



ICIOTSC - 2017

International Conference on Internet of Things for Future Smart Cities

Nellore, Andhra Pradesh

 $21^{st} - 22^{nd}$ July 2017

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Welcome Message

On behalf of *Institute For Engineering Research and Publications (IFERP)* and in association with *Geethanjali Institute of Science and Technology*, Nellore, Andhra Pradesh. I am delighted to welcome all the delegates and participants from around the globe to *Nellore*, *Andhra Pradesh* for the "*International Conference on Internet of Things for Future Smart Cities*" (*ICIOTSC - 2017*)" that will take place on $21^{st} - 22^{nd}$ *June 2017*

Transforming the importance of Engineering, the theme of this conference's assembling is "International Conference on Internet of Things for Future Smart Cities" (ICIOTSC - 2017)"

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 & GIST**) 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 *Nellore*, *Andhra Pradesh*.

Mr. R. B Satapathy
Director

Last.

IFERP

Preface

The "International Conference on Internet of Things for Future Smart Cities (ICIOTSC - 2017)" is being organized by Geethanjali Institute of Science and Technology, Nellore, Andhra Pradesh, India in association with IFERP - Institute For Engineering Research and Publications on the $21^{st} - 22^{nd}$ July 2017

Geethanjali Institute of Science and Technology, Nellore, Andhra Pradesh has a sprawling student - friendly campus with modern infrastructure and facilities which complements the sanctity and serenity of the divine city of Nellore, Andhra Pradesh.

With blessings of Venkateswara, Nellore, Andhra Pradesh the "International Conference on Internet of Things for Future Smart Cities (ICIOTSC - 2017)" is 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 globe.which were given the international values by "Institute For Engineering Research and Publication [IFERP]".

This International Conference attracted over 62 submissions. Through rigorous peer reviews 50 high quality papers were recommended by the Committee. The Conference aptly focuses on the tools and techniques for the developments on current technology.

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

ICIOTSC - 2017

CORRESPONDENT



Sri. N. Sudhakar Reddy Secretary & Correspondent GIST Nellore, Andhra Pradesh

MESSAGE

I express my profound happiness and great sense of pride in this memorable occasion of releasing a souvenir in connection with the "International conference on Internet of Things for Future Smart Cities" ICIOTSC-2017.

I am very much delighted to acknowledge the enthusiastic response of *GIST* to the emerging trends and developments in the modern Computer Science and Information Technology through the conduct of such academic activities of great technological significance, which serve as a useful platform for sharing and exchange of knowledge and creative ideas that have a bearing on modern technology. In this context, I express my earnest optimism that this mighty technological event will turn out to be a very enriching, enlightening academic experience that will ignite the creative spark of the young minds while sharpening their technical competencies.

Extending my best wishes to the organizers of the event.

Sri. N. SUDHAKAR REDDY Secretary & Correspondent

PRINCIPAL



Prof. Dr. G. Subba Rao,

Principal. GIST Nellore, Andhra Pradesh

MESSAGE

It is an act of great joy and gratification for me that the International conference is being organized at *GIST* on the theme "*Internet of Things for Future Smart Cities ICIOTSC-2017*" with the objective of expanding the scope of technical vision of the young techno savvy internet generation through a productive beneficial interaction with technical experts, scientists, eminent personalities drawn from different parts for the country.

Conferences, symposia, workshops, technical discourses and seminars constitute an integral part of qualitative Engineering Education. True to its mission of being a vital part in the technological advancement of the nation, GIST is opening new vistas for engineering aspirants by organizing a national level conference, which I am extremely hopeful will be a felicitous blend of vibrant minds and youthful thoughts marked by creative zeal and innovative spirit in the stream of computer science and engineering. On this momentous occasion I extend my warm appreciation and best compliments to the driving forces who have embarked upon this enlightening initiative.

Dr. G. SUBBA RAO, Principal

CONVENER



Dr. Y. Jahnavi, HOD/CSE GIST Nellore, Andhra Pradesh

MESSAGE

The ubiquitous presence and ever evolving multi-dimensional computer applications in every walk of our lives compel a more focused approach to the teaching/ learning / research strategies to be implemented in the Technology Institutions. In an attempt to bring together diverse thought processes and create an interactive platform for articulating new concepts, thoughts and ideas, *GIST* envisaged this International Conference to explore several "Internet of Things for Future Smart Cities", ICIOTSC-2017

The conference aims to bring together researchers, scientists, engineers, industry experts and academicians on to a common platform for fruitful exchange of ideas and expose the young aspiring and budding engineers to the current and future trends in the area.

We fondly hope that the time furnished for the intellectual interactions be properly utilized by the participants for furthering their domain knowledge and trending approaches in the field of computers.

Wish you all the Best

Dr. Y. JAHNAVI HOD/CSE

ICIOTSC - 2017

International Conference on Internet of Things for Future Smart Cities



Keynote Speakers



Dr. Sasikumar Gurumoorthy M.E.,Ph.D,

Professor, Program Coordinator BOS, Department of Computer Science and System Engineering, SreeVidyanikethan Engineering College,(Autonomous) Tirupati - 517102

Message:

International Conference On Internet Of Things For Future Smart Cities (ICIOTSC-17) will be held on 21st and 22nd, July, 2017 at Geethanjali Institute of Science and Technology, Nellore, Andhra Pradesh. ICIOTSC-17 is organized by Institute for Engineering Research and Publications (IFERP) at Geethanjali Institute of Science and Technology, Nellore, Andhra Pradesh, it is a great pleasure to invite me to be part of this event and to share my latest achievements, findings and innovations with the scientific and industrial communities.

Recognizing the high scientific level of this conference, the ICIOTSC-17 Proceedings will be indexed in International Journals and Scopus and all submitted final papers of plenary, oral and visual presentations will be coded by a digital identifier (DOI code), which will increase the visibility of all papers. To guarantee the scientific quality of the program, each abstract is scored by three independent reviewers before the topic organizers select the plenary, oral and visual presentations. Excellence, novelty, and scope for innovation are the strict criteria for paper selection.

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 of Engineers, 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.

Dr.SASIKUMAR GURUMOORTHY



Dr.P.C.SrikanthProfessor and Head Dept. of ECE,
Malnad College of Engineering, Hassan,
Karnataka, India

Biography

Dr. P. C. Srikanth had his schooling in the same town and graduated in Electronics & Communication Engineering in 1987 from Malnad College of Engineering, Hassan, Karnataka, India securing a first class with Distinction. Dr. P. C. SRIKANTH completed his M.Tech. degree in 1996 from Indian Institute of Technology, Kanpur in the area of LASERS, and obtained his Ph.D. from VTU Belgaum . He worked in the applied photonic lab IISc, Bangalore during his PhD. Starting as a Lecturer 1987, he became Assistant Professor In 1999, Professor in 2011 in Malnad College of Engineering, Hassan, Karnataka, India. Dr. P. C. SRIKANTH had a deep involvement in Optical networks, was awarded as TOP 100 ENGINEERS-2011 by International Biographical Centre, St Thomas' Place, ELY, CB7 4GG Great Britain. He was Selected for Marquis Who's Who in Science and Engineering 2011-2012 (11th Edition), and also in 2016-2017 (12th Edition) New Providence, NJ 07974,USA. He received Best paper award for the following papers, Modeling of Photonic Crystal Ring Resonator Temperature Sensor during 2014, A Novel Quantum Dot Automata Based Design For Multiplexers during 2015 and Detection of Fluoride Contaminated Water in Dental Applications during 2015 at International Conferences. He has been Awarded as **Outstanding Scientist** in the field of Photonics, by Venus International foundation CARD, on 19th Dec 2015. His Research areas includes, Optical Communication and Networks, Photonic Band gap Crystals, Wireless Networks, LASERS and Quantum Electronics. He has Guided/guiding more than 100 BE, M.Tech and Ph.d students. Dr. P. C. SRIKANTH has so far published more than 100 papers in national and international journals and conferences. He has attended many international conferences in India and Abroad and has chaired many technical sessions. He has organized many international conferences and workshops. He has also given many Key note and Invited talks in international conferences and workshops. Awards and laurels won by Dr. P. C. SRIKANTH run into volumes. So far he has received 12 awards. Dr. P. C. SRIKANTH is Senior Member IEEE (USA), Life Member ISTE, Currently he is secretary IEEE Photonic society, Karnataka Chapter Bangalore.

