popular feature selection algorithms use standard deviation as primary criterion and evaluation measure to recognize the subset of features. In case of high dimensional dataset, making the use of feature selection techniques such as genetic algorithm proves to be computationally expensive. Therefore, various existing feature selection techniques are proposed and are well appropriate for supervised learning. While addressing to the curse of dimensionality through the use of classification and clustering techniques, another challenge posed is of over-fitting. The prediction model has less precision if it suffers from over-fitting. Feature selection using regression seems to be a promising approach for high dimensional datasets, particularly when the number of instances is less than the number of features. This paper proposes a novel method of using multi-linear regression for feature selection. The proposed system has used benchmark datasets like Residential Building and Longley on which extended version of multiple linear regression is applied which is mean based multiple linear regression and results for null hypothesis are tested using different normality tests.

Key words:

Feature Selection, Multi-linear Regression, Statistical Testing.

Optimization of Delays in a CMOS Inverter using Cuckoo Search Optimization Algorithm

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Abstract:--

Many researchers have been done on the optimal design of the most fundamental logic gate complementary metal oxide semiconductor (CMOS) inverter. A new technique which is meta-heuristic in nature known as cuckoo search optimization algorithm (CSOA) is proposed to design CMOS inverter in this paper. CSOA is an easy to implement algorithm which gives efficient result with less computational complexity. This is concluded from the fact that this algorithm helps in achieving global convergence with using minimum number of parameters. The authenticity of CSOA is verified by comparing its results with other existing meta-heuristic techniques like real coded genetic algorithm, craziness based particle swarm optimization algorithm and social emotional optimization algorithm. It is verified that the CSOA is better as compared to all other existing algorithms.

Key words:

Transient Characteristics, CMOS, Propagation Delay, real coded genetic algorithm, particle swarm, Cuckoo Search and social emotional optimization algorithm.

Aiding Secure Data Retrieval Incorporated with Parallelization Technique in Cloud

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Abstract:--

Cloud data owners prefer to outsource data because of ease in maintenance. Data confidentiality of this outsourced sensitive data is a major task. The searchable encryption technique helps to carry out searches on encrypted data without decrypting it. In the data outsourcing environment, volume of data is increasing rapidly. Hence the time required to build the index and to carry out searches is also increasing exponentially. This makes it more difficult to build a system which is efficient, reliable and can cope up with growing data.

In this paper, a parallelization technique to build the index on outsourced data is proposed. This technique minimizes the time required to construct the index. It also supports secure ranked retrieval using bucketization technique. The buckets are formed using Hadoop Map Reduce framework which achieves significant efficiency. The proposed method prune the keyword dataset, which helps in significant reduction in the size of index. Through extensive experiments using standard dataset, the performance of the system is validated. The experimental results show that the proposed system requires less time for index construction and hence improves retrieval efficiency.

Key words:

Data outsourcing, searchable encryption, map-reduce, secure search, buketization, multi-owner, distributed index

Surface Roughness Study on Forged Al-TiB2 Composite by Regression Analysis

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Abstract:--

Aluminum composites are very rapidly replacing engineering metals and alloys because of its light weight and high strength in aerospace and biomedical applications etc. In the present work Al-TiB2 (Aluminum alloy A2024) composite is fabricated by In-Situ technique. The intensive study on effect of surface roughness of Aluminum TiB2 composite is carried out. The material is subjected for turning operation to study the surface roughness. This study focuses on developing an empirical model for prediction of surface roughness on forged composite. The working parameters are speed, feed, depth of cut and tool nose radius. One of the data mining techniques non-linear regression analysis is applied in developing the empirical model, this model is transferred to software by visual basic programming language.

The test results show that the value of surface roughness is low at high cutting speed and comparatively high at low cutting speed. Surface roughness increases with increase in feed and depth of cut. However it decreases with increasing tool nose radius and surface roughness increases as what% of TiB2 increases in aluminum. The values of surface roughness of models compared with experimental results. This models developed in this study have a satisfactory compatibility in both model construction and verification and there is a scope for future work.

Key words:

Al 2024 alloy, In-situ technique, surface roughness, regression analysis, tool nose radius.

Power Line Communication based Design for Testability for a CMOS Receiver

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Abstract:--

The internal nodes of circuit become less accessible as the complexity of the circuit increases, due to less number of I/O pins available for access. To overcome this problem at IC Level, we propose power line communication (PLC) that uses the dual power pins for distribution of power in networks for application/ observation of test data. This design ensures robust operation in addition to good data speed under variations and droops of the supply voltage. The PLC receiver is designed and verified in CMOS 0.18µm technology with a supply voltage of 1.8 V using Synopsys HSPICE Tools. The measurement results show that the receiver can tolerate a voltage drop of up to 0.22V for a data rate of 10Mb/s. The power dissipated by the receiver is decreased by 26.5% under 1.8 V supply, and the delay is reduced by 56.76% over the existing design.

