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ICRCET – 17

3rd International Conference on Recent Challenges in Engineering and Technology

Tirupati, Andhra Pradesh
12th – 13th September 2017

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Welcome Message

On behalf of ***Institute For Engineering Research and Publications(IFERP)*** and in association with ***Annamacharya Institute of Technology & Sciences,*** Tirupati, Andhra Pradesh. I am delighted to welcome all the delegates and participants around the globe to ***Annamacharya Institute of Technology & Sciences, Tirupati, Andhra Pradesh*** for the ***"3rd International Conference on Recent Challenges in Engineering and Technology 2017 (ICRCET-17)"*** that will take place from ***12th - 13th September '17***

Transforming the importance of Engineering, the theme of this conference's assembling is ***"3rdInternational Conference on Recent Challenges in Engineering and Technology 2017 (ICRCET-17)"***

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 ***Tirupati, Andhra Pradesh.***

Mr. R. B Satapathy
Director
IFERP

Preface

The ***"3rd International Conference on Recent Challenges in Engineering and Technology 2017 (ICRCET-17)"*** is being organized by ***Annamacharya Institute of Technology & Sciences,*** India in association with ***IFERP - Institute For Engineering Research and Publications*** on the ***12th - 13th September '17***

Annamacharya Institute of Technology & Sciences, Tirupati, Andhra Pradesh has a sprawling student - friendly campus with modern infrastructure and facilities which complements the sanctity and serenity of the divine city of ***Tirupati, Andhra Pradesh***

With blessings of Sri Venkateshwara, Tirupati, Andhra Pradesh the ***"3rd International Conference on Recent Challenges in Engineering and Technology 2017" (ICRCET-17)*** was a notable event which brings academia, researchers, engineers, industry experts and students together.

The conference will be a perfect platform to share experience and foster collaborations across industry and academia to evaluate current and emerging trends across the globes which were given the international values by **"*Institute For Engineering Research and Publication [IFERP]".***

The International Conference attracted over 140 submissions. Through rigorous peer reviews 71 high quality papers were recommended by the Committee. The Conference apply 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 - 2017

Sri. C. Gangi Reddy, M.Com. LLB.
Hon'rary Secretary,
Annamacharya Educational Trust.

MESSAGE

The ever changing needs of the humanity and the never-ending thirst for innovation are leading to technological advances at a rapid pace. At our Institute, it is believed that Change is the only constant thing and that forms the basis for grooming the students. This is a great platform to exchange the ideas of researches, academicians and other participants. It will also be an exciting and golden opportunity to the students and faculty members of the institution to enhance their knowledge. I sincerely entreat all the participants to endure their research efforts accomplishing the dreams of India like Make in India, Digital India etc. ICRCET- 2017 is yet another initiative by our institution to stimulate enthusiasm and creative temper among the scholars and academicians.

Sri.C. Abhishek Reddy, B.Tech., MBA(UK).,
Executive Director & Member, Annamacharya Educational Trust

MESSAGE

ICRCET is one of the key academic conferences to present research results and new developments in the area of Science, Engineering and Technology. The conference will bring together academicians, students, research scholar, PHD holders and industrialist to commemorate at a platform to provide solutions for a better and sustainable tomorrow.

Sri C. Yalla Reddy, Vice Chairman,
Annamacharya Institute of Technology & Sciences,
Tirupati

MESSAGE

Research Challenges in Engineering and Technology, ICRCET- 2017 at our institution. Technology changes are taking place at a rapid pace in the society because of research. This International Conference is a great platform for sharing innovative ideas among the researchers, academicians and other participants. It will also be an opportunity to the students of our institution to get inspired and motivated towards research. I sincerely thank our management team for their constant encouragement and support. I profoundly thank the delegates, resource persons, academicians and other participants for taking part in this International Conference. I congratulate and thank the Convener, Heads of the Departments, faculty, staff and energetic students for their diligent efforts in bringing this concept into reality. I thank **Institute for Engineering Research and Publication (IFERP)** for their association with us towards organizing this International Conference.

I encourage all the zealous participants to learn from one another.

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

MESSAGE

I welcome all the delegates and participants to the ICRCET 2017 to be held at the divine city of Tirupati. With the blessings of Lord Venkateswara, the International Conference is being conducted at the college premises of AITS, Tirupati. 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 2017 according to me will provide a platform to encourage people to face the challenges and to develop according to the demand.

I congratulate IFERP for help us out in conducting ICRCET 2017 successfully

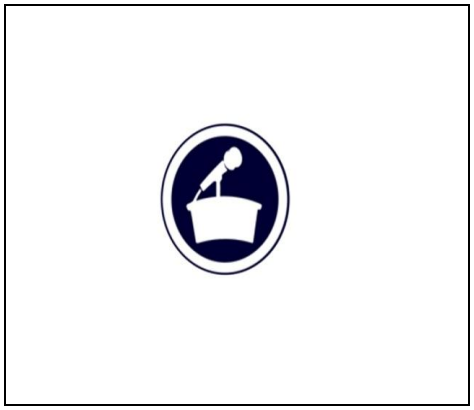
Dr Y Hari Prasad Reddy
Professor, Department ME, ,
Annamacharya Institute of Technology & Sciences, Tirupati.

MESSAGE

I on behalf of the whole Annamacharya Group of Institutions welcome the participants of the ICRCET 2017. I congratulate the Organizing Committee in their endeavor and thank them for toiling 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

ICRCET – 17

3rd International Conference on Recent Challenges in Engineering and Technology



Keynote Speakers

Prof. Dr. Pinnamaneni Bhanu Prasad
Director (R&D), KELENN Technology, France
Chief Mentor, Jekson Vision, USA, Dubai, India

MESSAGE

I am delighted to know and be part of this 3rd International Conference on "Recent Challenges in Engineering and Technology (ICRCET-17)" Sept 12th, 2017, organized by Annamacharya Institute of Technology & IFERP, at Annamacharya Institute of Technology & Sciences, Tirupati, India. Tirupati is one of the most divine smart city and open as industrial hub of India and known for high quality valued education. Annamacharya Institute is a first class educational organization dedicated for the noble cause of education to serve the society, industry and R&D sectors. IFERP is dedicated for the promotion of top quality research by organizing conferences and bringing the research to international level.

Interaction and exchange of ideas with experts from across the world is essential part of research and this international conference is an excellent opportunity for effective, interactive exchange for inter-disciplinary learning in the various fields and understands the challenges. The design, automation and artificial intelligence in technology has huge progress in recent years due to industrial revolution and playing an important role in intelligent manufacturing that makes our factories smart and efficient. The organizers have chosen carefully to cover the challenges in the current and future technology for the discussions.

I am confident that the delegates from academic and industry will attend and such interaction can bring academicians closure to industry needs and bridges the gap between academic research and industry requirements and solve the challenges faced by the industry. I am sure this international conference adds value by providing platform for strengthening the relationship and collaboration between national and international delegates.

I wish the event a grand success and congratulate the organizers on this timely initiative.

BIOGRAPHY

Dr. Bhanu Prasad got Ph.D. in Engineering and postdoctoral research at Universite de Caen, France. Received "Academic Award of Excellence". Dr.Bhanu Prasad is Advisor to more than 15 industries and R&D Centres in France, Germany, Norway and India. Published more than 150 articles related to applications of Machine Vision using image processing, Mathematical Morphology in different domains. Member of editorial board for 23 journals. 35 years of experience in several industries and academic organisations in Europe based in Paris, France. Life member in several International scientific research organisations like CSI, AMSI.

Research interests are related to immediate industrial applications that have impact on society which include Virtual Reality, Augmented reality, Digital Healthcare, Autonomous Vehicles, Smart Roads and Smart Cities, Intelligent Transport Systems, Advanced Driver Assistance System, Machine Vision in Automobile and Pharmaceutical industry, Smart Factory and Intelligent Manufacturing, Nanorobots, NanoCore, NGN and 3-D metrology. Several innovative products designed, developed for Automotive and Pharmaceutical industry are in the market in Europe and India. Given several invited talks in India, USA and Europe, to motivate young researchers and entrepreneurs to think in the direction of innovative products

(PINNAMANENI BHANU PRASAD)

Dr. Vijay Tharad
Director Operations at Corporate Professional Academy for Technical Training & Career Development.

MESSAGE

I am extremely happy to note that IFERP- Institute for Engineering Research and Publications and Annamacharya Institute of Technology & Sciences, Tirupati (AITS-T) is organizing the ***3rd International Conference on Recent Challenges in Engineering and Technology (ICRCET-17)*** during 12th - 13th September 2017. I am also happy to know that the institute is bringing out a Souvenir on this occasion.

I hope this conference will provide an opportunity to all the participants to interact with each other & discuss on the issues related to the current research and latest advancement and Recent Challenges in Engineering and Technology. The deliberation at this conference will, i am sure, enable Academicians, Practitioners, Consultants, Research Scholars, Industry leaders and other Experts to exchange ideas and suggest measures for meeting the evolving challenges and the exchanges will hopefully benefit the community.

I wish the conference a great success

BIOGRAPHY

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 aftertreatment 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.

Vijay Tharad did his B.Sc. with Maths, Physics, and Chemistry in the year 1965 securing seventh rank, and by virtue of which he was awarded National Merit Scholarship for his Engineering study. He did B.E. in Mechanical Engineering in the year 1969 with First Rank from Osmania University Hyderabad.

From 1969 onwards for past 45 years He served Shriram Refrigeration Industries at Hyderabad, Electronics and Radar Development Establishment at Bangalore, Tata Engineeing and Locomotive Ltd at Jamshedpur, Pune, and Mumbai, Hindustan Power Plus Limited at Hosur, Caterpillar India Private Limited at Chennia & Thiruvallur in various capacities and had received certificate of Excellence for outstanding services, achievements, contribution for parts marketing, outstanding performance in inventory control, remarkable role in the field of education and training of employees of Caterpillar India Private Limited at their plant at Hosur, Thiruvallur, and Engineering Design centre at Chennai.

To consolidate, He is an engineer with more than 45 years of experience in various disciplines and have worked in most admired engineering companies of India Telco and multinational company Caterpillar. During these 45 years he had traveled vastly every corner of India and had business tour to USA, Japan, England, Europe, Singapore, Malaysia and Middle East.

DR. VIJAY THARAD

Dr. Sasikumar Gurumoorthy M.E.,Ph.D
Professor, Program Coordinator BOS,
Department of Computer Science and System Engineering,
Sree Vidyanikethan Engineering College,(Autonomous) Tirupati - 517102.

MESSAGE

It gives me pleasure to know that IFERP is organizing the International conference on ***"3rd International Conference on Recent Challenges in Engineering and Technology (ICRCET-17)"*** will be held on 12, 13th Sep '17 at ***Annamacharya Institute of Technology & Sciences, Tirupati (AITS-T), Andhra Pradesh.***

I am sure that the interaction of Engineers from the Industry and Academic Institution will go a long way in knowledge sharing to help engineering students to grow and compete globally. The conference will provide a plat form for exchanging ideas and create networks to developed R&D.

I wish the organizers IFERP and AITS- TPT, a success in this wonderful effort also I convey my warm greetings & best wishes to all the participants and a great success

BIOGRAPHY

Dr.Sasikumar Gurumoorthy (born on 10th September 1981) is an Indian academician who is serving as a Professor in the Department of Computer Science and Systems Engineering, at Sree Vidhyanikethan Engineering College in Tirupati, Andhra Pradesh. He is having 11 years of Teaching and 7 years of Research experience. Sasikumar Gurumoorthy is an alumnus of VIT University (VIT), Vellore, Tamil Nadu, India where he completed his Doctoral - Ph.D. (2016) in computer science and engineering. His advisor was Professor Dr.B.K.Tripathy, a famous Indian-born internationally renowned Senior Professor and former Dean from VIT University, Vellore, Tamil Nadu, India. The title of thesis is “Study of Human Brain Signals for Finding Diseases using Soft Computing Techniques”.