DR.P.C.SRIKANTH

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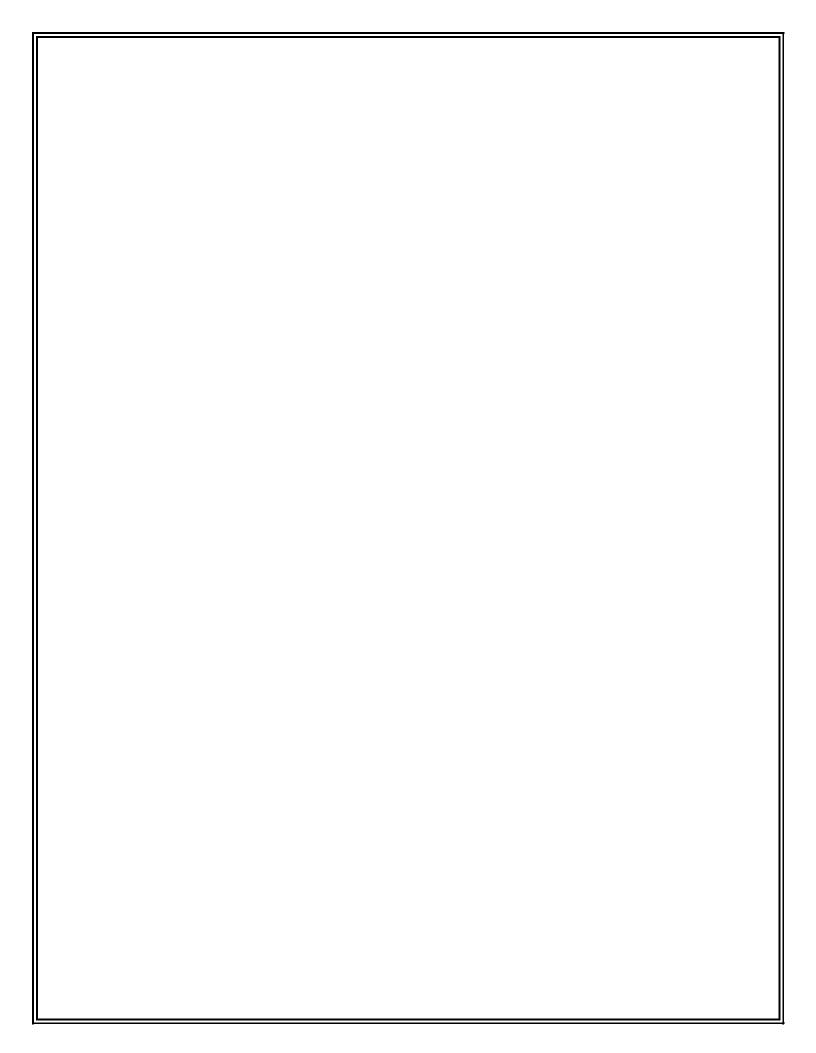
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ABSTRACTS

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Nellore, Andhra Pradesh on $21^{st} - 22^{nd}$ July 2017

A New Control Stratagy of VSC HVDC System for Passive Industrial Network

K. Ashok Kumar, PG Student, Dept of EEE (EPS), AITS, Rajampet, AP, India

M. Ramesh., Assistant Professor, Dept of EEE, AITS, Rajampet, AP, India

M. Padma lalitha., Professor & HOD, Dept of EEE, AITS, Rajampet, A.P., India

Abstract:--

This paper proposes a modified current limit strategy (MCLS) and a frequency hysteresis control (FHC) for improving the disturbance ride-through capability of a VSC-HVDC link supplying passive industrial installations. Since industrial loads are more sensitive to voltage drops than frequency deviations, it's essential to guarantee the stability of voltage during severe faults. The development of the control methods includes three steps. First, the main factor that affects the ac voltage in the passive industrial system is analyzed in order to enhance the voltage stability more effectively. Secondly, according to the analytical results, the MCLS is proposed to increase the ac voltage in transient conditions. Thirdly, in order to make the MCLS have a better control result, the FHC is added to the VSC controller with the MCLS, which can also further enhance the ac voltage of the passive system. The simulation tests under metallic single-phase and three-phase faults are done in MATLAB/SIMULINK, and the results verify the validity of the control methods..

Index Terms:--

Passive industrial installations, voltage stability, Voltage Source Converter (VSC), modified current limit strategy, frequency hysteresis control..

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Nellore, Andhra Pradesh on $21^{st} - 22^{nd}$ July 2017

Design of External Inductor for Improving Performance of Voltage Controlled Dstatcom using Fuzzy Logic Controller

P.Bhaskara Prasad., Assistant Professor, Dept of EEE, AITS, Rajampet, AP, India. Dr.M.Padma Lalitha., 2Professor & HOD, Dept of EEE, AITS, Rajampet, AP, India. S.Eranna., PG Student, Dept of EEE (EPS), AITS, Rajampet, AP, India

Abstract:--

Distribution compensator (DSTATCOM) is utilized for load voltage control and its execution essentially relies on the feeder impedance and its tendency (resistive, inductive, stiff, non-stiff). Be that as it may, a review for examining voltage regulation execution of DSTATCOM relying on system parameters is not all around characterized. This paper expects to give a exhaustive investigation of design, operation, and adaptable control of a DSTATCOM working in voltage control mode. A point by point investigation of the voltage direction capacity of DSTATCOM under different feeder impedances is exhibited. At that point, a benchmark design methodology to figure the estimation of external inductor using fuzzy logic controller is exhibited. A dynamic reference regulation voltage era plot is additionally created which enables DSTATCOM to adjust load reactive power amid typical operation, notwithstanding giving voltage bolster amid unsettling influences.

Keywords:--

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

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Control and Operation of A DC GRID-Based Wind Power Generation System in a MICROGRID

B Guru Lakshmi., PG Student, Dept of EEE (EPE), AITS, Rajampet, AP, India.

L Baya Reddy., Assistant Professor, Dept of EEE, AITS, Rajampet, AP, India..

D Padmalalitha., Associate Professor & HOD, Dept of EEE, AITS, Rajampet, A.P, India

Abstract:--

The poultry farming is the raising of domesticated birds such as chickens and ducks for the purpose of farming meat or eggs for food. To ensure that the poultries remain productive, the poultry farms in Singapore are required to be maintained at a comfortable temperature. Cooling fans, with power ratings of tens of kilowatts, are usually installed to regulate the temperature in the farms .Besides cooling the farms, the wind energy produced by the cooling fans can be harnessed using wind turbines(WTs) to reduce the farms demand on the grid. The major difference between the situation in poultry farms and common wind farms is in the wind speed variability. In recent years, the research attention on dc grids has been resurging due to technological advancements in power electronics and energy storage devices ,and increase in the variety of dc loads and the penetration of dc distributed energy resources(DERs) such as solar photovoltaic and fuel cells. Many research works on dc micro grids have been conducted to facilitate the integration of various DERs and energy storage systems. In a dc micro grid based wind farm architecture in which each wind energy conversion unit consisting of a matrix converter, a high frequency transformer and a single-phase ac/dc converter are proposed. However, the proposed architecture increases the system complexity as three stages of conversion are required. In this project as an alternative solution we are proposing a dc grid based distribution network. Where the ac output of the wind generators (WGs) in a poultry form are rectified to a common voltage at the dc grid. Most significant advantage of the proposed system is that only the voltage at the dc grid has to be controlled for parallel operation of several WGs without the need to synchronize the voltage, frequency and phase thus allowing the WGs to be turned ON (or) OFF any time without causing disruptions.