Key words:

Power Line Communication; Power Efficient CMOS PLC receiver; Power Consumption; Stacking Method.

Synthesis and Spectral Characterization of Cu (II) Complexes with 2-Hydroxy-2-Methyl Propiophenone Picolylamine and Diimine co-Ligands

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Abstract:--

Mixed ligand Cu(II) complexes, namely $Cu(L)SO_4.2H_2O$(1) and $[Cu(L\text{-}ONN\text{-}L^1)]$ where L = 2-Hydroxy-2-Methyl Propiophenone Picolyl-amine, L^1 = Bipyridine(bipy)(2), 1,10-phenan-throline(phen) (3) and 6-Methyl bipyridine (6-Me-bipy) (4) have been synthesized and characterized by various spectroscopic techniques like IR, EPR, electronic absorption, fluorescence spectroscopy and cyclic voltammetry. Aforesaid spectral data, it is evident that two nitrogen atoms of the heterocyclic bases like bipy, phen, 6-Me bipy coordinates with metal ions and acts as neutral bidendate ligand. Spectral data concluded that the complexes(1-4) have distorted trigonal bipyramidal structures, around Cu(II) centre with co-ordination of $Cu(N_2O_3)$ and $Cu(N_4O)$ respectively. But the complexes (1-4) have redox reaction Cu^{II} /Cu^{I}, which results in the decrease of current intensity and enhanced reversibility. The synthesized complexes were investigated for antimicrobial and antioxidant activities. The results show a significant growth inhibitory activity (anti-microbial: antibacterial and antifungal) against bacterial strain streptococcus aureus, Bacillus subtilis, Escherichia coli, Klebsiell pneumonia. The activity against streptococcus aureus is considered to be an important observation as the commercially available streptomycin is found to be active against this bacterial strain, and the antioxidant activities also showed good results when compared to the standard Ascorbic acid. Complex 4 show good antimicrobial activity when compared with other complexes.

Key words:

Copper(II) complexes, bipyridine, 1, 10-Phenanthroline, 6-Me bipyridine, IR, UV-Vis, EPR, CV and Biological activity (Antimicrobial and antioxidant activities).

Design and Numerical Analysis of Five Blade Propeller for a Drone

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Abstract:--

It is a major problem in UAVs to have a better stability in gusty winds and obtaining uniform thrust depend on the various directional and Aerobatic operations. Hence we have fabricated an X4 model Drone with the existing propeller blade profiles of standard size. Its performance were measured and stability criteria specified by varying the pitch shows that the span parameters of the propeller and the stability can be improved. We designed a propeller and mounted in the fabricated Drone for the real time measurements of the stability. The stability of the Drone was increased by varying the propeller design. The analysis of the propeller blade was performed in Open FOAM platform with the maximum of 10000 rpm.

Key words:

Five blade Propeller, X4 model Drone, open FOAM, Performance.

SMART way to control obesity using Telemedicine method

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Abstract:--

Obesity demonstrates a weight more noteworthy than what is viewed as solid. It is an unending condition characterized by an abundance measure of muscle versus fat. Obesity is best characterized by utilizing the BMI. It is ascertained utilizing a man's tallness and weight. The Body Mass Index (BMI) breaks even with a man's weight in kilograms (kg) partitioned by their stature in meters (m) squared. A grown-up who has a BMI of 25-29.9 is viewed as overweight, and a grown-up who has a BMI more than 30 is viewed as stout. A BMI of 18.5-24.9 is viewed as typical weight. This project uses behavioral treatment to induce a healthy eating/working habit which is an umbrella term for kinds of treatment that treat wellbeing issue. This type of treatment looks to distinguish and help change possibly pointless or undesirable practices prompting physical issues. It works on the possibility that all practices are found out and that undesirable practices can be changed. This project deals with taking real-time structural data relating to obesity from a patient, identifying his obesity and suggesting proper behavior patterns for him to counter the problem and make him healthy again. It consists of the following steps: Obesity detection, Quantification of severity and suggestion of behavior.

Key words:

obesity, telemedicine; Mifflin St. Jeor Equation; smart band

The impact of Positive language for professional and personal excellence

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Dr. Aruna G, Assistant Professor of English, AITS, Tirupati

Abstract:--

Positive Language is self-defined and simply means using positive words and positive outlook in speaking and writing. People believe that the World is created by words. It means words have super natural power. If words have the power to create, they also have the power to destroy. Therefore, words do matter. Words are power packed. Words can be positive or negative. Positive words bring positive outcomes and negative words bring negative outcomes. In this context it's high time for the Modern man to seriously brain storm his words and language. As a builder of his own modern castle of science and technology, he has to be conscious about his language and words.