Earlier, he obtained his Post Graduation M.E., degree in Computer Science and Engineering from the Anna University, Chennai, India in 2005. His Under Graduation B.E., degree in Computer science and Engineering from the Madurai Kamaraj University, Madurai, Tamil Nadu in 2003. He has held various senior positions such as Head of the Department, Chief Superintend and Assistant Chief Superintend of University Exams. He also serves on the Board of examiners and Board of Studies in Indian Universities.

He has published over 80 Research papers in different International Journals and Conferences, more in the area of Intelligent System and Interactive Computing.

He authored two reference text books, on "Programming in C and Introduction to Data Structures" in the area of UNIX and Windows operating system. He has started guiding many research scholars across the world. He has visited London (U.K). His team of researchers is from Finland, USA, UK, Australia, Malaysia, Singapore and Canada. The team is working on several projects utilizing grants from several organizations across the world. He will be roaming around the world as a resource person or speaker for Conferences and Workshops. He would like to contribute as Invited Speaker, keynote speaker, session chair or for special sessions in conferences and workshops. Also,

He would like to be an active member in workshops chairs, program committee board or in reviewing panel of research paper for Conference and Journal. He is a Life Member of CSI-Computer Society of India, IAENG International Association ofEngineers, ISTE-Life Member Indian Society for Technical Education, AIRCC- Academy & Industry Research Collaboration Center, IACSIT-International Association of Computer Science and Information Technology, IDES-Life Member, The Institute for Doctors Engineers and Scientists, IFERP-Institute for Engineering Research and Publication, WASET-World Academy of Science Engineering and Technology, INEER-International Network for Engineering Education and Research.

He is involved in organizing a number of Research Projects Proposals and workshops, Conferences, Faculty Development Program on topics covering Computer science and research activities. He has lectured extensively in these areas both in India and abroad. He has been a member of editor Board of several Journals in the areas of Computer Science. He organized a number of conferences, workshops in Computer science in J.J. College of Engineering and Technology, Kurinji college of Engineering and Technology, VIT University, Dayananda Sagar College of Engineering and Sree Vidyanikethan Engineering College; in the past eleven years, he conducted similar courses in CCNA, FOSS, Computer Hardware, and SAP in around Tamilnadu.

He is serving as a mentor for the Institute for Research and Development India-IRD and IFERP. For his outstanding contributions in the Wipro-Misson10X has been awarded In Pursuit of Excellence in Engineering Education through Innovation (in 2009) and in the WCE 2010 Best Research Paper award (in 2010,London,UK) by the International Association of Engineers. He has received Research Grant from DST-CSRI to work on "Intelligent System to Classify Human Brain Signals for finding Brain Diseases".

His research interests are in the areas of Soft Computing and Artificial Intelligence in Biomedical Engineering, Human and Machine Interaction and applications of intelligent system techniques, New user interface, brain-based interaction, human-centric computer.

Area of Specialization: Soft Computing and Artificial Intelligence in Biomedical Engineering, Human and Machine Interaction and applications of intelligent system techniques, brain-based interaction, human-centric computing, Fuzzy Sets and Systems, Image Processing, Cloud Computing, Cognitive Computing, Content based learning and Social Network Analysis.

Dr. SASIKUMAR GURUMOORTHY

ICRCET-17

3rd International Conference on Recent Challenges in Engineering and Technology

Tirupati, Andhra Pradesh, 12th – 13th September 2017

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ABSTRACTS

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Field Investigation on Wall Facing Deformation of Mechanically Stabilized Earth (MSE) Walls Constructed using Cement Modified Marginal Soil with Built-In Facing

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Abstract:--

It appears that the reasonable way of providing a realistic approach for Mechanically Stabilized Earth (MSE) walls is to construct model walls in the field and study their performance at failure. Hence, it was decided to study the behaviour of model MSE walls constructed using conventional (standard) backfill and marginal soils. This study was undertaken to investigate the mechanism, qualitative behaviour and potential benefits of using cement modified marginal backfill soils under cyclic loading. A field study was undertaken to evaluate the performance of model non–woven geotextile reinforced MSE walls constructed using locally available marginal backfill soils without and with cement modification. In the present study, an attempt was made to make a built–in soil cement facing out of same backfill soil with extended reinforcement into it, which is folded back within the lift thickness. As this type of built–in facing that does not involve the connection problems and tried as an alternative to conventional facing panels. The facing deformations were measured using dial gauges during load testing. The load testing was continued until failure of the respective walls was reached.

Keywords:--

Mechanically Stabilized Earth; Marginal soils; Geotextile; Wall Deformations

Feature Vectors Generation for Mammogram Classification based on 2-D GLCM Matrix

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Abstract:--

Earlier is the diagnosis of a disease; better is the rate of recovery. So far as the fatal disease like breast cancer is concerned, its early diagnosis may lead to improve the rate of care and thereby survival of a patient. Generally, breast cancer detection and analysis starts from capturing the Mammogram of the effected breast region. In this paper, an automated diagnosis scheme has been proposed for detecting the presence/ absence of breast cancer from such mammograms. Suitable pre-processing is applied to input mammogram images. For the feature extraction, the gray level co-occurrence matrix is framed out of the pre-processed image. The AdaBoost technique has been used for the purpose of feature selection. Classification is carried out with the help of the state-of-the-art Random-forest classifier. For the purpose of validation, the mammography image analysis society (MIAS) database has been taken into consideration. Satisfactory classification rate of 94% is achieved through the proposed scheme

Enhancement of Digital Images using Fir Filter

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Abstract:--

Underwater image pre-processing is absolutely necessary due to the quality of images captured under water. When capture such images, quality of images degrade due to many factors like ripples in water, lack of availability of light, organic matter dissolved in water etc and also such images are captured from a very small distance , so the images must be pre-processed before applying any kind of operation on these images. Different filtering techniques are available in the literature for pre-processing of underwater images. The filters used normally improve the image quality, suppress the noise, preserves the edges in an image, enhance and smoothen the image. In this paper comparative analysis of various Filters for such underwater images is presented.

Keywords:--

Underwater image preprocessing, Homomorphic Filter, Anisotropic Filter, Wavelet filter

Novel Speaker Recognition System using GMM

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Abstract:--

A text dependent speaker recognition system can be developed by using MFCC and Vector Quantization in a controlled environment. But MFCC with Vector Quantization cannot be useful for developing a text independent speaker recognition system and also does not provide accurate results. So, the main aim of this paper is to develop a text independent speaker recognition system using MFCC and GMM along with NLMS adaptive filter, such that the input utterance is given in real time using a microphone. NLMS adaptive filter is used to reduce the noise in the speech signal and then passed through the feature extraction phase. It is developed as Text- independent Speaker Recognition System with 50 speakers and also uses the locally recorded database for training. The performance of the proposed system tested in real time using Adaptive filter based on the log likelihood scores.

Keywords:--

NLMS Adaptive Filter, Vector Quantization, Gaussian Mixture Model (GMM), FFT

Simulation of Wireless Sensor Networks Based on Opnetmodeler

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Abstract:--

A Wireless sensor network comprises spatially distributed autonomous devices using sensors to cooperatively monitor physical or environmental conditions at different locations. The OPNET modeler is one of the important simulation tool which helps to validate and evaluate performance of wireless sensor networks. In this study, IEEE 802.15.4/Zigbee wireless communication standard was simulated by use of OPNET modeler. TheREVERBED (OPNET) Academic Edition17.5 simulator was capable of producing correct results and analysis to identify the actual behavior of the real systems.Zigbee is configured in three topologies such as mesh, tree and star topologies which is more advantageous than other wireless communication standards. This paper illustrates the performance of star, tree and mesh topologies supported by Zigbeestandard which make use of OPNET simulator were compared based on parameters end-to-delay and throughput.Fromsimulation results it is observed that the star topology is better compared to other topologies in case of end-to-end delay. Regarding throughput, star and tree topologies gives better performance

Index Terms:--

Wireless Sensor Networks, RIVERBED ,Wireless Network Topologies.

Adaptive Mimo System with Ostbc Using Spatial Diversity and Spatial Multiplexing

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Abstract:--

The advances in wireless technology leads to the simultaneous growth in the field of communication by increasing the data speed with high accuracy .It is a very complex task to increase the requirements of a data rate. So in order to meet these requirements Multiple-Input-Multiple -Output (MIMO) system has been developed. The adaptive system is having the variable number of transmit and receive antennas. Adaptive MIMO system uses an adaption algorithm. The number of transmit and receive antennas will change depending on this algorithm and it shows an Orthogonal Space Time Block Codes (OSTBC). This code helps in improving in improving accuracy and providing high data rates. This can be done by using the two techniques spatial diversity and spatial multiplexing. The frames present in the adaptive system will operate with one, two or three or four transmit and receive antennas. The OSTBC encoder block will encode the information symbols from the QPSK modulator by using the Almouti code .The QPSK demodulator will demodulate the output of the OSTBC combiner .The frame error rate for three transmit and two receive antennas is 0.1999 at 10db and the frame error rate for four transmit and two receive antennas is 0.5107. From the above results it is observed that the three transmit and two receive antennas is better.

Index Terms:--

MIMO, OSTBC, Spatial multiplexing, spatial diversity, FER, SNR

Noma In 5g Sysems by using Mimo Technique

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Dr.Ch.Santhi Rani., Professor & Head Dept Of ECE DMS SVH College Of Engineering, Machilipatnam

Abstract:--

Non orthogonal multiple access (NOMA) is one of the radio access technique for performance enhancement in the next generation in the cellular communication. The orthogonal multiple access technique is well known technique for providing high capacity. NOMA offers desirable benefits, including greater spectrum efficiency. There are different types of NOMA techniques like power domain and code domain .This work mainly focuses on the power domain NOMA which utilizes superposition coding at transmitter and successive interference cancellation at the receiver. Unconventional researchers have taken demonstration that NOMA can be used effectively on both network level and user experienced data rate requirements for 5G technology. From simulation results it is observed that BER is high for Max Doppler shift of 300Hz and BER is least for Dopper shift of 5Hz .S.

Index Terms:--

BER, Doppler effect, NOMA, Power domain

SRAM Architecture With A Full-Swing Local Bitline By Using Cross-Coupled pMOSs

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Abstract:--

In the previous average-8T static random access memory has a competitive area and does not require a write-back scheme. In the case of average8TSRAM architecture, a full-swing local bitline, that can be achieved with a boosted wordline voltage. In this average 8T SRAM Architecture, such as a 22-nm FinFET technology used, where the variation in threshold voltage is large, because of this reason read stability of SRAM degraded. Thus, a full-swing local BL cannot be achieved, resulting in a considerably large read delay and it can store only four bits in one block. To overcome the above disadvantages, in this paper and proposed SRAM architecture with a full swing local BL is proposed. In the proposed SRAM architecture, full swing of the local BL is ensured by the use of cross-coupled pMOSs, and the gate of the read buffer is driven by a full VDD, without the need for the boosted WL voltage. The proposed SRAM architecture that stores 16 bits in one block with achieves with 0.8v minimum voltage and read delay is lesser than that of average 8T SRAM architecture.

Key words:--

Static random access memory (SRAM), FinFET Technology, Cross-coupled pMOSs

Data aggregation and Energy efficient by using COM LEACH protocol in Wireless Sensor networks

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Dr.S. Balaji., Professor Department of Computer Science and Engineering Sunrise University, Alwar, Rajasthan, India

Abstract:--

The routing protocols that are specifically designed for the applications used by Wireless sensor networks, the limited available power of the sensor nodes has been taken into attention in order to increase lifetime of the networks. This paper presents a new version of leach protocol called COM-LEACH (Compound-Low Energy Adaptive Clustering Hierarchy) which aims to increase network life time. We first completely analyzed clustering Routing Protocol LEACH for data aggregation and its deficiencies and proposed COM-LEACH. Here we compose four Leach Architectures and their functionalities to develop new protocol called COM-LEACH. The goal of our work is to design COM-LEACH architecture and protocol that lead to efficient data aggregation and consume less energy.

