ONE DAY NATIONAL CONFERENCE ON CUTTING EDGE TECHNOLOGIES IN SCIENCE & ENGINEERING

2023

[NCCETSE - 2023]

25.04.2023

PROCEEDINGS

Organised by

Sri Bharathi Engineering College for Women
(Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai-25)
Kaikkurichi (PO),
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PRINCIPAL
SRI BHARATHI ENGINEERING
COLLEGE FOR WOMEN
Kaikkurchi - 622 303, Pudukkottai Dt.

ABOUT US

SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN (SBECW) the first college started one and only for women's higher education in Pudukkottai District, is named after the famous poet and freedom fighter, Bharathiyar, as the fought for women's freedom. This college started by "Sri Bharathi Educational Trust", in the year 2009 in a rural area of Pudukkottai District which is dedicated for the entire development of education, training and to face the society with positive deportment for women and to serve for the upliftment for the society.

SBECW is located about 6KM away from Pudukkottai. The Mission and Vision of this Institution is to inspire and educate young minds to grow with the principles of Truth, Obedient, Honor, Purity, Integrity and Obedience for their enlightment.

The Destiny of our Nation lies in the hands of children. They should be molded and shaped by proper education. We take care in educating the children to know their responsibilities towards their elders, poor & down trodden people. Apart from education our motto is to train the children to become good citizens of India in all aspects.

Our Institution offers five under graduate programmes in various disciplines,

- **B.E. - CIVIL ENGINEERING**
- **B.E. - COMPUTER SCIENCE & ENGINEERING**
- **B.E. - ELECTRICAL & ELECTRONICS ENGINEERING**
- **B.E. - ELECTRONICS & COMMUNICATION ENGINEERING**
- **B.Tech. - INFORMATION TECHNOLOGY**

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KAIKKURUCHI, PUDUKOTTAI – 622 303.

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25th APRIL 2023

CONFERENCE PROCEEDINGS

ACADEMIC YEAR 2022 – 2023

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PREFACE

Sri Bharathi Engineering College for Women, Kaikkurichi, Pudukkotai has organized a "National Conference on Cutting Edge Technologies in Science and Engineering (NCCETSE-2023)" and conducted by the Departments of Civil, Computer Science & Information Technology, Electrical and Electronics Engineering, Electronics and Communication Engineering. We feel swollen with pride and fortunate enough to systematize NCCETSE-2023 on 25th April 2023.

The field of Engineering while looking back to the origins of the history, the contributions where astonishing as well as they stand wonders to exhibit for our age. Due to the wide expansion of the knowledge as well as the population growth, the field of engineering has to spread over a wide spectrum. This has resulted in multi various aspects in the field of engineering and requires specialization in each of the field. Now living through the current age, specialization in a particular field alone will not be helpful.

In such a condition integration of multi various activities of engineering will alone fulfill the requirements of the high-tech modern world and in the days to come. As a fore thought and also to bring out the talents of the students of the various fields of engineering into one point of confluence to understand better and this is a joint venture for this Educational Institution also. We hope very much that such an effort will definitely give raise to a modern world through fulfillment of technologies with inter disciplinary applications.

Our conference aims to integrate the various engineering disciplines and we feel our aim is fulfilled and now we are encouraged by more number of research scholars, academicians and industrialists through their proposals in the form of their full research papers going to be presented at this conference. We have received 232 papers from distinguished and multi-disciplinary engineering domains such as Civil, Electrical, Electronics and Information Technology and Computer Science. Our Technical Core committee short listed those papers into 201 in numbers through an optimum quality policy in selection from those 232 papers.

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All those selected papers are to uplift the objectives of the conference and to interlink the multi-disciplinary engineering domains with a fore thought to achieve a new generation of engineers with an inter-disciplinary understanding.

My sincere thanks to the respected Chairman cum Managing Director, **Thiru. G.Dhanasekaran M.Com., M.A., M.Phil.,** Sri Bharathi Educational Institutions who is the main root for the cause of this National Conference and also thanks to the Secretary, **Mr. L. Dawood Gani**, and our thanks to the Correspondent **Er. N. Kanagarajan** and all the Trust members who have shouldered the organizational role.

I feel my immense pleasure to thank our Patron **Dr. S. Thilagavathi, M.E., Ph.D.,** and Principal for giving me this great opportunity for this National Conference NCCETSE–2023.

My sincere thanks to Chief Advisor of this conference **Thiru. A. Krishnamoorthy**, Administrative Officer and Institutional Publisher, SBECW, Pudukkottai.

I feel my jubilant thanks to all committees especially for Advisory committee, Technical committee and Editorial and Printing committee. I am gratified to the members of NCCETSE-2023, judges of various session, participants of multi-disciplinary.

I also feel my triumphant delight to all delegates, faculties and non-teaching faculty members of SBECW, supportive staff of NCCETSE–2023 and finally I am very grateful to the scholars of SBECW.

April 25, 2023,
Kaikkurichi.

Converner: NCCETSE – 2023,
Dr. S. Guna Selvi,
Associate Professor, Department of Civil,
Sri Bharathi Engineering College for Women,
Kaikkurichi, Pudukkottai.

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ABOUT THE CONFERENCE

This Conference plays an imperative role in meeting demands of the society and taking the illumination of acquaintance to the depth of obscurity, uplifting the embarrassed by providing the education to the society. This conference will enable under graduate, post graduate, Research scholar, Faculties and Industrial Participants from the various streams of engineering to interact the people and making then bend with the society and awareness about multi-disciplinary fields.

"A unity in diversity" is the normal slogan that is known to most of the Indian Citizen. The Constitution, Government, Law and the basic human rights are all unified irrespective of its diversified regional, religious, linguistic and cultural habitual of the Indian people, does not stand in the way of the unity of Indians. If the country is so, why not we, the engineers who are the pillars of the monumental structure shall unite and hold the nation's pride. The diversified fields are only various parts of the body. The function of a human being is only on united action of the various parts of the body. For anything and everything we need a building or structure with all amenities. For that we require invariably the services of engineers of various disciplines all that we know. As a matter of fact, we are supposed to find out a solution oby finding a way for inter connecting the activities of various disciplines. As the first step, as the Armstrong set his foot on the moon, a proposal for conducting a national conference of this nature is formulated.

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Thiru. G. Dhanasekaran, M.A., M.Com., M.Phil.,
Chairman and Managing Trustee,
Sri Bharathi Group of Institutions,
Kaikkurichi, Pudukkottai – 622 303.

MESSAGE

It gives me immense pleasure to know that the Departments of CIVIL, ECE, EEE, CSE, and IT of Sri Bharathi Engineering College for Women, Kaikkurichi, Pudukkottai is organizing a "National Conference on Cutting Edge Technologies in Science and Engineering" on 25th April 2023.

This conference will sharpen the intellects of the Faculty members and students of this 3 years old Institution and will enlighten the participants with latest trends in Multi-Disciplinary Engineering Domain.

My appreciation and congratulations are due to the faculty members and students for their excellent contribution to the academic growth of this Technical Institution, started exclusively for the benefit of women students of rural areas.

I extend my warm greeting to the Principal, Staff and the participants to this occasion.

"When aims are high and efforts are superfluous,
Production and outcome will be a great success"

I wish the conference a great success.

Thiru. G. Dharasekaran,
Chairman & Managing Trustee

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Mr. L. Dawood Gani,
Secretary,
Sri Bharathi Group of Institutions,
Kaikkurichi, Pudukkottai – 622 303.

MESSAGE

I am happy to note that a "National Conference on Cutting Edge Technologies in Science and Engineering" is being organized by various Departments of Sri Bharathi Engineering College for Women, Kaikkurichi, Pudukkottai on 25th April 2023. It is interesting to know that a Souvenir is also being released on this occasion.

This conference will provide an excellent platform for the Faculty members & Research Scholars for exchanging their ideas and experiences for the benefit of the students.

I congratulates the Principal & Faculty members of the Departments of Civil, ECE, EEE, CSE & IT for organizing the conference.

"Creativity is a must to shine in this competitive world
Conference is the best way to reach that Paradise"

I wish the conference a great success.

Mr. L. Dawood Gani,
Secretary

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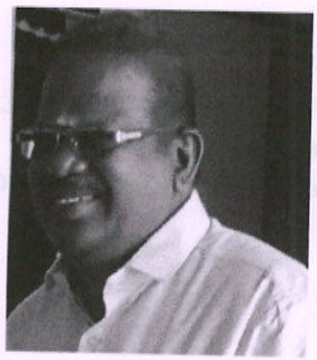
Er. N. Kanagarajan,
Correspondent,
Sri Bharathi Group of Institutions,
Kaikkurichi, Pudukkottai – 622 303.



MESSAGE

I am very pleasure to inform you that the "National Conference on Emerging Trends in Multi-Disciplinry Engineering Fields (NCETMEF-2022)" is being organized and conducted by the various Departments CIVIL, ECE, EEE, CSE & IT of Sri Bharathi Engineering College for Women, Kaikkurichi, Pudukkottai on 18th February 2022.

This conference will provide an excellent platform for the Faculty members & Research Scholars from various parts of the state and country for exchanging their ideas and experiences for the benefit of the students.

I congratulates the Principal & Faculty members of the Departments of CIVIL, ECE, EEE, CSE for organizing this national conference NCETMEF 2022.

I wish this conference for a great success.

Er. N. Kanagarajan,
Correspondent

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Dr. S. Thilagavathi, M.E., Ph.D.,
Principal,
Sri Bharathi Engineering College for Women

MESSAGE

It is a great pleasure for me as a dream has been translated into reality in organizing a "National Conference Conference on Cutting Edge Technologies in Science and Engineering (NCCETSE-23)" in our Fifteen years old college on the most auspicious day of 25th April 2023. I strongly believe that this conference provides a platform for the participants of various disciplines to disseminate, share and exchange their ideas. I promise that Sri Bharathi Engineering College for Women will serve as a grooming ground for new generation of women leaders to exhibit their talents on research through this national conference.

I take this opportunity to sincerely that the management of our college for encourage financially supporting and extending tall the cooperation in organizing this Sixth National Conference on Cutting Edge Technologies in Science and Engineering in our campus. I would like to place on record my whole hearted appreciating for all the members of the various committees for their untiring efforts put in to make this conference a splendid one. It is hoped that the participants will have a pleasant stay in the campus during the conference period and carry the message of the conference for the benefit of large section of students spread over different institutions. The college will be conducting many more programs in the years to come with continued support from the management and with encouragement received from all the participants. I also thank the principals of other colleges for motivating their faculty and students to submit papers.

I wish the conference a grand success.

Dr. S. Thilagavathi
Principal

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1. Utilization of Soft Drink Bottle Caps and Palm Fibre in Concrete

[1]Mrs.Padmarani.R, [2]Ms.V.Ragavi, [3]Ms.T.Ajitha, [4]Ms.G.Mangaiyarkarasi
[1]Assistant professor, [2, 3, 4]U.G.student, Department of Civil Engineering,
Sri Bharathi Engineering College for Women, Pudukkotai.

Abstract: This project mainly concerned with the utilization of soft drink bottle caps and palm fiber in concrete. Over the recent decades, scientists have to search for more sustainable and environmentally friendly materials. The scientists have proposed manufacturing fibers such as polyvinyl alcohol and polypropylene fibers to replace the use of steel fibers because it is more economical. But, in this project we have to add a natural fiber instead of chemical fiber. It increases a tensile strength and the water absorption is less and the CO_2 emission is also high. The mix proportion was chosen on trial-and-error method. The palm fiber was added to the total volume by (0.5%, 1%, 1.5%) and the soda bottle cap as (0.2%,0.25%,0.3%) in the total volume. The concrete cube of size (150 mm x150 mm)is produced by mixing palm fiber and soft drink bottle cap with ordinary concrete. And it is compacted and form a cube and curing for 7,14,28 days and conducting various test such as compressive strength test, water absorption test with comparison with the conventional concrete.

Keywords: Palm Fiber, Soda bottle cap, Water absorption less, CO_2 emission less.

2. Strength and Durability of Light Weight Concrete by Partial Replacement of Over Burnt Brick as Coarse Aggregate

[1]Mrs.Chithirai Selvi.N, [2]Mrs.Padmarani.R, [3]Ms.Priyadharshini.K
[1,2] Assistant professor, [3]U.G.student, Department of Civil Engineering,
Sri Bharathi Engineering College for Women, Pudukkotai.

Abstract: A concrete cube, cylinder is prepared by using sand, cement, water, coarse aggregate & over burnt brick. The over burnt brick is used as a coarse aggregate replacement by 10%, 15%, 20%, 25%. Mix design is done for M20 grade of concrete. Analysis of incorporated concrete was done in fresh state as well in hardened state to evaluate different properties of concrete i.e. slump, workability test, compaction factor test, unit weight, and compressive strength test are evaluated. From all the results and experimental approach it is concluded that Concrete formed with over burnt brick coarse aggregate showed beneficial performance as compared with the concrete made up of natural aggregate. It was seen that 0.74 kg reduction of weight in cube. It was seen that 1.58 kg reduction of weight in cylinder.

Keywords: aggregate gradation, compressive strength, concrete, coarse aggregate, fine aggregate, strength development, interparticle packing, particle size distribution, strength variations, optimizing aggregate gradation.

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3. Performance of Fiber-Reinforced Geopolymer Concrete with Natural Fibers and Fly Ash

[1]Mr.Sivayogaraj.A, [2]Mrs.Priya.R, [3]Ms.Geetha.M
[1, 2]Assistant professor, [3]U.G.student, Department of Civil Engineering,
Sri Bharathi Engineering College for Women, Pudukkotai.

Abstract: Geopolymer concrete has gained attention as an environmentally friendly alternative to conventional Portland cement concrete. This study focuses on investigating the performance of fiber-reinforced geopolymer concrete incorporating natural fibers and fly ash. Different natural fibers, such as sisal, jute, and bamboo, are used as reinforcement in geopolymer concrete mixes. The main variable considered are the volume fraction of steel fibres (0.5% and 1%) and volume fraction of hybrid fibres (0.25% steel fibres and 0.25% polypropylene fibres, 0.25% steel fibres and 0.75% polypropylene fibres and 0.5% steel fibres and 0.5% polypropylene fibres). The effects of fiber type, fiber content, and fly ash replacement on the fresh and hardened properties of geopolymer concrete are evaluated. The study includes assessments of workability, compressive strength, flexural strength, and durability characteristics.

Keywords: fiber-reinforced geopolymer concrete, natural fibers, fly ash, sustainable construction, workability, compressive strength, flexural strength, durability, construction material.

4. Study on Compressive strength of Reactive Powder Concrete (RPC) under various curing regimes

[1]Ms.R.Harshani
[1]PG Student, Department of Civil Engineering,
Mepco Schlenk Engineering College,Sivakasi.

Abstract: RPC has been produced with a compressive strength of over 150 MPa, a bending strength of up to 40 MPa, and even an 800 MPa maximum with the use of hybrid fibre reinforcement. Cement (OPC), fumed silica, quartz-sand, crushed quartz flour, water, High-Range Water Reducing Agent, and fibre reinforcement are the components of RPC . The quick hydration process of cement at a high curing temperature of 100°C as compared to 27°C is something that causes the higher early strength. In addition, the ideal range of fumed silica for its cementitious material characteristics and filler ability was applied. Due of its high strength, prefabricated concrete components may be manufactured in a thin shape to improve the structure's aesthetics. Mix RPC3 Compressive strengths of the concrete produced for this investigation reach values in the range of 150 N/mm^2.

Keywords: Reactive Powder, durability, compressive strength, Optimization.

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5. A Study on Behaviour of Axially Loaded Steel Concrete Composite Long Columns With Basalt And E-Glass Fiber

[1]Mrs.N.Chithirai Selvi, [2]Mrs.Dennis flora.P, [3]Ms.Aruljenifar.C
[1,2]Assistant professor, [3]U.G.student, Department of Civil Engineering,
Sri Bharathi Engineering College for Women, Pudukkotai.

Abstract: In this project, the effect of slenderness ratio on reinforced concrete columns has been investigated by both theoretical and numerical methods of analyses. The theoretical critical load that a column can withstand for a defined slenderness ratio for the design is being determined by the Euler's theory and Rankine's theory of columns. The considered column being square in cross-section is pinned at both of its ends as a support conditions. A vertical axial load was applied to the column top, and the corresponding strain was to be calculated for the column in numerical analysis. The bearing capacity of such columns is, obviously, dependent on the effective length.The computational evaluations were performed with the general purpose finite element analysis software ANSYS 12.0, which can effectively depict the behavior of the columns.
Keywords: Basalt, E-Glass fiber, cement, steel, aggregate, long column, analysis software 12.0.

6. An Experimental study on total Replacement of sand with plastic waste and crusher dust in paver blocks

[1]Mrs.Padmarani.R, [2]Mrs.Dennis flora.P, [3]Ms.Aswini.T
[1,2]Assistant professor, [3]U.G.student, Department of Civil Engineering,
Sri Bharathi Engineering College for Women, Pudukkotai.

Abstract: Recent urban infrastructure growth in India has led to an increase in the use of paved surfaces around buildings and along roads. Traditional concrete pavers are the most appropriate, affordable, and locally accessible material for this paving surface.As a result of increased industrialization and urbanisation, the Indian concrete industry must now satisfy the need for cost-effective and efficient building materials in order to meet the country's growing infrastructure demands. In the first batch of paver blocks, sand is completely replaced by crusher dust and plastic waste in proportions of 15%, 30%, and 45%; however, coarse aggregate is not utilized. In the second batch of paver blocks, sand is completely replaced by crusher dust and plastic waste in proportions of 15%, 30%, and 45%; however, coarse aggregates are still utilized. 7-day, 14-day, and 28-day tests were conducted on the compressive strength behavior of paver block specimens. In addition to the compressive strength and water absorption tests, these blocks were also employed for the compressive strength test. Utilizing waste materials helps to address the problems of scarcity, reduction of disposal costs, low prices, and available quantity of construction materials.
Keywords: Paving surface, paver block, compressive strength, waste disposal.

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7. Analysis and Design of Steel Truss Tower Configuration and Bracings by Using Staad Pro

[1]Ramya.R, [2]Muthukannal.AN
[1,2]Assistant Professor, Department of Civil Engineering,
Mount Zion College of Engineering and Technology, Pudukkotai.

Abstract: This paper deals with the effectiveness of various bracing systems used in lattice towers. Different types of bracings used in 6-legged square based self-supporting power transmission towers are analyzed. This study has focused on identifying the economical bracing system for a given range of tower heights. The height of transmission towers has been analyzed under critical loads such as wind and earthquake loads. The load case include diagonal wind has been found to be most critical cases for towers. The transmission line tower is analyzed by using STAAD PRO. The performance of various bracing system has been identified and reported. The choice of an optimal form, as well as the appropriate sort of bracing system, goes a long way toward producing a cost-effective transmission line tower design. Least weight of the tower implies greatest economy in the transmission line cost. The design given by STAAD.pro has been found to be complying with IS-800: 1984 and all the members were safe.
Keywords: bracings system, software analyser, STAAD PRO.

8. Utilization of Waste Glass Powder as Partial Replacement for Cement in Concrete

[1]Mr.Sivayogaraj.A, [2]Mrs.Padmarani.R, [3]Ms.Subathra.S
[1,2]Assistant professor, [3]U.G.student, Department of Civil Engineering,
Sri Bharathi Engineering College for Women, Pudukkotai.

Abstract: The growing concern over the environmental impact of cement production has led to increased interest in exploring alternative materials for sustainable concrete production. Waste glass powder, a by-product of glass recycling, has shown potential as a partial replacement for cement in concrete. Flow and compressive strength tests on mortar and concrete were carried out by adding 0–25% ground glass in which water to binder (cement + glass) ratio is kept the same for all replacement levels.Various concrete mixtures are prepared by replacing a portion of cement with waste glass powder. The effects of glass powder incorporation on the workability, compressive strength, and durability of concrete are evaluated through laboratory tests. Feasibility and benefits of utilizing waste glass powder as a partial cement replacement, contributing to sustainable concrete practices.
Keywords: waste glass powder, cement replacement, concrete, sustainability, workability, compressive strength, durability, alternative materials, sustainable concrete practices.

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9. Experimental Study on Partially Replacement of Coarse Aggregate by Light Weight Aggregate in Concrete

[1]Mrs.Dennis flora.P, [2]Mrs.Padmarani.R, [3]Ms.Keerthi.S
[1,2]Assistant professor, [3]U.G.student, Department of Civil Engineering,
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Abstract: The main specialties of lightweight concrete are its low density and thermal conductivity. Its advantages are that there is a reduction of dead load, faster building rates in construction and lower haulage and handling costs. We are replacing the cinder instead of coarse aggregate; it is obtained from steel industries. Low specific gravity of cinder in compression with natural aggregates resulted in the concrete made with cinder to be lighter than normal concrete. An experimentally study has been conducted on concrete with partial replacement of conventional coarse aggregate by another light weight aggregate. The M30 concrete mix is designed using ISI method. We make concrete by replacing coarse aggregate with cinder of different percentages like0%, 10%, 25%, 50%, 80% and 100% with curing of 7 and 28 days. Among all the percentages the better compressive strength is 25% replacement of light weight aggregate instead of coarse aggregate in concrete.

Keywords: Light weight aggregate, coarse aggragate, nominal concrete, compressive testing machine.

10. Evaluation of Lime Stabilization as a Remediation Technique for Contaminated Soils

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Abstract: Contaminated soils pose significant environmental and health risks, necessitating effective remediation techniques. Lime stabilization has emerged as a promising remediation method for treating contaminated soils. This study aims to evaluate the effectiveness of lime stabilization as a remediation technique for contaminated soils. Laboratory experiments are conducted to assess the changes in soil properties, including pH, metal leaching potential, and contaminant immobilization, after lime treatment. The study also investigates the impact of lime dosage, curing time, and soil characteristics on the remediation efficiency.

Keywords: lime stabilization, remediation technique, contaminated soils, soil properties, pH, metal leaching, contaminant immobilization, lime dosage, curing time, sustainable remediation.

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11. Influence of Soil Composition on Shear Strength Characteristics: Experimental Investigation

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Shanmuganathan Engineering College, Pudukkottai.

Abstract: The shear strength characteristics of soils play a significant role in geotechnical engineering projects. This abstract presents an experimental investigation on the influence of soil composition on shear strength characteristics. The research aims to understand how variations in soil composition, including the content of different soil constituents, affect shear strength parameters such as cohesion and angle of internal friction. Understanding the influence of soil composition on shear strength characteristics is essential for geotechnical engineering projects. This study investigates the relationship between soil composition and shear strength parameters through experimental investigations.
Keywords: soil composition, shear strength characteristics, experimental investigation, cohesion, angle of internal friction.