Index Terms:--

Wind power generation, dc grid, energy management, model predictive control.

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Solar PV Powered SRM Drive for Electric Vehicles with fuzzy logic control of Novel Flexible Energy Control

M.Pala Prasad Reddy, Assistant Professor, Dept of EEE, AITS, Rajampet, AP, India P.Bala Chennaiah, Assistant Professor, Dept of EEE, AITS, Rajampet, AP, India U.Harish Kumar., PG Student, Dept of EEE (EPS), AITS, Rajampet, AP, India

Abstract:--

In this paper Hybrid Electric vehicle (HEV) technology provides an effective solution for achieving higher fuel economy and better performances with reduced greenhouse gas emissions. For Electric vehicle applications, Switched reluctance motor (SRM) is the best suitable one of all the available motors. To increase the driving miles of the electric vehicles, a photovoltaic (PV) panel is mounted along with on-board battery bank. A tri-port converter with fuzzy logic controller is proposed in this paper to control the energy flow between the PV panel, battery and SRM drive. Six operational modes are presented, four of which are developed for driving modes and rest two for stand still on-board charging. In driving modes, the Perturb and observe technique is employed in order to receive maximum power from the PV panel. In standstill charging modes, a grid connected charging topology is developed without any external hardware. A multi section charging control strategy is used foe effective utilization of energy in case of battery charging from PV panel directly. The proposed tri-port technology with fuzzy logic controller is developed in MATLAB/SIMULINK environment and the results are proven to be successful in producing reduced harmonic distortion and have the capability to make better market for electric vehicle in the nearby future.

Index Terms:--

Electric Vehicles, Photovoltaic (PV), Switched Reluctance Motors (SRMs), Tri-Port Converter, Perturb and Observe Technique, Fuzzy Logic Controller.

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A Fuzzy Logic Controller Based Dynamic Voltage Restorer- Ultra Capacitor for Improving Power Quality of Distribution Grid

M.Manjula, 1M.TECH / Dept. of Electrical & Electronic Engineering: Annamacharya Institute of technology and sciences, rajampet A.P. India

S.Sagar Reddy, Assistant Professor. M.TECH/ Dept. of Electrical & Electronics Engineering: Annamacharya Institute of technology and sciences, rajampet A.P. India

Abstract:--

In this project Cost of various energy storage advancements is lessening rapidly and the combination of these developments into the power grid is transforming into a reality with the methodology of brilliant grid. Dynamic voltage restorer (DVR) is one thing that can give improved voltage rundown and swell pay with energy storage coordination. Ultra capacitors (UCAP) have low-energy thickness and high-control thickness flawless qualities for pay of voltage records and voltage swells, which are both events that require high power for constrained abilities to center time. The novel responsibility of this paper lies in the blend of rechargeable UCAP-based energy storage into the DVR topology.

Keywords:--

DC-DC converter, d-q control, DSP, dynamic voltage restorer (DVR), energy storage integration, phase locked loop (PLL), sag/swell, Ultra capacitor (UCAP).

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Smart City Billing System for Homes Through IOT

Dr. K.Rasadurai, Associate Professor, Kuppam Engineering College, Kuppam -517425, India
K. Kalanidhi, Research Scholar, SMU, Salem, India
Dr. D. Vinodkumar, Professor, SMU, Salem, India

Abstract:--

This paper proposed for the Smart City Billing System for Homes through Internet of Things (IoT) platform. In this paper consists of two modules, one is prepaid electricity billing and other is prepaid water usage billing by using NodeMCU system with IoT platform. First module is to minimizing the queue at the corporation / electricity board billing counters and to restrict the usage of electricity automatically, if the bill is not paid. This proposed method also supports at a system to find out the power thefts and other illegal activities. Second module is to indicate the water usage and automatic control of water flow and also prepaid water billing via IoT. It is to provide smart water supplies scheme for public and Corporation water board for automatic the control and monitoring water usage system. The proposed system adopts a totally new concept of "Electricity and Water Bill Systems for Smart City Corporation". The IoT based concept is used that the service provider and customer can continuously monitor the consumption of power (in watts) and water usage, if it reaches the minimum amount, it would automatically alert the consumer to recharge through Smart phone. In this method Arduino processor is used to monitor and control the entire system model. The implementation of IoT will help better management, conservation of energy and also in doing away with the unnecessary hassles over incorrect billing in electricity module. Further the IoT will able to incorporate transparently and seamlessly a number of different devices

Keywords:--

IoT, NodeMCU, Smart City Billing System.

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Optimal and Guaranteed Alternative Path for Multiple Link Failures in MPLS Networks

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Abstract:--

Traffic Engineering is one of the essentials for backbones of Internet Service Providers(ISP).MPLS provides end to end performance for traffic by using Label Switched Paths(LSP).Due to frequent failures in the network, the restoration of data has become a challenging task to network administrators. We present basic recovery mechanisms, Makam's Scheme and Haskin's Scheme compare them.The packet loss existed in these mechanisms is overcome by introducing Fast Rerouting and Reliable Fast Rerouting whose performance is far better compared to other two schemes, but packet delay and disordering exist.To overcome these, we propose Optimal and Guaranteed Alternative Path recovery mechanism for multiple link failures.

Keywords:--

MPLS,Traffic Engineering,LSP,Recovery,Ingress node,Egress Node Failure,Backup LSP,Alternative LSP,RFR,OGAP (key words)

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A Survey on Algorithms Solving ECDLP (Elliptic Curve Discrete Log Problem)

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Abstract:--

The underlying basis for many Public Key Schemes e.g., Diffie- Hellman and Elgamal is Elliptic Curve Discrete Log Problem(ECDLP). The level of security of these schemes depends on how hard it is to solve the ECDLP. Elliptic curve cryptosystem based on ECDLP is one of the algorithm in the list of algorithms recommended by NIST (National Institute of Standards and Technology) and NSA (National Security Agency). Since, It is being used extensively, continuous monitoring of new solutions or older solutions with improvement is required. There is no known solution for this problem (ECDLP) in sub exponential time. Exhaustive search to solve ECDLP is to compare each and every sequence until a solution is reached which takes more steps. But there are few algorithms which can avoid exhaustive search. Few such algorithms are Pohlig Hellman, Baby Step and Giant Step, Pollard's Rho. These algorithms are computed on ECDLP and compared using all the constraints.

Key words:--

ECC, ECDLP, Pohlig Hellman, Pollard Rho, Baby step, Giant step,

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Autonomous Wind-DG Microgrid with Back Propagation Algorithm Based Fuzzy Logic Strategy

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Abstract:--

This paper manages a wind-DG (Diesel Generator) hybrid setup of the microgrid utilizing a voltage source converter (VSC) as a voltage and frequency controller (VFC). The wind control created by permanent magnet brushless DC generator (PMBLDCG), and the most extreme power is caught by a maximum power point procedure (MPPT) utilizing a lift converter with an incremental conductance (INC) approach. This power is provided to the user's burdens and surplus power is put away into battery system (BS). BS is joined at DC connection of VSC which gives stack leveling during less or no wind conditions. With such blend of energy assets, a diminished rating, diesel motor driven squirrel confine enlistment generator (SCIG) encourages burdens and VSC at point of common coupling (PCC) underpins the system when the wind generation can't take care of out the load demand. Back spread encourage forward (BPFF) control calculation is utilized for VF control of VSC. This controller gives sounds disposal, stack leveling and reactive power compensation and furthermore directs the voltage at PCC. This microgrid is demonstrated in MATLAB Sim control apparatuses and reenactment results are created to confirm the proper working of both the converters and the generation system.

Index Terms:--

BPFF, Fuzzy Logic, MPPT, THD.

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RFID: The Buzzwordin Supply Chain

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Abstract:--

RFID is all set to be the technology of the future, especially in supply chain management. It is slowly gaining acceptance among various players. This is said to be the next breakthrough technology after bar codes. It has several advantages over bar codes and will replace them in next few years. RFID helps the retailers in tracking the movement of products from the suppliers to the warehouses and the store. It can also help in better inventory control and hence, cost reduction. In this paper, it is discussed in detail how RFID can help at store level in replenishing the shelves, prevent shoplifting, and gain valuable customer informatio.

