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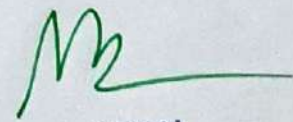
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V.H.N SENTHIKUMARA NADAR COLLEGE,
(AUTONOMOUS)

VIRUDHUNAGAR-626001, TAMILNADU, INDIA. MAY-2022



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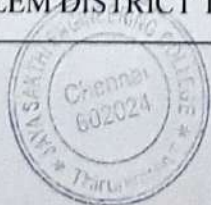


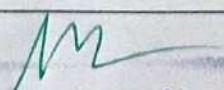

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**NATIONAL CONFERENCE ON
RECENT TRENDS IN APPLIED MATHEMATICS-2022
(NCRATAM-22)**

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SURFACTANT ASSISTED SYNTHESIS OF CUO NANOPARTICLES WITH DIFFERENT MORPHOLOGIES AND PHOTOCATALYTIC APPLICATIONS

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Abstract

Photocatalytic degradation using semiconductor materials was an efficient method to remove the organic pollutants from wastewater. Copper oxide (CuO) nanoparticles was synthesized by a surfactant-assisted hydrothermal process. The addition of surfactants such as sodium dodecyl sulfate (SDS) and Triethylamine leads to the formation of different morphologies of CuO nanoparticles. The structural and morphological properties of CuO nanoparticles were studied using X-ray diffraction studies (XRD), Fourier transform infrared spectroscopy (FTIR), ultraviolet-visible (UV-vis) spectroscopy, and Scanning electron microscopy (SEM). Further, the photocatalytic activity of the CuO nanoparticles was investigated and compared with different morphologies. Photocatalytic efficiency was calculated for degradation of Aniline Blue (10ppm) aqueous solutions in the presence of Sunlight irradiation.

Keywords:Surfactant ; Aniline Blue; Photodegradation; Morphology; Sunlight



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DIET PLAN FOR PREGNANT WOMEN USING MODELING WITH MATRICES

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ABSTRACT

This paper illustrates the application of matrices to build the model for diet planning for Pregnant women. It particularly studied the diet problem of designing diet plan of pregnant women. The planning adequate menus involves consideration of several types of constraints such as the required nutritional content and the calories. The mathematical model was developed which meet all the requirements and restrictions.



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ANALYSIS OF M/M/1 FEEDBACK NETWORK QUEUEING MODEL WITH THREE NODES WHEN CATASTROPHES OCCURS

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PROFESSOR, Assistant Professor ,Science & Humanities,

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Abstract

In this paper, we study M/M/1 Queueing network model with catastrophes at the service station. Here we have three nodes with feedback on third node. We derive probability of the system is idle (no customer), the probability of n number of the customers in the system and find queue length for the system and nodes, waiting time for the system and nodes, using Little's formula. The numerical examples are given to test the feasibility of this model.

Keywords: Markovian Model, Queueing Network, Feedback, Catastrophes



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IMPACT OF COVID – 19 LOCKDOWN ON THE MENTAL HEALTH AMONG HEALTHY WORKING ADULTS: A QUANTITATIVE STUDY

Mrs. U. Praba

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Abstract

The COVID – 19 pandemic lockdown has disrupted the day to day life and the daily routine that affected the mental well being of the general population. At this background, the present study aimed to assess the mental health of the healthy working adults in Salem city, Tamil Nadu, India. A convenient sample of 60 healthy working adults has been selected as a sample. The COVID – 19 lockdown has significantly changed the sleeping pattern, physical activities, usage of internet and work time of the respondents. The study has concluded that the COVID – 19 pandemic lockdown had significantly affected the psychological well being of the respondents. Irrespective of the age, education, occupation and gender the COVID – 19 lockdown has impacted the mental wellbeing of the respondents. The factors such as uncertainty of income, work from home, quarrels from the family members and fear about COVID – 19 are found to have a significant influence on the mental health of the respondents.