12. Performance Assessment of Fiber-Reinforced Concrete with Polypropylene Fibers and Recycled Aggregates

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Abstract: Fiber-reinforced concrete (FRC) offers enhanced properties in terms of crack resistance, ductility, and energy absorption. This study focuses on the performance assessment of FRC using polypropylene fibers and recycled aggregates. Different proportions of polypropylene fibers and recycled aggregates are incorporated into concrete mixes, and their effects on fresh and hardened properties are evaluated. The study includes assessments of workability, compressive strength, flexural strength, and impact resistance of the FRC specimens. The influence of fiber dosage and aggregate replacement on the performance of FRC is investigated. Effectiveness of polypropylene fiber reinforcement and recycled aggregates in enhancing the performance of concrete structures.
Keywords: fiber-reinforced concrete, polypropylene fibers, recycled aggregates, performance assessment, workability, compressive strength, flexural strength, impact resistance, concrete structures.

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13. Optimization of Concrete Mix Design for Long-lasting Rigid Pavements

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Abstract: Concrete mix design plays a critical role in the performance and durability of rigid pavements. This abstract presents a study on the optimization of concrete mix design for achieving long-lasting rigid pavements. The research focuses on identifying the key factors influencing concrete performance, evaluating various mix design parameters, and optimizing the mixture proportions to enhance pavement longevity. Concrete mix design is a crucial aspect of achieving long-lasting rigid pavements. Optimization of concrete mix design to enhance the performance and durability of rigid pavements.

Keywords: concrete mix design, rigid pavements, performance, durability, optimization, mixture proportions.

14. Performance of Column with Different Materials in Clay Soil

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Abstract: Lightweight concrete offers advantages such as reduced dead load, improved thermal insulation, and enhanced fire resistance. This study investigates the performance of lightweight aggregate additives in the production of lightweight concrete. Different lightweight aggregate additives, including expanded clay, expanded shale, and pumice, are incorporated into concrete mixes at varying proportions. The effects of these additives on the fresh and hardened properties of lightweight concrete are evaluated through laboratory tests. The study assesses workability, density, compressive strength, and thermal properties of the lightweight concrete specimens.
Keywords: lightweight concrete, lightweight aggregate additives, expanded clay, expanded shale, pumice, fresh properties, hardened properties, workability, density, compressive strength, thermal properties, processing methods, high-performance lightweight concrete.

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15. Experimental Study on Partial Replacement of Cement by Using Rice Straw Ash

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Abstract: The utilization of recycled plastic waste in paver block production has gained attention as a sustainable approach to waste management. This study focuses on the characterization of recycled plastic waste and its suitability for paver block manufacturing. Various physical and mechanical properties of the recycled plastic waste, such as particle size distribution, density, melt flow index, and tensile strength, are evaluated through laboratory tests. Additionally, the influence of incorporating recycled plastic waste in different proportions on the performance of paver blocks, including compressive strength, water absorption, and abrasion resistance, is investigated. Using recycled plastic waste in paver block production and contribute to sustainable waste utilization in the construction industry.

Keywords: recycled plastic waste, paver block production, characterization, physical properties, mechanical properties, waste management, sustainable approach, particle size distribution, density, melt flow index, tensile strength, compressive strength, water absorption, abrasion resistance, construction industry.

16. Usance of Groundnut Shell Ash and Waste Cardboard Pulp in Concrete

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Abstract: This project will examine the partial replacement of cement with groundnut shell ash and coarse aggregate with waste cardboard pulp for the manufacturing of light weight concrete through experimentation. Normally, the concrete mould occupies 80% of coarse aggregate, so we alternate by using waste cardboard in addition to cement, fine aggregate, coarse aggregate and some percentage of groundnut shell ash. Addition of these waste in a concrete help to increases the compressive strength and also reduces the impact of environment due to chemicals. In this experiment we will prepare a concrete cube of size 150x150x150mm in M25 grade by adding a groundnut shell ash in a percentage of 2.5%, 5% and 7.5% also adding a cardboard waste of 10%, 15% and 20% after the compressive strength will be determined at 7,14 and 28 days.

Keywords: Cardboard, Groundnut shell, Compressive Strength, Lightweight.

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17. Experimental Investigation on Hybrid Fiber Reinforced Concrete

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Abstract: Fiber reinforced concrete is a composite material consisting of mixtures of cement, mortar or concrete and discontinuous, discrete, uniformly dispersed suitable fibers. The behavior of concrete beams reinforced with conventional steel bars and steel fibers and subjected to flexural loading. Based on the test results M20 mix design was carried out. For this experimental investigation, it is planning to incorporate hybrid fiber reinforced concrete combination of hooked end steel fiber, crimped steel fiber, polypropylene fiber upto a total fiber volume fraction of 0.4%, 0.5%, 0.8%. which is prepared using normal mixing, compaction and curing conditions. The various parameters, such as, first crack load, service load, ultimate load and stiffness characteristics of beam with and without steel fibers will be carried out and a quantitative comparison was made on significant stages.

Keywords: Hooked end steel fiber, crimped steel fiber, polypropylene fiber, Fiber reinforced concrete.

18. Use of Light Detection and Ranging (LiDAR) Technology in Large-Scale Terrain Mapping and Infrastructure Surveys

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Abstract: The use of Light Detection and Ranging (LiDAR) technology has revolutionized large-scale terrain mapping and infrastructure surveys. This abstract provides an overview of the application of LiDAR technology in these domains. The study explores the capabilities of LiDAR, its data acquisition process, and its role in enhancing accuracy and efficiency in large-scale terrain mapping and infrastructure surveys. Light Detection and Ranging (LiDAR) technology has emerged as a powerful tool for large-scale terrain mapping and infrastructure surveys. This study investigates the applications of LiDAR technology and its significance in these domains.

Keywords: LiDAR technology, large-scale terrain mapping, infrastructure surveys, data acquisition, accuracy, efficiency.

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19. Experimental Investigation On Behavior of Fly Ash Based Geo-Polymer Mortar

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Abstract: Geopolymer mortar is such a one and in the present study, to produce the geo-polymer mortar the Portland cement is fully replaced with fly ash and the river sand is used as fine aggregate is and alkaline liquids are used for the binding of materials. The cube specimens are taken of size 70.6mm x 70.6mm x 70.6mm.The Geopolymer mortar cube specimens are tested for their compressive strength at the age of 14 days, mixes of varying potassium hydroxide molarities i.e.10M, 14M and 18M are prepared and they are cured by oven curing at 70° c and strengths are calculated for 14 days. The result shows that the strength of Geopolymer mortar is increasing with the increase of the molarity of potassium hydroxide at the elevated temperature.
Keywords:Geopolymer mortar, fly ash, Portland cement,alkaline liquids, potassium hydroxide.

20. Utilization of Cement-Lime Slurry Stabilization for Expansive Soils in Foundation Engineering

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[1,2] Assistant professor, [3]U.G.student, Department of Civil Engineering,
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Abstract: Expansive soils present significant challenges in foundation engineering due to their high plasticity and volume changes. Cement-lime slurry stabilization has emerged as an effective technique for improving the engineering properties of expansive soils. This study investigates the utilization of cement-lime slurry stabilization for mitigating the expansive behavior of soils in foundation engineering applications. Laboratory tests, including compaction, unconfined compressive strength, and swell tests, are performed on soil samples stabilized with various cement-lime ratios. The study evaluates the influence of stabilization parameters, such as cement-lime content and curing time, on the strength, swell potential, and volume stability of the stabilized soils. Effectiveness of cement-lime slurry stabilization as a sustainable approach for foundation engineering on expansive soils.
Keywords: cement-lime slurry stabilization, expansive soils, foundation engineering, engineering properties, plasticity, volume changes, compaction, unconfined compressive strength, swell potential, volume stability, sustainable approach.

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21. Utilization of Coconut Shell as Aggregate Replacement in Lightweight Concrete

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Abstract: The use of coconut shell as a sustainable alternative to traditional aggregates in lightweight concrete has gained significant attention. This study aims to investigate the utilization of coconut shell as an aggregate replacement in lightweight concrete. Different concrete mixtures are prepared by replacing a portion of conventional aggregates with coconut shell aggregates. The effects of coconut shell content on the fresh and hardened properties of lightweight concrete are evaluated through laboratory tests. The study assesses workability, compressive strength, density, and thermal properties of the lightweight concrete specimens. We make concrete by replacing coarse aggregate with coconut shell of different percentages like0%, 10%, 25%, 50%,80% and 100% with curing of 7 and 28 days. Among all the percentages the better compressive strength is 25% replacement of aggregate instead of coconut shell in concrete.

Keywords: coconut shell, aggregate replacement, lightweight concrete, sustainable construction, workability, compressive strength, density, thermal properties, construction practices.

22. Performance of Concrete Incorporating Waste Ceramic Tile Aggregates

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Abstract: The utilization of waste ceramic tile aggregates in concrete production has gained attention as a sustainable solution for waste management in the construction industry. This study focuses on evaluating the performance of concrete incorporating waste ceramic tile aggregates. Different proportions of waste ceramic tile aggregates are incorporated into concrete mixes, and their effects on the fresh and hardened properties of concrete are assessed. The study includes evaluations of workability, compressive strength, flexural strength, and durability characteristics of the concrete specimens. The influence of ceramic tile aggregate content and processing methods on the performance of the concrete is investigated. The feasibility and benefits of utilizing waste ceramic tile aggregates in concrete, contributing to sustainable construction practices and waste reduction.

Keywords: concrete, waste ceramic tile aggregates, sustainable construction, waste management, fresh properties, hardened properties, workability, compressive strength, flexural strength, durability, processing methods, waste reduction.

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23. Luminance and Strength Characteristics of Translucent Concrete

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Abstract: In recent years, it has become vitato construct energy-efficient buildings. An emerging innovation in the building industry is translucent concrete. It's a plan to switch commercial buildings over to using green energy. Light-Transmitting Concrete (LTC) has the potential to transform the inside of a concrete structure from darkish, boring, and greyish to bright, open, and expansive by letting natural light in through the building's outside walls. In this experimental study, Concrete is produced by adding 4% or 5% ofopticalfibrebyvolumeinconcretemix and also to investigate the mechanical and optical properties of translucent concrete bythe inclusion of 0.75mm diameter plastic optical fibre with three different densities in a cementmortarcube.Theoptical fibrewas weaved through the holes which were drilled perpendicularlyon the two opposite faces of the mould. In the present study,the plastic optical fibreof 0.75mm diameter with three different densities (5x5, 6x6, 7x7) is used as alight transmitting element.

Keywords: Translucent concrete, optical Fibre,luminance, strength.

24. Non Linear Regression Model for Compressive Strength of Silica Fume Concrete

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Abstract:In the present research work, investigations were carried out to improve the performance of concrete in terms of strength by incorporating silica fume (SF) as mineral admixture in concrete. Parametric study was carried out by considering w/cm ratio, various percentage of SF and age of concrete as parameters to understand the effect of each parameter. The study was conducted for different water-to-cement (w/cm) ratios of 0.32, 0.35, 0.4 and 0.5. The SF proportion was varied from 0 to 15% with an increment of 5% and ages of concrete from 3 to 90 days were considered and experiments performed accordingly. From the results, it was observed that SF concrete showed consistent performance in all w/cm ratios, and maximum strength was achieved at 0.32 w/c .A Multiple non-linear regression analysis was used to develop a statistical model to predict the strength and found to have good correlation between the observed and predicted values. From the model, It was observed that the maximum strength of 57.75 N/mm2 was obtained with 3.6% SF at 0.32w/c.

Keywords: compressive strength, pH, Silica fume, w/cm ratio

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25. Influence of Curing Conditions on Compressive Strength of Reactive Powder Concrete

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Abstract: Reactive powder concrete (RPC) is known for its exceptional mechanical properties, including high compressive strength and durability. This study investigates the influence of curing conditions on the compressive strength of RPC. Different curing methods, including moist curing, sealed curing, and steam curing, are employed to expose the RPC specimens to varying temperature and moisture conditions during the curing process. The compressive strength of the cured RPC specimens is measured at different ages. The study analyzes the effects of curing temperature, curing duration, and moisture availability on the development of compressive strength in RPC. The findings provide insights into the optimal curing conditions for achieving maximum compressive strength in RPC, facilitating the design and construction of high-performance concrete structures.

Keywords: curing conditions, compressive strength, reactive powder concrete, mechanical properties, moist curing, sealed curing, steam curing, temperature, curing duration, moisture availability, high-performance concrete structures.

26. Design of Concrete Paver Block Using Waste Coconut Fibres

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[1,2]Assistant Professor, Department of Civil Engineering,
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Abstract: Concrete is extensively used in all over the world as a common construction material. The proposed project work is about the development of concrete paver blocks using Cement, Fine Aggregate, Coarse Aggregate and Fine Aggregate along with Waste Coconut Fibres. An extensive study was carried out using coconut fibre as the partial replacement of fine aggregate. Rise in cost of concrete using traditional materials made construction, looks tremendously uneconomical. Concrete paver block of M20 grade were developed using 5%, 10%, 15%, 20% and 25% of coconut fibre. Compressive strength along with other major concrete tests were conducted during the project work. And a result of all the tests were plotted using graphs. The test result provides, adding of 20% of coconut fibre shows the great result among others.

Keywords: coconut fibre, concrete, paver block, waste materials.

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27. Effect of Lime Stabilization on Expansive Clay Soils for Foundation Engineering

[1]Ms.Gayathri.G, [2]Ms.Mahizhini.Raci, [3]Ms.Aruljenifar.C
[1,2]Assistant professor, [3]U.G.student, Department of Civil Engineering,
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Abstract: Expansive clay soils pose significant challenges in foundation engineering due to their high swelling and shrinkage potential. Lime stabilization has been widely employed as a soil improvement technique to mitigate the expansive behavior of clay soils. This study investigates the effect of lime stabilization on expansive clay soils for foundation engineering applications. Laboratory tests, including index properties, compaction characteristics, and unconfined compressive strength, are conducted on lime-stabilized clay specimens. The study assesses the influence of lime content, curing time, and soil moisture content on the effectiveness of stabilization.

Keywords: lime stabilization, expansive clay soils, foundation engineering, soil improvement, swelling, shrinkage, index properties, compaction characteristics, unconfined compressive strength, volume stability, engineering properties, stable foundations.

28. Effect of Fine Aggregate to Coarse Aggregate Ratio on Compressive Strength of Concrete

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Abstract: The ratio of fine aggregate to coarse aggregate is a critical factor that can significantly influence the compressive strength of concrete. This study investigates the effect of the fine aggregate to coarse aggregate ratio on the compressive strength of concrete. Various concrete mixtures with different fine-to-coarse aggregate ratios are prepared and tested for compressive strength. The study examines the impact of varying aggregate ratios on the workability, density, and compressive strength of the concrete specimens. The interfacial transition zone (ITZ) between the aggregates and cement paste is analyzed to understand its influence on the concrete strength. The optimal fine-to-coarse aggregate ratio for achieving the desired compressive strength in concrete mix designs.

Keywords: fine aggregate, coarse aggregate, compressive strength, concrete, aggregate ratio, workability, density, interfacial transition zone (ITZ), concrete mix designs.

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29. Exploring the Effect of Curing Methods on the Strength Development of Paver Blocks

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[1]Principal, [2]Assistant Professor, Department of Civil Engineering,
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Abstract: Proper curing is crucial for achieving the desired strength and durability of concrete products such as paver blocks. Different curing techniques, including moist curing, air curing, and curing compounds, are applied to paver block specimens. The compressive strength and flexural strength of the cured paver blocks are evaluated at various curing ages. The water absorption and dimensional stability of the paver blocks are assessed. The study analyzes the influence of curing methods on the strength development, durability, and overall performance of the paver blocks. The samples are cured using different methods and tested at 7, 14, 21, 28 and 56 days except for those cured in hot water which are tested at 3, 6, 9, 24 and 48 hours after casting. Results from this study indicate that the curing method strongly affects the compressive strength.

Keywords: curing methods, strength development, paver blocks, moist curing, air curing, curing compounds, compressive strength, flexural strength, water absorption, dimensional stability, durability, curing strategies.

30. Analysis of Load Distribution in Flexible Pavements: A Comparative Study

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[1,2]Assistant Professor, Department of Civil Engineering,
Mother Terasa College of Engineering and Technology, Pudukkotai.

Abstract: The analysis of load distribution in flexible pavements is crucial for understanding the behavior and performance of pavement structures under traffic loads. This abstract presents a comparative study on the analysis of load distribution in flexible pavements. The study aims to evaluate and compare different analytical and numerical methods for assessing load distribution characteristics in flexible pavements, considering factors such as pavement layer properties, vehicle characteristics, and environmental conditions. Load distribution analysis in flexible pavements plays a significant role in predicting the performance and longevity of pavement structures. This study presents a comparative analysis of different methods for assessing load distribution characteristics in flexible pavements.

Keywords: load distribution, flexible pavements, comparative study, pavement analysis, analytical methods, numerical methods.

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31. Experimental Investigation on Concrete by Using Babool Tree Leaves Ash

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[1,2]Assistant professor, [3]U.G.student, Department of Civil Engineering,
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Abstract: In the Present study compressive strength was conducted on hardened concrete by replacing cement with 0%, 15%, 20% and 30% of Babool Tree Leaves Ashes and compared the results with control mix (0% babool). The grade of concrete adopted was M30 grade. Different concrete mixtures are prepared by replacing a portion of the cement with varying percentages of Babool tree leaves ash. It has been observed that concrete with 15% Replacement of Babool tree ashes gave the nominal strength of the Concrete. The concrete mixtures are prepared using the determined proportions of cement and Babool tree leaves ash. pozzolans are materials that, when combined with lime and water, react to form cementitious compounds, enhancing the strength, durability, and other properties of concrete.

Keywords: Babool leaves ash, concrete, cement, loading testing machines, lime,water.

32. Exploring the Feasibility of Incorporating Waste Materials in Paver Block Production

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[1]Assistant professor, [2]Associate professor, [3]U.G.student, Department of Civil Engineering,
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Abstract: The utilization of waste materials in construction products, such as paver blocks, has gained attention as a sustainable approach to waste management. This study focuses on exploring the feasibility of incorporating waste materials in paver block production. Different waste materials, including recycled concrete aggregates, fly ash, and plastic waste, are incorporated into paver block mixes at varying proportions. The effects of waste material content on the physical, mechanical, and durability properties of the paver blocks are evaluated through laboratory testing. The study assesses parameters such as compressive strength, water absorption, abrasion resistance, and color variations. The economic and environmental considerations of using waste materials in paver block production are analyzed.

Keywords: waste materials, paver block production, sustainable construction, recycled concrete aggregates, fly ash, plastic waste, physical properties, mechanical properties, durability properties, compressive strength, water absorption, abrasion resistance, color variations, economic considerations, environmental considerations, optimization strategies.

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33. Evaluation of Biopolymer Stabilization for Organic Soils in Foundation Engineering

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[1]Associate professor, [2]Assistant professor, [3]U.G.student, Department of Civil Engineering,
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Abstract: Organic soils pose significant challenges in foundation engineering due to their high compressibility and low shear strength. Biopolymer stabilization has emerged as a promising technique to improve the engineering properties of organic soils. This study aims to evaluate the effectiveness of biopolymer stabilization for organic soils in foundation engineering applications. Laboratory tests, including compaction, unconfined compressive strength, and consolidation tests, are conducted on organic soil samples stabilized with different biopolymers. The study assesses the influence of stabilization parameters, such as biopolymer type and dosage, on the strength, compressibility, and volume stability of the stabilized soils. Additionally, the long-term performance of the stabilized organic soils under varying loading conditions is examined.

Keywords: biopolymer stabilization, organic soils, foundation engineering, engineering properties, high compressibility, low shear strength, compaction, unconfined compressive strength, consolidation, volume stability, sustainable approach.

34. Evaluation of Lime-Cement-Fly Ash Stabilization for Weak Clay Soils in Foundation Engineering

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[1,2]Assistant professor, [3]U.G.student, Department of Civil Engineering,
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Abstract: Weak clay soils pose significant challenges in foundation engineering due to their low strength and high compressibility. Lime-cement-fly ash stabilization has emerged as a potential technique for improving the engineering properties of weak clay soils. This study aims to evaluate the effectiveness of lime-cement-fly ash stabilization for weak clay soils in foundation engineering applications. Laboratory tests, including compaction, unconfined compressive strength, and consolidation tests, are conducted on soil samples stabilized with different proportions of lime, cement, and fly ash. The study assesses the influence of stabilization parameters, such as binder content and curing time, on the strength, compressibility, and volume stability of the stabilized soils.

Keywords: lime-cement-fly ash stabilization, weak clay soils, foundation engineering, engineering properties, low strength, high compressibility, compaction, unconfined compressive strength, consolidation, volume stability, sustainable approach.

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35. Performance of Water-Reducing Admixtures on the Rheological and Mechanical Properties of Concrete

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Abstract: Water-reducing admixtures (WRAs) are commonly used in concrete production to improve workability and reduce water content. This study focuses on evaluating the performance of water-reducing admixtures on the rheological and mechanical properties of concrete. Different types and dosages of WRAs are incorporated into concrete mixes, and their effects on workability, setting time, flowability, and mechanical properties are assessed. The study includes evaluations of compressive strength, flexural strength, and modulus of elasticity of the concrete specimens. Additionally, the influence of WRA dosage and time of addition on the performance of concrete is examined.

Keywords: water-reducing admixtures, concrete, workability, setting time, flowability, compressive strength, flexural strength, modulus of elasticity, optimization, mechanical properties.

36. Performance Evaluation of Copper Slag Concrete in Aggressive Environments

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Abstract: Copper slag, a by-product of copper production, has shown potential as a supplementary cementitious material in concrete due to its pozzolanic properties. Concrete mixtures with varying proportions of copper slag as a partial replacement for cement are prepared and subjected to aggressive exposure conditions, including chloride attack, sulfate attack, and freeze-thaw cycles. This experimental investigation dealt with replacement of copper slag as fine aggregate up to 60% and volume fraction of polypropylene fibre rages from 0% to 0.6%. Acid resistance, sulphate resistance, water absorption, Rapid Chloride Penetration Test (RCPT) and sorptivity tests were carried out to explore durability characteristics. It is evident that 40% to 60% copper slag replacement is having ability to resist acid and sulphate environment.

Keywords: copper slag, concrete, supplementary cementitious material, pozzolanic properties, chloride attack, sulfate attack, compressive strength, durability, chemical degradation, optimal utilization.

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37. Influence of Corrosion Inhibiting Admixtures on Reinforced Concrete Durability

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Abstract: Corrosion of reinforcement in concrete structures is a significant durability concern, leading to structural deterioration and reduced service life. Corrosion inhibiting admixtures have emerged as effective tools to enhance the durability of reinforced concrete. This study investigates the influence of corrosion inhibiting admixtures on the durability of reinforced concrete. Various types and dosages of corrosion inhibitors are incorporated into concrete mixes, and their effects on corrosion resistance and durability properties are evaluated. The study assesses parameters such as chloride ion penetration, electrical resistivity, carbonation depth, and corrosion potential. The long-term performance of the reinforced concrete specimens under accelerated corrosion conditions is examined.