Key words:--

wireless, speed control, dc motors, micro controller, android, Bluetooth, H-bridge.

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Remote monitoring and controlling of appliances using IoT

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Abstract:--

The rapidly advancing mobile communication technology and the decrease in costs make it possible to incorporate mobile technology into automation systems. In olden days we were not monitoring the office and home appliances by sitting at one place. We had controlled those appliances manually; it takes more time for controlling. This is disadvantage like time consuming and wastage of energy. We can overcome the disadvantage of the existing method by remote control via the Internet and it's a new feature and used in automation systems. However, providing a mechanism for interaction between devices in this environment is quite challenging. A massive no of microcontrollers are available in today's devices which can be linked to the Internet. The system uses a compact circuitry built around LPC2148 (ARM7), Global System for Mobile communication (GSM)/General Packet Radio Service (GPRS) module and sensor network. Microcontroller programs are developed in Embedded C. Flash magic is used for loading programs into microcontroller. In this paper the working principle of microcontroller and GSM is studied and interfacing between them is presented for two applications. Further advantages, disadvantages and future scope of the specified technology also discussed

Index Terms:--

Flash magic, GSM/GPRS, internet of things, microcontroller.

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Optimal Phasor Measurement Unit in Power Network using Spanning Tree Algorithm

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Abstract:--

Phasor Measurement Unit's (PMU) are power system devices which provide real time synchronized phasor measurements. Synchronization is achieved by same-time sampling of voltage and current waveforms by means of timing signals from the Global Positioning System Satellite (GPS). Synchronized phasor measurements make higher the standards of power system monitoring, control, and protection. Since PMU's are expensive they need to be placed in optimal way in power network in order to bring down the overall cost. Integer linear programming algorithm is used to determine the optimal number and location of PMUs needed to make the network power system completely observable. Conventional techniques assume PMU's as multichannel in case PMU's are single or two channel optimal PMU locations will change. The following analyses explain optimal PMU placement in single channel, two channel and multichannel cases. Spanning tree algorithm has been applied for IEEE 14 bus system and IEEE 30 bus system for complete observability of these systems by considering and ignoring zero injection buses separately.

Index Terms:-

Benchmarking, exhaustive search, measurement redundancy, observability, optimal placement, phasor measurement units, state estimation. Spanning tree Algorithm, PMU, Optimal PMU placement and full system.

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Hybrid Mppt Control Algorithm for Wind Energy Conversion Systems

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Abstract:--

This paper presents a hybrid maximum power point tracking (MPPT) algorithm for small-scale wind energy conversion systems (WECSs) to harvest more energy from turbulent wind. The proposed algorithm combines the computational behavior of hill climb search, tip speed ratio, and power signal feedback control algorithms for its adaptability over wide range of WECSs and fast tracking of maximum power point. In this paper, the proposed MPPT algorithm is implemented by using buck—boost featured single-ended primary inductor converter to extract maximum power from full range of wind velocity profile. MATLAB/SIMULINK results show that tracking capability of the proposed algorithm under sudden and gradual fluctuating wind conditions is efficient and effective.d.

Keywords :--

Maximum power point tracking, hill climb search algorithm, tip speed ratio algorithm, power signal feedback algorithm, single-ended primary inductor converter (SEPIC) dc-dc converter

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An Enhanced Power Sharing Scheme for Voltage Unbalances and Harmonic Compensation In an Islanded AC Micro Grid

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Abstract:--

In this paper, an enhanced hierarchical control structure with multiple current loop damping schemes for voltage unbalance and harmonics compensation in ac islanded microgrid is proposed to address unequal power sharing problems. The distributed generation (DG) is properly controlled to autonomously compensate voltage unbalance and harmonics while sharing the compensation effort for the real power, reactive power, unbalance and harmonic powers. The proposed control system of the microgrid mainly consists of the positive sequence real and reactive power droop controllers, voltage and current controllers, the selective virtual impedance loop, the unbalance and harmonics compensators, the secondary control for voltage amplitude and frequency restoration, and the auxiliary control to achieve a high voltage quality at the point of common coupling (PCC). By using the proposed unbalance and harmonics compensation (UHC), the auxiliary control, and the virtual positive/negative-sequence impedance (VPI/VNI) loops at fundamental frequency, and the virtual variable harmonic impedance (VVHI) loop at harmonic frequencies, an accurate power sharing is achieved. Moreover, the low bandwidth communication (LBC) technique is adopted to send the compensation command of the secondarycontrol and auxiliary control 1 from the microgrid control center (MGCC) to the local controllers of DG unit. Finally, the hardware-in-the-loop (HIL) results using dSPACE 1006 platform are presented to demonstrate the effectiveness of the proposed approach.

Index Terms :--

Distributed generation, microgrid, droopcontrol, voltage unbalance and harmonics compensation, power sharing, virtual impedance, secondary control, auxiliary control.

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Energy Harvesting for Low Power Application by Solar Energy

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Abstract:--

In today's world we are facing various issues regarding energy. In some places huge of energy is available still they doesn't have any proper techniques to conserve that energy for increasing efficiency. There are various form available for generation of electricity. Those forms are conventional and may harm most to the atmosphere. In our basic studies we have studied that energy can be generated by basically two types' Renewable type and non-renewable type. The main objective is renewable generation. Many of us knows that we can generate huge amount of energy through non-conventional sources. But we all know that generating energy through the non-conventional sources is very costly. So we are not going to generate any energy from non-conventional, we are going to harvest an energy from it. The basic difference between harvesting and generating is that in generation we generate comparatively large amount of energy for supplying the overall utility (Household load/ Commercial loads) and in the harvesting we uses the energy which is having no any use. Waste energy in case of solar is that rays coming from window/ reflected rays from mirror etc. Basically there are different types of harvesting modules available in the market. In our module we are going to use a supercapacitor. Now we all know that the cost of supercapacitor is very high compared to batteries but for saving the cost we are going to use the combination of small size of supercapacitor.

IndexTerms :--

Conventionaltype, Solar Harvesting, non-conventional type, supercapacitor, waste energy

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A survey : Different Open Source Database for IoT

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Abstract:--

The Internet of Things (IoT) is growing rapidly, and the data being transmitted through IoT grows extremely along with the network. The previous and regular methods of data management can't use with the growing needs. Because of IoT's inherent nature, requires different features in the databases and presents a new set of challenges to database management systems. This paper gives a idea of open source database management systems that are suits for the IoT.

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Brushless DC (BLDC) Motor Drive for Solar Photovoltaic (SPV) Array Fed Water Pumping System by using Fuzzy Logic Controller

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Abstract:--

This paper proposes a basic, cost effective and effective brushless DC (BLDC) motor drive for sun based photovoltaic (SPV) cluster encouraged water pumping system. A zeta converter is used with a specific end goal to separate the greatest accessible power from the SPV array. The proposed control calculation dispenses with stage current sensors and adjusts an essential recurrence switching of the voltage source inverter (VSI), in this manner keeping away from the power losses because of high recurrence switching. No extra control or hardware is utilized for speed control of the BLDC motor. The speed is controlled through a variable DC connect voltage of VSI. A fitting control of zeta converter through the incremental conductance greatest power point following (INC-MPPT) calculation offers delicate beginning of the BLDC motor. The proposed water pumping system is planned and demonstrated with the end goal that the execution is not influenced under element conditions.

Keywords :--

BLDC motor, SPV array, Water pump, Zeta converter, VSI, INC-MPPT.