Keywords: COVID-19, Pandemic, Lockdown, Mental health, Paired t Test, Correlation



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IDENTIFICATION OF PROMINENT GROUNDNUT PRODUCING STATES IN INDIA THROUGH SIMPLE FUZZY MATRIX

Mr.P.Karthikeyan, Mr. S.Vijayan,

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Abstract

India is one of the largest producers of oilseeds in the world and occupies an important position in the Indian agricultural economy. It is estimated that there are nine oilseeds namely groundnut, rapeseed-mustard, soybean, sunflower, safflower, sesame, Niger, castor and linseed. Groundnut is called as the 'King' of oilseeds. It is one of the most important food and cash crops of our country. While being a valuable source of all the nutrients, it is a low-priced commodity with all the valuable source of nutrients. Groundnut is also called as wonder nut and poor men's cashew nut. It is a low-priced commodity but a valuable source of all the nutrients. Groundnut, a very important seed crop, has been losing its space on the cropping map of the state agriculture. The world beneath groundnut has turned negative over the years though the productivity of the crop was perpetually increasing. To allow a lift to the groundnut cultivation within the state, two dimensional efforts, viz., technological up gradation and effective market support are needed. Efforts ought to be taken by the Government to acquire seeds and chemicals at a lower value to the farmers and additionally the middlemen involvement ought to be reduced. Groundnut generation is concentrated in five states viz., Gujarat, Andhra Pradesh, Tamil Nadu, Karnataka and Maharashtra. These five states represent the maximum share of groundnut. Thiruvannamalai, Villupuram, Vellore, Namakkal, Salem, Erode and Cuddalore are the significant groundnut creating regions in Tamil Nadu. The trend of Groundnut crop shows a fluctuating pattern throughout the years due to various reasons.

This paper gives a brief survey on the production of groundnut in India, while raw data collected from secondary sources with reference to production of groundnut during 2010 – 2011 to 2019 – 2020 in prominent states in India is studied using Fuzzy Matrices model. Using this model, the researcher can find out the prominent groundnut producing states in India.

Key words: Ground nut Area, Production, Productivity and Fuzzy Matrix.



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OUT-OF-POCKET EXPENDITURE ON HEALTHCARE AMONG THE HOUSEHOLDS IN SALEM DISTRICT

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Abstract

Health is an integral part of human resource development. It acts as both the means and end of economic development, which in turn improves human lives by good education, healthcare facilities, better job opportunities, enhanced job security, and other necessities for human well-being. India faces the major health challenges of more health care cost due to the low standard of living. Out-of-pocket expenditures for health care leads to more financial burden for households in rural areas. The study aimed to find out the health problems and out-of-pocket health expenditure incurred by respondents in Veerapandi Block of Salem district. Out-of-pocket expenditure is high in rural areas mainly due to low socio-economic status. From the analysis it is concluded that there is a significant association between the type of hospital and monthly family income. The average out-of-pocket expenditure on three categories of healthcare treatment was Rs. 221.20 for pre-hospitalisation, Rs. 227.08 for hospitalisation, and Rs.72.12 for post-hospitalisation. There is a significant association between the morbidity of days and opportunity cost. To reduce out-of-pocket expenditures for households, there is need for ceiling of prices for healthcare services in hospitals run by private sectors and community-based mechanisms parallel to government actions.



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LANZHOU INDEX FOR DETOUR SATURATED TREE

Mr.S.Vignesh, , Dr. P.Marimuthu

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Abstract

Let G be a connected graph with a vertex set $V(G)$ and edge set $E(G)$. The Lanzhou index of a Graph G is defined as the sum of the product between \overline{d}_u and the square of d_u for all vertices u in G . Where d_u is the degree of u in G and \overline{d}_u is the degree of the complement graph of G [3].

$$L_z(G) = \sum d_u^2 \overline{d}_u$$

The Detour Saturated graph is the sum of any edge results in an increased largested path length. The upper mantle is compound of silicates common in magmatic and metamorphic rocks, like olivine, pyroxene and garnet. In this paper we can find the generalized Lanzhou index results for Detour Saturates, pyroxene and amphibole tree.