Keywords: corrosion inhibiting admixtures, reinforced concrete durability, corrosion resistance, durability properties, chloride ion penetration, electrical resistivity, carbonation depth, corrosion potential, service life, concrete structures.

38. Evaluation of High-Performance Concrete with Rice Husk Ash and Superplasticizers

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Abstract: The evaluation of high-performance concrete (HPC) incorporating rice husk ash (RHA) and superplasticizers is the focus of this study. HPC offers enhanced durability, strength, and workability, making it suitable for various construction applications.Concrete is a widely used construction material, and the development of high-performance concrete (HPC) has gained significant attention due to its superior mechanical properties and durability. For the hydration properties, concrete cubes were prepared in different series such as 2.5%, 5%, 7.5%, & 10% with water – binder ratio (w/b) of 0.35 with super plasticizer. the best performance was obtained for 7.5% replacement of Rice Husk Ash for OPC with w/b of 0.35 with super plasticizer.

Keywords: high-performance concrete, rice husk ash, superplasticizers, evaluation, durability, strength, workability, sustainable concrete production.

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39. Title: Novel Agricultural Monitoring System with MATLAB Validation

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Abstract: Our project aims to implement "a smart agriculture monitoring system" that reduces human intervention in farming. The three subsystems, namely the master controller, the water pump system, and the water pump switching controller, will enhance productivity. We indeed have targets in developing this novel system that would have a robust design, high accessibility, and wireless communication. The system will accept sensor input, interpret it using MATLAB software, and provide a final interface with the end user. The project concludes with the result of a smart water management system that ensures stable growing conditions for plants. Our proposed idea offers great potential for excellent performance as an interface between the sensors as the input and the IoT as the output medium.

Keywords: Smat Monitoring System, Wireless Communication, IoT based Control, MATLAB Simulink.

40. Title: Validation of MATLAB in Monitoring the Parameters of a Single Phase Induction Motor using an ESP 32 Micro Controller

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Abstract: Our project proposes the monitoring of motor parameters such as voltage, current, temperature, vibration, and speed in a single-phase induction motors using various sensors, thereby observing their live operational status. The hardware component for monitoring the continuous parameters and for the speed control of a single-phase induction motor is carried out using an ESP32 microcontroller. The parameter monitoring is validated using MATLAB software. The hardware is designed such that there is a provision to carry out speed control of both Single and three Phase induction motor in a single unit. The proposed work can help industry people in online monitoring of motors and in future the work can be extended for fault prediction and classification. The condition monitoring of rotating machines for critical applications plays an important role in reducing downtime. With Industry 4.0, the role of IoT in online condition monitoring of electrical machines has gained considerable significance.

Keywords: Single Phase Induction Motor, ESP Micro Controller, MATLAB Simulink.

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41. Title: Smart Ventilation System and Health Care Control using IOT and Big Data Analytics

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Abstract: The crisis resulting from the pandemic COVID -19 has led to an unfavourable situation where thousands of people have died due to the lack of artificial respirators. Our project proposes a preliminary design for a simple and easy-to-build ventilator with a unique design that can be used for COVID -19 patients and also for future unpredictable pandemics to prevent massive loss of life in resource-poor settings. We all know that the human lung uses the back pressure generated by the contraction movement of the diaphragm to draw in air for breathing. The ventilator we have designed here performs a counter-pressure movement to inflate the lungs. It uses an Arduino Uno controller and a Node MCU ESP8266, which contains a blood oxygen sensor, a temperature sensor and a heartbeat sensor, to collect the necessary vital data from the patient based on machine learning techniques (KNN Algorithm) and display it on a website using IOT.

Keywords: Smart Ventilation System, Health Care Unit, IOT and Big Data Analysis, DNN Algorithm.

42. Title: Adaptive Model Predictive Control for Enhanced Speed Control in Dynamic Systems

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Abstract: Speed control plays a crucial role in various dynamic systems, ranging from autonomous vehicles to industrial processes. This paper presents an adaptive model predictive control (MPC) technique aimed at achieving superior speed control performance in dynamic systems. The proposed approach leverages a predictive model that captures the system dynamics and optimizes control actions over a finite prediction horizon. By adapting the model parameters online, the control system can effectively respond to changes in the system behavior, enhancing its adaptability and robustness. The key advantage of the adaptive MPC technique lies in its ability to handle uncertainties and disturbances encountered in real-world scenarios. By continuously estimating and updating the system model, the controller can accurately predict the future behavior of the system and adjust control inputs accordingly

Keywords:- Model Predictive Control, Dynamic Systems, Control System, Optimization Algorithm.

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43. Title: Comparative Analysis of Starting Methods for Electrical Machines

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Abstract: This study presents a comparative analysis of various starting methods employed in electrical machines. Starting an electrical machine efficiently and reliably is crucial for its proper operation and longevity. The paper provides an overview of commonly used starting methods, including direct-on-line (DOL) starting, star-delta starting, autotransformer starting, and soft-starting techniques. The advantages and limitations of each method are discussed, considering factors such as torque, current surge, voltage drop, and mechanical stress during the starting process. The comparative analysis is based on theoretical models, simulation results, and practical considerations.

Keywords:- Direct Online Starters, Direct Current machines, Comparative Analysis, Simulation Results.

44. Title: Solar-Powered Water Pumping Systems for Agricultural Applications: Design, Performance, and Optimization

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Abstract: Solar pumping systems offer a sustainable and cost-effective solution for agricultural water supply. This paper focuses on the design, performance, and optimization of solar-powered water pumping systems for agricultural applications. It discusses the components of a solar pumping system, including solar panels, the pump, and the control system. The paper explores different design considerations, such as system sizing, solar panel selection, and pump selection, to meet specific agricultural water requirements. It addresses system performance analysis, considering factors like solar irradiance, pump efficiency, and water demand. The paper also discusses optimization techniques, including maximum power point tracking (MPPT) algorithms, energy storage integration, and pump control strategies, to enhance the overall efficiency and reliability of solar pumping systems.

Keywords:- Solar powered Water pumping Systems, Reliable Operation, Solar Panel, Performance Analysis.

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45. Title: Challenges and Solutions for Ensuring Stability in Electrical Power Systems

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Abstract: The stability of electrical power systems is of paramount importance in maintaining a reliable and secure supply of electricity. As the demand for electricity continues to grow, power systems face numerous challenges that can jeopardize their stability. This paper aims to explore the various aspects of power system stability, including its significance, key factors influencing stability, and potential solutions to enhance system resilience. Firstly, the paper delves into the importance of power system stability and its role in ensuring uninterrupted electricity supply. It highlights the potential consequences of instability, such as voltage fluctuations, frequency deviations, and even system-wide blackouts. Recognizing the criticality of stability, the research examines the multiple factors that can impact power system stability, including load variations, intermittent renewable energy sources, and unforeseen disturbances.

Keywords:- Stability Analysis, Electrical Power Systems, Renewable Energy Sources.

46. Title: Optimal Load Forecasting in Power System Distribution using Artificial Intelligence

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Abstract: This study proposes an artificial intelligence (AI)-based approach for load forecasting in power system distribution networks. By leveraging historical load data and incorporating various AI techniques such as machine learning and deep learning, the proposed model can accurately predict future load demands. The system takes into account various factors such as weather conditions, seasonal patterns, and historical load patterns to optimize load forecasting accuracy. The results demonstrate that the AI-based load forecasting model outperforms traditional forecasting methods and provides valuable insights for efficient power system distribution planning.

Keywords:- Artificial Intelligence Technique, Power System Distribution, Load Distribution, Optimal control technique.

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47. Title: Enhancing Power Quality in Power System Distribution using Artificial Intelligence

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Abstract: This research focuses on the utilization of artificial intelligence techniques to enhance power quality in power system distribution networks. The proposed AI-based system monitors and analyzes various power quality parameters, such as voltage sags, harmonics, and flicker, in real-time. By employing machine learning algorithms, the system can detect power quality disturbances, classify their types, and localize their sources. The AI model provides valuable insights into the causes of power quality issues and enables proactive mitigation measures. The experimental results demonstrate the efficacy of the AI-based approach in maintaining high power quality standards, minimizing disruptions, and improving overall network performance.

Keywords:- Power Quality Improvements, Artificial Intelligence Technique, Harmonics, Voltage Sag, Flickering, Performance Analysis.

48. Title: MATLAB Simulation of Multilevel Inverters: Modeling, Control, and Performance Analysis

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Abstract: Multilevel inverters have gained significant attention in power electronics due to their ability to produce high-quality voltage waveforms with reduced harmonic content. This paper focuses on MATLAB simulation of multilevel inverters, covering their modeling, control strategies, and performance analysis. It discusses the modeling techniques for multilevel inverters, including the use of pulse-width modulation (PWM) techniques and switching functions. The paper explores various control strategies employed in multilevel inverters, such as carrier-based PWM, selective harmonic elimination (SHE), and space vector modulation (SVM), to achieve improved voltage waveform quality and harmonic reduction. It addresses the implementation of control algorithms in MATLAB/Simulink and the simulation of multilevel inverter performance under different load conditions.

Keywords:- Multilevel Inverter, State Vector Modulation, Harmonics, Diode Clamped Multilevel Inverters, Filtering Methods, SPWM Technique.

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49. Title: Integration of Renewable Energy Sources in Power Grids

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Abstract: This paper explores the challenges associated with integrating renewable energy sources, such as solar and wind, into existing power grids. The intermittent and unpredictable nature of these sources poses significant technical and operational challenges, including grid stability, voltage regulation, and frequency control. The paper discusses various solutions such as advanced energy storage systems, demand response mechanisms, and smart grid technologies that can help mitigate these challenges and ensure reliable integration of renewable energy sources into power grids.

Keywords: Renewable Energy Source, Power Grid, Voltage Regulation, Frequency Control, Reliability, Energy Storage system.

50. Title: Design and Optimization of Offshore Wind Farms for Maximum Energy Production

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Abstract: This study focuses on the design and optimization of offshore wind farms to maximize energy production. It examines various factors, including wind resource assessment, turbine selection, layout optimization, and electrical infrastructure design. The paper presents a comprehensive methodology that considers environmental conditions, such as wind speed, turbulence, and sea states, to determine the optimal configuration of wind turbines for maximum power generation. The findings provide valuable insights for engineers and policymakers involved in the development of offshore wind farms.

Keywords:- Wind mill system, Optimization Control, Efficiency management.

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51. Title: Techno-Economic Analysis of Photovoltaic Systems for Residential Applications

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Abstract: This research paper presents a techno-economic analysis of photovoltaic (PV) systems for residential applications. It examines the cost-effectiveness and performance of PV systems by considering factors such as installation costs, system efficiency, maintenance requirements, and potential electricity savings. The study compares different PV technologies, including crystalline silicon, thin-film, and emerging technologies, and evaluates their financial viability in various geographic regions. The results provide valuable insights into the economic feasibility of PV systems and aid in the decision-making process for residential solar installations.

Keywords: Photovoltaic Systems, Stability Analysis, Flexibility, Economic Management, Emerging Technologies.

52. Title: The Importance of Power Electronics in AC Drives: Enhancing Efficiency and Control

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Abstract: This paper highlights the significance of power electronics in AC drives and discusses its role in improving system efficiency and control. AC drives, also known as adjustable speed drives, play a crucial role in various industrial applications where precise control of motor speed and torque is required. Power electronics converters, such as inverters, are essential components in AC drives as they convert the input electrical power from the grid into a suitable form to drive the AC motor. This enables the control of motor speed and torque through the manipulation of voltage and frequency.

Keywords:- AC Drives, Voltage and Frequency Control, Power Quality, Reliability, Power Electronics.

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53. Title: Stability Analysis of Multi-Source Electrical Systems: Challenges, Methods, and Control Strategies

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Abstract: Multi-source electrical systems, which integrate multiple renewable energy sources, energy storage systems, and traditional power generation units, present unique challenges in terms of stability. This paper focuses on the stability analysis of multi-source electrical systems, addressing the challenges, methods, and control strategies employed to ensure stable and reliable operation. It discusses the different types of instability, including voltage instability, frequency instability, and inter-area oscillations that can occur in multi-source systems. The paper explores stability analysis techniques, such as small-signal stability analysis, eigenvalue analysis, and transient stability analysis, to assess the stability limits and performance of multi-source systems.

Keywords:- Stability Analysis, Multi Source Systems, Optimization Techniques, MATLAB Simulation.

54. Title: The Role of Power Electronics in DC Drives: Enabling Electrification and Automation

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Abstract: This paper examines the role of power electronics in DC drives and its significance in the context of electrification and automation. DC drives are crucial components in various industries, ranging from manufacturing and transportation to healthcare and robotics, where precise control and automation are paramount. Power electronics technology enables the efficient conversion and control of electrical energy in DC drives, thereby facilitating the electrification of systems and the automation of processes. The paper explores how power electronics devices, such as DC-DC converters and motor drives, provide the necessary voltage and current regulation for seamless integration into electrified systems. It discusses the impact of power electronics on improving motor performance, reducing energy consumption, and enhancing system reliability.

Keywords:- DC-DC Converters, Internet of Things, Artificial Techniques, Optimization.

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55. Title: Power Theft Detection using Machine Learning Techniques

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Abstract: Power theft is a significant issue faced by utility companies worldwide, leading to substantial financial losses and inefficient distribution of electricity. Detecting power theft in a timely and accurate manner is crucial for maintaining the integrity of the power grid. This paper proposes a novel approach for power theft detection utilizing machine learning techniques. The proposed system leverages advanced analytics and smart meter data to identify suspicious consumption patterns indicative of power theft. Initially, the system collects real-time electricity consumption data from smart meters installed at consumer premises. These smart meters provide fine-grained information about the energy consumption at regular intervals. To detect power theft, the collected data is preprocessed, including data cleaning, normalization, and feature engineering.

Keywords:- Machine Learning Techniques, Support Vector Machines, Power Grid, Optimization Algorithms.

56. Title: Enhancing Frequency Control Techniques for Robust Power System Stability

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Abstract: The stability of power systems is of paramount importance to ensure reliable and efficient electricity generation, transmission, and distribution. Among the critical factors affecting system stability, frequency control plays a crucial role in maintaining the balance between generation and demand. This paper explores various techniques and strategies to enhance frequency control in power systems, focusing on improved stability, grid reliability, and mitigating the impact of disturbances. The study investigates traditional frequency control methods, such as governor control and automatic generation control (AGC), along with advanced control algorithms, including model predictive control (MPC) and intelligent control systems. Additionally, the utilization of energy storage systems, demand response, and renewable energy integration for frequency regulation is examined.

Keywords:- Stability Analysis, Frequency Control, Electrical Power Systems, Automatic Generation Control.

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57. Title: Smart Metering Systems for Real-Time Energy Management and Home Automation in Residential Houses

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Abstract: Smart metering systems provide a foundation for real-time energy management and home automation in residential houses, enabling homeowners to monitor and control their energy consumption remotely. This paper focuses on the application of smart metering systems for real-time energy management and home automation in residential settings. It discusses the integration of smart meters with home automation systems, enabling users to monitor energy usage, adjust energy settings, and control smart devices based on real-time energy data. The paper explores the functionalities of smart metering systems, such as energy data visualization, load control, and appliance scheduling, that facilitate energy-efficient and automated home environments.

Keywords:- Smart Metering Systems, Home Automation, Real Time Energy management, Monitoring and Controlling.

58. Title: Application of Artificial Intelligence Techniques for Optimization and Control of Electrical Machines

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Abstract: Artificial Intelligence (AI) techniques have gained significant attention in recent years due to their potential in revolutionizing various fields, including electrical machines. This paper explores the application of AI techniques in the optimization and control of electrical machines. The objective is to enhance the performance, efficiency, and reliability of these machines through intelligent algorithms and data-driven approaches. The paper begins by providing an overview of AI techniques such as machine learning, deep learning, and evolutionary algorithms, highlighting their capabilities in handling complex and nonlinear problems. It then delves into specific applications of AI in electrical machines, including optimization of machine parameters, fault detection and diagnosis, and predictive maintenance.

Keywords:- Artificial Intelligent Control, Optimization Methods, Electrical machines, Machine Learning Algorithms.

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59. Title: Advancements in Brushless DC Motors: A Comprehensive Review

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Abstract: Brushless DC motors (BLDC) have gained significant attention in various industries due to their superior performance, efficiency, and reliability. This review paper provides a comprehensive analysis of recent advancements in brushless DC motor technology. It covers the fundamental principles of BLDC motors, including their construction, working principles, and advantages over traditional brushed motors. The paper discusses key developments in motor control techniques, sensorless operation, and intelligent control algorithms, enabling precise speed and torque control. Furthermore, it explores the latest materials and manufacturing processes used in BLDC motor design, highlighting improvements in power density, thermal management, and overall motor efficiency. The review also examines emerging applications of brushless DC motors in electric vehicles, robotics, and renewable energy systems.

Keywords:- DC Motors, Control Techniques, Renewable Energy Systems, Electric Vehicles. BLDC motor characteristics.

60. Title: Advances in Synchronous Motor Technology: A Comprehensive Review

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Abstract: Synchronous motors have been widely utilized in various industrial applications due to their high efficiency, precise speed control, and excellent power factor characteristics. This comprehensive review paper aims to provide an in-depth analysis of recent advancements in synchronous motor technology. It covers the fundamental principles of synchronous motors, including their construction, working principles, and key performance parameters. The paper discusses advances in motor design, such as the utilization of permanent magnets and field winding arrangements, to enhance motor efficiency, power density, and torque production. Furthermore, it explores cutting-edge control strategies, including vector control and sensorless techniques, enabling accurate speed and position control.

Keywords:- Synchronous Motor, Sensorless Techniques, Permanent Magnets, Efficiency.

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61. Title: A Comprehensive Review Advancements in Reluctance Motor Technology

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Abstract: Reluctance motors have gained considerable attention in recent years due to their simple construction, robustness, and high torque-to-inertia ratio. This comprehensive review paper aims to provide a detailed analysis of the latest advancements in reluctance motor technology. It covers the fundamental principles of reluctance motors, including their working principles, types, and key characteristics. The paper discusses recent developments in motor design, such as the use of advanced magnetic materials and optimized rotor and stator configurations, to enhance motor performance and efficiency. Furthermore, it explores innovative control strategies, including sensorless control techniques and intelligent control algorithms, enabling precise speed and torque control. The review also investigates the integration of reluctance motors in various applications, such as electric vehicles, industrial automation, and renewable energy systems.

Keywords: Reluctance Motor, Intelligent Control Techniques, Torque to inertia Control, Renewable Energy System.

62. Title: Embedded System with GSM for Panic Button and Emergency Response in Bank Security

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Abstract: Embedded systems with GSM technology offer effective panic button and emergency response capabilities in bank security applications, enabling prompt assistance and enhanced safety for bank staff and customers. This paper focuses on the application of embedded systems with GSM for panic button and emergency response in bank security. It discusses the functionalities of embedded systems, including panic button integration, event triggering, and automatic alert generation, in facilitating immediate response during critical situations. The paper explores the design considerations for panic button and emergency response systems, including button placement, communication protocols, and emergency contact management. It addresses the implementation aspects, such as response center integration, emergency protocols, and user training, to ensure swift and effective emergency response.

Keywords:- Embedded System, GSM Technology, Security Analysis.

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63. Title: Active Power Quality Control Strategy for Mitigating Voltage Sags and Swells in Power Distribution Systems

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Abstract: Power quality problems, such as voltage sags and swells, can lead to significant disruptions and financial losses in industrial and commercial settings. This paper presents an active power quality control strategy aimed at minimizing voltage sags and swells in power distribution systems. The proposed strategy integrates a dynamic voltage restorer (DVR) with an intelligent control algorithm to detect and compensate for voltage disturbances in real-time. The paper discusses the design and implementation of the control algorithm, which employs advanced signal processing techniques and voltage prediction models to estimate the magnitude and duration of voltage disturbances accurately. The control strategy triggers the DVR to inject compensating voltage in a timely manner, effectively mitigating the impact of sags and swells on sensitive loads.

Keywords:- Power Quality, Dynamic Voltage Restorer, Quality control Strategy, Active Power, Power Distribution Systems.

64. Title: Adaptive Control Strategy for Harmonic Mitigation in Power Systems with Nonlinear Loads

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Abstract: Nonlinear loads, such as power electronics converters and electronic devices, introduce harmonic distortions in power systems, leading to power quality problems and potential equipment failures. This paper presents an adaptive control strategy to minimize harmonic distortions in power systems with nonlinear loads. The proposed strategy utilizes real-time harmonic detection techniques, such as fast Fourier transform (FFT) analysis, to identify the dominant harmonic components and their amplitudes. An adaptive control algorithm is then employed to adjust the control parameters of active harmonic filters or static VAR compensators (SVC) to actively mitigate the identified harmonic distortions.

Keywords:- Harmonics, Static VAR Compensators, Mitigation Techniques, Fast Fourier Transform.

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65. Title: Optimal Control Strategy for Voltage Regulation and Reactive Power Compensation in Distribution Networks

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Abstract: Voltage regulation and reactive power compensation are critical aspects of maintaining optimal power quality in distribution networks. This paper presents an optimal control strategy aimed at achieving voltage regulation and reactive power compensation in distribution networks. The proposed strategy utilizes advanced optimization techniques, such as genetic algorithms or particle swarm optimization, to determine the optimal setpoints for voltage regulators and capacitor banks within the network. The control strategy takes into account load variations, system constraints, and power quality objectives to dynamically adjust the set points of voltage regulators and capacitor banks. The optimal control algorithm considers multiple objectives, including minimizing voltage deviations, reducing power losses, and enhancing power factor, to achieve overall improvement in power quality.

Keywords:- Voltage Regulation, Distribution Networks, Power Quality, Optimal Control Algorithms, System Constraints.

66. Title: Voltage Sag Analysis and Mitigation Techniques for Power Quality Improvement

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Abstract: Voltage sags, also known as voltage dips or short-duration voltage variations, are one of the most common power quality problems affecting industrial and commercial electrical systems. This paper provides a comprehensive analysis of voltage sag characteristics, their causes, and the impact on sensitive loads. It explores various mitigation techniques, including dynamic voltage restorers (DVRs), uninterruptible power supplies (UPS), and energy storage systems, highlighting their effectiveness in reducing the impact of voltage sags on critical equipment. The paper also discusses advanced control strategies and coordination schemes to enhance the performance and reliability of voltage sag mitigation devices.

Keywords:- Power Quality Problems, Voltage Sage, Stability, Reliability, Dynamic Voltage Restorer, Uninterrupted Power Supply.