Index Terms:--

COM-LEACH, clustering Routing Protocols , Data aggregation. Network life time..

Improved Method of Ci Engine Performance using Pongamai Oil for Various Belnds of Biofuel

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Abstract:--

As the luxury factor in transportation increases day by day, the number of vehicles on road increases and so is their emission. Ever depleting petroleum resources push researchers towards the search of new fuels and improved methods of combustion. Biodiesel obtained from vegetable oils and animal fats has comparatively low profile pollutant emissions and can be easily substituted for mineral diesel. Viscosity and density of fuel greatly influences the atomization and vaporization patterns of fuel sprays. At higher temperatures, the viscosity of fuel decreases which enhances the atomization. Better atomization improves the combustion quality of the fuel and hence reduces the HC and CO emission. In these work three blends of pungamia oil with diesel is heated to 60, 70 and 80o C. The preheated fuel is used in direct injection C I engine and the performance curves were obtained. Emission analysis was also done and the emission curves were also presented. The results show that B 20 blend gives good combustion and emission characteristics when heated to 70o C before inlet. The analysis of graph shows that B20 gives better thermal efficiency and low emission characteristics compared to diesel. The NOx emissions were drastically reduced.

Key words:--

Diesel - Pungamia blends,Hydro-Carbons, NOx, Pre-heating, Spray Test.

Islanding Detection and Resynchronization Mode for Microgrid with Upqc using Fuzzy Logic Controller

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Abstract:--

A novel presentation of unified power quality conditioner (UPQC) is a custom power device in distributed electrical power system for improving the power quality in grid connected DG based microgrid/microgeneration(μG) system has been presented here .UPQC has a ability to controlling the complexity of active power and the non-active power under islanded/reconnected mode. UPQC is a combination of series and shunt active power filters are connected back to back with DC Capacitor. The series part of the UPQC is placed before at the Point of Common Coupling (PCC) for mitigating the supply side disturbances like voltage sag/swell, flicker and voltage unbalances etc. The shunt part of the UPQC is used to mitigate the reactive and harmonic problems at Point of Common Coupling (PCC). This proposed system provides smooth control operation of microgrid for interconnected and islanded modes using UPQCμG−IR system with minimum number of switch breakers. This UPQCμG−IR can even works in the occurrence of phase difference between grid and microgrid.The effective operation of UPQC μG−IR for islanded and reconnection modes of results are shown in MATLAB/SIMULINK. by using fuzzy controller.

Investigation on Age Hardening of Aluminium Alloy Using Biological Quenchants

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Abstract:--

In this work the suitability of biological quenching medium for age hardening of aluminum alloy has been investigated. An attempt was made to add different percentages of cow and sheep urine in base quenching media (water) separately to study its effect on the micro structural and mechanical properties of cast aluminum alloy. Cow and sheep urine are supposed to contain rich quantities of sodium, nitrogen, sulphur, manganese, silicon etc., homogeneously present. Test samples of aluminum alloy were age hardened at 4500C, 4000C, 3500C by soaking for one hour and then investigated for different strength parameters. The results showed significant increase in ultimate tensile strength, yield strength and hardness possibly due to above elements present in the cow and sheep urine. Sodium present in the cow and sheep urine could be the reason for grain refinement and silicon along other elements could have helped in interlocking of grain boundaries. The values are in coincidence with recommended values of age hardening of aluminum alloy in base quenching media.

Keywords:--

Age hardening, grain refinement, strength parameter, quenching medium

Dynamics of Ideation, Creativity and Innovation for Enterpreneurship----- A Case Study of A Multinational Company

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Abstract:--

Ideation is the hub of innovation. In this century, the context of business has changed considerably because of globalization, Privatization, and liberalization. Business has become a global village with immense diversity of all nature. This has made ideation process very culture-bound locally , but with extensive global connectivity. Ideation and creativity are the germinating activities for any innovation system. Innovations are rapid and as fast as they change the corporate landscape. Ideation can be defined as the thought process involved in apprehending and expressing a new concept. Creativity on the other hand, is the outcome of the cognitive process of ideation undertaken by individuals and organizations. This paper explains ideation, creativity and innovation methods and process with different models. It helps to understand ideation and creativity process with the case studies of some of the multinational companies. This gives the entrepreneurs to understand the process and develop their business.

Keywords:--

Ideation, Creativity and Entrepreneurship

Power Quality Enhancement in Power System using STATCOM by Fuzzy Logic Controller Technique

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B. Jagadeesh., Lecturer, Eee Department , Jntu Pulivendula

Abstract:--

This paper exhibits another multilevel specific consonant disposal beat width tweak (MSHE-PWM) system based transformer-less Static Synchronous Compensator (STATCOM) system utilizing cascaded H-bridge inverter (CHI) setup. The MSHE-PWM strategy improves both the DC voltage levels and the switching angles, empowering more harmonics to be wiped out without influencing the structure of the inverter circuit. The strategy gives consistent switching angles and direct example of DC voltage levels over the balance list extend. This in turns wipes out the monotonous strides required for controlling the disconnected ascertained exchanging points and in this way, facilitating the usage of the MSHE-PWM for dynamic frameworks. In spite of the fact that the strategy depends on the accessibility of the variable DC voltage levels which can be acquired by different topologies, in any case, the quick development and advancement in the field of energy semiconductor gadgets prompted deliver high proficiency DC-DC converters with a generally high voltage limit and for simplicity, a buck DC-DC converter is considered in this paper. Current and voltage shut circle controllers are executed for both the STATCOM and the buck converter to take care of the reactive power demand at various stacking conditions. The strategy is additionally contrasted and a proportionate traditional transporter based heartbeat width balance (CB-PWM) to outline its upgraded qualities. The adequacy and the hypothetical investigation of the approach are checked through both reenactment and test contemplates.

Keywords:--

Cascaded H-Bridge Inverter (CHI),MSHE-PWM, STATCOM, Reactive power (VAR) Compensation..

Analysis of fuzzy logic controller based dual voltage source inverter to compensate unbalanced and nonlinear loads

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Abstract:--

This paper describes the improvement of power quality and reliability of microgrid system by using dual voltage source inverter (DVSI). The reference currents for this scheme are generated by using ISCT (Instantaneous symmetrical component theory).ISCT makes DVSI to operate in grid sharing and grid injecting modes. This scheme makes the microgrid to exchange power generated by distribution resources (DERs) and also to compensate the local unbalanced nonlinear loads

Keywords:--

Power quality, microgrid,grid connected inverter, Instantaneous symmetrical component theory(ISCT)

Analysis, Design and Implementation of A Single Phase AC-AC Buck Boost Converter

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Abstract:--

This paper presents a performance analysis and implementation of single phase AC-AC Buck Boost Converter. This converter controls the voltage and current delivered to load. The performance of this converter emphasis on the output harmonic content and also on the effective utilization of input voltage. This converter can be used in practical circuits like speed controlling of Induction motor, traction motor control etc. A single phase AC-AC Buck Boost converter is simulated and implemented to demonstrate the converter features

Performance Improvement of Voltage Controlled D-Statcom with Design of External Inductor Using Fuzzy Logic Controller

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Abstract:--

In this work provides a comprehensive study of design, operation, and flexible control of a D-STATCOM operating in voltage control mode. A detailed analysis of the voltage regulation capability of D-STATCOM under various feeder impedances has been discussed. For load voltage regulation a D-STATCOM is used and its performance mainly depends upon the feeder impedance and its nature. A design procedure to compute the value of external inductor has been presented in this work. To compensate load reactive power a dynamic reference load voltage generation scheme is developed which allows D-STATCOM during normal operation, in addition to providing voltage support during disturbances. The fuzzy controller is the most suitable for the human decision-making mechanism, providing the operation of an electronic system with decisions of experts. When the fuzzy controller is used for a nonlinear system allows reduction of uncertain effects in the system control and improves the efficiency. The results have been carried out in MATLAB/SIMULINK

Non-Orthogonal Multiple Access (NOMA) With Beamforming

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Dr.N.Balaji., Professor and Head, Department of ECE,JNTUK University College of Engineering,Narasaraopet, Andhra Pradesh, India

Abstract:--

Non-Orthogonal Multiple Access(NOMA) is one of the promising radio access techniques for performance enhancement in next-generation cellular communications. NOMA offers a set of desirable benefits including high spectral efficiency. BeamForming(BF) is a signal processing technique used in various wireless systems for directional communications. The integration of both NOMA with multiuser BF(NOMA-BF) has the potential to capture the benefits of both NOMA and BF. NOMA with beam forming can exploit the power domain as well as spatial domain to increase spectral efficiency. NOMA-BF system improves the sum capacity, compared to conventional multiuser beam forming system. Due to beam forming, signals from one cluster to the other are suppressed. This paper discusses the performance of NOMA when it is integrated with beam forming techniques.

Modeling and Stability Analysis of a New Transformerless Buck-Boost Converter for Solar Energy Application

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Abstract:--

In this paper a Modeling and Stability analysis of a new transformerless buck-boost converter with simple structure is proposed. The normal buck-boost converter has simple structure and high efficiency. The disadvantage of the normal converter is restricted voltage gain, Output voltage is negative, floating power switch, discontinuous input and output currents. For eliminating the disadvantages of the normal converter, a new transformerless buck-boost converter is proposed. The proposed converter consists of two power switches, two inductors and two capacitors and one resistive load. In the proposed buck-boost converter, the two power switches operate simultaneously. The proposed convertergives the voltage gain is squared times of the normal converter which make it suitable for solar energy applications. Thevoltage gain, voltage stress, small-signal model and stability for the proposed converter operating in continuous conduction mode (CCM) are analyzed. To improve the stability of the proposed converter, a PI controller is used in the feedback. Theproposed new transformerless buck-boost converter circuit is simulated inMATLAB/ SIMULINK..

An Improved Maximum Power Point Tracking of Three Phase Grid Connected Based on Robust Nonlinear Controller

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Abstract:--

This paper presents a robust nonlinear controller design for a three-phase grid-connected photovoltaic (PV) system to control the current injected into the grid and the dc-link voltage for extracting maximum power from PV units. The controller is designed based on the partial feed back linearization approach, and the robustness of the proposed control scheme is ensured by considering structured uncertainties within the PV system model. An approach for modeling the uncertainties through the satisfaction of matching conditions is provided. The superiority of the proposed robust controller is demonstrated on a test system through simulation results under different system contingencies along with changes in atmospheric conditions. From the simulation results, it is evident that the robust controller provides excellent performance under various operating conditions.

Keywords:--

Grid-connected PV system, matching conditions, partial feedback linearization, robust nonlinear controller, structured uncertainty

Design and Implementation of Modern Car Parking System Using Micro Controller And Smart Intelligent Application System Techniques

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Abstract:--

Now days in many multiplex systems there is a severe problem for car parking systems .There are many lanes for car parking, so to park a car one has to look for the all lanes. Moreover there is a lot of men labor involved for this process for which there is lot of investment. So the need is to develop a system which indicates directly which lane is vacant. In this Electronics and communications project we have to use the equipments of microcontroller, Infrared transmitters and infrared receivers for each and every parking slot, IR receivers should be connect to the microcontroller. Here we are using infrared communication because it can support LOS (line of sight communication), and while enter into gate for parking there is the display to get the information regarding which line is empty. This information gives the microcontroller. The microcontroller first give the information to the IR transmitter then it gives to the IR receiver then this information show on the display, so by this process the parking is easy process. So the traffic can be reduced in the parking place of the theatres, multiplex, and in large industries and in commercial places. Use of automated system for car parking monitoring will reduce the human efforts. Display unit is installed on entrance of parking lot which will show LEDs for all Parking slot and for all parking lanes. Empty slot is indicated by the respective glowing LED. All the above process is the back end process to make it more modern application which can make it more easier to achieve the great success using Internet of Things is more useful. This system is effectively in use in most of the European countries and many of the American states. This design is mainly comprised of low manual operation as well as efficient equipment can the commercial, industrial, apartments, institutions/ universities, etc.. Hence it is a low cost apparatus as it mainly uses a microcontroller which is programmable, which is easy to

Keywords:--

LOS (line of sight communication), IR (Infrared), LED (Light Emitting Device).