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Optimal Placement and Sizing Method to Improve the Voltage Stability Margin in a Reduced Buses Distribution System Using Distributed Generation

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Abstract:--

As of late, combination of distributed generation(DG) in circulation systems has expanded to high entrance levels. The effect ofDGunits on the voltage stabilitymargins has moved toward becoming significant. Currentlining procedures are instruments which can be utilized to find and size the DG units in the system, to use these units ideally inside specific breaking points and imperatives. Along these lines, the effects of DG units issues, for example, voltage soundness and voltage profile, can be broke down successfully. A definitive objective of this paper is to propose a strategy for finding and estimating DG units to move forward the voltage dependability angle. The load and inexhaustible DG generation probabilistic nature are considered in this investigation. The proposed technique begins by choosing competitor buses into which to introduce the DG units on the system, organizing buses which are delicate to voltage profile and subsequently enhance the voltage strength angle. The DG units'series and measuring is figured utilizing blended number nonlinear programming, with a target capacity of moving forward the security angle; the requirements are the system voltage limits, feeders' ability, and the DG infiltration level.

Index Terms :--

Distributed generation (DG), distribution system, optimum power flow, voltage profile, voltage stability.

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A Review of Smart Cities Based on the Internet of Things Concept

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Abstract:--

With the expansion of smart meters, like the Advanced Metering Infrastructure (AMI), and the Internet of Things (IoT), each smart city is equipped with various kinds of electronic devices. Therefore, equipment and technologies enable us to be smarter and make various aspects of smart cities more accessible and applicable. The goal of the current paper is to provide an inclusive review on the concept of the smart city besides their different applications, benefits, and advantages. In addition, most of the possible IoT technologies are introduced, and their capabilities to merge into and apply to the different parts of smart cities are discussed. The potential application of smart cities with respect to technology development in the future provides another valuable discussion in this paper. Meanwhile, some practical experiences all across the world and the key barriers to its implementation are thoroughly expressed.

Keywords :--

Cloud platform; Internet of Things (IoT); smart city; demand response.

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Secure Video Steganography Based on Combined Approach Of DWT-DCT And SVD Technique

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Abstract:--

Proliferation and development of technology, internet network have grown briskly. Due to increase in online communication, security of information gets the compromise. Cryptography and Steganography are very well-known concepts of security. Cryptography creates information in an unreadable format. So rather than making the data in an unreadable format, secure communication is carried out by hiding data in other multimedia this technique is referred as Steganography. Video Steganography is more complex and difficult type of Steganography. This paper presents a novel way of steganography where secret data is securely communicated by hiding data in combined coefficients of DWT and DCT using SVD technique of Video. Our combined approach of data hiding by using DWT, DCT, and SVD makes communication secure and it protects the data from the attacker.

Index Terms :--

Steganography, Video Steganography, DCT, DWT, SVD, Security.

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Solar PV Array Fed Water Pumping Using BLDC Motor Drive with Boost-Buck Converter

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Abstract:--

A boost-buck (BB) DC-DC converter is proposed for solar photovoltaic (SPV) array fed water pumping system using a permanent magnet brushless DC (BLDC) motor drive. To design a BB converter with suitable voltage control, DC-DC boost and buck converters are cascaded such that it accomplishes the purpose of maximum power point tracking (MPPT) and soft starting of the BLDC motor. The BB converter exhibits the advantages of both the boost and buck converters and interestingly emerges as a solution to problems associated with these converters in SPV applications. The good switch utilization, high efficiency, non-inverting output voltage and low stress on power devices are the features of BB converter. This paper deals with the starting, dynamic and steady state performances under varying atmospheric conditions and examines the effectiveness of the BLDC motor with the proposed BB converter for SPV based water pumping. Simulated results using MATLAB/Simulink followed by the experimental validation have demonstrated the suitability of this drive for SPV based water pumping system.

Index Terms :--

BB converter, SPV array, BLDC motor, MPPT, Soft starting

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A New Encryption Methodology of AES Algorithm using High Speed S-BOX

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Abstract:--

Cryptography plays an important role in the security of data. Encryption ensures data integrity by protecting the data from being corrupted or modified.RSA and DSA are the most commonly used methods for the authentication. Encryption uses symmetric and asymmetric encryption algorithms such as Triple-DES and Blowfish for maintaining the confidential. The AES is widely used for encryption of audio/video data contents in real time. Due to the significance of the AES algorithm and the numerous real-time applications, the main concern of this paper is to present new efficient hardware implementations for this algorithm.AES uses four operations, namely SubBytes, ShiftRows , MixColumns and Key Additions transformations. SubBytes transformation is done through S-BOX. This paper describes full custom design of high speed S-BOX for AES encryption algorithm and its implementation in FPGA and ASIC. The proposed AES architecture has delayed improvement of approx. 1.6 ns along with area improvement of 287 FPGA slices when implemented in the Spartan-6 FPGA of Xilinx. The full custom design of the S-BOX has been done in 180 nm technology in Cadence using novel XOR gate which has high speed and low power consumption . The designed S-BOX chip consumes $22.6~\mu W$ and has 8.2~ns delay after post layout simulation.

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Energy Consumption Management and Forecasting

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Abstract:--

Electrical power generation techniques are improving because there is need to reduce the emissions of greenhouse gases. Precise monitoring and determining proper tariff is critical for any electric energy consumption system. Paper gives a novel technique for monitoring and forecasting electric energy consumption using advanced data analytics. Prediction techniques based on Statistical methods as well as machine learning techniques have been presented and analyzed. The proposed approach monitors and forecasts the consumption of the electricity in the domestic use through a web server. The hardware module along with camera uploads the data onto cloud infrastructure where the data is processed and stored in the database. The web base solution also depicts the day to day consumption of the energy to its users. The paper also aims at predicting the consumption of the energy for its customers which also includes demand management, asset management, and leakage management aspects of energy management system.

Index Terms:--

Energy Consumption, Support Vector Machine (Svm), Polynomial Regression, Linear Regression, Ocr (Optical Character Recognition)

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An Efficient Cuckoo Search Algorithm for Segmentation of Satellite Images

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Abstract:--

Satellite imaging is being the most attractive source of information for the governmental agencies and the commercial companies in last decade. Satellite images are characterized by weak local correlation between pixels, complete randomness and small multiple regions of interest which makes difficult to segment. The quality of the images is very important especially for the military or the police forces to pick the valuable information from the details. Satellite images may have unwanted signals called as noise in addition to useful information for several reasons such as heat generated electrons, bad sensor, wrong ISO settings, vibration and clouds. There are several image enhancement algorithms to reduce the effects of noise over the image to see the details and gather meaningful information. Satellite images are acquired with remote sensing. Remote sensing is the science and art of obtaining information about an object or area through a device that is not in contact with the object or the area under investigation. The classification can be done by using Image segmentation via various thresholding algorithms where segmentation is the process of dividing an object into several homogeneous regions such that union of no two adjacent regions is homogeneous. In this work an efficient cuckoo search algorithm is developed for segmentation of satellite image.

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Improvised Cloud Based Venue Recommendation Framework

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Abstract:--

We know that Recommendation systems is the technological development in technology trend. Most of recommendation systems is totally based on past behavior which is termed as collaborative filtering based recommendation system which suffers some problems such as data sparseness, cold start etc. This paper is totally based bi-objective recommendation framework(BORF). Bi-objective framework is cloud based framework for mobile social network. In this paper we proposed a system for venue recommendation on the basis of rating given by user and nearest place to user on the basis of longitude and latitude. This paper optimized both scalar and vector optimization. Some algorithms are used for scalar and vector optimization as weighted sum approach and evolutionary NSGAII respectively.

Keywords :--

BORF, Collaborative Filtering (CF), Non-dominated Sorting Genetic Algorithm (NSGA-II).

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A Novel AODV Technique with Varying Area In MANET

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Abstract:--

In the existing scenarios of MANET there are various types of routing protocols those are used and implemented in mobile Ad hoc networks. This paper has been applied and based on the complete analysis between unipath on-demand routing protocol (AODV) and the multipath on-demand routing protocol (AOMDV) using NS-2.34 simulation environment with respect to novel AODV(SAODV). The proposed S-AODV, which is a simplest algorithm based on the previous AODV which is having better performance than the previous AODV and AOMDV for the undersized area network. At the similar time, its better advantages are its simple nature and specification, light physical weight and no routing overheads. This protocol implemented in NS-2.34 and the performance of it will be compared with the previous AODV and AOMDV.