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67. Title: Adaptive Model Predictive Control for Enhanced Speed Control in Dynamic Systems

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Abstract: Speed control plays a crucial role in various dynamic systems, ranging from autonomous vehicles to industrial processes. This paper presents an adaptive model predictive control (MPC) technique aimed at achieving superior speed control performance in dynamic systems. The proposed approach leverages a predictive model that captures the system dynamics and optimizes control actions over a finite prediction horizon. By adapting the model parameters online, the control system can effectively respond to changes in the system behavior, enhancing its adaptability and robustness. The key advantage of the adaptive MPC technique lies in its ability to handle uncertainties and disturbances encountered in real-world scenarios. By continuously estimating and updating the system model, the controller can accurately predict the future behavior of the system and adjust control inputs accordingly.

Keywords:- Model Predictive Control Technique, Dynamic System, Speed Control, MATLAB Simulation.

68. Title: Flicker Analysis and Mitigation Techniques for Power Quality Enhancement

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Abstract: Flicker, also known as voltage fluctuation, is a power quality issue that can cause visual discomfort, equipment malfunctions, and operational problems. This paper provides a comprehensive analysis of flicker, including its causes, measurement methodologies, and standards. It explores various flicker mitigation techniques, such as static compensators, dynamic voltage restorers, and intelligent control strategies, highlighting their effectiveness in reducing flicker levels. The paper also discusses the influence of renewable energy sources and electric vehicle charging on flicker, and presents techniques to mitigate their impact. Case studies and simulation results are presented to illustrate the effectiveness of different flicker mitigation techniques and their practical applications in enhancing power quality. The analysis of this research contribute to a better understanding of flicker phenomena and provide valuable insights into effective mitigation strategies for power quality enhancement.

Keywords:- Power Quality Improvements, Flicker Analysis and Mitigation Techniques.

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69. Title: Modeling and Control of SCR Controlled Rectifier for High-Power Applications

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Abstract: SCR (Silicon-Controlled Rectifier) controlled rectifiers are widely used in high-power applications for converting alternating current (AC) to direct current (DC). This paper focuses on the modeling and control of SCR controlled rectifiers for efficient and reliable power conversion. The paper discusses the fundamental operating principles of SCR rectifiers and presents a comprehensive mathematical model that captures the non-linear characteristics of the SCR device. It explores various control strategies, including phase-angle control and pulse-width modulation (PWM), to regulate the output voltage and minimize harmonics.

Keywords:- Silicon Controlled Rectifiers, Alternating Current, Harmonic Distortion, High Power Applications.

70. Title: Impedance Relay Applications in Power System Protection: Principles and Performance Analysis

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Abstract: Impedance relays play a vital role in power system protection, offering reliable and selective fault detection and discrimination. This paper focuses on the applications of impedance relays in power system protection schemes. It provides a detailed overview of impedance relay principles, including the measurement of impedance-based parameters, such as apparent impedance, impedance angle, and reach settings. The paper discusses various application scenarios where impedance relays are employed, such as distance protection, differential protection, and directional over current protection. It explores the performance analysis of impedance relays, including their sensitivity, stability, and security under various fault conditions. The paper also addresses advanced techniques, such as adaptive and adaptive directional impedance relays, for improved fault detection and reliable operation.

Keywords: Impedance Relay, Distribution System, Fault Analysis, Power System Protection.

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71. Title: Open Circuit Test of a Single-Phase Transformer: Analysis and Interpretation of Test Results

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Abstract: The open circuit test is a crucial diagnostic test conducted on a single-phase transformer to determine its core losses, magnetizing current, and excitation characteristics. This paper focuses on the analysis and interpretation of open circuit test results for a single-phase transformer. It discusses the test setup, including the measurement of primary and secondary voltages, as well as the recording of magnetizing current. The paper explains the procedure for conducting the test and presents the mathematical equations used to calculate core losses and magnetizing current from the recorded data. It explores the influence of magnetic saturation and hysteresis on the open circuit test results and discusses techniques to minimize these effects. Case studies and practical examples are provided to illustrate the analysis and interpretation of open circuit test results.

Keywords:- Single Phase Transformer, Open Circuit and Short Circuit Test, Characteristics Analysis.

72. Title: Comparative Analysis of Starting Methods for Electrical Machines

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Abstract: This study presents a comparative analysis of various starting methods employed in electrical machines. Starting an electrical machine efficiently and reliably is crucial for its proper operation and longevity. The paper provides an overview of commonly used starting methods, including direct-on-line (DOL) starting, star-delta starting, autotransformer starting, and soft-starting techniques. The advantages and limitations of each method are discussed, considering factors such as torque, current surge, voltage drop, and mechanical stress during the starting process. The comparative analysis is based on theoretical models, simulation results, and practical considerations. The findings aim to assist engineers and designers in selecting the most suitable starting method based on the specific requirements and constraints of their electrical machine applications.

Keywords:- Direct Online Starters, Starting methods, Different Starting Methods.

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73. Title: Buchholz Relay Application in Three-Phase Transformer: Fault Detection and Protection Strategies

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Abstract: Buchholz relay is a protective device widely used in three-phase transformers to detect and provide early warning of internal faults, such as transformer core insulation failure, winding short circuits, or excessive heating. This paper focuses on the application of Buchholz relay in three-phase transformers for fault detection and protection strategies. It discusses the working principle of Buchholz relay, which relies on the detection of gas or oil flow abnormalities caused by internal faults. The paper explores the installation and configuration of Buchholz relay in three-phase transformers, considering factors such as oil flow rate, relay sensitivity, and fault discrimination. It addresses the challenges associated with Buchholz relay operation, such as false alarms and sensitivity adjustments, and presents techniques to mitigate these issues.

Keywords:- Buchholz Relay, Three Phase Transformer, Fault Discrimination, Transformer Protection.

74. Title: Induction Motor Applications in Renewable Energy Systems: Grid Integration and Power Quality Considerations

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Abstract: Induction motors play a significant role in renewable energy systems, such as wind turbines and solar power plants, due to their robustness and grid compatibility. This paper focuses on the application of induction motors in renewable energy systems from a grid integration and power quality perspective. It discusses the challenges associated with grid synchronization, reactive power compensation, and power quality regulation in renewable energy systems and presents techniques to address these challenges using induction motors. The paper explores control strategies, such as grid-forming control and grid-following control, to achieve stable and reliable grid integration. It addresses power quality issues, such as voltage fluctuations, harmonics, and flicker, and presents methods to mitigate these issues using induction motors.

Keywords:- Induction Motor, Renewable Energy Sources, Grid forming Control, Performance Improvements.

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75. Title: Study and Analysis of Single Phase 13-Level Inverter Switching Pulses by interfacing Arduino

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Abstract: Inverters are nowadays very much in demand due to their serviceability. Based on the area of application there are various types of inverters available among them Cascade H-bridge multilevel inverter is very useful in every industrial applications, power system and home appliance. There are numerous limitations of conventional two level inverter like presence of harmonics and high rate of change of voltage that is caused in output. The elimination of presence of harmonics in the inverter output involves various techniques. Cascade connection of H bridges is one of the very efficient ways to eliminate the presence of Harmonics and high change in the output voltage. The cascade connection of H bridges provides very less or negligible change in voltage between two levels that is ultimately solution for two level inverter.

Keywords:- H bridge multilevel Inverters, Switching Methods, Harmonics.

76. Title: Advanced Control Techniques for Electric Vehicle Propulsion Systems: A Comprehensive Review

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Abstract: Electric vehicles (EVs) have gained significant attention as a sustainable and environmentally friendly mode of transportation. This comprehensive review paper focuses on advanced control techniques for electric vehicle propulsion systems. It provides an overview of the fundamental components of EV propulsion systems, including the electric motor, power electronics, and energy storage system. The paper discusses various control strategies employed in EVs, such as field-oriented control (FOC), direct torque control (DTC), and model predictive control (MPC). It explores the utilization of these control techniques for precise speed and torque control, regenerative braking, and energy management in EVs. The review also addresses the integration of control algorithms with vehicle dynamics control, such as traction control and stability control, to enhance vehicle performance and safety.

Keywords:- Electric Vehicle, Model Predictive Control, Field Oriented Control, Direct Torque Control.

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77. Title: Stability Control Strategies for Hydro Power Generation: A Comprehensive Review

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Abstract: Hydro power generation plays a vital role in the global energy mix, providing renewable and sustainable electricity. This comprehensive review paper focuses on stability control strategies in hydro power generation. It provides an overview of the stability challenges faced in hydro power systems, including synchronous stability, voltage stability, and frequency stability. The paper discusses various control techniques and strategies employed to enhance system stability and prevent instability events, such as generator tripping and grid disturbances. It explores the utilization of supplementary control devices, such as excitation systems, turbine governors, and power system stabilizers (PSS), to improve the dynamic response and stability of hydro power plants.

Keywords:- Hydro Power Generation, Stability, Effectiveness and Performance Analysis.

78. Title: A Review of implementation of 5 level Inverter with reduced switches using Photovoltaic System.

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Abstract: This paper deals with the multilevel inverter with reduced switch count fed by renewable energy sources. The inverter circuit is designed with the help of T-type topology. The inverter is fed from a solar panel which generates a dc output. MPPT technique is employed to get the required output from solar panel. The output of solar panel is passed to a dc-dc converter and then to inverter. Thirteen level output voltage waveform is produced using eight switches in inverter. LC filter is used to avoid harmonics. Space vector pulse width modulation technique is used to generate pulses for the switches used in inverter. The transistors used will be MOSFET in case of low power applications and IGBT in case of high power applications. The proposed system has several advantages like less number of switches, lower switching frequency and reduced harmonics. The performance of the proposed system is simulated in a Matlab/Simulink environment and its output waveform is verified

Keywords:- Photovoltaic System, Multi level Inverter, MPPT Technique, Transistors.

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79. Title: Advancements in High-Speed Fiber Optic Communication Systems

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Abstract: This paper provides a comprehensive review of recent advancements in high-speed fiber optic communication systems. It discusses key technologies such as wavelength-division multiplexing (WDM), coherent detection, and digital signal processing (DSP) techniques that have enabled the transmission of large amounts of data over long-haul fiber links. The paper also explores challenges and future directions for achieving even higher data rates and increased spectral efficiency in fiber optic communication systems.

Keywords: Fiber optic communication, high-speed systems, wavelength-division multiplexing, coherent detection, digital signal processing, long-haul transmission, data rates, spectral efficiency

80. Title: Design and Implementation of a Low-Power Wireless Sensor Network for Environmental Monitoring using Arduino

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Abstract: This paper presents the design and implementation of a low-power wireless sensor network for environmental monitoring. The system is built using Arduino-based sensor nodes equipped with various environmental sensors. The network utilizes the Zigbee protocol for wireless communication, enabling data collection from multiple sensor nodes. The proposed system demonstrates the feasibility of using Arduino in wireless sensor networks for environmental monitoring applications.

Keywords: IoT, Arduino, wireless sensor network, environmental monitoring, Zigbee

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81. Title: Edge Detection in Images Using the Canny Operator in MATLAB

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Abstract: This paper explores the Canny edge detection algorithm for identifying edges in images. The Canny operator provides accurate edge localization and noise suppression. Experimental evaluations demonstrate the effectiveness of the method in various scenarios.

Keywords: Edge detection, Canny operator, MATLAB.

82. Title: Image-Based Biometric Recognition Using Deep Learning and Face Recognition in Python

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Abstract: This paper presents an image-based biometric recognition system using deep learning and face recognition techniques. Python and libraries like OpenCV or Dlib are utilized to detect and recognize faces for biometric authentication. Experimental evaluations demonstrate high recognition accuracy.

Keywords: Image-based biometric recognition, Deep learning, Face recognition, Python, OpenCV, Dlib

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83. Title: Arduino-based Wearable Sensor Networks for Healthcare Applications in IoT

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Abstract: This paper investigates the use of Arduino-based wearable sensor networks for healthcare applications in IoT. The study explores the integration of Arduino boards into wearable devices to monitor vital signs, activity levels, and other health-related parameters. The proposed system enables continuous health monitoring, early detection of anomalies, and personalized healthcare services, contributing to improved patient care.

Keywords: IoT, Arduino, wireless sensor network, wearable sensor networks, healthcare applications, vital signs monitoring

84. Title: Secure Key Distribution in Quantum Fiber Optic Networks

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Abstract: Quantum key distribution (QKD) offers a secure method for key exchange in fiber optic networks. This paper reviews the latest advancements in QKD protocols and technologies, discussing their strengths and vulnerabilities. It also explores potential countermeasures against attacks, ensuring secure key distribution in quantum fiber optic networks.

Keywords: Fiber optic networks, Quantum key distribution, Secure key exchange, QKD protocols, Network security

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85. Title: IoT-Enabled Attendance Management and Notification System using RFID for Educational Institutions

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AbstractTraditional attendance systems often suffer from inaccuracies and inefficiencies, leading to administrative challenges and loss of valuable instructional time. To overcome these limitations, this project employs the Internet of Things (IoT) technology, specifically Radio-Frequency Identification (RFID), to create a comprehensive attendance management and notification system.RFID tags are assigned to students and faculty members, allowing for seamless and automated attendance tracking. RFID readers placed at bus, such as classroom entrances, record attendance as individuals pass by. The collected attendance data is then transmitted in real-time to a centralized IoT platform, where it is processed and stored securely. A vehicle monitoring system is implemented for tracking the movement of a bus at a specific time. It combines a smart phone application with a microcontroller. Users will be able to monitor the moving vehicle on demand using the application. In addition to the tracking, a prediction is implemented for computation of the arrival time of a bus

Keywords: Arduino Uno,IOT, ,RFID,Automatic tracking

86. Title: Efficient Management System for Waste Monitoring And Controlling

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Abstract: This paper focuses on the analysis and mitigation of multipath propagation in urban environments. The characteristics of multipath propagation, including delay spread and Doppler spread, are analyzed using measurement data. Various techniques for mitigating the effects of multipath propagation, such as equalization, diversity combining, and adaptive modulation, are discussed. The performance of these techniques in terms of bit error rate and throughput is evaluated through simulations. The results provide insights into effective strategies for dealing with multipath propagation in urban wireless communication systems.

Keywords: multipath propagation, urban environments, delay spread, Doppler spread, equalization, diversity combining, adaptive modulation, bit error rate, throughput, wireless communication systems.

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87. Title: Deep Learning for Predictive Maintenance in Industrial IoT

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Abstract: This research paper investigates the application of deep learning techniques for predictive maintenance in industrial Internet of Things (IoT) environments. A convolutional neural network (CNN) model is developed to analyze sensor data and detect anomalies in real-time. The proposed approach enables proactive maintenance strategies, reducing downtime and optimizing equipment performance.

Keywords: IoT, artificial intelligence, deep learning, predictive maintenance, anomaly detection.

88. Title: AI –Enhanced Wildlife Management for smart crop protection system attack using CNN algorithms

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[1,2]Assistant Professor, Department of ECE, [3,4]UG Students, Department of ECE,
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Abstract: Crop damage caused by animal attacks is one of the major threats in reducing the crop yield. Due to the expansion of cultivated land into previous wildlife habitat, crop raiding is becoming one of the most antagonizing human-wildlife conflicts. Traditional methods followed by farmers are not that effective and it is not feasible to hire guards to keep an eye on crops and prevent wild animals. Since safety of both human and animal is equally vital, Thus, in order to overcome above problems and to reach our aim, we use deep learning to detect animals, entering into our farm by using deep neural network concept, a division in computer vision. In this project, we will monitor the entire farm at regular intervals through a camera which will be recording the surrounding throughout the day. With the help of a deep learning model, we detect the entry of animals and we play appropriate sounds to drive the animal away

Keywords: Image processing, AI, CNN Algorithm, Python.

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89. Title: Autonomous Navigation and Obstacle Avoidance for Mobile Robots in Dynamic Environments

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Abstract: This paper presents a novel approach for autonomous navigation and obstacle avoidance of mobile robots operating in dynamic environments. The proposed system integrates perception, planning, and control algorithms to enable robots to navigate safely and efficiently in real-time. Key components include sensor fusion for environment perception, dynamic path planning algorithms, and adaptive control strategies. The system has been extensively tested in various scenarios, demonstrating robustness and effectiveness.

Keywords: Mobile robots, autonomous navigation, obstacle avoidance, dynamic environments, perception, planning, control

90. Title: Adaptive Control and Learning for Robotic Systems

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Abstract: This paper explores the application of adaptive control and learning techniques for robotic systems. It discusses various adaptive control strategies, including model-based and model-free approaches, and their integration with learning algorithms. The paper also presents case studies of adaptive control in different robotic applications, highlighting the advantages and challenges of these techniques.

Keywords: Adaptive control, learning, robotic systems, model-based control, model-free control, case studies.

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91. Title: Joint Estimation of Channel and Carrier Frequency Offset in OFDM Systems

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Abstract: This paper addresses the problem of joint estimation of channel and carrier frequency offset in orthogonal frequency-division multiplexing (OFDM) systems. The proposed method utilizes pilot symbols to estimate the channel impulse response and carrier frequency offset simultaneously. Simulation results demonstrate the accuracy and robustness of the joint estimation approach in different channel conditions.

Keywords: OFDM systems, Channel estimation, Carrier frequency offset, Joint estimation, Pilot symbols

92. Title: Joint Optimization of Link and Path Selection in Software-Defined Optical Networks

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Abstract: Software-defined networking (SDN) enables flexible control and management of optical networks. This paper presents a joint optimization framework for link and path selection in SDN-based optical networks. The proposed approach considers various metrics, such as bandwidth utilization and latency, to achieve efficient resource allocation and improved network performance.

Keywords: Fiber optic networks, Software-defined networking, Link and path selection, Optimization, Resource allocation.

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93. Title: Automatic Modulation Classification of Communication Signals Using Machine Learning

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[1, 2]Assistant Professor, Department of ECE, [3, 4]UG Students, Department of ECE,
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Abstract: This paper presents an automatic modulation classification method for communication signals using machine learning techniques. The proposed approach extracts relevant features from the signal and employs machine learning algorithms, such as support vector machines or neural networks, to classify the modulation type. Experimental results demonstrate the high accuracy and efficiency of the proposed method in modulation classification.

Keywords: Modulation classification, Communication signals, Machine learning, Feature extraction, Classification algorithms

94. Title: Human-Robot Collaboration for Efficient Assembly Tasks in Industrial Environments

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Abstract: This paper addresses the problem of human-robot collaboration for efficient assembly tasks in industrial environments. The proposed framework focuses on enhancing the interaction between human operators and robots to improve productivity and safety. Key aspects include task allocation, motion planning, and communication protocols. The system incorporates machine learning techniques to learn and adapt to human preferences and capabilities. Experimental results show significant improvements in assembly time and worker satisfaction.

Keywords: human-robot collaboration, assembly tasks, industrial environments, task allocation, motion planning, communication protocols

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95. Title: Optical Fiber Sensors for Structural Health Monitoring

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Abstract: Optical fiber sensors have gained significant attention in structural health monitoring applications. This paper reviews various types of optical fiber sensors, such as fiber Bragg gratings and distributed sensing systems, and their deployment in structural health monitoring scenarios. The study highlights their advantages, limitations, and potential improvements for accurate and reliable monitoring.

Keywords: Fiber optic networks, Optical fiber sensors, Structural health monitoring, Fiber Bragg gratings, Distributed sensing.

96. Title: Secure Communication in IoT using Arduino-based Wireless Sensor Networks

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Abstract: This paper addresses the security challenges in IoT by proposing a secure communication mechanism for Arduino-based wireless sensor networks. The system integrates encryption algorithms and authentication protocols to ensure the confidentiality and integrity of data transmitted over the network. Experimental evaluations demonstrate the effectiveness of the proposed solution in protecting IoT communication against various security threats.

Keywords: IoT, Arduino, wireless sensor network, secure communication, encryption, authentication

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97. Title: Reconfigurable Antenna Arrays for Beamforming in Massive MIMO Systems

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Abstract: This paper investigates the design and performance of reconfigurable antenna arrays for beamforming in massive multiple-input multiple-output (MIMO) systems. The proposed antenna arrays employ electronically steerable parasitic elements to achieve beamforming in different directions. The design methodology, including the optimization of element spacing and phase shifters, is presented. The performance of the arrays is evaluated in terms of beamforming gain, beamwidth, and sidelobe levels. The results demonstrate the effectiveness of reconfigurable antenna arrays in improving the performance of massive MIMO systems.

Keywords: reconfigurable antenna arrays, beamforming, massive MIMO systems, electronically steerable parasitic elements, element spacing, phase shifters, beamforming gain, beamwidth, sidelobe levels.

98. Title: Adaptive Noise Reduction for Speech Signals Using Deep Learning

[1]Mrs T.K.Mohanapriya, [2]Nithyapoorani.V, [3]Abirami.S, [4]Arthi S
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Abstract: This paper proposes an adaptive noise reduction technique for speech signals based on deep learning. The proposed method utilizes a convolutional neural network (CNN) to automatically learn the noise patterns and adaptively remove them from the speech signals. Experimental results demonstrate the effectiveness of the proposed approach in enhancing the quality of speech signals corrupted by various types of noise.

Keywords: Speech signals, Adaptive noise reduction, Deep learning, Convolutional neural network, Signal enhancement

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99. Title: Image Super-Resolution Using Sparse Representation and Total Variation Regularization

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Abstract: This paper introduces an image super-resolution technique based on sparse representation and total variation regularization. The proposed method reconstructs high-resolution images from low-resolution counterparts by leveraging the sparse representation of image patches and incorporating total variation regularization to preserve image edges and details. Experimental results demonstrate the superiority of the approach in enhancing image resolution and quality.

Keywords: Image super-resolution, sparse representation, Total variation regularization, Image reconstruction, Image quality

100. Title: Enhanced Bandwidth Allocation Scheme for Ethernet Passive Optical Network

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Abstract: Ethernet Passive Optical Networks (EPONs) provide high-speed broadband access to residential and business users. This paper proposes an enhanced bandwidth allocation scheme for EPONs, considering dynamic bandwidth allocation, fairness, and quality of service requirements. The scheme aims to optimize resource utilization and ensure equitable access to network resources.

Keywords: Fiber optic networks, Ethernet Passive Optical Networks, Bandwidth allocation, Quality of service, Resource utilization.

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101. Title: Efficient Image Fusion Using Multi-Scale Transform and Spatial-Spectral Consistency

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Abstract: This paper introduces an efficient image fusion technique based on multi-scale transform and spatial-spectral consistency. The proposed method decomposes the source images into multi-scale representations, fuses the corresponding coefficients, and enforces spatial-spectral consistency to preserve important details and color information. Experimental results show the effectiveness of the approach in producing fused images with enhanced visual quality.

Keywords: Image fusion, Multi-scale transform, Spatial-spectral consistency, Image decomposition, Visual quality

102. Title: Smart Antenna Systems for Cognitive Radio Networks

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Abstract: This paper presents the design and implementation of smart antenna systems for cognitive radio networks. The smart antennas adaptively adjust their radiation pattern and beam direction based on the detected spectrum availability and user requirements. The design considerations, including beamforming algorithms and channel estimation techniques, are discussed. The performance of the smart antenna systems is evaluated in terms of interference mitigation, capacity enhancement, and energy efficiency. The results highlight the benefits of utilizing smart antenna systems in cognitive radio networks.