An Experiment on Effect of Mineral Admixture In Coconut Shell Concrete

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Abstract:--

The demand to make this material lighter has challenged scientists and engineers alike. The challenge in making a lightweight concrete is decreasing the density while maintaining strength and without adversely effecting cost. One such alternative is coconut shell (cs), as coarse aggregate in the production of concrete. Even though coconut shell possesses several desirable properties, its relative low tensile strength and deformation properties prompted many researches to work on to improve these properties. One such development of improving or modifying the properties of concrete is by supplementing the mineral admixtures with coconut shell concrete. Experimental investigations and analysis of results were conducted to study the compressive and flexural strength behavior of concrete with varying percentage of mineral admixtures. The concrete mix adopted were m25 with varying percentage of mineral admixtures ranging from 2%, 4%, 6%, 8%, 10%, 12%, 14%, 16%, 18%, 20%, 22%, 24%, and 26%. On the analysis of result the concrete with mineral admixtures in coconut shell had improved performance as compared to the ordinary concrete.

Keywords:--

Coarse aggregate, coconut shell, mineral admixtures, silica fume confinement; steel; coconut shell; quarry dust; concrete; mechanical properties.

Viscous and Joule's dissipation effects on Bio-convection MHD Casson Radiative Fluid Flow Over a Stretching Sheet with Slip Condition.

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N.Kishan., Department of Mathematics, Osmania University, Hyderabad. Telangana

Abstract:--

The present work deals with an investigation of steady two dimensional flow of analyzed slip effects of viscous, joules dissipation, inclined magnetic field Casson fluid flow containing both nanoparticles and gyrotactic microorganism with analyzed on heat, mass, concentration and motile microorganism. The governing partial differential equations (PDEs) are complex and highly non-linearized. These equations are transfigured to system of ordinary differential equations (ODEs) using suitable transformations. These equations are solved by using shooting technique with Runge-Kutta-Fehlberg method. Further interesting aspects of viscous dissipation, magnetic parameter, Radiation parameter, Lewis number, peclet number and Joule heating on the non-dimension velocity, temperature, concentration, the distribution of motile microorganisms are examined. The results are obtained from the skin friction coefficient, local Nusselt number and local Sherwood number are computed and explicated through tables as well as graphs.

Keywords:--

Viscous dissipation, joule's dissipation, MHD, Casson fluid.

Multi-Channel three-Dimensional Probability CSMA Protocol of Analysis with Monitoring Function for WSN

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Abstract:--

In cloud computing, security and storage space management techniques are most important factors for improving the performance of cloud computing. Secure deduplication is a technique for eliminating duplicate copies of storage data, and provides security to them. To reduce storage space and upload bandwidth in cloud storage deduplication has been a well-known technique. For that purpose convergent encryption has been extensively adopt for secure deduplication, critical issue of making convergent encryption practical is to efficiently and reliably manage a huge number of convergent keys. The basic idea in this paper is that we can eliminate duplicate copies of storage data and limit the damage of stolen data if we decrease the value of that stolen information to the attacker. This paper makes the first attempt to formally address the problem of achieving efficient and reliable key management in secure deduplication. We first introduce a baseline approach in which each user holds an independent master key for encrypting the convergent keys and outsourcing them. However, such a baseline key management scheme generates an enormous number of keys with the increasing number of users and requires users to dedicatedly protect the master keys. To this end, we propose Dekey, User Behavior Profiling and Decoys technology. Dekey new construction in which users do not need to manage any keys on their own but instead securely distribute the convergent key shares across multiple servers for insider attacker. As a proof of concept, we implement Dekey using the Ramp secret sharing scheme and demonstrate that Dekey incurs limited overhead in realistic environments. User profiling and decoys, then, serve two purposes. First one is validating whether data access is authorized when abnormal information access is detected, and second one is that confusing the attacker with bogus information. We posit that the combination of these security features will provide unprecedented levels of security for the deduplication in insider and outsider attacker.

Keywords:--

De duplication , proof of ownership, convergent encryption, key management, decoy technology.

The Mechanical / Chemical Properties / SEM Analysis of Natural Reinforced Hybrid Composites

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Dr. Y. Hari Prasada Reddy., Professor of ME, Dept of ME

Abstract:--

The chemical, impact, tensile properties of Bamboo/Grass/Onion fibres reinforced polyester hybrid composites were studied. The effect of alkali treatment for Bamboo/Grass/Onion fibres on these properties was also studied. It was absorbed that tensile properties of hybrid composites increase with bamboo fibre content. These properties found to be higher when alkaline treated bamboo fibres were used in the hybrid composites. The elimination of amorphous hemi – cellulose with alkali treated leading to higher crystallinity of the bamboo fibres with alkali treatment may be responsible for these observations. The effect of alkali treatment on the bonding between Bamboo/Grass/Onion fibres was also studied. The chemical resistance of Bamboo/Grass/Onion reinforced polyester composites to acetic acid, nitric acid, hydrochloric acid, sodium hydroxide, sodium carbonate, benzene, toluene, carbon tetrachloride and water was studied. The bonding between fibres and matrix was studied by metallographic (Scanning Electron Microscope) analysis.

Voltage and Power Flow Control of Grid Connected Dual Voltage Source Invert

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Abstract:--

This paper presents a dual voltage source inverter (DVSI) scheme to enhance the power quality and reliability of the micro grid system. The proposed scheme is comprised of two inverters, which enables the micro grid to exchange power generated by the distributed energy resources (DERs) and also to compensate the local unbalanced and nonlinear load. The control algorithms are developed based on instantaneous symmetrical component theory (ISCT) to operate DVSI in grid sharing and grid injecting modes. The proposed scheme has increased reliability, lower band width requirement of the main inverter, lower cost due to reduction in filter size, and better utilization of micro grid power while using reduced dc-link voltage rating for the main inverter. These features make the DVSI scheme a promising option for micro grid supplying sensitive loads. The two ology and control algorithm are validated through extensive simulation

Keywords:--

Dual Voltage Source Inverter (DVSI), Distributed Energy Resources (DERs), Instantaneous Symmetrical Component Theory (ISCT)

Novel Analysis on Placement of Energy Storage Systems in Power Systems with Wind Integration

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Abstract:--

This paper examines the problems posed by wind integration for power system operation. For example this kind of energy source is practically flexible and unstable. The establishment of this in exhaustible source might require the grid to transmit power at full capacity and some transmission lines could wind increasing noticeably congested. Accordingly, some working conditions, wind power could be curtailed (spilled or minimized) which will drive up expenses for system administrators. One of the activities that can be taken to support the incorporation of wind is utilizing energy storage systems (ESSs). For this purpose particle swarm optimization (PSO) power flow problem with energy storage systems is implemented and sets of candidate buses for energy storage systems installation are recognized based on financial criterion to minimize the cost. Tests are performed on IEEE 14-bus and IEEE 118-bus systems to evaluate the robustness of storage location on system operation.

Index Term:--

Curtailed wind, Energy Storage Systems(ESSs), LMPs, Location, particle swarm optimization (PSO) Production Cost Wind Integration.

Voltage Regulation of Transmission Line using Adaptive Neuro Fuzzy Inference System (ANFIS) Control of STATCOM

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Abstract:--

STATCOM will contribute quick and effective reactive power support to require care of line voltage stability. In literature, several applications of proportional-integral (PI) of assorted STATCOM management ways in which area unit mentioned. However, these previous works get a impression model supported associate degree adaptative PI controller constants are optimized for voltage stability thanks to interaction of load disturbances and input power disturbances. This paper has the intention to a brand new management model supported as sociate degree Adaptive Neuro Fuzzy Inference System(ANFIS) to tune the criterion of STATCOM controller for dominant the reactive power demand to steady the voltage variation, like totally different amendment of initial management gains, transmission network, consecutive disturbances, a severe disturbance and totally distinct load levels. A simulink model of associate degree ANFIS STATCOM management has been taken for the analysis victimization simulation in MATLAB computer code.

Index Term:--

Adaptive PI management, ANFIS management, Reactive Power Compensation, STATCOM, Voltage Stability

Enhancing the Performance of Coverage-Based Techniques in Test Case Prioritization

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Abstract:--

This paper presents a novel method based on coverage techniques using closed functional dependency structure. Test cases are grouped in clusters from functional Dependency. Closed functional dependency structure is applied to arrange test case in each cluster, Test case prioritization is done from function-coverage information. Results demonstrate that, proposed method performs better, when compared to code coverage technique and some other coverage techniques in test case prioritization. Moreover, current approach capitulate average percentage of fault detection (APFD) of 97% and 0.8363 of coefficient of determination in correlation which enhances the performance of coverage-based techniques.

Index terms:--

Regression Testing, Dependency Structures, Clustered Technique, Test Case Prioritization, Function Coverage Techniques.

A Power Quality Improved Bridgeless Converter with fuzzy logic controller Based Computer Power Supply

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Abstract:--

In this paper Poor power quality, moderate dynamic reaction, high gadget stretch, consonant rich, occasionally thick, peaky, mutilated info current are the significant issues which are every now and again experienced in traditional switched mode power supplies (SMPSs) utilized as a part of Personal Computers (PCs). To relieve these issues, it is proposed here to utilize a non-secluded bridgeless buck-support single ended primary inductance converter inductance converter (SEPIC) in intermittent conduction mode (DCM) at the front end of a SMPS. The bridgeless SEPIC at the front end gives solidly controlled output dc voltage even under successive information voltage and load varieties. The output of the front end converter is connected with a half scaffold dc-dc converter for seclusion and furthermore to obtain distinctive dc voltage levels at the heap end that are required in a PC. Controlling a solitary output voltage can direct the various dc output voltages also.

Index Terms –

Index Terms:--

Bridgeless converter; input current; computer power supply; voltage; power quality.

Simultaneously Control the PMSG Based Wind Turbines for Power Oscillation Damping and System Inertial Response

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Abstract:--

To improve the power oscillation damping capability and inertial response during transient events, this in-vestigation is considered to be an improve active-power control for changeable-speed wind turbines. The OPPT controller, which the operating point of turbine shifts from the MPPT (Maximum Power Point Tracking) curves to the VIC curves according to the frequency-deviation, it emits the "hidden" kinetic energy and offer dynamic-frequency support toward the electrical grid. The proposed system was modeled and simulated in MATLAB/Simulink environment. At this point fuzzy logic is used for controlling and comparing with PI controller, it simultaneously provide the dynamic frequency support and injects the maximum-power to electrical- grid.

Keywords:--

Dynamic frequency support, MPPT (Maximum Power Point Tracking), PMSG (Permanent Magnet Synchronous Generator), Optimized Power Point Tracking (OPPT), Virtual Inertia Control (VIC).

Design and Implementation of a Novel Multilevel DC–AC Inverter

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R Rajesh, Lecturer, Sree Vidyanikethan Engineering College, Tirupathi

Abstract:--

In this paper, a novel multilevel dc–ac inverter is pro-posed. The proposed multilevel inverter generates seven-level ac output voltage with the appropriate gate signals' design. Also, the low-pass filter is used to reduce the total harmonic distortion of the sinusoidal output voltage. The switching losses and the voltage stress of power devices can be reduced in the proposed multi-level inverter. The operating principles of the proposed inverter and the voltage balancing method of input capacitors are dis-cussed. Finally, a laboratory prototype multilevel inverter with 400-V input voltage and output 220 Vrms/2 kW is implemented. The multilevel inverter is controlled with sinusoidal pulse-width modulation (SPWM) by TMS320LF2407 digital signal processor (DSP). Experimental results show that the maximum efficiency is 96.9% and the full load efficiency is 94.6%.

Index Terms:--

DC–AC inverter, digital signal processor (DSP), maximum power point tracking (MPPT), multilevel.