Reading through the lines of 'Wings of Fire' an autobiography of Dr APJ Abdul Kalam, one can fathom that he used positive language most of the times. He encouraged his team members even at the most devastating situations just like that and make them resilient. Therefore, its positive language that builds, connects, makes people positive and excellent.

Key words:

Positive Language, Resilient, Excellence, High Time, Impact, Power Pack Words.

Spectral Matching Algorithm for Horticulture Application

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Abstract:--

Horticulture lighting industry is one of the fastest growing industries which is capable of overcoming the limitations of changing light conditions around the year. Plants need a band of wavelengths which drives photosynthesis and aids growth. The work aims to find an optimal solution for the spectrum matching function. Two algorithms have been discussed for optimal spectral matching. The first optimization algorithm for n-channel LED was simulated however; validation for the same is needed before going to real time design. In the second method, a database of LED along with curve-fit tool and Gaussian model were used in the simulation. Results indicated a larger database of LEDs will lead to better spectrum match.

Key words:

LED, Spectral matching algorithm, Gaussian model, horticulture

Wireless Protocol for Enhanced Control of Lighting Devices

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Abstract:--

There are several proprietary protocols available in the market for the implementation of Building Automation systems used for enhancing the facilities available in a building. DALI (Digitally Addressable Lighting Interface) is a wired lighting protocol which sends and receives data to and from a digitally addressable ballast to control it. The protocol standard was called for to integrate all the lighting interfaces in a single building with the DALI supporting upto 64 devices to do so. Our current work is done to improve the cost efficiency of implementing this protocol by implementing it wirelessly using 2 Xbee RF modules and using the IEEE 802.15.4 standard to transmit the address of the ballast along with different data packets to control their dimming. The 2 Xbee modules are used to transmit RF data packets between the host PC and the remote DALI interface (arduino setup). The arduino board continuously runs the code to read the serial data from the packet received and thus produce a corresponding digital output that has been used to control the dimmable ballast. The DALI standard uses a 19 bit data frame but the 802.15.4 protocol requires the data transmitted via the Xbee modules to be an API (Application programming interface) frame. We were successfully able to transmit RF data packets from our PC host and produce different digital outputs to control the dimming settings of our ballast.

Key words:

DALI, automation, networking, Xbee, API, ballast

A Novel on Power Quality Improvement of Solar PV under Grid Connected Mode

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Abstract:--

In this paper grid-connected PV system presented. PV system consists of a photovoltaic module, a boost converter, and voltage source inverter. To boost the panel voltage DC-DC boost converter is used and ANFIS based ICM (Incremental Conductance Method) MPPT. ANFIS controller will be a new technique which is often used to optimize the total performance of the Photovoltaic system. In this paper, the grid-connected PV system performance is evaluated and harmonics occurred in the system are optimized. This ANFIS controller is definitely effective, simple and easy at minimal cost. The entire proposed technique continues to be modeled in addition to simulation using Mat lab/Simulink software.

Key words:

Photovoltaic (PV); boost converter; ANFIS controller; Incremental Conductance Method (ICM); Voltage Source Inverter (VSI).

Smart Vehicle Assistance System

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Abstract:--

Accident is an unexpected occurrence event, which leads to loss of many lives. Accident may occur due to fast driving of the driver, drunk and drive or no proper driving knowledge, poor road conditions and so on. In many situations we may not be able to find accident location because we don't know where the accident will take place. So, we use GPS to track to the location and GSM to convey message to coded number. The purpose of this work is to prevent the lives of human being and detect the accident. If driver does not wear seatbelt and alcoholic consumed buzzer will on and message display on LCD. When accident occurs, immediately accident sensor will detect signal and then microcontroller will send signal to GPS. The GPS will track the location and signal send through GSM to coded number.

Effect of Concentration of Sodium Hydroxide Solution on Compressive Strength of Geopolymer Concrete

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Abstract:--

This paper contains results of the tests carried out to find the effect of different concentrations of sodium hydroxide solution on the strength of the geo-polymer concrete. Now a days, a big problem facing by the world is carbon dioxide. The production of Ordinary Portland cement causes emission of Co2 which leads to environmental pollution. Supplementary material like fly ash can be used in place of ordinary Portland cement to reduce Co2. The Concrete made by activation of Fly ash with highly alkaline liquids is known as geo-polymer concrete. The alternative material which is sustainable and eco-friendly to Portland cement concrete is Geo-polymer concrete (GPC). Highly alkaline liquids like Sodium Hydroxide (NaOH) and Sodium Silicate (Na2SiO3) are used in this investigation for the polymerization process. Different concentrations of sodium hydroxide solution i.e. 8M, 10M, 12M, 14M and 16M were taken in preparing different GPC mixes and the compressive strength of each mix were obtained .The size of specimen used for testing is 100mm X 100mm X 100mm.Oven curing was adopted in this investigation and cubes are kept in an oven for 1 day,3 days,7 days and 28 days and then GPC specimens were tested for Compressive strength.. The result shows that compressive strength of GPC increases with increase in molarity of Sodium Hydroxide solution.