Keywords :--

Throughput, Packet delivery ratio, Pause Time

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Discerning Congestion Intrusion Elimination Based on Packet Masking and Warm Holes Methodologies

Syed Umar., Professor, Department Of Computer Science Engineering, MLRIT, Hyderabad

Abstract:--

Wireless networks are vulnerable to Denial of Service (DoS) attacks. The current system, based on spread spectrum (for example). The technique is primarily focused on the external threat model. The wireless communication between nodes by means of radio communication. Therefore, if the attacker has this system you can easily listen to the messages sent by each node. The world's largest wireless network attachment disorder of selective attacks. This type of attack focuses primarily a word node as a destination node. Hackers are always trying to close the message from the destination node. This leads to a denial of service. We should prevent a new approach to disruptive attacks internal threat model option. Worm Holes are used, the generation of an alarm that indicates the presence, and sends the address of the IP node Scrambler to all the other nodes of the SCRAMBLER system. Through a process called cache packages, we can send a message through the network, although this is a pity. This method is based on a consultation hide diagram technique called Strong (SHCS). The network access to the tunnel at each node knows that violate the rules of a certain network area. If a node, the node is considered a jammer. The launch Wormhole IP shame all other nodes. jammer tunnel prevents noise function to encrypt the message ID and the message source for the package. Thus, shame not to designate the destination node and its origin can be safely mission further jammer own node.

Keywords:--

Elimination, warm hole, Denial of service, Jamming, overloaded

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Performance Evaluation of various Clustering Technique for Gathering Big Data in Distributed Wireless Sensor Network

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Abstract:--

In the digital communication era, big data places an important role in wireless technology. One of the highly scheduled key contributors of big data is wireless sensor network. The overall data generated across in the large sensors in the distributed wireless sensor networks can produce a significant big data. The efficient method of data gathering is a major concern in wireless sensor network. Among those some of techniques are, Fixed Clustering(FC), Mobile sink based Energy Efficiency Clustering (MEC), Expectation Maximization algorithm (EMC), Modified Expectation Maximization algorithm technique (MEM). In this paper, comparing and analyzing of all above methods are done to show that the modified expectation maximization gives the optimum result than the rest of other techniques. It also proposed as a novel model for clustering by considering the cons of MEM algorithm called Fuzzy MEM.

Keywords:--

Mobile sink, Fuzzy, cluster, Connectivity, Deployment, Energy

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Statistical Stemmer for Roman Konkani

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Sagar Krishna Naik., Assistant Professors, Computer Engineering, Agnel Institute of Technology and Design, Assagao, Goa – 403 507

Abstract:--

AStemming algorithm or Stemmer aims at obtaining the stem of a word, that is, its morphological root, by clearing the affixes that carry grammatical or lexical information about the word. Stemming is also a very major requirement of Information retrieval and Natural Language processing functions. There exists greater diversity of languages and the states have their own official languages spoken only in those areas in India. Konkani is the official and widely spoken language in the state of Goa for which some stemmers have already been developed but in Devanagari script. This project develops a stemmer for Konkani in Roman script, in which, each Devanagari letter is resembled by a Roman character, equal to its Devanagari equivalent. The main focus of this project is to develop a statistical stemmer which clusters the morphological variants of a word into a single cluster, based on string distance measure. Then, the extraction of the Stem words from each cluster is done by using Longest Common Prefix algorithm. If any cluster consistsof a single word, then the stem word is extracted from that cluster by applying suffix stripping methodology on it.

Keywords:--

Stemming, IR, Statistical Stemmer, Clustering.

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Lifi- Light Fidelity Technology

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Abstract:--

Li-Fi technology means Light Fidelity technology which was proposed by Harald Haas (a German Physicist). As the name suggests Li-Fi is a data transmission technique which uses illumination for sending the data or light as a medium of communication . It transmits data with the help of an LED bulb having variation in its intensity which has a speed of actually faster than which human eye can follow. It is also known as optical wireless technology or visible light communication. This paper focuses to explore this amazing technology and give a relative study of Li-Fi with other wireless communication technologies like W-Fi. Wi-Fi is perfect for transmission of data having a wireless coverage within buildings. But Li-Fi provides better efficiency, higher bandwidth, better security and availability with a very high speed

Keywords:--

Li-Fi, Wi-Fi, Photodiode, wireless Communication, Visual Light Communications(VLC).

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An Authentication of Significant security for accessing Password through Network System

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Abstract:--

Significant security password to authenticate users on a network system network system for small and large. Text passwords is the standard form of authentication of users on the site for comfort and convenience. In fact, it probably caught on the user's password with various threats and vulnerabilities and threats. ordinary users use text passwords for authentication when they register with the selected account on the site, weak password selected by the user and the application between the sites that a domino effect. Additionally, enter the password of the computer thief a password is not a reliable threat arrival could begin passwords, such as phishing, key loggers and capturing malware attacks steal. OPASS introduce more help with a specific user authentication protocol in this paper. The concept of the universal system and methods of organizations and users to implement password policies. The system is designed for user authentication protocols OTP relating to benefit the users of mobile phones and short message services giant passwords and reuse of passwords to steal a series of attacks. OPass a live phone number of each contribution, this unique recreation and telecom service providers involved have shot three OPASS, users need to log in a password on any computer in the long-term prototype website. After remembering OPASS, we believe OPASSeffective and inexpensive compared to a conventional web authentication mechanism.

Keywords:--

Security, authentication, Messages, OPass, networking, password.

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An Innovative approach to Virtual Reality

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Abstract:--

This presentation describes the overview of virtual reality, its history and its applications. The presentation also elucidates the rapid growth of VR now a day's along with its future scope.

Virtual reality is a computer-generated environment that lets you experience a different reality. Virtual reality (VR) is a simulated information environment used in a growing number of applications. The aim in VR is to create an experience that mimics or resembles real life situations using a computer. People can try out and practice in a virtual world procedures that are complex, difficult, time consuming, expensive, and even dangerous. To date VR has found applications in the education, entertainment industry, building and engineering design, medical surgery, the tourist industry, advertising, food retail and others. While today's T.V and video productions got used to the benefits of virtual studio technology, the interaction between actors and virtual objects inside a virtual world remains challenging. A VR headset fits around your head and over your eyes, and visually separates you from whatever space you're physically occupying. A person using virtual reality equipment is able to "look around" the artificial world, and with high quality VR move about in it and interact with virtual features or items. VR headsets are headmounted goggles with a screen in front of the eyes. Programs may include audio and sounds through speakers or headphones

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Overview of The New Bioinformatics Virus Goes From The Front of Next Generation Sequencing in Genomics Based on Datamining

Syed Umar., Professor, Department Of Computer Science Engineering, MLRIT, Hyderabad

Abstract:--

Genomics and molecular biology at the inspiration and motivation researchers worldwide in biology and biotechnology. Both areas controlled by many data, and grouped and analysed bioinformatics the past. The application of bioinformatics is fast and efficient a clear vision of all this analysis and data to reduce costly laboratory equipment, chemicals and the most valuable time. Most data, including genome sequence results in large numbers, and that is why the administration manual curation of data very difficult. The purpose of the study on the selection of the highest awareness of cancer genomics and next-generation genome sequencing bioinformatics to create different viruses. A next-generation sequencing and high-throughput sequencing could replace the old method of sequencing using the latest technology. This technology is very efficient, faster and cheaper than the traditional way. normal use, briefly discussed below. The role of bioinformatics is increasingly and managing large amounts of data in the world of medical research, biotechnology and clinical analysis. But we still need to understand the challenges and limitations of bioinformatics and reliable

Keywords:--

Cancer, Genomics, molecular biology

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Power Quality Improvement By Using DVR By Energy Optimal Technique

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Abstract:--

Power quality is one of major concerns in the present era. It has become important, especially, with the introduction of sophisticated devices, whose performance is very sensitive to the quality of power supply. Power quality problem is an occurrence manifested as a nonstandard voltage, current or frequency that results in a failure of end use equipment's. Sensitive industrial loads and utility distribution networks suffer from various types of outages and service interruptions which may result in a significant financial loss.