Design and Implementation of Real time Wireless Sensor Networks based multi patient health care monitoring system

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Abstract:--

In a hospital health care monitoring system it is necessary to constantly monitor the patient's physiological parameters. For example a pregnant woman parameters such as blood pressure (BP) and heart rate of the woman and heart rate and movements of fetal to control their health condition. This paper presents a monitoring system that has the capability to monitor physiological parameters from multiple patient bodies. In the proposed system, a coordinator node has attached on patient body to collect all the signals from the wireless sensors and sends them to the base station. The attached sensors on patient's body form a wireless body sensor network (WBSN) and they are able to sense the heart rate, blood pressure and so on. This system can detect the abnormal conditions, issue an alarm to the patient and send a SMS/E-mail to the physician. Also, the proposed system consists of several wireless relay nodes which are responsible for relaying the data sent by the coordinator node and forward them to the base station. The main advantage of this system in comparison to previous systems is to reduce the energy consumption to prolong the network lifetime, speed up and extend the communication coverage to increase the freedom for enhance patient quality of life. We have developed this system in multi-patient architecture for hospital healthcare and compared it with the other existing networks based on multi-hop relay node in terms of coverage, energy consumption and speed.

Keywords:--

Patient; Blood pressure; Hospital healthcare; Wireless body sensor network; Energy consumption; End-to-end delay

Fuzzy Controller Forcirculating Current In Parallel Three Phase PWM Converters Under Generalized Unbalanced Operating Conditions

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Abstract:--

The use of common dc-linkparallel three-phase PWM converter topology owing to advanced features & applications has become more popular,This paper proposes another control scheme forparallel three phase pulse width modulation (PWM) convertersunder generalized lopsided working conditions. When three-phase PWM converters are connected in parallel there exist circulating current, which result in current distortion and harmonic loss in parallel module and degrade the overall performance of the parallel system. An averagemodel of the parallel system in positive-sequence synchronousreference frame (PSRF) is derived to dissect the impact of generalized unequal working conditions in AC side. It is seenthat the variance in network frequency &the unbalance factors in filter inductancewon't just offer ascent to negative- sequence circulating current, additionally add to creating zero-sequence circling current (ZSCC) with the coupling between the active-reactive system.The negative-sequence circling current can be restrained by suppressing the negative-sequence parts in AC output currents of parallel modules with a proportional integral resonant(PIR) controller. An enhanced feed forward system and a fuzzy controller for ZSCC control are proposed for unequal working conditions. The unsettling influences in ZSCC caused by unbalance factors in filter inductance can be rejected with feed forward methodology. The proposed plan with a PIR, Improved feed forward & fuzzy controllercan successfully stifle the circulating currents between the parallel modules and therefore, the distortions in output currents can be enormously diminished.

Parallel three-phase PWM converter & Average model in PSRF mode, Generalized unequal operating conditions, Circulating current control, PIR & Improved feed forward with fuzzy logic controller..

Keywords:--

Parallel three-phase PWM converter & Average model in PSRF mode, Generalized unequal operating conditions, Circulating current control, PIR & Improved feed forward with fuzzy logic controller..

Control of Renewable Power generation systems using the synchronous power controller

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Abstract:--

In this paper presents the expanding measure of renewable power generation systems is a testing issue for the control and operation of the electrical systems. One of the principle issues is their absence of idleness, which is turning into a more prominent issue as much as the share of the power plants in view of customary synchronous generators gets decreased. In such manner the new system codes request that these plants give new functionalities, for example, the frequency support and dormancy imitating. A synchronous power controller for system connected converters is proposed as a decent answer for the renewable generation systems with energy storage. It gives latency, damping and adaptable droop qualities. Not quite the same as the reliable replication of the swing condition of synchronous machines, an option control structure is proposed, by which the damping and inherent droop slope can be series freely to meet the requirements in both progression and frequency directions

Shear Strength of Beam U-wrapped with Symmetrical Angle Ply

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Shashikant Duggal , Professor, Civil Engg Department, MNNIT, Allahabad.

Abstract:--

U-wrapped externally bonded Glass Fiber Reinforced Polymer (GFRP) provides a valuable alternative for strengthening of shear deficient beams. The effect of GFRP laminates up to three laminas for strengthening the beams in shear has been studied. The GFRP laminate (00/450/450/00) was wrapped in U-fashion on the beams, to ascertain its suitability for strengthening the beams. Beams, U-wrapped with GFRP all along the span, were tested by four-point loading. The results of the experimental program were validated using the software ANSYS. It has been found that considerable enhancement of shear strength can be achieved for shear deficient beams wrapped with GFRP laminates.

Performance Evaluation of Multi Input DC-DC Buck-Boost Converter

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Abstract:--

Now a day with an increase in demand there is a lot of improvements in renewable energy systems. This paper presents a multi input DC-DC Buck-Boost converter. In this paper multi input sources like fuel cell, battery, and PV cell are considered. By varying the duty ratio of the switches the performance of the converter is improved with an increase in efficiency. To validate the results the converter is simulated and implemented.

Effect of Process Parameters on MRR And Surface Roughness In Turning Process of En8 Steel

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Abstract:--

Good surface finish and better material removal rate are desired for the proper functioning of produced parts. It was seen that the desired surface roughness and material removal rate were not obtained consistently in turning of EN 8 steel applications. These higher values of surface roughness results in rework and increasing cost, hence the main objective is optimization of surface roughness and material removal rate. A general optimization of surface roughness and material removal rate are necessary for the most of manufacturing industry. The surface quality and material removal rate are influenced by cutting speed, feed rate and depth of cut and many other parameters. In this experimental work optimum process parameters and the effect of machining parameters like spindle speed, feed and depth of cut on material removal rate and surface roughness are investigated . An L9 orthogonal array (mixed level design), analysis of variance (ANOVA) and the signal to noise (S/N) ratio are used in this study. Mixed levels of machining parameters are used and experiments are done on conventional lathe machine. EN8 steel material is used for manufacturing of shafts, studs, keys, general purpose axles etc. The most significant parameters for material removal rate are depth of cut, speed and least significant factor for MRR is Feed. For surface roughness speed, depth of cut are the most significant parameters and least significant factor is feed rate

Power Quality Conditioner Functionality By Using A Single Phase Voltage Controlled Grid Connected Photovoltaic System

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Vimala kumar.k, Assistant professor, EEE Department , JNTU University Pulivendula

Abstract:--

This paper proposed method is solved by using voltage controlled converter. This voltage converter acts like a shunt controller .It is used to improving the voltage quality in case of small voltage dips for nonlinear loads. Shunt controller are used as static var generator for giving un fluctuating and improved the voltage profile in power system and to minimizing the current harmonics and unbalanced load current. This paper presents a single-phase photovoltaic system that provides grid voltage support and minimization of harmonic distortion. by using repetitive controller. In this paper, the photovoltaic inverter not only supplies the power produced by the PV panels but also improves the voltage profile. The presented method using repetitive controller that is able to minimize the selected harmonic. This type of modeled PV system provides grid voltage support at fundamental frequency and compensation of harmonic distortion.

Keywords:—

MPPT Algorithms, shunt controller, single phase inverter

Fuzzy Logic Control of a Hybrid-STATCOM with Wide Compensation Range and Low DC-Link Voltage

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Abstract:--

This paper proposes a Fuzzy logic controller based hybrid static synchronous compensator (crossover STATCOM) in a three-phase control transmission system that has a wide remuneration range and low DC-connect voltage. As a result of these noticeable attributes, the system expenses can be significantly lessened. In this paper, the circuit setup of hybrid STATCOM is presented first. Its V-I characteristics is then broke down, examined, and contrasted and conventional STATCOM and capacitive-coupled STATCOM (C-STATCOM). The system parameter configuration is then proposed on the premise of thought of the reactive power pay range and shirking of the potential reverberation issue. From that point forward, a control methodology for hybrid STATCOM is proposed to permit operation under various voltage and current conditions, for example, lopsided current, voltage plunge, and voltage blame. At last, reproduction and test comes about are given to confirm the wide pay range and low DC-interface voltage attributes and the great dynamic execution of the proposed mixture STATCOM.

Keywords:—

Capacitive-coupled static synchronous compensator (C-STATCOM), hybrid static synchronous compensator (hybrid-STATCOM), static synchronous compensator (STATCOM), wide compensation range, low DC- link voltage

Evaluation of Mechanical Properties of Cordia Dichotoma Based Natural Fibre/Epoxy Composite

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Abstract:--

These days, plastics and synthetic fiber composites are growing remarkably due to their wide range of domestic applications. However, it is more evident that the environment is considerably stressed and damaged due to their non degradable plastic and synthetic essence. In recent years, natural fibre composites have gathered much research attention as reinforcing components owing to their affluent mechanical properties. So far, various natural fibres like sisal, bamboo, banana, flax, kenaf and coir were used as reinforcements and more such natural fibers with outstanding properties, can be a considerable breakthrough. One such fibre with proven bio-medical properties is Cordia dichotoma where in this work; its fibers were used as reinforcement to fabricate the composite. Hand-layup technique has been used for preparing the specimens with an increasing fiber weight of 5, 10, 15, and 20 gms respectively. They were cut as per the ASTM standards. Further they were tested for Tensile and flexural strengths using Instran Testing Machine (UTM). They depicted a regular trend of an increase in properties with fiber weight of 20grams.Tensile and flexural tests revealed 23.41MPa and 103.48 Mpa of tensile and flexural strengths respectively. Morphology of tensile and flexural specimens was carried out to observe the interfacial bonding using scanning electron microscope (SEM)

Index Items:—

Composites, Epoxy, Natural fibers, Mechanical Properties, UTM

Development of 2D-nanolayered ws2 reinforced Aluminium Nano composites

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Abstract:--

The proposed project deals with composite materials, which involving the tungsten disulfide and aluminum alloy, aluminum compositions.The possibility of the research work is the development of 2D WS2 reinforced aluminum nanocomposites are synthesized through the powder metallurgy process. The reinforcement of aluminium and aluminium-based alloys by 2D Nano material like graphene is well established, while the lubricating properties of 2D-nanolayereed-WS2 and MOS2 are also well known. Some preliminary work carried out at ARCI (International Advanced Research Center for Powder Metallurgy & New Materials, Hyderabad) has shown promising results in terms of reinforcing abilities of 2D-WS2. The proposed project will explore the possibility of reinforcing aluminium and aluminium alloys e.g. such as age hardenable AL-CU by different grades of 2D-nanolayered WS2 as synthesized by a novel route developed by ARCI. These reinforced alloys are tested for their strength as well as lubricating properties by evaluating hardness. The performance of the alloys are correlated in various processing parameters, microstructural features and residual stress distribution as ascertained from electron microscopy and micro-area x-ray diffraction techniques.

Reliability Analysis of Frames

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Abstract:--

In this paper, reliability analysis of framedstructures are considered. Here, the uncertainties in geometry, loads and strength are considered with required distributions. The performance functions for bending stress, shear stress and deflection are derived from the finite element analysis. The performance functions are studied using Rackwitz-Fiessler algorithm and Hasofer-Lind reliability index is determined. A MATLAB program is developed for computing reliability index by using performance function and the statistical data.

Keywords:—

Reliability Analysis; Rackwitz-Fiessler Algorithm; Reliability Index; Probability of failure

Fuzzy Logic Control of a Multi-Level Converter with a Floating Bridge for Open-Ended Winding Motor Drive Applications

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Abstract:--

This paper presents a fuzzy logic controller based double three phase open end winding enlistment motor drive. The drive comprises of a three phase enlistment machine with open stator phase windings and double bridge inverter provided from a solitary DC voltage source. To accomplish multilevel output voltage waveforms a floating capacitor bank is utilized for the second of the double bridges. The capacitor voltage is directed utilizing redundant switching states at half of the fundamental dc link voltage. This specific voltage proportion (2:1) is utilized to make a multi-level output voltage waveform with three levels. An adjusted modulation plot is utilized to enhance the waveform nature of this double inverter. This paper additionally analyzes the misfortunes in double inverter system interestingly with single sided three-level NPC converter.