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SYNTHESIS, OPTICAL AND DIELECTRIC PROPERTIES OF POLYMER BASED CHITOSAN- CUO NANOCOMPOSITES

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Abstract

Chitosan (CS) was used as a powerful chelating agent and an excellent structure for synthesis of metal oxide nanoparticles (NPs). In this paper, we report the synthesis and characterization of Chitosan (CS) blended with copper oxide (CuO) nanoparticles. The nanoparticles were prepared by co- precipitation method and then blended with pure Chitosan (CS) material. Prepared samples were characterized using XRD, FTIR, SEM, UV- DRS. XRD patterns shows sharp peaks it indicates an improvement in the crystallinity in blended CS/ CuO nanocomposites. Presence of Copper oxide in the Chitosan matrix were also confirmed using FTIR spectra. Surface morphology showed that the prepared nanocomposites were uniformly dispersed in the Chitosan matrix. The optical properties were investigated for pure CS, CuO and blended CS/ CuO nanocomposites. The dielectric properties of the nanocomposite were studied

Keywords: Chitosan; CuO; Nanocomposites; Optical properties; dielectric properties.



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**MAXIMIZING THE NUMBER OF LIVES OF YOUNG BIRDS IN THE NEST BEFORE
IT IS READY TO FLY BY USING FUZZY SIMPLEX METHOD.**

Mrs. H.Jamuna,

Assistant Professor, Electronics and Communication engineering,

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ABSTRACT

Wetland restoration in recent decades has provided new habitat resources for wetland birds in agriculturally dominated landscapes. The goals of wetland restorations often include providing habitat for migratory and breeding waterfowl and other wetland birds. The examination of nest occurrence and variables influencing site selection, nest success, and changes in nest density across stages of the wetland succession cycle are studied. By providing grain plates and water jugs in the trees the mortality ratio of eggs and chicks can be maximized. In this paper we maximize the mortality ratio of eggs and chicks by using fuzzy simplex method.



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IMPACT OF COVID 19 ON CONSUMER BEHAVIOUR

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ABSTRACT

The ongoing lockdown to combat Covid-19 has altered consumers' purchase decisions - higher spending on health and hygiene products, adapting to limited product availability, and preferring home deliveries over store visits. The current crisis is affecting the brand and category preferences, shopping behavior and spends. The Covid-19 pandemic had also seen a growth of many first-time online shoppers and also saw people switching over to alternate methods, or changing their mundane ways of shopping across the globe. Consumers' preference for health and hygienic foods have been increasing and their attitude towards online shopping is also identified. It was found that more preference is found among consumers for fruits, vegetables have increased but there is no higher preference for online shopping. However, their intention towards local selling have increased. Their opinion that their spending towards essential goods have increased and their savings have reduced.



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LANZHOU INDEX FOR NANOSTAR, D2 STARCHUDRATY

Mrs. J. Sumathi

Assistant Professor, Science & Humanities,

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Abstract

Let G be a connected graph with a vertex set $V(G)$ and edge set $E(G)$. The Lanzhou index introduced by Damir Vukicevic, Qiuli Li, Jelena sedlar, Tomislav Doslic[2] in 2018. The Lanzhou index of a Graph G is defined as the sum of the product between $\overline{d_u}$ and the square of d_u for all vertices u in G . Where d_u is the degree of u in G and $\overline{d_u}$ is the degree of the complement graph of G . $L_z(G) = \sum d_u^2 \overline{d_u}$. The nanostar dendrimers are a piece of another gathering of macromolecules that seem, by all accounts, to be photon pipes simply like counterfeit reception apparatuses. In this paper we can find the generalized results for nanostar dendrimer and some structure.



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**ANALYTICAL SOLUTION OF HEAT SOURCE / SINK EFFECTS ONMHD
NANOFLUIDFLOW OVER SHRINKING WALL WITH POROUS MEDIUM**

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Abstract

This research mainly focuses on the effects of heat absorption/generation and radiation on the hydromagnetic flow of Fe_3O_4 -Ethylene glycol nanofluid through a shrinking wall with porous medium. We consider the basic governing ordinary differential equations into partial differential equations by using appropriate similarity solutions. Moreover, hyper geometric function is employing to determine the formulated problem. We analyze the effects of appropriate physical parameters on the fluid temperature and velocity profiles. The presence of porosity parameter reduced the fluid velocity, and improved fluid temperature.