To improve the power quality, custom power devices are used. The device considered in this work is Dynamic Voltage Restorer. This thesis presents modeling, analysis and simulation of a Dynamic Voltage Restorer (DVR) constructed in Simulink environment. In this work, composite observer based controller are used for the control purpose. Here, different supply voltage conditions are considered for linear loads and sensitive load. The major problems dealt here are voltage sag, voltage and voltages unbalances. The role of DVR to compensate load voltage is investigated during the different supply conditions..

Keywords:--

Power quality, custom power devices, DVR, voltage sag and supply voltage unbalance..

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Data Mining for IoT – Review

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Dr.G.Maragatham, Assistant Professor, SRM University

Abstract:--

Data Mining is the discovery of "models" of data. Data dredging is a process of derogatory referring to attempts to extract information that was not supported by the data. Today, data mining is more similar to machine learning and most techniques uses algorithms from machine learning in order to discover unusal events hidden within the large amounts of data. The recent advancements in communication technology, people and the things are becoming increasingly interconnected. The availability of the Internet makes it possible to connect various devices that can communicate with each other and share data. The Internet of Things (IoT) is a new concept that allows users to connect various sensors and smart devices to collect real-time data from the environment. Big Data is a vast amount of data collected from IoT environment and it applies to information that can't be processed or analyzed using traditional tools. Every organization is facing more and more challenges to access a wealth of information and how to get values out of large variety of data. As creation of data is much easier than analyzing it, there is a need for Novel approaches in data mining techniques to deal with huge data. From the perspective of software, the traditional mining algorithms are applicable only for small scale IoT data. This paper first focuses on a review of existing techniques and data mining algorithms that are used to process massive data of IoT and its limitations are discussed. Second, the works related to data mining algorithms that are implemented with Hadoop technology are presented. Third, Hybrid data mining algorithms using MapReduce framework are reviewed. Finally, open research challenges and issues are presented as a conclusion

Keywords:--

Big Data, Data Mining, Hadoop, IoT, MapReduce.

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A Power Quality Improved Bridgeless Converter Based fuzzy logic controller

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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 exchanged mode influence supplies (SMPSs) utilized as a part of PCs. To relieve these issues, it is proposed here to utilize a non-secluded bridgeless buck-support single finished essential 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 load end that are required in a PC. Controlling a solitary output voltage can direct the various dc output voltages also.

Keywords:

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

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Bi-Directional Energy Meter using GSM Modem

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Dr. K. Swarna Sri., M.tech,Ph.d(prof of EEE Dept,RVR&JCCE)

A.Akhil., M.tech,Ph.d(prof of EEE Dept,RVR&JCCE)

D.R.V.Prathap., M.tech,Ph.d(prof of EEE Dept,RVR&JCCE)

Abstract:--

This research model helps to create a better understanding and awareness towards the value and the importance of electrical energy, energy saving, promoting of smart energy management as well as an innovation towards further improvement to proven existing system Most of the energy meters are designed to bill as per the units of energy consumed. These meters need to be manually read by people in order to provide monthly/quarterly bill. In our idea of implementation, we are going to compare the energy we have consumed and the energy we generated and gives billing according to it. If we generate the energy greater than our consumption it will go to the nearby substation which not useful to us. If we install bidirectional energy meter at our home/industry it will give output by comparing by the consumed and the generated energy, and gives the information of our billing through GSM modem to the consumer. If we generate the energy more than we consumed the energy will go to the nearby station, the substation have to pay for that energy, we can give that energy to the station per unit charge greater than the per unit energy consumption. which is for revenue purpose. Day by day energy consumption is increasing, for sake of future generation we have to generate electricity through renewable sources. The most available and efficient energy source is solar energy. Most of are installing solar panels for the generation of energy in this case bidirectional energy meter is useful.

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A Novel Approach of Face Detection And Recognition In Video Surveillance System Using Raspberry Pi

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Abstract:--

In this paper, a PIR based advanced video surveillance capable of face detection, recognition of the detected face and sending captured images to user is implemented. Here a system is developed using a PIR sensor. Picamera interfaced to raspberry pi 3 to perform video surveillance. Face detection, face recognition, sending images to end user is coded using python and open CV scripting language. When motion is detected by the PIR sensor, picamera gets triggered on and start capturing the videos at the same time face detection and recognition is also done in surveillance area. The recognized face is sent to user through Email and also can see the captured video through android app installed in the smart phone.

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Designing prototype for Altering System for Mines with WSN

Syed Umar., Professor, Department Of Computer Science Engineering, MLRIT, Hyderabad

Abstract:--

This article describes the work done in my design and build a prototype security system uses wireless sensor networks to monitor a security system to the environmental conditions of the mining environment. There reviewing the current literature regarding the safety and health of miners and the safety of my system was created. Subsystem prototype that simulated. Includes hardware microcontroller circuit in which the central processing unit. A graphical user interface is also used. There were several feasibility studies. Temperature, humidity, air flow, and a sound sensor measurement accuracy of 89.01%, 98.55%, 90.5% and 89.53%, and a resolution of 0105 °C, 0.12% RH, 0.05 m/s and 00:23 dB SPL, under respectively. Furthermore, the sensors on the specifications of gas and dust; However, it can improve the accuracy. Two production control takes place in the form of changing the ventilation, and the noise protection systems

Keywords:—

Altering system, WSN, noise, Sensors...

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Development of Open Source Based Web GIS Tools

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Shaik Salam, Research Scholar, Associate Professor, Dept. of Computer Science and Engineering, Sree Vidyanikethan Engineering College (Autonomous), Tirupati, Andhra Pradesh

Abstract:--

This Geographic Information System (GIS) is a tool used for capture, storage, manipulation, query and presentation of spatial data that have applicability in various fields. Web GIS has place GIS on Web that created it accessible to common public which was earlier utilized by few elite users. In the present paper, development of Web GIS frameworks has been provide the knowledge for creating Web based GIS applications. Open Source tools have been used to develop two Web GIS frameworks. In first Web GIS framework, WAMP server, Q GIS and MySQL have been used while in second Web GIS framework, Apache Tomcat server, GeoServer, Q GIS, PostgreSQL and PostGIS have been used. These two Web GIS frameworks have been compared to bring out the suitability of each for a particular application

Keywords:—

Web GIS Open Source Software Geo Server QGIS PostGIS

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Solar Powered Bomb Detection Vehicle Based On Gesture Recognition

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Prashanth.N., Asst.Prof, Dept. of Electrical & Electronics, SVIT, Bangalore-560064, India

Abstract:--

The aim of this study is to discuss a vehicle driven by a solar and electrical means. The renewable energy is vital for today's world as in near future the non-renewable sources that we are using are going to get exhausted. The solar vehicle is a step in saving these non-renewable sources of energy. The basic principle of solar vehicle is to use energy that is stored in a battery during and after charging it from a solar panel. The charged batteries are used to drive the motor which serves here as an engine and moves the vehicle in reverse or forward direction. Interpretation of human gestures by a computer is used for human-machine interaction in the area of computer vision. Hand Gesture is habitually used in everyday life style. It is a very intuitive way to communicate. The main purpose of gesture recognition research is to identify a particular human gesture and convey information to the user pertaining to individual gesture. This project work introduces a real time hand gesture recognition system to control a Robot. The system consists of three stages: image acquisition, feature extraction, and recognition in order to navigate the robot using gestures of palm, thereby interacting with the system.

Keywords:—

feature extraction, hand gesture, image acquisition, navigation, solar vehicle.

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Current Research trends of Internet of Things In Agriculture : A Review

Kunchala Anil., KORM College of Engineering, Kadapa, Andhra Pradesh

Abstract:--

This review aims to gain insight into current research trends of Internet of Things(IoT) in Agriculture. The literature reviewed focuses on architecture, connectivity, prototyping hardware and applications. The finding indicate that IoT in agriculture is still in infancy stage and still need application specific solutions

Keywords:—

Agriculture, IOT, IOT Agriculture, Smart Agriculture, review.