Index Terms:—

Field oriented control, floating bridge, Open End Winding Induction Machine (OEWIM), space vector.

A Unified Control Strategy for Three-Phase Inverter in Distributed Generation using fuzzy controller

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Abstract:--

This paper is to propose a unified control strategy for DG in both grid-tied and islanded modes, which is represented by the current reference generation module. The proposed control strategy composes of an inner inductor current loop, and a novel voltage loop in the synchronous reference frame The contribution of this module can be summarized in two aspects. First, by introducing PI compensator and P compensator in D-axis and Q-axis respectively, the voltage controller is inactivated in the grid- tied mode and can be automatically activated upon occurrence of islanding. Therefore, there is no need for switching different controllers or critical islanding detection, and the quality of the load voltage during the transition from the grid-tied mode to the islanded mode can be improved. The second contribution of this module is to present the load current feed forward to deal with the issue caused by the nonlinear local load, with which, not only the waveform of the grid current in grid-tied is improved, but also the quality of the load voltage in the islanded mode is enhanced. Finally the effectiveness of the proposed control strategy and fuzzy control are validated by the simulation results.

Implementation of Narrowband Conventional and Adaptive Beamformers for Smart Antenna Systems

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Abstract:--

This study presents three important narrow band Beamformers for smart antennas; conventional phases shift, adaptive Minimum Variance Distortion less Response Beamformer (MVDR) and adaptive Linear Constraint Minimum Variance Beamformer (LCMV). The conventional phases shift beamformer in presence of strong interference signals we cannot exactly extract the signal content. Based on the received signal weight vector these beamformers form beam pattern. In self-nulling condition LCMV beamformer is efficient than the MVDR beamformer even though the interference signal direction is close to the desired signal direction. The nine elements uniform linear array (ULA) with λ/2 element spacing smart antenna is used in our simulation program.

Index Items:—

LCMV, MVDR, Narrowband Beamformer, Smart antenna, ULA.

A Preliminary Study about an Emerging Approach in Cryptography: Quantum Cryptography

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Abstract:--

The word cryptography is the artwork of mystery writing. Generally, humans consider cryptography because the art of mangling data into obvious unintelligibility in a way permitting a secret technique of untangling. The fundamental provider supplied by cryptography is the potential to send data among members in a manner that others can't read in a right format. Here we will give attention to the sort of cryptography this is based on representing information as numbers and mathematically manipulating those numbers. And we have various encryption techniques to send data in a cryptographic manner. Here we have an emerging technology for this new era called Quantum cryptography. The first-rate and famous instance of quantum cryptography is the quantum key distribution which gives an information-theoretically comfy method to the important thing change trouble. Presently used famous public-key encryption and signature schemes may be damaged by using quantum adversaries. The benefit of quantum cryptography lies in the truth that it permits the completion of diverse cryptographic responsibilities which can be established or conjectured to be not possible the usage of simplest classical (i.e. non-quantum) verbal exchange. This paper deals with the detailed technology and different methods discussed in detail.

Keywords:—

Cryptography, Encryption, Decryption, Quantum Cryptography

A Modified Bridge-Type Fault Current Limiter for Fault Ride-Through Capacity Enhancement of Doubly Fed Induction Machine-Based Wind Generator

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S .Hussain Vali., assistant proffessor, EEE Department ,JNTU University Pulivendula

Abstract:--

Transient stability is a very crucial aspect for doubly fed induction machine (DFIM). A DFIM-based system is adversely operated because of faults as the stator of generator is linked with the power grid. However , there is a requirement for the wind generator need to be connected even during fault conditions it helps there is an increment in fault ride through capacity of DFIM . Therefore, it is much crucial to increase the transient stability of the DFIM-based wind generators. To get enhanced transient stability of the DFIM, a bridge-type fault current limiter (BFCL) is suggested In this work along with the fuzzy logic controller. Fuzzy controller responds faster than conventional PI controller for grounded as well as ungrounded faults. which were performed on test system to verify the effect of the BFCL in transient stability enhancement. Simulations were conducted in MATLAB/SIMULINK domain.To illustrate the presentation of the proposed BFCL with fuzzy controller , its performance is compared with that of the conventional PI controller. Simulation results gives the information that the BFCL with fuzzy controller is a very efficient than BFCL with normal PI controller.

A Study on Customers' Perception towards Credit Cards

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D. Durga., Assistant Professor, GRT Institute of Engineering & technology, Tiruttani.

Abstract:--

A credit card is a payment card issued to users (cardholders) to enable the cardholder to pay a merchant for goods and services. In present scenario credit card is more dominant at everywhere as well as card holder's daily life. All the working employees and self-employed who have the regular monthly income are eligible to get a credit card. It offers more benefits to card holders while using of that credit card. So the present study attempted to analyze the customer's perception and awareness towards credit cards. The data was collected using convenience sampling. The study finds that the present generation is using credit cards for cardholder's needs –instead of using cash- due to the reason it is easy to handle, zero interest rate for a certain period and the global acceptance of all the Public Sector Banks and Private Sector Banks.

Index Terms:--

Cardholder, Perception, Credit Card

AI In Cyber Security

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Abstract:--

Today cyber security is something which can't be handled by human security analysts alone. They need some degree of automation in this area and this is where AI(Artificial Intelligence) comes into the picture. A machine has the ability to exhibit advanced cognitive skills to learn, to plan, and to make new tasks possible by means of the intelligence given to it(probably more accurate than human!).Today the world has coupled with the widespread absorption of cloud and mobile technologies having made an infinite platform to cyber security problem. Cyber criminals are also findings intelligent new ways to use machine learning to their advantage. As mentioned , cyber security is something which can't be handled by human security analysts alone. This platform helps us to prevent the attempts of hackers from gaining access to private or secure data. For this technology to become the saviour of cyber security, businesses need to make sure AI applications learn to defend must faster than they learn to attack. By incorporating AI with security systems, machines learn from the data.AI-driven cyber attacks are able to learn and get better as they evolve by using the technique, AI2 (AI square).By using this method we show that the system learns to defend against unseen attacks and detection rates are reduced fivefold. This in turn helps to keep the systems ,networks and sensitive data secure.

Perspective of Reality

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P. Siva Parvathi., G. Narayanamma Institute of Science and Technology (for Women)

Abstract:--

Augmented reality known as AR changes the vision with which people look at the real world.AR is a direct view of physical, real-world environment just by augmenting elements. Unlike virtual reality, where a new digital world is created, AR just alters the actual world.GPS has become so widespread that most people couldn't live without it. One annoying aspect is that you generally have to take your eyes off the road to see the directions, along with turn-by-turn directions being difficult to line up to the actual road at times. To avoid this inconvenience, we can use AR to augment labels or tags which display directions, land marks, distances etc by wearing special AR glasses. These labels or tags should be limited, to avoid clumsiness to the driver. The final target is to make a system such that user cannot find the difference between scene of a real world and its virtual augmentation. Including AR applications makes our lives more productive, more safer, and more informative

Deep Learning for Medical Diagnosis

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Abstract:--

Deep Learning is a sub-area of Machine Learning, which deals with the recognition, processing, interpretation and classification of images, text, speech, etc. Disease identification and diagnosis of ailments is at the forefront of ML research in medicine. It is especially interesting for the medical field, which conducts the analysis and diagnostics based mainly on images. A wide variety of technologies and tools are involved in the diagnostic process like the Health IT. Health IT plays key roles in various aspects of the diagnostic process: capturing information about a patient that informs the diagnostic process, including the clinical history and interview, physical exam, and diagnostic testing results; shaping a clinician's workflow and decision making in the diagnostic process; and facilitating information exchange. This iterative, time-consuming process is costly as it causes threat to many people's lives. Deep Learning aims at delivering faster, accurate medical diagnostic services for patients. The potential of this technique not only assists in medical decisions and the accuracy of the diagnosis, but also assists the medical specialist to suggest treatment measures to improve speed and performance

Reduction of Post burning blow holes by using Shainin Techniques in Automotive Batteries.

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Abstract:--

Battery is one of the vital components used in automobiles. The main purpose of battery is to start the engine, to run the light system and other sound systems like music, horn etc. Once the engine is ignited and starts running, power for electrical system of the automobile will be supplied by alternator. Modern automobiles batteries are lead acid type using six cells connected in series so as to obtain 12 volts system. Keeping in view the vital role of a battery in an automobile, the battery should be made with high quality, durability and defect free. However, defective batteries would be rejected at quality check (QC) phase in the manufacturing industry. These rejections at QC should not be more, as it may reduce the productivity. The company should identify the root cause for such defects, which are responsible to brand battery as defective and also a rejection. A study has been under taken at "Automobile Battery Division" of Amararaja Batteries limited, karakambadi, Renigunta(M),Tirupathi, on rejected batteries because of various defects. After thorough analysis and investigation for a period of four months, it is understood that nearly 27% of batteries are rejected because of only one defect, namely Blow holes. In the present case study, product process search technique has been applied to reduce the sblow holes rejection.

The Parameters Influencing Consumer Decision Making in Sports Utility Vehicle Launch Event Attendancer

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Jamal Mohamed Zubair, Department of Management Studies, B.S.Abdur Rahman Crescent University, Chennai, India

Abstract:--

This study is based upon a sample survey on consumer SUV launch event selection and attendance with regard to SUV product launches and the various processes involved in this area. Many strategies are involved in the decision making and of them indicate new insights to the field of SUV launch event marketing and SUV launch event management. The process is quite complex as it involves in variety of factors associated both with SUV launch event like nature of SUV launch event, objective, and psychological, consumer values, societal influences and the pattern of their SUV launch event attendance and so on. The survey is done with a view to understanding the various influences that had enabled them attend a particular SUV launch event say SUV product launch. Questions for their not attending an SUV launch event to unravel the various factors that are involved in changing a positive attendance and their influence on the consumer decision process. The study revealed finer details of the parameters involved in the process of consumer decision of SUV launch event selection and attendance and gave insights (1) to enable a detailed analysis on the demographics of the consumers who have attended SUV launch event (2) to know the impact of the decision making on event attendance. The survey is done with a view to understanding the various influences that had enabled them attend a particular SUV launch event. The study has been carried out for the first time in Chennai area with a sample size of 100 using convenience sampling technique. The study revealed male respondents attended more than female. Based on the analysis the youngsters and middle aged attended more than the older groups. Professionals attended more than other occupation holders. The study revealed that more degree holders attended the launch event than non degree holders. Learning from the launch event was more compared to other reasons. The information about the launch event has been obtained largely from SNS than other listed traditional medias.

A Study on Trends, Review and Effects of Online Shopping In India

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Abstract:--

In the recent scenario of E - business online shopping has developed a huge importance. The development and growth of online shopping has given n number of opportunities to the organization to provide competitive advantages. There are n number of companies which are selling their products through on line portals or provides service online. Compared to other countries online shopping in India is not very common but it is growing at an immense speed then other countries. This paper gives brief idea of online shopping in India its positive and negative effects. It also provides scope of upgrading in online shopping websites. Findings says that online shopping is the best convenient way for consumers. But people also worry with the risk associated with it like privacy and security risk. Many organizations uses Internet to provide information and communicate with people which helps them to get idea what consumers exactly want, what are there demands and organization can also get feedback through them. But, there are various uncertainties attached with online shopping such as misuse of personal data, return or exchange policies, testing of product etc.

Keywords:--

Online shopping, online portals, websites, consumers, shopping, Internet.