Index Terms

Alkaline Solution, Concentration, Fly ash, Geo-polymer concrete, Sodium hydroxide, Sodium silicate, Molarity.

Smart Helmet for Accidents Detection and Notifications

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Abstract:--

The main objective of smart helmet is to build a safety system which is integrated with the smart helmet and intelligent bike to reduce the probability of twowheeler accidents and drunk drive cases. The flex sensor checks if the person wearing the helmet or not. Alcohol sensors detect the alcoholic content in riders' breath. If the rider is not wearing the helmet or if there is any alcohol content found in rider's breath, the bike remains off. The bike will not start until the rider wears the helmet and if there is no alcoholic content present. When the rider crashes, helmet hits the ground, sensors detect the motion and tilts of helmet and reports the occurrence of an accident. It sends information of the corresponding location to family members of the rider and emergency contact number Index Terms: Accident detection, Smart helmet, Alcohol detection.

Fire Alarming and Authentication System for Workhouse using Raspberry Pi 3 in IOT

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Abstract:--

Ensuring minimum rights and safety of the garment workers has become a burning issue nowadays. The workers of garment factories are facing some labyrinths and broken out of fire is surely one of them. The investors are losing their interest and the prominence of this sector is getting toneless. In this paper, we have propounded a system which is capable to detect fire and can provide the location of the affected region. Raspberry Pi 3 has been used to control multiple Arduino which are integrated 1with a couple of sensors and camera. A 360○ relay motor is assembled with the camera so that it can snap the image in whatever angle the fire is detected. We have provided a confirmation of the fire suspecting system to avoid any false alarm. The system will immediately send a message along with the image of the affected spot and Arduino's location. An admin can confirm or deny theT impeachment and if the admin confirms the situation as a breaking out of fire, then the system will immediately raise an alarm and an automatic message will be sent to the nearby fire brigade.

Keywords—

FireDetection; Raspberry Pi; WiFi module; Sensors; Arduino; Camera; Authentication; Notification.

Automatic Traffic Light Control System

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Abstract:--

Traffic light control systems are widely used for monitoring and controlling the flow of automobiles through the junction of many roads. The main aim to realize smooth motion of automobiles in the transportation routes. However, the synchronization of multiple traffic light systems at adjacent intersection is a complicated problem given the various parameters involved. Conventional systems do not handle variable flows approaching the junctions. In addition, the mutual interference between adjacent traffic light systems, the disparity of automobiles flow with time, the accidents, the passage of emergency vehicles, and the pedestrian crossing are not implemented in the existing traffic system. This leads to traffic jam and accidents. We propose a system based on PIC microcontroller that evaluates the traffic density using IR sensors for dynamic timing slots with different levels. a portable controller device is designed to solve the problem of emergency vehicles stuck in the overcrowded roads.

Keywords—

Traffic light system; microcontroller; XBee wireless communication; IR sensor; traffic density

Accident Prevention by Eye Blinking Sensor and Alcohol Detector

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Abstract:--

The main objective of this proposed system is to stop drunken and dowry people. Here in this system alcohol sensor and eye blink sensor are used .so whenever the driver starts the vehicle, the alcoholic sensor senses the amount of breathe and generates a signal to Buzzer, GSM and LCD. The output of sensors is given to micro controllers. If the value reaches to an particular level, then automatically it sends SMS through GSM. Buzzer will produce sound and the message was displayed by LCD.

Plants Health monitoring system using Aurduino microcontroller

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Abstract:--

Plant wellbeing the board is the science and routine with regards to comprehension and beating the progression of biotic and abiotic factors that limit plants from accomplishing their full hereditary potential as harvests, ornamentals, timber trees, or different employments. Plant observing is a standout amongst the most essential assignments in any farming based condition. In this paper, we talk about the execution of a plant wellbeing checking framework. Which will check some condition parameters like temperature, mugginess and light force that has consequences for plants. What's more, recover the dirt dampness. This data is sent by Arduino Uno dev sheets to the Ubidots IoT (Internet of Things) cloud stage. On the off chance that there are any deviations in the put away sensor esteem, ready message is sent to the client's cell phone.

Index terms -

IoT; Wireless Sensors Network, Embedded Processing, ZigBee, Plants Health, Larvae.