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Incremental Processing and Privacy Preserving of Health Data

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Abstract:--

I2mapreduce: fine-grain incremental handling in big data mining is the increase of Map reduces strategy it upgrades the stale and old data mining application comes to fruition as the new data and updates are arrives. Incremental preparing gives stimulating mining comes to fruition I2MapReduce consider its own advantages (i) It propels a basic organizations to execute regard key join computational level handling as opposed to detail level re-estimation, (ii) It singles walk figuring close by extra created persevering computation, and it is generally realized in data mining application, and besides (iii) By Incorporating the plan of novel techniques, can decrement the I/O overhead to gather the directed fine drawn count states. I2MAPREDUCE:FINE-GRAIN INCREMENTAL PROCESSING IN BIG DATA MINING holds the remarkable incremental handling for both single walk and reliable count. By using Map lessen based graph store figuring. The Preliminary outcome at Amazon EC2 addresses the compelling change in execution of I2MapReduce, as stood out from both clear and constant MapReduce, which play out the re-computation.

Index Terms:—

TOP-K, Queries, Incomplete, Positions.

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Addressing Security Attacks in MANETs using SHA-3 Standard Algorithms

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Abstract:--

Hash function maps a message of an arbitrary length to an n-bit output known as the "fingerprint" or the "message digest". Secure Hash Algorithm (SHA-3) is a next generation security standard used in the world of electronic communications where the digital messages are transformed into "message digest" for creating digital signatures. Any changes in the original message leads to a change in the message digest and it becomes easy to detect the modifications to the original message. Hash functions are used in message authentication. They are also used in routine software upgrades to make sure that the new software has not been tampered with. SHA-3 is a family of functions based on Keccak, some of them can be implemented with minimal additional circuitry on a chip and are very useful alternatives for providing security in small devices. SHA-3 is not a replacement for SHA-2 but it is offered as a backup. So far, there is no procedure that exists to crack the SHA-2 and still remains secure and viable. In this paper, we have implemented HMAC-SHA-3 and HMAC-SHA-3 algorithms for the Data Integrity of the information being sent using an Ad Hoc On-Demand Distance Vector (AODV) routing algorithm for Mobile Ad hoc Networks (MANETs). The Block Hole attack was addressed in AODV using SHA-3 algorithm and the tool used for simulation was Qualnet 7.4. The metrics that we have considered to analyze the performance of the protocol were Throughput, Packet delivery fraction, Jitter and Average End-to-End Delay..

Keywords:—

Hash function, Secure Hash Algorithm, Digital Signatures, HMAC-SHA-3, Message Authentication Code, AODV, Qualnet 7.4..

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Smart Agriculture using IoT and Image Processing

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Abstract:--

Image Processing and Internet of Things have been applied individually in the field of agriculture and achieved success to some scope. Combination of these two technologies is not so far present. This paper describes an approach to combine these two technologies to find out the disease of plants in automated manner. Using an IoT, network images are captured using Arduino board and camera module, which are then analyzed under MATLAB to determine the health condition of the plant.s

Keywords:—

Image Processing; Internet of Things; Arduino; Agriculture.

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Seasonal Variations of Ground Water Quality Parameters in Rural Areas of Various Region: A Review

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Abstract:--

Water is the medicine for life. The quality of water is of vital concern for mankind because it sustains life. Water is one of the five elements described in "shastra" to life. It is also one of the most important assets, exploited by man for his sustenance. This is the important point to note that in early time's habitation used to be near rivers, lakes and springs, without water there would have been no life. Water is a very important endless natural resource; it not only makes up to 70 to 90% of weight of most form of life but also represents the continuous phase of living organisms. Water is necessary for the life and growth of human, animals, and plants. The above study has been carried out to measure the turbidity, alkanity, total dissolved solid and pH of water in both pre and post monsoon seasons. Many author's researches to improve the water quality parameter. It maintains the body fluid and regulates the body temperature. It helps in removing the body's waste in the form of sweat and Urine. The pollution causing parameters and extent of pollution at each station are identified through Nemerow's Pollution Index (NPI).

Keywords:—

pH, Total dissolved solid, Nemerow's Pollution Index, turbidity

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Spectrum Sharing Scheme Between Cellular Users

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Abstract:--

In the field of communication spectrum requirement is the biggest issue. To utilize the spectrum resources more efficiently, protocols sharing the licensed spectrum with unlicensed users are receiving increased attention. Spectrum sharing is the technique among the service providers to share the licensed spectrum of the licensed service providers for the Heterogeneous wireless networks in a dynamic manner will be implemented. Here, we can analyze and sense out the unoccupied bands, free bands, allocated bands by calculating the free spectrum metric. If spectrum is free than spectrum sharing technique assigns available channel to new user without harming existing primary users. Hence, providing opportunistic access to the licensed spectrum for unlicensed users that mean other service providers try to access the available spectrum without causing any interference to the primary users. Interference management is a major component in designing these schemes

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Aadhar Enabled Autonomous City Bus (AEA-Bus)

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Abstract:--

In this modern era, it is obvious to have a technology that makes vehicle to run autonomously to the desired location based on the predefined track circuit. This project keeps its focus on this ideology happen with Aadhar unique identification number linked system. Aadhar UID is a unique identification number issued by the Indian government to every individual resident of India. In the existing system, there is a passenger transport concept that follows traditional ticket issue system through query, cash transactions and inefficient usage of Aadhar UID number. Therefore our proposed solution introduces Aadhar UID enabled system which is installed on bus for passenger boarding onto and exiting from the bus. This system features an automatic digital payment on passenger exit from his/her Aadhar linked bank account based on the entry and exit location of a specific passenger. On every bus stop, a timer gets activated for fixed amount of time in which passenger can enter or exit the bus with interruption touch input. Time out causes bus movement to the next bus stop. This leads to non-ticket queries, cashless transactions, and automatic digital payment on exit to maintain real time deadline. This system can also be enabled with obstacle and fire exit sensors for passenger safety. Overall a ticketless, hassle less and time saving travel experience to passengers in smart city.

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Optimal placement & Sizing of DG's using Backtracking Search Algorithm in IEEE 33-bus Distribution System

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Abstract:--

This paper presents an efficient and fast-converging optimization technique based on a modification of the traditional big bang-big crunch method for optimal placement and sizing of voltage controlled distributed generators. The Proposed Backtracking Search Algorithm (BSA) has beenapplied on balanced and unbalanced distribution feeders andvalidated via comparing its results with published results doneusing different analytical and numerical methods. The methodis capable of handling distribution systems of all sizes. A very recent swarm optimization technique namely backtracking search optimization algorithm (BSOA) is considered and compared with conventional Big Bank Big Crunch Method (BBBC). DGs supplying both active and reactive power have been studied. The proposed (BSA) algorithm is implemented in MATLAB environment and tested on the IEEE 33-bus feeder system and the IEEE 37-node feeder..

Index Terms -

Big bang-big crunch, distributed generators, energy loss, optimization

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Modeling of Resource Allocation in OFDMA systems with Multiple Handover Stations

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Abstract:--

In the orthogonal frequency division multiple access (OFDMA) systems, one of the efficient and low complex methods to allocate radio resources among multiple users is chunk based resource allocation, which groups a number of adjacent sub carriers into a chunk and allocates resources chunk by chunk. In this paper we address the problem of radio resources allocation in the Downlink (Dl) of cellular systems with Handover Stations (HS), based on OFDMA systems. In this there is a need for resource allocations for efficient algorithms to the exploit potential capacity and coverage area increased by using Handover Stations. We propose several algorithms for different options such as frequency and time division. One algorithm offers an overall improvement of throughput and coverage, compared to a system without relays. At the same time the advantage of our algorithms is that their complexity and amount of information overhead are much reduced compared to an optimal algorithm?

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