Experimental Investigation on Wear Rate Of Al6061 /SiC /Zr Hybrid Metal Matrix Composite

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Abstract:--

The emphasis of recent research works in the area of composite materials has been more on improving mechanical properties like tensile strength, micro hardness and wear resistance, fatigue properties etc. The reason is that the desired mechanical properties were not obtained by the ordinary engineering materials. In the present days, significant demand for materials with good wear resistance has been there in automotive, aerospace and military applications. In the present research work, the wear rate of Al6061/SiC metal matrix composite (MMC) has been enhanced by reinforcing Zirconium (Zr) particles to the molten Al6061/SiC metal matrix composites (MMC) by stir casting technique. The wear rate was tested using pin on disk wear tester. An effort has been made to blend 2% of Zr with Al6061 alloy by varying Sic in 10, 15 and 20%. The wear resistance of Al6061/SiC has been improved significantly due to the uniform distribution of Zr particles in the matrix.

Sentiment Analysis with Vector Feature Extraction and Classification of Social Media Dataset

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Dr. B. K. Verma., Professor, Department of Computer Science & Engineering Chandigarh Engineering College Landran, Mohali

Abstract:--

The paper presents a methodology used for sentiment analysis. Data to be analyzed will be extracted from social media sites like twitter. Feature extraction will be done using support vector machine. Instance selection will be done using genetic algorithm operators: Selection, crossover and mutation operators. Classification of sentiments will be done using back propagation neural network technique. Training and testing phase evaluates various performance parameters: False Rejection Rate, False Acceptance Rate and Accuracy.

Keywords:-

Sentiments, Sentiment Analysis, Genetic algorithm, Feature extraction, Back propagation neural network,. Genetic operators.

Enhancing the Performance of DSTATCOM in VCM by Designing a Foreign Inductor

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Abstract:--

This paper gives an exhaustive investigation of operation, design and multifunctional control strategy of a Distribution Static Compensator (DSTATCOM) working in voltage control mode (VCM). The dynamic reference load voltage production plan is created as an internal part of the control strategy which enables it to adjust load reactive power in nominal operation, with association provides voltage support during unsettling influences. Additionally an investigation of the voltage regulation capacity of it under different feeder impedances (resistive, inductive) and its nature (strong, weak) is exhibited. This investigation spotlights the limited regulation capability of it in resistive and strong feeder. Also, a design methodology to figure out the estimation of foreign inductor (external to the system) utilized for enhancing the regulation capability of it is exhibited. It is then utilized for load voltage control to exhibit the performance.

Keyword—

Distribution static compensator (DSTATCOM), current control, voltage control, power factor, power quality

FiDoop-DP: An Efficient Data Mining Technique on Heterogeneous Clusters

Juturu Chandana, M.Tech Scholar in Department of CSE, JNTUA College of Engineering, Ananthapuram, India.

Abstract:--

Data mining is the analysis step of the "Knowledge discovery in data bases process" [1]. Actually, it is very hard to mine item-sets which are frequently used in the transactions. To identify frequently used item-sets, parallel algorithms which are used for mining were developed. These parallel algorithms were developed to balance the data and to maintain equal partitions of data, among a group of nodes which are to be computed. Because of redundant transactions, there is a significant performance problem of parallel frequent item-sets mining. Therefore, a data partitioning technique has been developed. FiDoop-DP is a kind of data partitioning method which is used to divide the data based on item-sets of the transaction which are brought by the clients or customers. To know better about frequent item-sets i.e., products which are regularly sold together, an algorithm is used for time consumption while running data which is extremely large. This algorithm is named as Equivalence Class clustering and Lattice Traversal algorithm (ECLAT). This ECLAT algorithm is combined with the Map-Reduce functionality, and then it gives better solutions within small amount of time. At the same time ECLAT is combined with Local sensitive hashing technique for better performance of items which are present at locally present in the data nodes. By combining those two techniques, the performance of FiDoop increases. This is known by the time taken to mine frequent item-sets. The main goal of this paper is to mine the item-sets which are prominently used or sold in the market by that it can increase the sales of those products.

Index Items:-

Frequent Item-set Mining, Data Partitioning, ECLAT algorithm, Time management, Map-Reduce, Hadoop Cluster

Effective Approach for Inconsistent Probabilistic Graph Database

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Abstract:--

The Resource Description Framework (RDF) has been generally utilized to describe resources and their connections as a part of the semantic web. The RDF graph is one of the usually utilized representations for RDF information. In any case, in many real time application such as data extraction or integration, RDF graph incorporated from various information sources may frequently contain uncertain and conflicting data (e.g., uncertain labels or that violate facts/rules), because of the lack of quality of information sources. The formalizing the RDF data by conflicting probabilistic RDF diagrams, which contain the two anomalies and uncertainty. With such a probabilistic diagram model and concentrate on a vital issue in cache based query retrieval management in conflicting probabilistic RDF charts, which recovers sub graphs from conflicting probabilistic RDF graphs that are isomorphic to a given query graph and with excellent scores. In order to efficiently answer QA-gMatch queries, the proposed cache supported to query retrieval system, which can reducing time delay between new search and cache searching time. Finally, demonstrating the efficiency and the effectiveness of the proposed approach through extensive experiments..

Index Items:-

Cache based query retrieval system, inconsistent probabilistic RDF graph databases, QA-gMatch

Metric Based Approach to Identify Test Case Orderings

Palem Naresh, M.Tech Scholar in Department of CSE, JNTUA College of Engineering, Ananthapuram, India

Abstract:--

In Testing we will evaluate a system or its components with the purpose to find whether the specified requirements are satisfied or not. The goal of Regression Testing is to make certain that improvements, patches or configuration changes have not introduced new faults in the source code. In regression testing, running each test case requires more time and assets. Test Case Prioritization (TCP) endeavors to plan test cases to accomplish objectives with higher scope or quicker fault recognition. Here, the investigation of utilization of Information Retrieval (IR) methods to enhance the viability of TCP, especially to test rarely tried code. Our approach considers the recurrence at which components have been tried, in extra to conventional scope data, adjusting these factors utilizing straight relapse displaying.

Index Terms:--

Regression Testing, Test Case Prioritization, Information Retrieval.

Comparative Study of the Machinability Characteristics of Nimonic C-263 Super Alloy

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Abstract:--

Nickel base super alloy has the combined property of "high mechanical strength" and "High heat and corrosion resistance" at elevated temperature. This is the reason for which Nickel based super alloy are extremely used in Aircraft, Aerospace, Submarine and chemical industries. Machining of Nimonic C-263 has always been a challenging task owing to its hot strength, low thermal conductivity, tendency to work harden and affinity towards tool materials. Although coated tools have been used to overcome some of these challenges, selection of coated tool with appropriate deposition technique is of immense significance. The current study attempts to comparatively evaluate various performance parameters in machining of Nimonic C-263 such as surface roughness, cutting force, tool temperature and tool wear. The tool materials used for this study are cubic boron nitride(CBN), ceramic and PVD coated TiAlN. To determine the effects of parameters selection on machining using Design of Experiments (DOE), Taguchi. L9 / L27 orthogonal array design of experiments was adopted to optimize the parameters. By using Taguchi and Grey Relational Analysis / Analysis of Variance (ANOVA) etc., an optimum value or the best value of surface roughness, cutting force, tool temperature and tool wear is obtained.

Keywords:--

Nimonic C-26, cubic boron nitride(CBN),ceramic and PVD coated TiAlN, Taguchi and ANOVA.

Industrial Internet of Things

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R.Tejaswini Nema.,

Abstract:--

In today's world the usage of internet,computers and smart devices have become a part of our daily life. We can connect the devices to the internet and keep track of the devices .With the help of IoT we can work in a more efficient manner.The Internet of Things sits at the intersection of sensors, networks, design, business models, and a wide range of industries. At its simplest, the IoT is the idea that wireless communication and digital intelligence can be embedded into everything around us — clothing, vehicles, buildings, flowerbeds, even the ground beneath our feet.Today, it is entirely possible to remotely monitor machines, perform diagnostics, acquire and calculate overall equipment effectiveness (OEE) data, upload production data and download recipes using Industrial IoT,called IIOT .We address specific manufacturing industry needs related to communication and real-time operating systems. How Iot is useful in the Industrial sector to improve the product quality and services.

Design of Payload Data Storage Block of Wi-Fi Mac Transmitter with VHDL

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Abstract:--

IEEE 802.11 is one standard for the wireless communication in radio frequency range.This 802.11b defines the Medium Access Control Layer [MAC] for wireless local area networks. Now a days wireless local area network, WLAN isused more people so that is the main reason for doing research on this project.today most of the projects going on simulation because of its effective cost.The main core of the IEEE 802.11b standard is the CSMA\CA, Physical and MAC layers. But here we are giving only MAC layer for transmitter using the VHDL. VHDL is language it is used of designs and implementing a n electronic modules. VHDLstands for Very High Speed Hardware Description LANguage.It is defined in IEEE as a tool of creation of electronics system because it supports the development verification synthesis and testing of hardware design, the communication of hardware design data and the maintenance, modification and procurement of hardware. The main purpose of the IEEE 802.11 standard is to provide wireless connectivity to devices that require a faster installation. MAC procedures are defined here for accessing the physical medium, which can be infrared or radio frequency. Here Wi-Fi MAC Transmitter module is divided in to 5 blocks i.e. Data Unit Interface block, Controller block, Pay Load Data Storage block, MAC Header Register block, Data Processing block. In this paper, we are considering only Payload Data Storage block.

Keywords:--

Wi-Fi, Technology, payload data storage, serializer, HEC, CRC

Enhancing Overall Equipment Effectiveness in Battery Industries through Total Productive Maintenance

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Venkatamuni .K., Deputy Manger IE projects, Amara Raja Batteries Ltd

Abstract:--

Nowadays Battery industries have gone through significant changes in the recent years. For a good manufacturing plant, the most recommended thing is quality, efficiency and operating cost. These parameters depend on the function of the equipments used in the industry. Nowadays a remarkable improvement has taken place in the maintenance management of the physical assets and productive systems to reduce wastage of resources and improve the production rate. Because of this, the organization should introduce a maintenance system to improve and increase both the quality and productivity continuously. Total productive maintenance (TPM) is one of the most popular maintenance strategies to ensure high machine reliability, maintaining equipments in top working condition to avoid breakdowns and minimize downtimes in the manufacturing process. In order to increase machine availability, performance & process quality we have to increase overall equipment effectiveness (OEE).

Overall Equipment Effectiveness (OEE) is the product of availability, performance and quality of the machine. OEE of a machine plays an important role where performance and quality of the product are of key importance to the company. The availability rate of the machine, performance rate of the machine and quality rate of the products are considered as parameters while maximizing the OEE of a manufacturing system. This work is carried on one of the leading battery industry in India. This Investigation includes implementation of TPM pillars to reduce losses associated with OEE.

Keywords:--

Total Productive Maintenance, Availability, Performance, Quality, Overall Equipment Effectiveness

Variation Reduction in Plate Weight By Using Variable Search For Battery

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Venkata Muni.K., Deputy Manager IE Projects,Amara Raja Batteries Ltd

Abstract:--

Highly diverse customer demand has changed the way of doing business. Modern business model are working with new economy. This project work gives an account of variation reduction in Plate Weight by using Variable Search method. Based on previous months analysis of data , it was found that major rejections are due to the variations of grids produced in the strip pasting .The root causes are to be found out by using the variable search method and the results are to be validated . With the results of this approach, modifications are to be carried out .The ultimate aim of this project is to reduce the rejections drastically from 35% to 7% ,and thereby improving the overall productivity of the plant. In the present case study, Variable search technique has been applied to Plate Weight rejection. A Study Is Under Taken At "Small Battery Division" Of Amara Raja Batteries Limited,Karakambadi,Renigunta(M),Tirupati.