Keywords: smart antenna systems, cognitive radio networks, radiation pattern, beam direction, spectrum availability, beamforming algorithms, channel estimation, interference mitigation, capacity enhancement, energy efficiency.

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103. Title: Privacy-Preserving Techniques for Secure Data Transmission in Wireless Sensor Networks

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Abstract: This paper focuses on privacy-preserving techniques for secure data transmission in wireless sensor networks (WSNs). It discusses cryptographic mechanisms, such as homomorphic encryption and secure multiparty computation that enable secure data aggregation, authentication, and privacy preservation in WSNs. The paper also addresses energy efficiency, network scalability, and key management challenges in the context of privacy-preserving WSNs. Experimental evaluations demonstrate the effectiveness of the proposed techniques in enhancing the security and privacy of WSNs.

Keywords: privacy-preserving techniques, data transmission, wireless sensor networks, homomorphic encryption, secure multiparty computation, data aggregation.

104. Title: Wireless Power Transfer Systems using Antenna Arrays: Design and Optimization

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Abstract: This paper presents the design and optimization of wireless power transfer systems using antenna arrays. The antenna arrays are utilized to achieve highly efficient power transfer over a distance. The design considerations, including the selection of array elements, power allocation, and beamforming techniques, are discussed. The system performance is evaluated in terms of power transfer efficiency and spatial coverage. The results highlight the effectiveness of antenna arrays in wireless power transfer applications.

Keywords: wireless power transfer systems, antenna arrays, power transfer efficiency, spatial coverage, array elements, power allocation, beamforming techniques.

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105. Title: Efficient Signal Denoising Using Wavelet Transform and Thresholding

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Abstract: This paper introduces an efficient signal denoising technique based on wavelet transform and thresholding. The proposed method decomposes the noisy signal into different frequency bands using wavelet transform and applies a thresholding operation to remove the noise components. Experimental results show that the approach effectively reduces noise while preserving the important signal features.

Keywords: Signal denoising, Wavelet transform, Thresholding, Noise reduction, Frequency bands

106. Title: Autonomous Exploration and Mapping in Unknown Environments using Multi-Robot Systems

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Abstract: This paper presents a novel approach for autonomous exploration and mapping in unknown environments using a team of robots. The proposed system leverages advanced technologies such as simultaneous localization and mapping (SLAM) and cooperative path planning to enable efficient and effective exploration. Each robot in the team is equipped with sensors and cameras for perception and mapping, and they collaborate to build a detailed map of the environment. The robots communicate and exchange information to avoid redundant exploration and maximize coverage. Experimental results demonstrate the effectiveness of the proposed approach in exploring and mapping unknown environments, showcasing its potential for various applications, including search and rescue missions and autonomous surveillance.

Keywords: Robotics, Automation, Autonomous Exploration, Mapping, Multi-Robot Systems

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107. Title: Multi-Robot Coordination and Cooperation for Cooperative Object Manipulation

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Abstract: This paper presents a multi-robot coordination and cooperation framework for cooperative object manipulation tasks. The system enables multiple robots to work together to achieve complex manipulation goals by coordinating their actions and sharing information. Key components include task allocation algorithms, motion planning strategies, and communication protocols. Experimental evaluations demonstrate the effectiveness of the proposed framework in improving task completion time and achieving robustness in the face of uncertainties.

Keywords: multi-robot coordination, cooperation, object manipulation, task allocation, motion planning, communication

108. Title: Arduino-based Energy Harvesting Techniques for Self-Powered IoT Sensor Nodes in Wireless Sensor Networks

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Abstract: This paper focuses on Arduino-based energy harvesting techniques for self-powered IoT sensor nodes in wireless sensor networks. The study explores various energy harvesting methods, including solar, kinetic, and thermal energy, and investigates their feasibility in powering Arduino-based sensor nodes. Experimental evaluations demonstrate the effectiveness of the proposed techniques in extending the network's lifetime without relying on external power sources.

Keywords: IoT, Arduino, wireless sensor network, energy harvesting, self-powered sensor nodes, renewable energy

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109. Title: Humanoid Robot Locomotion: Planning and Control StrategiesNodes in Wireless Sensor Networks

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[2]Assistant Professor, Department of ECE, Sri Bharathi Engineering College for Women, Pudukkottai

Abstract: This paper focuses on planning and control strategies for humanoid robot locomotion. It discusses various approaches for gait planning, balance control, and motion optimization in humanoid robots. The paper also presents novel algorithms for humanoid locomotion on uneven terrain and in complex environments. Experimental evaluations demonstrate the effectiveness of the proposed strategies in achieving stable and agile locomotion.

Keywords: humanoid robot, locomotion, planning strategies, control strategies, gait planning, balance control

110. Title: Interference Mitigation Techniques for Next-Generation Cellular Networks

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Abstract: This paper presents interference mitigation techniques for next-generation cellular networks. The increasing demand for wireless data and the proliferation of devices pose significant challenges in managing interference. Various techniques, including interference alignment, coordinated multipoint transmission, and cognitive radio, are discussed. The performance of these techniques in terms of interference reduction, capacity enhancement, and quality of service improvement is evaluated through simulations. The results provide insights into effective strategies for mitigating interference in next-generation cellular networks.

Keywords: interference mitigation techniques, next-generation cellular networks, wireless data, interference alignment, coordinated multipoint transmission, cognitive radio, interference reduction, capacity enhancement, quality of service.

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111. Title: Energy-Efficient Resource Allocation in Wireless Transmission for Internet of Things (IoT) Networks

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[2]Asst. Prof., Dept. of ECE, Mount Zion College of of Engineering & Technology, Pudukkottai

Abstract: This paper presents a novel approach for energy-efficient resource allocation in wireless transmission for Internet of Things (IoT) networks. As IoT devices continue to proliferate, wireless communication plays a crucial role in enabling seamless connectivity and data exchange. However, the limited energy resources of IoT devices pose significant challenges in achieving sustainable and reliable communication. The proposed approach addresses this challenge by optimizing the allocation of transmission resources, such as time slots and transmission power, to minimize energy consumption while meeting the quality of service (QoS) requirements of IoT applications. The resource allocation problem is formulated as an optimization problem, and a distributed algorithm based on convex optimization techniques is proposed to efficiently solve it.

Keywords: Wireless Transmission, Resource Allocation, Internet of Things (IoT), Energy Efficiency

112.Title: Enhancing Luggage Security with Raspberry Pi-based Alarm System

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[2]UG Student, Department of ECE, Alagappa Chettiyar College of Engineering and Technology, Karakudi.

Abstract: The aim of this project is to develop a portable luggage security alarm system utilizing Raspberry Pi, providing an effective solution to protect travelers' belongings from theft or unauthorized access. The system employs Raspberry Pi as the central processing unit, integrated with various sensors and a buzzer to detect and respond to potential security breaches.The proposed luggage security alarm system utilizes a combination of motion, light, and magnetic sensors to detect any unauthorized tampering with the luggage. Upon detecting suspicious activity, the Raspberry Pi triggers a loud alarm to alert the owner and nearby individuals, deterring potential thieves. Additionally, the system incorporates wireless connectivity, enabling real-time notifications to be sent to the owner's smartphone, allowing them to take immediate action.

Keywords: Luggage security, Alarm system, Raspberry Pi, Motion sensor, Light sensor, Magnetic sensor, Wireless connectivity, Theft prevention, Real-time notifications, User-friendly interface.

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113. Title: Revolutionizing E-Commerce with Artificial Intelligence: A Comprehensive Analysis

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Abstract: This project aims to explore the transformative impact of Artificial Intelligence (AI) on the field of e-commerce. With the rapid advancements in AI technologies, businesses are leveraging its capabilities to enhance various aspects of the e-commerce ecosystem, including personalization, recommendation systems, fraud detection, and customer service. This project provides a comprehensive analysis of how AI is revolutionizing the e-commerce industry, shedding light on its benefits, challenges, and future prospects.

Keywords: E-commerce, Artificial Intelligence, Personalization, Recommendation Systems, Fraud Detection, Customer Service, Chatbots, Virtual Assistants, Machine Learning, Data Privacy, Algorithm Bias, Transparency, Visual Search, Voice Commerce.

114. Title: E-Shaped in Body Antenna for Monitoring Pacemaker

[1]Dr. A. Muthumanickam, Professor, Department of ECE,
Shanmuganathan Engineering College, Pudukkottai.

Abstract: Heart Attack is now a very common disease in our modern lifestyle. It occurs when heart is pumping too quickly or slowly or when body does not get enough blood. A pacemaker is an electrically charged medical device which is used to control irregular heartbeats called arrhythmias. It implants under the skin of our body. This project represents an In-body patch antenna, which is designed on pacemaker with resonance frequency of 2.464 GHz. The antenna will be used to monitor the condition of the pacemaker wirelessly, weather it works properly or not. It can also be monitored heart function such as beat rate. The antenna is designed to operate at Industrial, Scientific, and Medical band (2.4 GHz-2.48 GHz). The pacemaker box is imitated in the box of a perfect electric conductor, which is used as a ground of the proposed antenna to maintain the compact size. The pacemaker embedded in the 2/3 muscle-equivalent phantom where the distance between the top of the phantom and the antenna is changed and analyzed. The substrate and superstrate is chosen FR-4 Substrate for its flexibility. At operating frequency (2.464 GHz), Reflection coefficient, Voltage Standing Wave Ratio, total efficiency, and radiation efficiency are found -28.37 dB, 1.08, -35.50 dB, and - 35.50 dB. Besides that, far-field radiation characteristics and biocompatibility of this antenna also discussed in this project to ensure that a comfortable design for wireless monitoring of pacemaker. HFSS is used to design this antenna as well as to calculate the findings.

Keywords: Patch Antenna, Pacemaker, Wireless Monitoring

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115. Title: Ailment Forecasting System

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Abstract: The dependency on computer-based technology has resulted in storage of lot of electronic data in the health care industry. As a result of which, health professionals and doctors are dealing with demanding situations to research signs and symptoms correctly and perceive illnesses at an early stage. However, Machine Learning technology have been proven beneficial in giving an immeasurable platform in the medical field so that health care issues can be resolved effortlessly and expeditiously. Ailment Prediction System is a Machine Learning based system which primarily works according to the symptoms given by a user.

Keywords:- Machine Learning technology, Ailment Prediction System, tracking method, health care industry.

116. Title: Driver Recognition and Drowsiness Detection using Deep Learning Technique

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Abstract: Drowsiness and fatigue of automobile drivers reduce the drivers' abilities of vehicle control, natural reflex, recognition and perception. Real-time detection and tracking of the eye is an active area of research in computer vision community. Localization and tracking of the eye can be useful in face alignment. This project describes real time eye detection and tracking method that works under variable and realistic lighting conditions. Then recognize the face to authorize the person and also provide the alert about unauthorized access security.

Keywords:- Localization (ICS), Real time detection, tracking method, Secuirty, Intrusion Detection System, Network Segmentation

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117. Title: Interact Computer with Facial Expression for Tetraplegia users using Deep Learning

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Abstract: Human-Computer Interface (HCI) refers to the way people interact with computers. An interface using functions of the eye, nose, and mouth could represent a new form of HCI that use biometric data from these body parts to control and interact with a computer. A mouse function could still be used for cursor control and clicking. Such an HCI system would require advanced webcam and algorithms to accurately track and interpret the movements of the eye, nose, and mouth. These technologies use the movements of the eyes or facial expression to control a cursor, navigate menus, and perform other actions on a computer screen.

Keywords:- Human-Computer Interface (HCI) , Use biometric data, control a cursor, navigate menus.

118. Title: Next-Generation Encryption Algorithms for Enhanced Data Protection

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Abstract: This research focuses on the development of advanced encryption algorithms to mitigate evolving cyber threats. The study evaluates the effectiveness of next-generation encryption techniques such as post-quantum cryptography and homomorphic encryption. The results demonstrate their potential to provide enhanced data protection, ensuring confidentiality, integrity, and authenticity in the face of increasingly sophisticated attacks. This paper explores the challenges faced in securing critical infrastructures against cyber threats and provides an in-depth analysis of a comprehensive cybersecurity framework. The framework incorporates robust risk assessment, proactive threat intelligence, resilient network architectures, and effective incident response mechanisms to safeguard critical infrastructures from cyber attacks.

Keywords:- cryptography, cybersecurity framework, network architectures, Encryption, Data Protection, Attacks, Cyber threats.

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119. Title: Event of Safety Violation Detection in Industrial Environment

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Abstract: Wearing a safety helmet while working is crucial for protecting workers from head injuries, which can range from mild to severe. In industrial settings, workers are often exposed to hazardous materials, dangerous machinery, and other potential hazards that can cause head injury. Workers without safety helmets will suffer more injuries in accidents such as falling human body and vertical falling matter. Hence, detecting safety helmet wearing is a vital step of construction sites safety management and a safety helmet detector with high speed and accuracy is urgently needed. Therefore, this paper proposes a deep learning-based method to detect safety helmet wearing at a satisfactory accuracy with high detection speed. The proposed system is an AI visual examination system that uses a convolutional neural network (CNN) algorithm to detect potential hazards in real-time.

Keywords:- Convolutional neural network (CNN), AI visual examination system, Deep learning-based method .

120. Title: Efficient Methods For Reducing Image Data Size

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Abstract: This research focuses on image compression techniques for efficiently reducing the size of image data. The study explores algorithms such as discrete cosine transform (DCT)-based methods, wavelet-based methods, and deep learning-based approaches. By exploiting redundancies in image data, image compression aims to achieve high compression ratios while maintaining acceptable visual quality. The research evaluates compression algorithms using objective measures like peak signal-to-noise ratio (PSNR) and subjective quality assessment. The findings contribute to advancing image compression methods, enabling efficient storage, transmission, and retrieval of images in various applications, including multimedia systems, remote sensing, and web-based image delivery.

Keywords:- peak signal-to-noise ratio (PSNR), discrete cosine transform (DCT), web-based image delivery, Deep Learning, Multimedia, Compression, Quality.

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121. Title: Liquid Petroleum Hydrocarbon Ocean Coastal Water Pollution Identification Using Deep Neural Network

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Abstract: Oil spills are a very dangerous occurrence for marine ecosystem is affected and the marine life-forms' existence gets unnecessarily threatened. Oil destroys the insulating ability of fur-bearing mammals, such as sea otters, and the water repellency of a bird's feathers, thus exposing these creatures to the harsh elements. In this project, we present a CNN architecture for semantically segmenting SAR images into multiple classes. The proposed CNN is specifically designed to run on remote embedded systems, which have very limited hardware capability and strict limits on power consumption. Even if the performance in terms of results accuracy does not represent a step forward compared with previous solutions, the presented CNN has the important advantage of being able to run on remote embedded systems with limited hardware resources while achieving good performance. The presented CNN is compatible with dedicated hardware accelerators available on the market due to its low memory footprint and small size.

.**Keywords:-** CNN, SAR images, Oil spills.

122. Title: Algorithms for Improving Image Visibility and Quality

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Abstract: This topic addresses image enhancement algorithms for improving image visibility and quality. The research investigates techniques such as histogram equalization, contrast enhancement, and adaptive enhancement methods. By adjusting image characteristics, enhancing details, and reducing artifacts, image enhancement aims to improve visual perception and facilitate subsequent analysis tasks. The research evaluates enhancement algorithms using subjective and objective quality assessment measures. The findings contribute to advancing image enhancement methods, enabling better interpretation and analysis of images in various applications, including surveillance, satellite imaging, and digital photography.

Keywords:- satellite imaging, digital photography, Image enhancement, Image visibility, Image quality, Histogram, Artifact reduction, Image characteristics, Adaptive enhancement

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123. Title: Image Denoising: Algorithms For Noise Reduction In Digital Images

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Abstract: This topic addresses image denoising techniques for reducing noise in digital images. The research investigates filtering approaches, such as spatial domain filters (e.g., Gaussian, median) and transform domain methods (e.g., wavelet, non-local means). By effectively removing noise while preserving important image details, the study aims to enhance image quality and facilitate subsequent image analysis tasks. The research evaluates denoising algorithms using benchmark datasets, considering metrics like peak signal-to-noise ratio (PSNR) and structural similarity index (SSIM). The findings contribute to improving image denoising methods, enabling better visual perception and accurate analysis of noisy images in various applications.

Keywords: like peak signal-to-noise ratio (PSNR) and structural similarity index (SSIM), Imgae denoising, Gaussian filter, Median Filter, Wavelet transform, Noise removal

124. Title: Ontology-Based Knowledge Management in Organizational Contexts

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Abstract: This topic addresses ontology-based knowledge management in organizational contexts. The research investigates techniques for capturing, organizing, and sharing organizational knowledge using ontological models. By representing knowledge assets, expertise, and relationships in ontologies, organizations can enhance knowledge discovery, knowledge reuse, and collaboration among employees. The study evaluates ontology-driven knowledge management approaches, including ontology-based knowledge repositories, semantic wikis, and expertise recommendation systems. The findings contribute to advancing knowledge management practices, enabling organizations to effectively harness their intellectual capital, foster innovation, and improve decision-making processes in dynamic and knowledge-intensive environments.

Keywords: Ontology Engineering ,Knowledge Integration, Knowledge Visualization, Knowledge Validation, Knowledge-Based Systems.

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125. Title: Crop Disease Prediction Using Neural Network

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Abstract: Crop diseases are a major threat to food security, but their rapid identification remains difficult in many parts of the world due to the lack of the necessary infrastructure. This should be reduced automatically without any human invention for that purpose we go for Artificial intelligence. In this project we use deep learning techniques (CNN) to detect the disease and classifying it. With the invent of plant diseases, the yield is affected adversely. Hence it is important to identify the disease at its earliest stages and find a cure to eradicate the disease. This can be achieved by targeting the disease places, with the appropriate quantity and concentration of pesticide. In this project K nearest neighbor classifier method has been used to segment the image into three images based on color. Among these images unaffected leaf regions and disease affected regions are used to calculated percentage of affected pixels. By calculating percentage of affected pixels disease severity can be observed with GUI which leads to take appropriate measure for treatment.

Keywords: deep learning techniques (CNN). GUI, pesticide.

126. Title: Ontology-Based Personalization and Recommendation Systems

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Abstract: This research focuses on ontology-based personalization and recommendation systems. The study explores techniques that leverage ontological representations of user profiles, item characteristics, and domain knowledge to provide personalized recommendations. By modeling user preferences and interests in ontologies, recommendation systems can offer tailored suggestions, improve user satisfaction, and support decision-making processes. The research evaluates ontology-driven personalization approaches in domains such as e-commerce, news recommendation, and entertainment. The findings contribute to advancing the field of ontology-based recommendation systems, enabling organizations to provide personalized experiences, increase customer engagement, and drive user-centric services.

Keywords: Ontology-Based Personalization, Recommendation Systems, Personalized Recommendations, Ontology Engineering, User Modeling

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127. Title: Ontology-Based Reasoning for Intelligent Systems

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Abstract: This research focuses on ontology-based reasoning for intelligent systems. The study explores reasoning techniques, such as deductive, inductive, and abductive reasoning, using ontological knowledge representations. By formalizing knowledge in ontologies and applying reasoning algorithms, intelligent systems can infer new information, make logical deductions, and generate new insights. The research evaluates reasoning mechanisms in various domains, including expert systems, intelligent agents, and knowledge-based systems. The findings contribute to advancing the field of ontology-based reasoning, enabling intelligent systems to handle complex problems, support decision-making processes, and provide automated knowledge-based services.

Keywords: Ontology-Based Reasoning, Intelligent Systems, Knowledge Representation, Semantic Reasoning, Ontology Engineering

128. Title: Ontology-Based Semantic Integration of Heterogeneous Data Sources

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Abstract: This topic addresses the semantic integration of heterogeneous data sources using ontologies. The research investigates ontology mapping techniques, semantic annotation, and ontology alignment to reconcile differences in data schemas and terminologies. By leveraging ontological representations, the study aims to achieve interoperability, data harmonization, and knowledge integration across disparate systems and datasets. The research evaluates semantic integration approaches in various domains, such as e-commerce, bioinformatics, and government data, enabling seamless data exchange, integration, and querying. The findings contribute to advancing the field of semantic data integration, enabling organizations to overcome data heterogeneity challenges and leverage integrated knowledge for decision-making and analysis.

Keywords:- Ontology Reasoning, Ontology Mediation, Semantic Similarity, Data Fusion, Ontology Evolution, Ontology Mapping Evaluation

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129. Title: Ontology Development for Knowledge Representation in Healthcare

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Abstract: This research focuses on ontology development for knowledge representation in the healthcare domain. The study explores the creation of ontologies to capture and organize medical knowledge, terminology, and relationships between medical concepts. By leveraging ontological models, healthcare professionals can enhance information retrieval, decision support systems, and interoperability among different healthcare applications. The research evaluates existing healthcare ontologies, ontology engineering methodologies, and semantic web technologies to facilitate knowledge sharing and collaboration in the healthcare industry. The findings contribute to the development of robust ontologies that improve data integration, knowledge management, and clinical decision-making in healthcare settings.

Keywords:- Ontological Methods, Knowledge Management, Colloboration, Healthcare Application, Terminology, Data integration, Clinical Decision-making, Information Retrieval, Relationships, Interoperability

130. Title: Ontology-Based Data Integration for Internet of Things (IoT)

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Abstract: This topic addresses ontology-based data integration for the Internet of Things (IoT). The research investigates ontological models, semantic interoperability, and data integration techniques to overcome data heterogeneity challenges in IoT environments. By creating ontologies that capture the semantics of IoT data, the study aims to enable seamless data integration, knowledge sharing, and collaboration among diverse IoT devices and platforms. The research evaluates ontology-driven data integration approaches in IoT applications, such as smart homes, industrial automation, and smart cities. The findings contribute to enhancing data interoperability, knowledge discovery, and decision-making in the rapidly growing IoT ecosystem.

Keywords:- Ontologies, Data Heterogeneity, IOT devices, IOT platforms, Industrial Automation, Data interoperability, Knowledgs discovery, Decision – Making, IoT Ecosystem, Collaboration

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131. Title: AI Enhanced OT Security Tool-Gail

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Abstract: The implementation of SIEM a tool requires the use of advanced algorithms, machine learning, and big data technologies to process and analyze large amounts of real-time data generated by various devices in an OT ecosystem. The tool should be designed to identify and classify various types of traffic based on predefined rules, statistical analysis, and behavioral patterns. It should also have the capability to learn and adapt to new threats and anomalies by continuously updating its rules and models. The user interface of the tool should be intuitive and user-friendly, allowing security admins to quickly identify and respond to potential threats. Overall, the tool should be able to provide a proactive and automated approach to threat detection and response, helping to improve the security posture of OT ecosystems.

Keywords: - SIEM, OT ecosystem, statistical analysis, potential threats.