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CONSUMER BEHAVIOUR AND DECISION-MAKING: A STUDY ON THE IMPACT OF GREEN MARKETING

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Abstract

Green marketing is a great initiative and growing recently. With the threat of global warming looming large, it is extremely important that green marketing becomes the norm rather than an exception. Recycling paper, metals, plastics, etc., in a safe and environmentally harmless manner, should become much more systematized and universal. Green marketing occupied important place in fast moving consumer goods business. The specific objective of the study was to understand the consumer level of awareness of green marketing and to identify the consumer buying behaviour in green marketing. The study also shows the problems faced by consumers in buying green products. There are 130 respondents were interviewed by adopting the questionnaire method. It was observed that age of the consumer, level of education, and monthly income of the consumer are had close association with the decision to buy green products. The study also observed respondents interest on eco-friendly products. It was also found that the source of awareness of green products is the word of mouth. The statistical tools used for data analysis were descriptive statistics, chi-square, correlation and ranking method were applied.

Key words: Green Marketing, Consumer Behaviour, Decision Making.



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**A STUDY ON SOCIO-ECONOMIC CONDITIONS OF THE WOMEN DOMESTIC
WORKERS IN THOPPUKADU AREA OF SALEM TALUK**

Mrs. S.UMA MAHESHWARI

Assistant Professor, Computer Science and Engineering,

Jaya Sakthi Engineering College
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Abstract

Women play a significant role in a nation, which includes a part of a homemaker. Homemaker is the largest workforce in the world which remains unpaid and undervalued. The domestic chores of women do not be considered as an occupation by the nations. It is also considered as an unproductive work. But the domestic work is the most productive work done by women for the development of the nation. The workers who are doing the same service of the homemaker in other's home are known as the domestic servant, workers and maids. Normally, women entered into these types of domestic workers for their own survival and the survival of their family. This is because of the illiteracy or less educational awareness among women. On this regard, the women domestic workers has important place to play in their life as well as the employer's life, in which they are occupied. Women have always been contributing to the economy to achieve remarkable progress. But it is the gender prejudice that still prevails at every social division, although in the most educated and developed society. It is also unable to absorb this noticeable participation of women in all spheres of her life. In some regions, male-biased societies reduce the part of women in significant matters in the economy and also in the family. Conversely, this masochist thinking is starting to fade slowly with the course of time. As a whole, in the present society, domestic workers are considered as one of the most significant workers and productive work of an economy.

The major issues faced by these workers are corrupt recruitment practices, lack of work contracts, withheld salaries, physical, sexual and emotional abuse at the workplace. Thoppukadu area of Salem taluk is chosen for the study. The survey period was from July 2020 to March 2021. The study was based on primary data as well as on the secondary data. 50 were selected as sample through stratified random sampling. The sample respondents have been stratified on the basis of stream of course offered by the Thoppukadu area and there after selection of sample respondents was done with the help of simple random sampling method.



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A MATHEMATICAL STUDY ON THE POPULATION OF NILGIRI TAHR

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ABSTRACT

Nilgiri Tahr is the state animal of Tamil Nadu. The International Union for Conservation of Nature (IUCN) keeps a "The Red List of Threatened Species" which includes this species, Nilgiri Tahr. Mukurthi National Park is a protected area located in the northwest corner of Tamil Nadu in the Western Ghats which is created mainly to protect its keystone species Nilgiri Tahr. In this paper, a mathematical study on the population of nilgiritahr has been carried out and the population growth of the species with the available data (from 2016-2019) is studied using logistic differential equation model. Using the growth rate and carrying capacity of the species we predict the population of the species in the following years.



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APPLICATION OF FUZZY GRAPH IN TRAFFIC

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ABSTRACT

The monitoring and controlling of city traffic is becoming a major problem in many countries. In this paper, a fuzzy graph model to represent a traffic network of a city is used and discuss a method to find the different type of accidental zones in a traffic flows. This paper is based on fuzzy coloring of fuzzy graphs and fuzziness of vertices, the total waiting time of a traffic flow is minimized which will help to reduce the road traffic.