Fabrication and Investigation on Hardness Behavior of Aluminium Hybrid Metal Matrix Composites (AL8010 Reinforced with Tic and Nanoclay particles)

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Dr.H.S.Manohar., (Head-Research centre Department of Mechanical Engineering, SEA College of Engineering and Technology,Bangalore)

Abstract:--

Composites involve two or more component materials that are generally combined in an attempt to improve material properties such as stiffness, strength toughness. Composed of a discrete reinforcement and distributed in a continuous phase of matrix, composites are the most successful materials used for recent works in the industry. There has been an increasing interest in composites containing low density and low cost reinforcement. The proposed work was to fabricate and investigate the hardness behavior of Al8010/TiC-Nanoclay composites. The composites were prepared using stir casting method (Liquid Metallurgy route) in which amount of reinforcement such as Hybrid Nano Composites of Nanoclay (MontmorilloniteK10) is varied from 1.5-7.5 wt% in steps of 2 wt%,and Titanium Carbide (TiC) is kept constant for an optimized value of 2 wt%.The prepared hybrid composites of Al8010/TiC-Nanoclay were subjected to evaluate the hardness studies as per the ASTM standards Nanostructure materials such as nanocomposites provide opportunities to explore new fracture behavior and functionality beyond those found in conventional materials. The presence of small amounts of nanoparticles in metal matrix can improve the hardness of composites. Most of the previous studies carried out on processing of aluminium–TiC composites and aluminium-nanoclay composites evolving their characters .Present investigation has been focused on TiC, also adding Nanoclay for their superior properties to construct the different wt.% of Metal Matrix composite(MMCs), the combination of Aluminium ,nanoclay and TiC by using Liquid metallurgical technique to investigate the hardness of the composte.

Outlier Detection using Kmeans and Neural Network in Data Mining

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Abstract:--

Outlier detection has been used to detect the outlier and, where appropriate, eliminate outliers from various types of data. It has vital applications in the field of fraud detection, network robustness analysis, Insider Trading Detection, email spam detection, Medical and Public Health Outlier Detection, Industrial Damage Detection, Image processing fraud detection, marketing, network sensors and intrusion detection. In this paper, we propose a kmean clustering and neural network as novel to detect the outlier in network analysis. Especially in a social network, k means clustering and neural network is used to find the community overlapped user in the network as well as it finds more kclique which describe the strong coupling of data. In this paper, we propose that this method is efficient to find out outlier in social network analyses. Moreover, we show the effectiveness of this new method using the experiments data. (Abstract).

Keywords:--

Outlier Detection; Network Data; Adjacency Matrix; Kmeans Clustering; Neural Network. (keywords)

Simulation And Comparision Between 7-Level(7-L) And 13-Level (13-L) Inverter Topology For Photovoltaic Application

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Dr.O.Chand ra Sekhar., Professor and HOD, Dept of EEE, K L University, Vaddeswaram, A.P, India

Abstract:--

Renewable energy sources (RES) gain an prominence in contemporary decades for the reason that they are pollution free, easily erectable, and limitless. Among RES, Photovoltaic systems are mostly used as they are light, clean in addition to easily installable. In general PV cells alters sunlight into electricity in the form of dc. A seemly converter is customarily looked-for to convert the dc power into ac power, which is then inoculating into the power grid. The Multilevel Inverters [MLI] can be used to renovate the dc into ac for integration of renewable energy sources into the straight grids. But the conventional MLIs such as Diode Clamped MLIs involves extra diodes in conjunction with the active switches, Flying capacitor MLIs necessitates extra Capacitors besides control also problematic if the levels increases and the Cascaded H-bridge MLIs necessitates separate dc sources which limits its use. This paper suggests a new type of multi level Inverter which translates the dc into ac using less number of switches when associated to conventional multilevel Inverters. The projected Inverter can be used to integrate the Photovoltaic system into Grid, with satisfying the grid necessities such as phase angle, frequency and amplitude of the Grid voltage. Seven level and thirteen level projected MLI is simulated using Matlab/Simulink environment and the corresponding results are accessible in this paper.

Keywords:--

Grid interconnection, PV scheme, MLI, Renewable energy sources (RES).

Transpose Form Block Fir Filter Configuration for Area Delay Efficient Realization of Reconfigurable Applications

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Abstract:--

Transpose form finite-impulse response (FIR) filters are inherently pipelined and support multiple constant multiplications (MCM) technique that results in significant saving of computation. However, transpose form configuration does not directly support the block processing unlike direct form configuration. In this paper, we explore the possibility of realization of block FIR filter in transpose form configuration for area-delay efficient realization of large order FIR filters for both fixed and reconfigurable applications. Based on a detailed computational analysis of transpose form configuration of FIR filter, we have derived a flow graph for transpose form block FIR filter with optimized register complexity. A generalized block formulation is presented for transpose form FIR filter. We have derived a general multiplier-based architecture for the proposed transpose form block filter for reconfigurable applications. A low-complexity design using the MCM scheme is also presented for the block implementation of fixed FIR filters. The proposed structure involves significantly less areadelay product (ADP) and less energy per sample (EPS) than the existing block implementation of direct-form structure for medium or large filter lengths, while for the short-length filters, the block implementation of direct-form FIR structure has less ADP and less EPS than the proposed structure. Application specific integrated circuit synthesis result shows that the proposed structure for block size 4 and filter length 64 involves 42% less ADP and 40% less EPS than the best available FIR filter structure proposed for reconfigurable applications. For the same filter length and the same block size, the proposed structure involves 13% less ADP and 12.8% less EPS than that of the existing direct-form block FIR structure..

Keywords:--

Block processing, finite-impulse response (FIR) filter, reconfigurable architecture, VLSI.

IoT Based Electricity Bill Generating System

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Mr.N.Srinivasa Naidu., Asst. Professor, Department of ECE,ANITS

Abstract:--

With the advent of increasing technology human involvement can be minimized. For billing purpose EB office is still using labour, it results in difficulties like delay in bill generation and sometimes in bill manipulation. This paper is aimed at measuring energy consumption in the house and generates the bill automatically using IoT. The bill is sent to the consumer via SMS and he can also browse the details of no of units, updated bill anytime globally. This helps the consumer in minimizing the utilization of electricity thereby saving power and money. To implement this we use the hardware Energy Meter, Arduino Uno, Ethernet Shield, LCD display. Using Arduino IDE software, a program is written for extracting no: of units from the energy meter and for calculating the bill based on unit cost. By interfacing LCD with microcontroller, it displays the no: of units consumed and corresponding bill. Ethernet Shield is connected to the router and it is interfaced with the Arduino through which information is updated on the Web server by connecting through same IP address. If in case the consumer fails to pay the bill within due date then electricity transmission can be turned off using relays.

Index Items:--

EB office, Energy Meter, Arduino Uno, Ethernet Shield, Arduino IDE software, LCD

Compilation of Information and Hydrological Data for the Study of Feasibility of Netravathi Diversion Scheme in Karnataka

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Abstract:--

The concept of diverting a part of flow in the west flowing rivers to the east, is being promoted in Karnataka. This paper presents a Hydrological Feasibility of Netravathi Diversion Scheme in Karnataka. Many different proposals have been put forward over the years. They include G.S.Paramashivaiah's Garland canals, NWDA, KNNL. The paper presents a which proposal is suitable to divert Netravathi by analyzing the runoff volumes for 10 days intervals for the different years which are considered to be maximum rainfall years for the various catchment areas in the study area by making use of the equations developed. And to determine the excess amount of water available for diversion, flow in mid-September is considered as the datum.

Keywords:--

Garland canals, Hydrological feasibility, NWDA, KNNL

Fuzzy Logic Control Based Maximum Power Point Tracking for Three-Port Bidirectional DC-DC Converter with Photovoltaic-Battery System

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Abstract:--

In this paper a new fuzzy logic controller (FLC) based maximum power point tracking (MPPT) for a three-port bidirectional isolated dc-dc converter proposed for simultaneous power management to multiple energy sources. This proposed converter has an advantage of using minimum number of switches which reduces the switching losses. The inductor-capacitor-inductor (LCL) resonant circuit realized to achieve soft switching. The proposed converter is modelled to simultaneous power management of photovoltaic (PV) panel, battery and load. The proposed FLC based MPPT is capable of achieving maximum power from PV panel when solar irradiance available. The charge and discharge controller of the battery works when the surplus energy and power deficiency with respect to the load, respectively to maintain dc link voltage at 50V. The voltage error effectively reduced to below one percent.

Optimal DG Allocation in Distribution System for Loss Minmization

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Abstract:--

In the deregulated power market environment, distributed generation (DG) is an effective approach to manage performance, operation and control of the distribution system. Methods available in the literature for DG planning are often not able to simultaneously provide technical and economical benefits. Therefore an effective methodology is developed to improve the technical as well as economical benefits as compared with the existing approaches. This study reports the optimal installation of multi-DG in the standard 33-bus, 69-bus radial distribution systems and 54-bus practical radial distribution system. Several performance evaluation indices such as active and reactive power loss indices, voltage deviation index, reliability index and shift factor indices are used to develop a novel multi-objective function (MOF). A new set of equations is developed for representing different practical load models. A novel MOF has been solved to find optimal sizing and placement of DGs using genetic algorithm and particle swarm optimization technique. The comparative result analysis is also discussed for both techniques. The result analysis reveals that system losses, energy not supplied, system MVA intakes are reduced, whereas available transfer capability, voltage profile, reliability and cost benefits are improved for the case with-DGs in the Distribution system.

Keywords:--

Distributed Generation, Active power loss index, Reactive power loss index, Voltage deviation, Reliability index, Sensitivity factor, Active and reactive power flow, Active and reactive power demand, Active and reactive power losses.

Controlling Of Transformer-less UPFC with Cascaded Multilevel Inverter

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Abstract:--

The traditional UPFC that exists two back-to-back inverters bulky and more complicated zigzag transformers for isolation and reaching high power/voltage rating. To overcome this difficulty, two zigzag transformers are completely eliminated, in this place two cascaded multilevel inverter are proposed. The unique configuration and control of two CMI's as a power flow controller lead to possible to independently control active and reactive over a transmission line. The proposed configuration has unique features and several advantages over the traditional configuration such as transformer-less, high efficiency, light weight, low cost, high reliability and fast dynamic response. a simulation model is built to represent the operating of proposed transformer less UPFC.

Index Items:--

AC Transmission System, Cascaded Multi-level inverter(CMI), FACTS, Unified Power Flow Controller(UPFC).

Reduction of Rejection in 26AH model battery by Using Variable Search DOE Methodology

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Abstract:--

One of company who is pioneer in VRLA battery in Asian Pacific Rim has foray into automotive batteries with its new brand addressing automobile segment launched across country by opening many franchises & pit stops covering all metros, major cities and urban towns. Batteries are one of the major components manufactured in the industry. Battery is also called SLI (Starting-lighting-ignition). In order to satisfy the customer needs the battery should be made defect free at the industry itself. This cell short will lead to a large problem, if not rejected in the industry itself. This project is on the account of Reduction of rejections in the Formation process of battery that are useful for the customers which is vital battery functioning results in Providing the Maximum Output without any obstruction of power to the customers Historical data collection found that Cell Shorts Mode of rejections is more in the 26 AH battery model by Brain Storming and DOE Approach Identified the Root cause for the rejections and solved the issue so that this analysis is also used to reduce the rejections in the other similar models and this leads to more customer satisfaction and cost reduction to the company With the results of the six sigma Methodology, Analyzed the Problem generating stage in Pasting section and Parameters affecting to create problem by Six sigma tools application and implemented the solution. These results in reduction of Cell shorts in battery and by this project Cost saving and Customer satisfaction is improved.

Reactive Power Support Incorporated VSI Control for Distributed Generation Sources with Ride-Through Capability under Grid Faults

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Abstract:--

Nowadays with the advancement in the technology and rapid growth of power demand the penetration of distributed generation (DG) sources like PV systems, wind energy and fuel-cells is growing at a greater pace. At this moment it is very essential to maintain stability during various sorts of grid-faults (voltage droops). The control action is made based on the Grid Codes(GC's) i.e., Reactive power support is incorporated in the VSI to address the issues of inverter disconnection during grid voltage sags to make the system capable to ride-through the grid faults that exists for a very short-span of time. In this paper 1-MW PV system is considered and the analysis of control action is simulated using MATLAB/Simulink..

Index Items:--

Grid codes (GC's), photovoltaic systems (PV's), stability, voltage droop