132. Title: Ontology Engineering for Domain-Specific Applications

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Abstract: This topic addresses ontology engineering for domain-specific applications. The research investigates methodologies, best practices, and tools for ontology development and maintenance in specialized domains, such as finance, healthcare, and manufacturing. By capturing domain knowledge and relationships between concepts, ontologies can facilitate knowledge sharing, interoperability, and intelligent decision-making within specific application contexts. The study evaluates ontology engineering approaches, including ontology development methodologies, ontology evaluation, and ontology reuse. The findings contribute to enhancing ontology engineering practices, enabling the development of domain-specific ontologies that support knowledge management, data integration, and domain-specific reasoning.

Keywords:- Ontology Engineering, Specialized Domains, Knowledge Sharing, Concept Relationships, Interoperability, Intelligent decision-making, Ontology Evaluation, Data Integration, Domain-specific Reasoning, Application Context

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133. Title: Ontology-Based Knowledge Graph Construction and Exploration

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Abstract: This research focuses on ontology-based knowledge graph construction and exploration. The study explores techniques for extracting, integrating, and representing knowledge from diverse data sources as interconnected nodes and edges in a knowledge graph. By leveraging ontological structures, knowledge graphs enable advanced data exploration, knowledge discovery, and semantic querying. The research evaluates knowledge graph construction methodologies, entity linking algorithms, and graph query languages. The findings contribute to advancing the field of ontology-based knowledge graph construction and exploration, enabling organizations to unlock the full potential of their data by connecting and exploring diverse knowledge sources.

Keywords:- Ontology- based knowledge graph, Diverse data sources, Ontological Structures, Data Exploration, Knowledge Discovery, Semantic Quering, Data Unlocking, Diverse Knowledge Sources

134. Title: Image Segmentation Techniques for Medical Image Analysis

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Abstract: This research focuses on image segmentation techniques for medical image analysis. The study explores algorithms such as thresholding, region growing, and advanced methods like level set and deep learning-based segmentation. By accurately delineating anatomical structures or abnormal regions in medical images, the research aims to support diagnosis, treatment planning, and disease monitoring. The research evaluates the performance of different segmentation algorithms using medical imaging datasets, considering factors like accuracy, computational efficiency, and robustness. The findings contribute to advancing medical image analysis, enabling more precise and efficient interpretation of medical images in various clinical applications.

Keywords: Image Segementation, Medical Image Analysis, Thresholding, Segementation Algorithms, Medical Imaging Datasets, Disease Monitoring, Computational Efficiency, Precise Interpretation

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135. Title: Algorithms for Noise Reduction in Digital Images

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Abstract: This topic addresses image denoising techniques for reducing noise in digital images. The research investigates filtering approaches, such as spatial domain filters (e.g., Gaussian, median) and transform domain methods (e.g., wavelet, non-local means). By effectively removing noise while preserving important image details, the study aims to enhance image quality and facilitate subsequent image analysis tasks. The research evaluates denoising algorithms using benchmark datasets, considering metrics like peak signal-to-noise ratio (PSNR) and structural similarity index (SSIM). The findings contribute to improving image denoising methods, enabling better visual perception and accurate analysis of noisy images in various applications.

Keywords:- Spatial domain filters, Gaussian filter, Median filter, Transform domain methods, Wavelet transform Non-local means, Image quality, Image analysis tasks, Benchmark datasets, Peak signal-to-noise ratio (PSNR), Structural similarity index (SSIM), Image perception, Visual perception, Noisy images, Application-specific denoising

136. Title: Techniques for Aligning and Comparing Images to register the image

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Abstract: This research focuses on image registration techniques for aligning and comparing images. The study explores methods such as intensity-based registration, feature-based registration, and deformable registration. By estimating geometric transformations between images, image registration enables applications such as image fusion, image stitching, and image-guided interventions. The research evaluates the accuracy and robustness of different registration algorithms using image datasets with known ground truth. The findings contribute to advancing image registration methods, enabling precise alignment of images with varying modalities, viewpoints, or temporal changes, and facilitating comprehensive image analysis in fields like medical imaging, remote sensing, and computer vision.

Keywords:- Image registration, Image fusion, Robustness evaluation, Accuracy assessment, Feature Evaluation, Modalities, Geometric transformation, Image comparision

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137. Title: Deep Learning Approaches for Object Recognition

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Abstract: This research focuses on image classification using deep learning approaches for object recognition. The study explores convolutional neural networks (CNNs), such as AlexNet, VGGNet, and ResNet, as well as advanced architectures like DenseNet and EfficientNet. By training deep learning models on large-scale image datasets, image classification aims to accurately assign predefined labels to images. The research evaluates the performance of different CNN models using benchmark datasets, considering metrics like accuracy, precision, and recall. The findings contribute to advancing image classification techniques, enabling more accurate and efficient object recognition in various domains, including autonomous driving, visual search, and content-based image retrieval.

Keywords:- Image Classification, Deep Learning, Convolution Neural Network, AlexNet, DenseNet, ResNet, Datasets, Object Recognition, Training Models

138. Title: Techniques for Recovering Degraded or Damaged Images

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Abstract: This topic addresses image restoration techniques for recovering degraded or damaged images. The research investigates methods such as image deblurring, inpainting, and super-resolution. By exploiting statistical properties, prior knowledge, and advanced algorithms, image restoration aims to recover lost details, remove artifacts, and improve image quality. The research evaluates restoration algorithms using benchmark datasets and visual quality metrics. The findings contribute to advancing image restoration methods, enabling the recovery of high-quality images in various applications, including forensic analysis, historical document preservation, and surveillance.

Keywords:- Image restoration, Degraded images, Image deblurring, resolution, Recovery, Datasets, Benchmark details, Prior Knowledge

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139. Title: Generative Models for Creating Realistic Images

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Abstract: This topic addresses image synthesis using generative models for creating realistic images. The research investigates techniques such as generative adversarial networks (GANs), variational auto encoders (VAEs), and deep convolutional generative models. By learning from large datasets, generative models aim to generate novel images that resemble real-world examples. The research evaluates the quality and diversity of generated images using objective and subjective measures. The findings contribute to advancing image synthesis methods, enabling the generation of realistic and diverse images in applications like virtual reality, computer graphics, and data augmentation for machine learning.

Keywords:- Artificial Intelligence Technique, Power System Distribution, Load Distribution, Optimal control technique.

140. Title: Generative Adversarial Networks to communicate

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Abstract: This research investigates generative adversarial networks (GANs), a class of deep learning models known for their ability to generate realistic and novel data samples. The study explores GAN architectures, training strategies, and applications in domains such as image synthesis, text generation, and video generation. The research evaluates techniques to improve GAN stability, address mode collapse, and measure the quality of generated samples. The findings contribute to advancing GAN methodologies, enabling the creation of high-fidelity synthetic data and facilitating creative applications in various fields.

Keywords:- Artificial Intelligence Technique, Power System Distribution, Load Distribution, Optimal control technique.

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141. Title: Machine Learning for Natural Language Processing: Text Classification and Sentiment Analysis

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Abstract: This topic focuses on machine learning techniques for natural language processing (NLP). The research investigates text classification and sentiment analysis, exploring algorithms such as Naive Bayes, support vector machines (SVMs), and deep learning models (e.g., recurrent neural networks and transformers). The study evaluates feature representation, word embeddings, and contextual embeddings for NLP tasks. The findings contribute to improving text understanding, sentiment detection, and language processing capabilities, enabling applications in areas such as social media analysis, customer feedback analysis, and chatbot development.

Keywords:- Artificial Intelligence Technique, Power System Distribution, Load Distribution, Optimal control technique.

142. Title: Automated Machine Learning for Efficient Model Building

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Abstract: This research addresses automated machine learning (AutoML), which aims to streamline and automate the process of building machine learning models. The study explores techniques such as algorithm selection, hyperparameter optimization, and feature engineering automation to facilitate the model development pipeline. The research evaluates AutoML frameworks and tools that enable efficient model building and evaluation. The findings contribute to reducing the manual effort and expertise required in developing machine learning models, empowering non-experts to leverage the benefits of machine learning in diverse application domains.

Keywords:- Artificial Intelligence Technique, Power System Distribution, Load Distribution, Optimal control technique.

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143. Title: Mitigating Discrimination and Ensuring Equity for Fairness and Bias in Machine Learning

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Abstract: This topic focuses on fairness and bias in machine learning algorithms. The research investigates methods to detect and mitigate bias in data, feature representation, and model predictions. The study explores fairness metrics, such as disparate impact and equalized odds, and considers strategies to ensure equitable outcomes across different demographic groups. The research evaluates the trade-offs between fairness and other performance metrics, highlighting the importance of ethical considerations in machine learning deployment. The findings contribute to advancing the understanding and development of fair and unbiased machine learning systems, promoting ethical and equitable practices in algorithmic decision-making.

Keywords:- Discrimination, Equity, Ethical AI, Fairness-aware Machine Learning, Bias Mitigation, Fairness Metrics, Demographic Parity, Equal Opportunity, Counterfactual Fairness, Transparency and Account.

144. Title: Reinforcement Learning From Theory to Real-World Applications

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Abstract: This topic focuses on reinforcement learning (RL), a subfield of machine learning concerned with decision-making and sequential behavior. The research explores RL algorithms, including Q-learning, policy gradients, and deep RL, and investigates their applications in autonomous systems, robotics, and game playing. The study evaluates RL techniques for model-free and model-based learning, and considers challenges such as exploration-exploitation trade-offs and reward shaping. The findings contribute to advancing RL methodologies and their practical implementation, enabling autonomous agents to learn and adapt in complex and dynamic environments.

Keywords:- Interpretable Machine Learning, Model Explainability, Model Transparency, Explainable Artificial Intelligence (XAI), Interpretability Techniques, Model Visualization, Feature Importance, Local and Global Explanations, Rule-Based Models

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145. Title: Interpretable Machine Learning: Model Explainability and Transparency

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Abstract: This topic addresses the interpretability of machine learning models. The research investigates methods to enhance model explainability and transparency, including feature importance analysis, model-agnostic interpretability techniques (e.g., LIME and SHAP), and rule-based approaches. The study evaluates the trade-off between model complexity and interpretability, aiming to provide insights into decision-making processes and build trust in machine learning systems. The findings contribute to bridging the gap between model accuracy and human interpretability, enabling stakeholders to understand and trust the predictions made by machine learning algorithms.

Keywords:- Network Performance, Monitoring, Network Analysis, Network Management Performance Metrics, Network Traffic, Throughput, Latency, Packet Loss, Bandwidth Utilization

146. Title: Network Performance Monitoring and Analysis for Efficient Network Management

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Abstract: This research focuses on network performance monitoring and analysis for efficient network management. The study investigates techniques to measure, monitor, and analyze network performance metrics such as throughput, latency, and packet loss. By leveraging monitoring tools, protocols, and statistical analysis, network administrators can gain insights into network behavior, identify performance bottlenecks, and optimize network resources. The research evaluates different monitoring approaches, including active and passive monitoring, and explores visualization techniques for effective performance analysis. The findings contribute to improving network performance management, enabling organizations to enhance network reliability, minimize downtime, and ensure optimal user experience.

Keywords:- Network Performance, Performance Evaluation, Real-Time Applications, Real-Time Services, Quality of Service (QoS), Latency

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147. Title: Quality of Service (QoS) Management in Network Performance Optimization

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Abstract: This topic addresses Quality of Service (QoS) management in network performance optimization. The research investigates QoS parameters such as bandwidth allocation, traffic prioritization, and delay control to ensure consistent and reliable network performance. By implementing QoS mechanisms, network administrators can enforce service-level agreements (SLAs) and prioritize critical traffic types. The study explores QoS management techniques, including traffic shaping, traffic policing, and queuing algorithms, to optimize resource allocation and minimize network congestion. The findings contribute to enhancing QoS management practices, enabling organizations to meet performance requirements, improve user satisfaction, and deliver uninterrupted network services.

Keywords:- Quality of Service (QoS), Network Performance, QoS Management, Network Optimization, Service Level Agreements (SLAs), Traffic Prioritization, Latency

148. Title: Network Performance Tuning for High-Speed Data Transmission

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Abstract: This research focuses on network performance tuning for high-speed data transmission. The study investigates techniques to optimize network configurations, protocols, and settings to maximize throughput and minimize latency in high-speed network environments. By fine-tuning parameters such as buffer sizes, window sizes, and congestion control algorithms, network administrators can achieve optimal performance for demanding applications and large-scale data transfers. The research evaluates performance tuning approaches for different network technologies, including Ethernet, wireless networks, and data center networks. The findings contribute to improving network performance in high-speed scenarios, enabling efficient data transmission and supporting bandwidth-intensive applications.

Keywords:- Bandwidth, Network Protocols (e.g., TCP, UDP), Network Optimization, Traffic Management, Congestion Control, Quality of Service (QoS), Network Hardware, Network Software, Network Monitoring, Buffering.

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149. Title: Network Performance Evaluation for Real-Time Applications and Services

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Abstract: This topic addresses network performance evaluation for real-time applications and services. The research investigates techniques to assess the quality and performance of network connections, such as jitter, packet delay, and end-to-end latency, for real-time communication and multimedia streaming. By analyzing network performance metrics, network administrators can ensure seamless delivery of time-sensitive data and provide a satisfactory user experience. The study explores performance evaluation methods, including subjective assessment, objective quality metrics, and quality of experience (QoE) models. The findings contribute to improving network performance evaluation, enabling organizations to optimize real-time applications, support multimedia services, and meet user expectations.

Keywords:- Network Performance, Performance Evaluation, Real-Time Applications, Real-Time Services, Quality of Service (QoS), Latency, Throughput, Jitter

150. Title: Network Traffic Analysis for Anomaly Detection and Security Monitoring

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Abstract: This research focuses on network traffic analysis for anomaly detection and security monitoring. The study investigates techniques to analyze network traffic patterns, flow data, and behavior to identify abnormal activities and potential security threats. By leveraging machine learning, statistical analysis, and intrusion detection systems (IDS), network administrators can detect and mitigate network-based attacks and intrusions. The research explores traffic analysis approaches, including anomaly-based detection, signature-based detection, and behavior-based detection, and evaluates their effectiveness in different network environments. The findings contribute to enhancing network security, enabling proactive threat detection, and safeguarding network assets.

Keywords:- Network Traffic Analysis, Anomaly Detection, Security Monitoring, Network Security, Intrusion Detection, Cyber security, Packet Inspection

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151. Title: Network Performance Optimization for Mobile Networks and Wireless Communication

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Abstract: This topic addresses network performance optimization for mobile networks and wireless communication. The research investigates techniques to enhance throughput, coverage, and quality of service in mobile and wireless networks, including cellular networks (e.g., 4G, 5G) and Wi-Fi networks. By optimizing radio resource management, mobility management, and network protocols, network operators can provide seamless connectivity and high-performance services to mobile users. The study explores optimization algorithms, interference mitigation techniques, and mobility management strategies for improving network performance in dynamic wireless environments. The findings contribute to advancing network performance in mobile and wireless communication, enabling efficient data transmission, seamless handovers, and enhanced user experience.

Keywords:- Network Performance, Optimization, Mobile Networks, Wireless Communication, Cellular Networks, 5G/6G Networks, Radio Access Technologies, Signal Strength

152. Title: Network Performance Monitoring in Cloud Computing Environments

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Abstract: This research focuses on network performance monitoring in cloud computing environments. The study investigates techniques to measure, analyze, and optimize network performance in virtualized and distributed cloud infrastructures. By monitoring network traffic, latency, and bandwidth utilization, cloud administrators can ensure reliable and efficient communication among virtual machines and data centers. The research explores cloud-specific network monitoring tools, software-defined networking (SDN) technologies, and performance analysis methodologies for cloud networks. The findings contribute to improving network performance in cloud environments, enabling effective resource allocation, efficient data transfer, and optimal cloud service delivery.

Keywords:- Network Performance, Testing, Benchmarking, Quality of Service (QoS), Latency, Packet Loss, Network Performance

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153. Title: Network Performance Testing and Benchmarking for Performance Evaluation

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Abstract: This topic addresses network performance testing and benchmarking for performance evaluation. The research investigates techniques to conduct controlled experiments, simulate network conditions, and measure key performance indicators (KPIs) for evaluating network performance. By designing comprehensive test scenarios, network administrators can assess the performance of network devices, protocols, and services under different traffic loads and network configurations. The study explores benchmarking methodologies, testbed setups, and performance evaluation metrics for accurate and reliable performance assessment. The findings contribute to advancing network performance testing and benchmarking practices, enabling organizations to make informed decisions about network infrastructure upgrades, capacity planning, and performance optimization strategies.

Keywords:- Network Performance, Testing, Benchmarking, Performance Evaluation, Network Metrics, Throughput, Latency, Packet Loss.

154. Title: Network Performance Monitoring for Internet of Things (IoT) Networks

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Abstract: This research focuses on network performance monitoring for Internet of Things (IoT) networks. The study investigates techniques to monitor and analyze the performance of IoT networks, which connect a large number of devices and sensors. By monitoring network connectivity, latency, and data transfer rates, network administrators can ensure reliable and efficient communication within IoT ecosystems. The research explores monitoring approaches for IoT networks, including network protocols, data aggregation, and analytics techniques. The findings contribute to improving network performance in IoT environments, enabling seamless device connectivity, efficient data exchange, and optimal utilization of IoT resources.

Keywords:- Network Traffic, Quality of Service (QoS), Latency, Packet Loss, Throughput, Energy Efficiency, Network Reliability

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155. Title: Network Performance Optimization for Software-Defined Networking

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Abstract: This research focuses on network performance monitoring for Internet of Things (IoT) networks. The study investigates techniques to monitor and analyze the performance of IoT networks, which connect a large number of devices and sensors. By monitoring network connectivity, latency, and data transfer rates, network administrators can ensure reliable and efficient communication within IoT ecosystems. The research explores monitoring approaches for IoT networks, including network protocols, data aggregation, and analytics techniques. The findings contribute to improving network performance in IoT environments, enabling seamless device connectivity, efficient data exchange, and optimal utilization of IoT resources.

Keywords:- Network Performance, Optimization, Software-Defined Networking (SDN) Network Function Virtualization (NFV),Network Management,Quality of Service (QoS)

156. Title: Techniques for Identifying Manipulated Images

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Abstract: This topic addresses image forgery detection techniques for identifying manipulated or tampered images. The research investigates methods such as digital watermarking, image forensics, and deep learning-based approaches. By analyzing image properties, statistical inconsistencies, and artifacts, forgery detection aims to identify regions or modifications in images that are not authentic. The research evaluates detection algorithms using benchmark datasets and performance metrics like detection rate and false positive rate. The findings contribute to advancing image forgery detection methods, enabling the verification of image authenticity, ensuring integrity in digital imaging, and supporting forensic investigations.

Keywords:- Image Forgey Detection, Detection algorithm, Detection rate, Deep Learning –based approach, Image properties analysis, Artifacts, Tampered images

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157. Title: Enhancing English Language Skills through Effective Strategies

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Abstract: This research explores various strategies and techniques to enhance English language skills. The study investigates the role of vocabulary building, grammar proficiency, reading comprehension, listening comprehension, and speaking fluency in developing overall language competency. It also examines the impact of technology, immersion programs, and self-directed learning on English language proficiency. The findings provide valuable insights for educators, learners, and policymakers in designing effective language learning programs.

Keywords: English language skills, vocabulary building, grammar proficiency, reading comprehension, listening comprehension, speaking fluency, technology, immersion programs, self-directed learning, language learning programs

158. Title: Bridging the Gap: Strategies for Improving English Language Proficiency in Non-Native Speakers

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Abstract: This study explores effective strategies for improving English language proficiency in non-native speakers. It examines the challenges faced by non-native speakers and investigates strategies such as language immersion, language exchange programs, cultural integration, and targeted language instruction. The research also highlights the importance of motivation, self-confidence, and cultural awareness in developing English language skills. The findings provide practical recommendations for educators and language learners.

Keywords: English language proficiency, non-native speakers, language immersion, language exchange programs, cultural integration, targeted language instruction, motivation, self-confidence, cultural awareness, language learners

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159. Title: The Role of Reading in Developing English Language Skills

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Abstract: This research investigates the role of reading in developing English language skills. It examines the impact of extensive reading, reading strategies, and reading comprehension on vocabulary acquisition, grammar proficiency, and overall language competency. The study also explores the influence of digital resources, graded readers, and reading circles in promoting reading engagement and language development. The findings contribute to the understanding of effective reading practices in English language learning.

Keywords: Reading, English language skills, extensive reading, reading strategies, reading comprehension, vocabulary acquisition, grammar proficiency, language competency, digital resources, graded readers, reading circles, language learning

160. Title: Enhancing English Listening Comprehension Skills: Strategies and Challenges

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Abstract: This study explores strategies and challenges in enhancing English listening comprehension skills. It investigates factors influencing listening comprehension, such as accent variation, speech rate, and background noise. The research examines effective listening strategies, including active listening, note-taking, and the use of authentic materials. It also addresses the role of technology, such as online resources and language learning apps, in improving listening skills. The findings provide insights for educators and learners seeking to improve listening proficiency.

Keywords: English listening comprehension, strategies, challenges, accent variation, speech rate, background noise, active listening, note-taking, authentic materials, technology, online resources, language learning apps, listening proficiency

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161. Title: Unlocking Speaking Fluency: Strategies for Developing English Oral Communication Skills

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Abstract: This research investigates strategies for developing English oral communication skills and unlocking speaking fluency. It examines the importance of pronunciation, intonation, and fluency in effective oral communication. The study explores the use of language exchanges, role-playing activities, and conversation clubs to enhance speaking proficiency. It also discusses the impact of anxiety, cultural factors, and feedback on speaking skills. The findings contribute to the development of practical approaches for improving oral communication in English.

Keywords: Speaking fluency, English oral communication skills, pronunciation, intonation, fluency, language exchanges, role-playing activities, conversation clubs, speaking proficiency, anxiety, cultural factors, feedback, oral communication

162. Title: The Impact of Technology on English Language Skills Development

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Abstract: This study examines the impact of technology on the development of English language skills. It investigates the effectiveness of language learning apps, online resources, and digital tools in vocabulary acquisition, grammar instruction, reading comprehension, and speaking fluency. The research also explores the role of virtual classrooms, language exchange platforms, and multimedia resources in language learning. The findings provide insights into the potential benefits and challenges of integrating technology in English language education.

Keywords: Technology, English language skills development, language learning apps, online resources, digital tools, vocabulary acquisition, grammar instruction, reading comprehension, speaking fluency, virtual classrooms, language exchange platforms, multimedia resources, English language education

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163. Title: Cultivating Cultural Competence through English Language Learning

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Abstract: This research explores the role of English language learning in cultivating cultural competence. It investigates the relationship between language proficiency and cultural awareness, highlighting the importance of intercultural communication skills. The study examines the impact of multicultural literature, authentic materials, and language immersion programs in fostering cultural competence. It also addresses the challenges and opportunities in incorporating cultural aspects into English language education. The findings contribute to a holistic approach to language learning and cultural understanding.

Keywords: Cultural competence, English language learning, language proficiency, cultural awareness, intercultural communication skills, multicultural literature, authentic materials, language immersion programs, cultural aspects, English language education

164. Title: Strategies for Improving English Writing Skills: A Comprehensive Analysis

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Abstract: This study provides a comprehensive analysis of strategies for improving English writing skills. It explores the stages of the writing process, including pre-writing, drafting, revising, and editing. The research examines the impact of vocabulary use, sentence structure, coherence, and organization on writing proficiency. It also discusses the role of feedback, peer collaboration, and self-reflection in enhancing writing skills. The findings offer practical recommendations for educators and learners seeking to enhance English writing proficiency.

Keywords: English writing skills, strategies, writing process, pre-writing, drafting, revising, editing, vocabulary use, sentence structure, coherence, organization, feedback, peer collaboration, self-reflection, writing proficiency

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165. Title: Matrix Magic: Exploring the World of Matrices and Their Applications

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Abstract: Matrices are powerful mathematical structures that find extensive applications in various fields, ranging from linear algebra to computer science, physics, economics, and beyond. This paper aims to unravel the world of matrices, exploring their properties, operations, and practical applications.The paper begins with an introduction to matrices, covering their definition, notation, and basic properties. It then delves into matrix operations, including addition, subtraction, scalar multiplication, matrix multiplication, and transposition. These operations are explained in detail, highlighting their algebraic and geometric interpretations. Furthermore, the paper explores fundamental concepts in matrix theory, such as determinants, inverses, and eigenvalues/eigenvectors. These concepts are crucial for understanding the properties and behavior of matrices, and they play a vital role in applications such as solving systems of linear equations, diagonalization, and studying the stability of dynamical systems.

Keywords: Matrices, linear algebra, matrix operations, determinants, inverses, eigenvalues, eigenvectors, linear transformations.

166. Title: Exploring Extrema: Maxima and Minima of Functions in Two Variables

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Abstract: This paper delves into the fascinating world of extrema—maxima and minima—of functions in two variables. Understanding the behavior and location of these critical points is vital in optimization, mathematical modeling, and various scientific and engineering applications. This paper explores the techniques and methods for identifying and analyzing maxima and minima in functions of two variables.The paper begins by introducing the concept of extrema and the importance of identifying these points in the context of optimization problems. It discusses critical points, emphasizing the role of partial derivatives in determining where extrema may occur. The paper also explores the notion of second partial derivatives and their significance in classifying extrema as maximum or minimum points.

Keywords: Extrema, maxima, minima, functions of two variables, optimization, partial derivatives, critical points.

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167. Title: Unveiling Variance: Tests for Single Variance and Equality of Variances

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Abstract: This paper explores the fundamental tests used for examining variance in statistical analysis: tests for single variance and tests for equality of variances. Variance is a crucial measure of variability in data, and these tests provide valuable insights into the distribution and comparison of data sets. This paper provides a comprehensive examination of the theory, methodology, and practical applications of these tests.The paper begins by introducing the concept of variance and its importance in statistical analysis. It discusses the role of variance in measuring the spread or dispersion of data, highlighting its significance in understanding the characteristics of a population or sample.Subsequently, the paper focuses on tests for a single variance, such as the chi-square test and the F-test. It explains the underlying principles, assumptions, and interpretation of these tests.

Keywords: Variance, tests for single variance, tests for equality of variances, chi-square test, F-test, Levene's test, Bartlett's test, variability, dispersion, quality control, experimental design, hypothesis testing, analysis of variance (ANOVA).

168. Title: Solving Equations Unveiled: Techniques for Algebraic and Transcendental Equations

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Abstract: This paper explores the diverse techniques employed in solving algebraic and transcendental equations, providing a comprehensive understanding of the methods used to find accurate solutions. Solving equations is a fundamental problem in mathematics and science, with applications spanning various disciplines. This paper delves into the theory, algorithms, and practical considerations involved in solving both algebraic and transcendental equations.The paper begins by introducing the distinction between algebraic and transcendental equations and their respective characteristics. It discusses the importance of finding solutions to these equations in fields such as engineering, physics, economics, and optimization.

Keywords: Algebraic equations, transcendental equations, root-finding methods, bisection method, Newton-Raphson method, secant method, fixed-point iteration, numerical stability.

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169. Title: Unleashing the Power of Taylor Series: Approximation, Analysis, and Applications

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Abstract: The Taylor series is a fundamental mathematical tool that plays a crucial role in approximation, analysis, and numerous applications across various disciplines. This paper explores the power and versatility of the Taylor series, shedding light on its underlying principles, techniques, and practical applications.The paper begins by providing a comprehensive overview of the Taylor series, including its definition, convergence properties, and representation as an infinite sum of terms. It delves into the mathematical foundations of the Taylor series, discussing concepts such as derivatives, Taylor polynomials, and the remainder term, elucidating their significance in the approximation process.Furthermore, the paper explores various techniques for constructing and manipulating Taylor series, such as differentiation and integration of power series, as well as operations involving composition and inversion.

Keywords: Taylor series, approximation, analysis, power series, convergence, Taylor polynomials, remainder term, numerical methods, differential equations, signal processing, complex analysis.

170. Title: Partial Fraction Decomposition: Integration of Rational Functions

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Abstract: Partial fraction decomposition is a powerful technique used to integrate rational functions, which are ratios of polynomials. This method involves breaking down a complex rational function into simpler fractions, known as partial fractions, whose integrals can be easily evaluated. This paper provides an overview of the partial fraction decomposition process and its application in integrating rational functions. Various strategies and examples are presented to illustrate the step-by-step procedure of performing partial fraction decomposition and integrating the resulting fractions. Additionally, the advantages and limitations of this technique are discussed, along with practical tips for handling different types of rational functions. The integration of rational functions by partial fraction decomposition proves to be a valuable tool in solving a wide range of mathematical problems.

Keywords: partial fraction decomposition, integration, rational functions, polynomial, fractions, step-by-step procedure, techniques, examples, advantages, limitations, mathematical problem-solving.

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171. Title: Real-Time Applications of Matrices

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Abstract: Matrices, as a fundamental mathematical concept, find extensive applications in various real-time systems. This paper explores the practical utilization of matrices in real-time applications across different domains. Matrices provide a versatile framework for representing and manipulating data in a structured manner, making them well-suited for tasks such as data processing, control systems, computer graphics, and signal processing. This paper discusses specific examples of real-time applications where matrices play a crucial role, highlighting their significance and impact on system performance. Furthermore, it examines the benefits and challenges associated with using matrices in real-time scenarios and explores potential avenues for future research and development in this area. Understanding the real-time applications of matrices enables researchers and practitioners to harness their power in solving complex problems and optimizing system performance.

Keywords: matrices, real-time applications, data processing, control systems, computer graphics, signal processing, system performance, structured data representation, data manipulation, benefits, challenges, research, development, optimization.

172. Title: A Comparative Study of Milne's and Adams-Bashforth Predictor-Corrector Methods for Solving First-Order Differential Equations

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Abstract: This paper presents a comparative study of two widely used predictor-corrector methods, Milne's method and Adams-Bashforth method, for solving first-order differential equations. The abstract provides an overview of the fundamental principles and implementation steps of both methods. It discusses the predictive step of each method, where an initial approximation is computed, followed by the corrector step, which refines the approximation iteratively. The paper explores the advantages and limitations of Milne's method and Adams-Bashforth method, focusing on their accuracy, stability, and convergence properties. A detailed comparison of the numerical results obtained from applying these methods to various first-order differential equations is presented, highlighting their performance in terms of accuracy and computational efficiency.

Keywords: predictor-corrector methods, Milne's method, Adams-Bashforth method, first-order differential equations, approximation, accuracy, stability, convergence.

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173. Title: Analysis of Variance: Unveiling Patterns and Relationships in Statistical Data

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Abstract: Analysis of Variance (ANOVA) is a powerful statistical technique used to investigate the relationships and patterns within data sets by decomposing the total variability into different sources. This paper provides an overview of ANOVA and its application in uncovering valuable insights in statistical data. The ANOVA framework allows for the comparison of means across multiple groups or treatments, enabling researchers to determine if there are significant differences among the groups. The paper discusses the fundamental concepts and assumptions underlying ANOVA, including the partitioning of variance and the F-test for assessing statistical significance. Various types of ANOVA models, such as one-way, two-way, and factorial designs, are explored, along with their respective interpretations and applications.

Keywords: Analysis of Variance, ANOVA, statistical technique, variability, means comparison, groups, treatments, statistical significance.

174. Title: Comparative Analysis of Trapezoidal and Simpson's 1/3 Rules for Numerical Integration

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Abstract: Numerical integration plays a vital role in approximating the definite integral of a function when an exact analytical solution is not feasible. This paper presents a comparative analysis of two widely used numerical integration methods: the Trapezoidal rule and Simpson's 1/3 rule. The abstract provides an overview of both techniques, explaining their underlying principles and implementation. The paper then discusses the advantages and limitations of each method, highlighting their accuracy, convergence, and computational efficiency. A detailed comparison of the approximation errors associated with the Trapezoidal rule and Simpson's 1/3 rule is presented, along with numerical examples to illustrate their performance under various scenarios. Additionally, the abstract discusses the applicability of these methods in different fields, such as physics, engineering, and finance.

Keywords: numerical integration, Trapezoidal rule, Simpson's 1/3 rule, approximation errors, accuracy, convergence, computational efficiency, physics, engineering, finance, comparative analysis, strengths, weaknesses, research directions, numerical examples.

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175. Title: Cayley-Hamilton Theorem: Unveiling the Relationship between a Matrix and its Characteristic Polynomial

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Abstract: The Cayley-Hamilton theorem is a fundamental result in linear algebra that establishes a profound relationship between a square matrix and its characteristic polynomial. This paper explores the Cayley-Hamilton theorem, shedding light on its significance and implications. The abstract provides an overview of the theorem's statement and proof, emphasizing the connection between the matrix's powers and its characteristic polynomial. The paper discusses the applications of the Cayley-Hamilton theorem in various areas, such as matrix diagonalization, matrix exponentiation, and system dynamics. It also delves into the ramifications of the theorem in fields such as control theory, signal processing, and quantum mechanics. Real-world examples and illustrative demonstrations are presented to showcase the practical utility of the Cayley-Hamilton theorem. Furthermore, the abstract discusses extensions and generalizations of the theorem, as well as its limitations and possible variations.
Keywords: Cayley-Hamilton theorem, matrix, characteristic polynomial, linear algebra, matrix powers, matrix diagonalization, matrix exponentiation.

176. Title: Transforming Integration: Change of Variables in Double and Triple Integrals

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Abstract: This paper explores the concept of change of variables in the context of double and triple integrals. Change of variables is a powerful technique in multivariable calculus that allows for the transformation of coordinates, simplifying the evaluation of integrals. This paper provides a comprehensive examination of the theory and practical application of change of variables in double and triple integrals.The paper begins by introducing the motivation behind change of variables and its benefits in integration problems. It discusses the change of variables theorem and its relevance to transforming the integration domain and integrand. The techniques for selecting appropriate coordinate transformations, such as polar, cylindrical, and spherical coordinates, are presented and analyzed.Furthermore, the paper discusses the essential tools and methods for performing change of variables, including the Jacobian determinant and its calculation for different coordinate systems.
Keywords: Change of variables, double integrals, triple integrals, coordinate transformation, polar coordinates, and cylindrical coordinates, spherical coordinates, Jacobian determinant, volume preservation, integral equations, singularities.

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177. Title: Physics of Thin Films: Advances in Research and Development

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Abstract: This book, "Physics of Thin Films: Advances in Research and Development," is a compilation of cutting-edge research and developments in the field of thin films. Edited by G. Hass and R. A. Forman, the book brings together contributions from leading scientists and researchers to provide a comprehensive overview of the latest advancements and discoveries in the physics of thin films. The book covers a wide range of topics related to thin films, including deposition techniques, growth mechanisms, characterization methods, and applications. It explores the fundamental physical properties of thin films, such as their electronic, optical, magnetic, and structural properties, and discusses the underlying physics and mechanisms that govern these properties.

Key Words: Development, Materials science, Surface physics ,Deposition techniques ,Growth mechanisms ,Thin film characterization ,Optical properties, Electrical properties, Magnetic properties, Structural properties

178. Title: Advancements in Thin Film Technology with Novel Materials and Applications

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Abstract: Thin films have emerged as a vital area of research and development due to their unique properties and wide-ranging applications. This paper delves into recent advancements in thin film technology, encompassing novel materials, innovative deposition techniques, and diverse applications. The study investigates the underlying physics and engineering principles governing thin film growth, explores the latest breakthroughs in deposition methods such as physical vapor deposition (PVD), chemical vapor deposition (CVD), and atomic layer deposition (ALD), and highlights the role of surface/interface engineering in tailoring thin film properties. Furthermore, the paper showcases the diverse applications of thin films across various fields, including microelectronics, optoelectronics, solar cells, sensors, coatings, and biomedical devices.

Keywords: Thin films, Film growth, Deposition techniques, Physical vapor deposition (PVD), Chemical vapor deposition (CVD), Atomic layer deposition (ALD), Surface engineering, Interface engineering, Thin film properties, Microelectronics, Optoelectronics.

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179. Title: Semiconductor Materials for Sensor Applications

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Abstract: Semiconductor materials have become crucial elements in the development of advanced sensor technologies due to their unique electronic properties and sensitivity to various stimuli. This paper explores the significance of semiconductor materials for sensor applications, focusing on their role in transforming physical, chemical, and biological signals into measurable electrical responses. The paper discusses the diverse range of semiconductor materials used in sensors, including silicon, gallium arsenide, zinc oxide, and others, each offering specific advantages in different sensing scenarios. Various sensor types, such as temperature sensors, gas sensors, pressure sensors, biosensors, and image sensors, are examined to highlight the versatility of semiconductor-based sensing devices.

Keywords: Semiconductor materials, sensor applications, electronic properties, sensitivity, physical sensors, chemical sensors, biological sensors, silicon,

180. Title: Thermoluminescence: Principles and Applications

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Abstract: "Thermoluminescence: Principles and Applications" is a comprehensive book written by Maria Rodriguez, a leading expert in the field of thermoluminescence. This book provides a detailed exploration of the principles, mechanisms, and applications of thermoluminescence in various scientific and archaeological contexts. Thermoluminescence is a phenomenon where certain materials emit light when heated after being exposed to ionizing radiation. It has significant applications in dosimetry, dating techniques, and material analysis.In this book, Rodriguez starts by explaining the underlying principles of thermoluminescence, including the energy levels and trapping mechanisms involved. She then discusses the instrumentation and techniques used for thermoluminescence measurements and analysis.

Keywords: Thermoluminescence, Luminescence, Principles, Dosimetry, Dating, Radiation, Excitation, Trapped charges, Heating process, Glow curve, Thermoluminescent materials, Geochronology, Archaeology, Radiation dosimeters, Environmental monitoring, Radiation therapy, Retrospective dosimetry Radiation accidents, Radiobiology.

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181. Title: Nanotechnology: Transforming Science and Engineering at the Nanoscale

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Abstract: Nanotechnology, the manipulation and control of matter at the nanoscale, has revolutionized numerous scientific and engineering disciplines. This paper explores the transformative nature of nanotechnology, highlighting its key principles, advancements, and diverse applications. The study delves into the fundamental concepts of nanoscale phenomena, including quantum confinement, surface effects, and size-dependent properties. It discusses the synthesis and characterization techniques employed in nanomaterial fabrication, such as bottom-up and top-down approaches, as well as self-assembly and nanolithography. Furthermore, the paper examines the broad range of applications across fields such as electronics, medicine, energy, materials science, and environmental remediation.

Keywords: Nanotechnology Nanoscale, Nanomaterials, Quantum confinement, Surface effects , Sizedependent properties, Synthesis techniques, Characterization techniques ,Bottom-up approach, Top-down approach, Nanolithography, Medicine, Energy, Materials science.

182. Title: Emerging Trends in Magnetic Nanomaterials: Towards Enhanced Magnetic Properties

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Abstract: Magnetic nano materials have attracted significant attention due to their unique properties and potential applications in various fields. This paper explores the emerging trends in magnetic nano materials, focusing on advancements aimed at enhancing their magnetic properties. The study discusses the synthesis and fabrication techniques used to engineer magnetic nano materials with precise control over their size, shape, composition, and magnetic behavior. It examines the underlying physical principles governing the magnetic properties of nanomaterials, including super paramagnetism, exchange bias, and magnetic anisotropy. Furthermore, the paper explores the diverse applications of magnetic nanomaterials, such as in magnetic data storage, magnetic sensors, biomedical imaging, targeted drug delivery, and catalysis.

Keywords: Magnetic nanomaterials Nanotechnology, Magnetic properties, Superparamagnetism, Exchange bias, Magnetic anisotropy, Synthesis techniques, Fabrication methods, Size control, Shape control, Composition control.

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183. Title: Superconducting Quantum Interference Devices (SQUIDs) for Sensing and Imaging

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Abstract: Superconducting Quantum Interference Devices (SQUIDs) have emerged as highly sensitive detectors for sensing and imaging applications, revolutionizing various fields of science and technology. This paper explores the significance of SQUIDs and their utilization in sensing and imaging systems. The paper discusses the fundamental principles of SQUID operation, including the Josephson effect and flux quantization, which enable their exceptional sensitivity to magnetic fields. It explores the different types of SQUIDs, such as dc SQUIDs and rf SQUIDs, and their respective advantages and limitations. Additionally, the paper highlights the diverse range of applications for SQUIDs, including biomagnetic measurements, non-destructive testing, geophysics, and magneto encephalography (MEG). It discusses the challenges associated with SQUID-based sensing and imaging, such as noise sources, magnetic field shielding, and cooling requirements.

Keywords: Superconducting Quantum Interference Devices (SQUIDs), sensing, imaging, Josephson effect, flux quantization, dc SQUIDs, rf SQUIDs, magnetic field sensitivity, biomagnetic measurements, non-destructive testing, geophysics,

184. Title: Spintronics: Bridging Magnetism and Electronics for Next-Generation Devices

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Abstract: Spintronics, an emerging field at the intersection of magnetism and electronics, holds great promise for revolutionizing the design and functionality of next-generation devices. This paper explores the principles, advancements, and potential applications of spintronics in bridging the gap between magnetism and electronics. The study delves into the fundamental concepts of spin-based phenomena, such as spin polarization, spin transport, and spin manipulation. It examines spintronic devices, including spin valves, magnetic tunnel junctions, and spin transistors, which harness the spin of electrons for information storage, sensing, and computing.

Keywords: Spintronics, Magnetism ,Electronics, Spin polarization, Spin transport, Spin manipulation, Spin valves, Magnetic tunnel junctions, Spin transistors, Information storage, Sensing, Computing, Spin-orbit coupling, Magnetic materials, Spintronic materials, Spin-based memory, Spin logic.

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185. Title: Optical Computing: Revolutionizing Data Processing with Lasers

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Abstract: Optical computing, a revolutionary technology, has emerged as a promising alternative to traditional electronic computing, offering significant advantages in terms of processing speed and energy efficiency. This paper explores the fundamental principles of optical computing and its potential to revolutionize data processing. By harnessing the properties of light and utilizing lasers as key components, optical computing promises to overcome the limitations of Moore's law and pave the way for unprecedented computational power. We delve into the underlying concepts of optical logic gates, data manipulation, and signal processing, highlighting the key breakthroughs and challenges that lie ahead in realizing practical and scalable optical computing systems.

Keywords: Optical computing, lasers, data processing, computational power, Moore's law, optical logic gates, signal processing, energy efficiency, breakthroughs, challenges, research, developments.

186. Title: Thin Films in Nanotechnology: Current Status and Future Prospects

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Abstract: Thin films have become integral to nanotechnology, offering versatile platforms for manipulating and engineering nanoscale structures and devices. This paper provides an overview of the current status and future prospects of thin films in nanotechnology. It explores the significance of thin films as building blocks for various nanosystems, enabling advancements in electronics, optics, sensors, and other cutting-edge applications. The paper discusses the fabrication techniques employed in producing thin films with precise control over thickness, composition, and structure at the nanoscale. Furthermore, it delves into the unique properties exhibited by thin films at the nanoscale and their impact on enhancing material functionalities.

Keywords:Thin films, nanotechnology, nanoscale structures, nanodevices, fabrication techniques, electronics, optics, sensors, material functionalities, nanosystems, challenges, opportunities, emerging trends, state-of-the-art, future prospects, research, innovation.

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187. Title: Thin Film Coatings for Corrosion Protection and Surface Modification

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Abstract: Corrosion of materials is a significant challenge faced across various industries, leading to substantial economic losses and safety concerns. Thin film coatings have emerged as a promising solution for corrosion protection and surface modification applications. This paper presents an in-depth review of the role of thin film coatings in mitigating corrosion and enhancing the performance of materials in aggressive environments. It explores the different types of thin film coatings used for corrosion protection, such as metallic, ceramic, and organic coatings, and discusses their mechanisms of action. The paper also highlights the advanced techniques employed in the deposition of these coatings, including physical vapor deposition (PVD), chemical vapor deposition (CVD), and electroplating.

Keywords: Thin film coatings, corrosion protection, surface modification, metallic coatings, ceramic coatings, organic coatings, physical vapor deposition (PVD).

188. Title: Superconductivity in Astrophysics: Unraveling Cosmic Mysteries

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Abstract: Superconductivity, an intriguing phenomenon observed in certain materials at extremely low temperatures, has found surprising relevance in the realm of astrophysics. This paper explores the role of superconductivity in unraveling cosmic mysteries and its impact on understanding fundamental astrophysical processes. Superconducting states in neutron stars, white dwarfs, and other extreme astrophysical environments have been theorized to influence their magnetic fields, rotational behavior, and emission characteristics. The paper delves into the theoretical models and observations related to superconductivity in astrophysical objects, shedding light on their unique properties and potential effects on celestial phenomena.

Keywords: Superconductivity, astrophysics, neutron stars, white dwarfs, magnetic fields, rotational behavior, emission characteristics, extreme environments, condensed matter physics, cosmic phenomena, interdisciplinary research, theoretical models, experimental challenges, technological advancements, cosmic mysteries.

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189. Title: High-Frequency Semiconductor Devices for Wireless Communication

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Abstract: The demand for high-frequency semiconductor devices has escalated with the rapid growth of wireless communication technologies. This paper explores the significance and challenges associated with high-frequency semiconductor devices in wireless communication applications. The paper discusses the fundamental principles and design considerations of devices such as high-frequency transistors, power amplifiers, oscillators, mixers, and phase-locked loops. It emphasizes the importance of advanced semiconductor materials, device geometries, and fabrication processes to meet the stringent performance requirements of modern wireless communication systems. Furthermore, the paper explores the impact of high-frequency semiconductor devices on emerging technologies like 5G and beyond, as well as millimeter-wave and terahertz communication

Keywords: High-frequency semiconductor devices, wireless communication, transistors, power amplifiers, oscillators, mixers, phase-locked loops, semiconductor materials.

190. Title: Evaluation of Groundnut Seed Oil as a Potential Feedstock For Biodiesel Production: Transesterification and Fuel Properties

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Abstract: The evaluation of groundnut seed oil as a potential feedstock for biodiesel production is of great significance due to the need for renewable and sustainable fuel sources. This study focuses on assessing the suitability of groundnut seed oil for biodiesel production through the transesterification process and investigates its fuel properties. The transesterification reaction is performed using an appropriate catalyst to convert the oil into biodiesel. The study examines the conversion efficiency, yield, and purity of biodiesel obtained from groundnut seed oil. Furthermore, the fuel properties of groundnut seed oil biodiesel, including viscosity, density, flash point, cetane number, and oxidative stability, are analyzed to determine its compatibility with standard diesel fuel.

Keywords: Groundnut Seed Oil, Biodiesel Production, Transesterification, Feedstock Evaluation, Fuel Properties, Renewable Energy, Sustainable Fuel, Conversion Efficiency.

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191. Title: Acid Rain and Human Health: Evaluating the Risks And Protective Measures

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Abstract: Acid rain poses significant risks to human health, necessitating a comprehensive evaluation of its potential impacts and the implementation of protective measures. This study focuses on assessing the relationship between acid rain and human health, exploring the mechanisms through which acid rain pollutants can affect human well-being. It examines the potential health effects of exposure to acid rain components, such as sulfur dioxide (SO2) and nitrogen oxides (NOx), including respiratory problems, cardiovascular diseases, and adverse effects on the immune system. Furthermore, the study reviews the existing literature on epidemiological studies and risk assessments to quantify the association between acid rain and specific health outcomes. Protective measures, such as air pollution control regulations, emission reduction strategies, and public health interventions, are also discussed.

Keywords: Acid Rain, Human Health, Risks, Health Effects, Respiratory Problems, Cardiovascular Diseases, Immune System, Sulfur Dioxide (SO2), Nitrogen Oxides (NOx), Epidemiological Studies, Risk Assessment, Air Pollution Control, Emission Reduction, Public Health Interventions

192. Title: Desalination of Brackish Water Using Electrodialysis: Effect of Operational Conditions

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Abstract: "As the most countries on the earth, shortage of drinking water is a major problem in Tunisia. One mean to obtain low cost drinking water is the desalination of brackish water. The desalination of brackish water by electrodialysis was investigated in this work. This technique is a membrane separation process based on the selective migration of aqueous ions through ion exchange membranes as a result of an electrical driving force. It represents one of the most important methods for desalting solutions as well as thermal process and reverse osmosis. The parameters which can influence the performance of process were studied. These parameters are: concentration of feed solution, flow rate, voltage and circulation mode. Experiments were carried out on sodium chloride solutions with known concentration. Working in continuous mode showed that the desalination rate does not exceed 55%. However, working in batch recirculation mode, more efficient results were obtained. An initial concentration of 3 g L-1 of salts is considered as the maximum recommended feed concentration.

Key words: Brackish water, Desalination, Electrodialysis, Optimal conditions

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193. Title: Controlling Nanomaterial Phases through Ligand-Mediated Approaches

[1]Mrs.T.Annalakshmi, [2]P.Barjush fathima, [3]B. Biruntha. [4]S.Sajina
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[2, 3, 4]UG Student, Sri Bharathi Engineering College, Pudukkottai.

Abstract: Controlling the phases of nanomaterials is crucial for tailoring their properties and achieving desired functionalities. Ligand-mediated approaches have emerged as effective strategies for phase engineering in nanomaterial synthesis. This study provides an overview of ligand-mediated approaches for controlling nanomaterial phases and explores their impact on material properties. Ligands, acting as surface modifiers, play a crucial role in directing the nucleation, growth, and stabilization of specific phases during synthesis. The study discusses various ligand-mediated techniques, including ligand selection, surface passivation, ligand exchange, and ligand-induced phase transitions. It examines their influence on nanomaterial structure, composition, morphology, and surface properties.

Keywords: Nanomaterials, Phase Engineering, Ligand-Mediated Approaches, Phase Control, Material Properties, Surface Modification, Ligand Selection, Surface Passivation, Ligand Exchange, Phase Transitions, Nanomaterial Synthesis

194. Title: Metal-Organic Chemical Vapor Deposition: Versatile Technique for Materials Growth

[1]Mrs.T.Annalakshmi, [2]Mrs.S.Renugadevi, [3]S.Ishwarya, [4]M.Sarulekha
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Abstract: Metal-Organic Chemical Vapor Deposition (MOCVD) is a versatile and widely used technique for the growth of thin films and nanostructures. This method enables precise control over the deposition of complex materials by utilizing volatile metal-organic precursors and reactive gases. This study provides an overview of MOCVD as a powerful technique for materials growth and explores its applications in various fields, including semiconductor devices, optoelectronics, photovoltaics, and catalysis. The fundamental principles of MOCVD are discussed, along with the factors influencing film growth, such as temperature, precursor chemistry, and substrate properties.

Keywords: Metal-Organic Chemical Vapor Deposition (MOCVD), Thin Film Growth, Nanostructures, Precursor Chemistry, Deposition Parameters.

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195. Title: Electrophoretic Deposition in Production of Ceramic Matrix Composites

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[2 3 4] UG Student, Sri Bharathi Engineering College, Pudukkottai

Abstract: Electrophoretic deposition (EPD) is a versatile and effective technique used in the production of ceramic matrix composites (CMCs). This study provides an overview of the application of electrophoretic deposition in the fabrication of CMCs and explores its advantages and challenges. EPD allows for the controlled deposition of ceramic particles onto a conductive substrate under the influence of an electric field, enabling the formation of uniform and well-adhered ceramic layers. The study highlights the importance of optimizing deposition parameters such as voltage, deposition time, and suspension properties to achieve desired composite characteristics. Additionally, the influence of particle size, concentration, and surface charge on the deposition process and resulting microstructure is discussed.

Keywords: Electrophoretic Deposition (EPD), Ceramic Matrix Composites (CMCs), Fabrication, Ceramic Particles, Electric Field, Deposition Parameters, Suspension Properties, Composite Characteristics, Microstructure, Particle Size, Concentration.

196. Title: Phase Diagram of a Metallic Alloy

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Abstract: The Phase Diagram of a Metallic Alloy is a graphical representation that illustrates the different phases and their equilibrium conditions as a function of temperature and composition for a specific metallic alloy system. This phase diagram provides crucial insights into the behavior and stability of the alloy, aiding in the design and optimization of materials with desired properties. By studying the phase diagram, engineers and scientists can determine the appropriate processing conditions to achieve specific microstructures and properties in metallic alloys.

Keywords: Metallic Alloy, Phase Diagram, Equilibrium Conditions, Temperature, Composition, Microstructure, Alloy Design, Material Properties, Processing Conditions, Phase Transitions, Solid Solution, Inter metallic Compounds,

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197. Title: Studies of Carbonization Process on the Production of Durian Peel Biobriquettes with Mixed Biomass Coconut and Palm Shells

[1]S.Renugadevi [2]Mrs.T.Annalakshmi, [3]V.Athishta, [4]B.Malathi
[1,2]Asst. Prof., Dept of Chemistry Sri Bharathi Engineering College, Pudukkottai
[3, 4]UG Students, Sri Bharathi Engineering College, Pudukkottai

Abstract: This study investigates the carbonization process's influence on the production of durian peel biobriquettes, utilizing a mixed biomass of coconut and palm shells. The carbonization process involves subjecting the biomass to high temperatures in an oxygen-limited environment, resulting in the production of charcoal. The objective is to evaluate the effect of carbonization parameters, such as temperature and residence time, on the quality and characteristics of the durian peel biobriquettes. The study examines the physical and thermal properties of the produced biobriquettes, including density, moisture content, calorific value, and combustion characteristics. Additionally, the study investigates the potential emissions during the combustion process to assess the environmental impact.

Keywords: Carbonization Process, Durian Peel, Biobriquettes, Mixed Biomass, Coconut Shells, Palm Shells, Temperature, Residence Time, Physical Properties, Thermal Properties, Density, Moisture Content, Calorific Value.

198. Title: Determination of Calorific Value of Biomass Briquette Fuel Produced from Waste-Paper, Cornstalk and Bagasse

[1]Mrs.P.Bhavani, [2]S.Yogalakshmi, [3] V.Athishta, [4] B.Malathi
[1] Asst. Prof., Dept of Chemistry Chendhuran College of Engineering, Pudukkottai.
[2, 3, 4] UG Students, Chendhuran College of Engineering, Pudukkottai.

Abstract: The determination of the calorific value of biomass briquette fuel is essential for evaluating its energy content and potential as a renewable energy source. In this study, biomass briquettes were produced from waste-paper, cornstalk, and bagasse, and their calorific values were measured using a bomb calorimeter. The experimental results provided insights into the energy density and combustion efficiency of the biomass briquettes, enabling a comparative analysis of their fuel properties. The findings contribute to the assessment of biomass briquettes as a sustainable alternative to traditional fossil fuels for various applications, including heating and power generation.

Keywords: Biomass Briquette Fuel, Calorific Value, Waste-Paper, Cornstalk, Bagasse, Renewable Energy, Energy Content, Bomb Calorimeter, Energy Density, Combustion Efficiency

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199. Title: Unleashing the Power of Composites: Innovations in Material Engineering

[1]Mrs.A.Sathya, [2]S.Sasikala, [3]T.Ayisha, [4]S.Kalavathi
[1]Asst. Prof., Dept of Chemistry Mount Zion Engineering College, Pudukkottai.
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Abstract: Unleashing the Power of Composites: Innovations in Material Engineering" explores the groundbreaking advancements in the field of composite materials, revolutionizing various industries and applications. This paper highlights the transformative capabilities of composites, which combine multiple materials to create structures that surpass the limitations of traditional materials. Through meticulous research and development, scientists and engineers have unlocked the immense potential of composites, harnessing their exceptional strength, lightweight nature, and versatility. The abstract delves into the key innovations driving the evolution of composite materials, such as advanced manufacturing techniques and matrix systems. It also explores the diverse range of industries benefitting from composites and highlights ongoing research in this field.

Keywords: composites, material engineering, innovation, advanced manufacturing, matrix systems, strength, lightweight, versatility, industries, sustainability, research.

200. Title: Future Fuels: Innovations and Prospects for Next-Generation Energy Sources

[1]Mrs.S.Pothumselvi, [2]S.Gayathri, [3]M. Ragavi, [4]S. Kalaiselvi
[1]Asst Prof Dept of Chemistry Shanmuganathan Engineering College, Pudukkottai.
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Abstract: The future of fuels is undergoing a significant transformation as the world strives for sustainable and cleaner energy sources. This study explores the innovations and prospects for next-generation energy sources, focusing on future fuels that have the potential to revolutionize the global energy landscape. It examines emerging technologies, such as hydrogen fuel, advanced biofuels, synthetic fuels, and carbon-neutral fuels, and discusses their attributes, challenges, and potential applications. The study also addresses the importance of energy storage and distribution infrastructure in enabling the widespread adoption of future fuels. By evaluating the innovations and prospects for next-generation energy sources, this study contributes to shaping a more sustainable and resilient energy future.

Keywords: Future Fuels, Innovations, Prospects, Next-Generation Energy Sources, Sustainable Energy, Renewable Energy, Alternative Fuels, Biofuels, Hydrogen Fuel, Synthetic Fuels, Electric Fuels, Carbon-Neutral Fuels, Energy Transition,mEnergy Storage, Energy Distribution

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201. Title: Nuclear Energy: A Controversial yet Powerful Source of Electricity

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Abstract: Nuclear energy is a controversial yet powerful source of electricity that has been widely debated due to its associated risks and benefits. This study provides an overview of nuclear energy as a viable option for meeting the growing global energy demand. It explores the underlying science and technology behind nuclear power generation, including nuclear fission reactions and reactor designs. The potential advantages, such as high energy density and low greenhouse gas emissions, are discussed alongside the concerns surrounding safety, waste disposal, and the potential for nuclear weapons proliferation. By analyzing the current state of nuclear energy and addressing the challenges it faces, this study contributes to the ongoing dialogue on the role of nuclear power in the energy transition.

Keywords: Nuclear Energy, Electricity Generation, Controversial, Power Source, Nuclear Fission, Reactor Design, Energy Density, Greenhouse Gas Emissions, Safety Concerns, Waste Disposal, Nuclear Weapons Proliferation.

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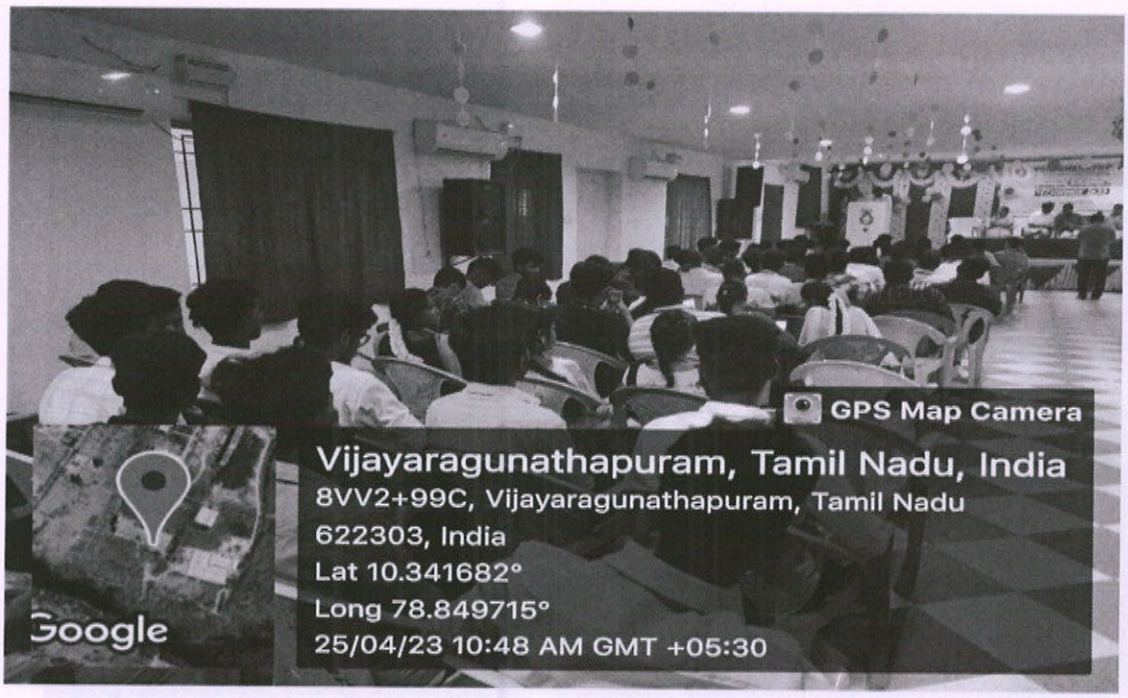

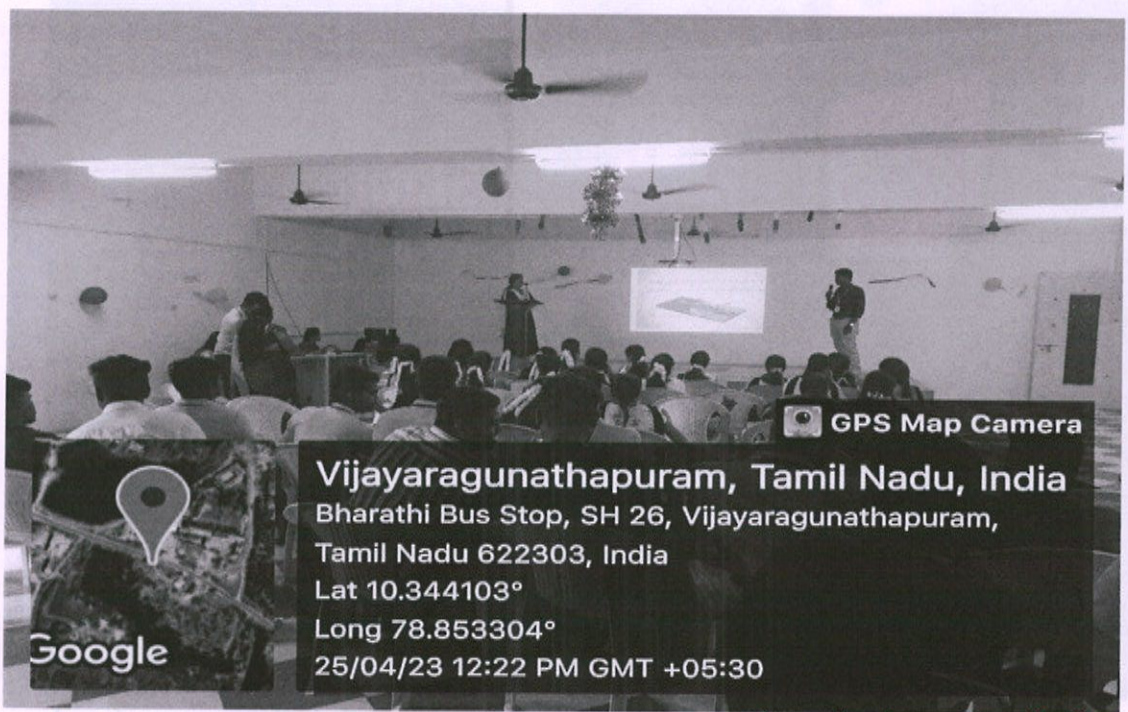

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Mr/Ms **G.SUGA PRIYA** of

SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN

Has Presented Paper Entitled as

Ai Enhanced Ot Security Tool

in the "International Conference on Information and Communication Engineering (ICICE'23) organized by Department of Electronics and Communication Engineering at CARE College of Engineering during 27 & 28 April , 2023.

Dr. S.THILAGAVATHI M.E.,Ph.D.,
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Kaikkurchi - 622 303, Pudukkottai Dt.

Ms. M.Shiva Shankari Organizing Chair CARE College of Engineering Tiruchirappalli	Ms. R.Deepalakshmi Organizing Chair CARE College of Engineering	Mrs. R. Vanitha Organising Chair CARE College of Engineering	**Dr. J. Jeyarani** **HOD, ECE** **CARE College of Engineering** **Tiruchirappalli**	**Dr. S. Shanthi** **Principal** **CARE College of Engineering** **Tiruchirappalli**

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AMARAVATHIPUTHUR, KARAIKUDI - 630 301

DEPARTMENT OF ECE & EEE

JOINTLY ORGANIZED

INTERNATIONAL CONFERENCE ON

EMERGING TRENDS IN ELECTRICAL ELECTRONICS & COMMUNICATION TECHNOLOGY

(ICETEECT'23)

CERTIFICATE OF PARTICIPATION

This is to certify that Prof./Dr./Mr./Ms. Mrs. G. SUGAPRIYA, ME., MS., Assistant Professor - CSE has presented a Paper entitled E-VOTING SYSTEM USING ETHEREUM NETWORK In the International Conference on"Emerging Trends in Electrical Electronics & Communication Technology" held on 20th April 2023,Organized by the Department Of Electrical Electronics & Communication Engineering, Sri Raaja Raajan College Of Engineering And Technology, Karaikudi.

Dr.A.ELANGO
Principal

Dr.S.SUBBIAH
Advisor

Dr. S.THILAGAVATHI M.E.,Ph.D
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(ICETEECT'23)

CERTIFICATE OF PARTICIPATION

This is to certify that Prof./Dr./Mr./Ms. S. JAYA PRATHA, AP/CSE has presented a Paper entitled Interact computer with Facial Expression for Tetraplegia users using deep Learning In the International Conference on"Emerging Trends in Electrical Electronics & Communication Technology" held on 20th April 2023,Organized by the Department Of Electrical Electronics & Communication Engineering, Sri Raaja Raajan College Of Engineering And Technology, Karaikudi.

Dr.A.ELANGO
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(ICETEECT'23)

CERTIFICATE OF PARTICIPATION

This is to certify that Prof./Dr./Mr./Ms. EL.THANGA UMA., ME (AP/CSE) has presented a Paper entitled ..DESIGN AND IMPLEMENTATION OF BEAUTY PARADISE..... In the International Conference on"Emerging Trends in Electrical Electronics & Communication Technology" held on 20th April 2023,Organized by the Department Of Electrical Electronics & Communication Engineering Sri Raaja Raajan College Of Engineering And Technology, Karaikudi.

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(ICETEECT'23)

CERTIFICATE OF PARTICIPATION

This is to certify that Prof./Dr./Mr./Ms. M.PARVEEN BANU AP/CSE has presented a Paper entitled Liquid Petroleum hydrocarbon ocean costal water pollution Identification using deep Learning In the International Conference on"Emerging Trends in Electrical Electronics & Communication Technology" held on 20th April 2023,Organized by the Department Of Electrical Electronics & Communication Engineering, Sri Raaja Raajan College Of Engineering And Technology, Karaikudi.

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Department of Mechanical Engineering

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GTMTS - 2023

23rd & 24th February 2023

This is to certify that ~~Prof.~~ /~~Dr.~~/Mr./~~Ms.~~ T. PARTHIBAN, ASSISTANT PROFESSOR of SRI BHARATHI ENGINEERING COLLEGE FOR WOMEN has participated/ presented a paper titled "IOT BASED NOVEL METHOD TO HARVEST LIGHT ENERGY USING SOLAR PHOTOVOLTAIC PANEL TO SUPPLY DC HOMES" in the national conference on Global Technologies in Manufacturing and Thermal Sciences **(GTMTS-2023)** held at Sethu Institute of Technology, Kariapatti, Virudhunagar, Tamilnadu, India on 23rd and 24th February 2023.

Dr. S.THILAGAVATHI M.E.,Ph.D.,
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Co-Convener	Convener	Principal
Dr.C.KAILASANATHAN	Dr.G.D.SIVA KUMAR	Dr. A. SENTHIL KUMAR

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DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

Certificate of Participation

This is to certify that Mr.T.Parthiban , Assistant Professor, Sri Bharathi Engineering College for Women, Pudukottai has presented a paper in the "International Conference on Power and Energy Systems (ICPES-23)" organized by the Department of Electrical and Electronics Engineering, Velammal College of Engineering and Technology on 17 & 18 March 2023.

Dr.B.Kiruthiga
Organising Secretary

Dr.S.Chellam
Organising Secretary

Dr. R Narmatha Banu
HOD / EEE,VCET

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DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

Certificate of Participation

This is to certify that Ms.Priya, Assistant Professor, Sri Bharathi Engineering College for Women, Pudukottai has presented a paper in the "International Conference on Power and Energy Systems (ICPES-23)" organized by the Department of Electrical and Electronics Engineering, Velammal College of Engineering and Technology on 17 & 18 March 2023.

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