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DIAGNOSIS OF ASD IN CHILDREN USING MACHINE LEARNING TECHNIQUES

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Jaya Sakthi Engineering College

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The autism spectrum disorder is one among the disorders which severely affect the children's ability to socialize and to mingle with the society. As the symptoms of this disorder can't be confined accurately and as it may vary person to person this disorder is termed to be a spectrum. Due to this spectrum of behaviour it is generally hard to diagnose this disease at early stages of the children's growth. There is no form of medication till date to completely cure the disorder but there are several treatment methods which can aid the children to improve the needed ability. In order to pursue such treatments it is vital to diagnose the presence of disorder at early stages. The recent improvement in the field of machine learning has helped the medical community in diagnosing several Complex diseases. In the current research an attempt has been made to diagnose Autism spectrum disorder from the bio medical data sets using machine learning techniques.



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ONLINE MATRIMONY

Mr. S.Selvakumaran, Mrs. S.Sivakami

Assistant Professor, Computer Science and Engineering,

Jaya Sakthi Engineering College

Thiruninravur

Online matrimonial is becoming one of the most profitable businesses in India. Many People are looking forward to online matrimony; people do not only understand the advantages of being on net but they are also appreciating it and selecting their partners. The online matrimonial world definitely has become a long way process. In the new era, vast popularity of internet users has made online matchmaking increasingly popular in India. It became a tool to search for prospective partners. It provides the comfort and choice of millions of prospects and much more information about a prospect. The study was undertaken to explore customer's preference and satisfaction towards online matrimonial services. Many People are looking forward to online matrimony; they not only understand the advantages of being on internet but also appreciate it as a way of selecting their partners. In future, market continues to evolve, bring in more customers and serve to new generations, online matrimony will continue to thrive in India for a very long time to come.



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A COMPARATIVE ASSESSMENT ON THE EMISSIONS OF NITROGEN BETWEEN NERIUM OLEANDER AND PANDANUS AND THEIR CONTRIBUTION TO AGRICULTURE USING FUZZY LOGIC

Mrs. M.Pavithra Rao , Dr. M.Gopu

Assistant Professor, Professor ,Computer Science and Engineering,

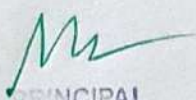
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Abstract

The beauty of nature and the massive impact it brings in the lives of human beings is paramount. Flowers are the most significant and pleasant creation existing in the Universe. Apart from being known for their aesthetic nature flowers also have vital role in maintaining the sustainability of the world. In this connection, the process of symbiotic Nitrogen fixation and it's role in maintaining the agricultural balance is compared between two flowers *Nerium oleander* and *Pandanus* with the aid of fuzzy logic.




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A Study on Customer Adoption towards E-Payment System with Special reference to State Bank of India, Fairlands Branch.

OPTIMIZATION OF PRICE AND PROFITABILITY OF VEGETABLES AND PULSES VIA FUZZY SIMPLEX METHOD

Dr. D. Kumar

Professor, Science & Humanities,

Jaya Sakthi Engineering College
Thiruninravur

Abstract

Agriculture addresses the challenge of meeting the growing demand for food despite less opportunities for agricultural expansion on supplementary lands. Evaluating profitability will help the farmers to a greater extent as how to make their cultivation and marketing more profitable. We know that profitability of a crop depends on yield, price of the product, cost of inputs and as well, farmer's management capacity. Vegetables have higher productivity, shorter maturity cycle, are high in value and provide greater income leading to improved livelihoods. Therefore, the individual farmer would be benefited from this study for effective operation and management of their farms. The method of maximizing the farmer's profitability of vegetables and pulses using the fuzzy simplex method is given.



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A Review on Image Mining Framework and Techniques

Mr.P.Karthikeyan, Assistant professor, Mechanical Engineering, Jaya Sakthi Engineering College, Thirininravur

Mr. S.VIJAYAN, Assistant professor, Mechanical Engineering, Jaya Sakthi Engineering College, Thirininravur

Mr. S.VIGNESH, Assistant professor, Mechanical Engineering, Jaya Sakthi Engineering College, Thirininravur

Abstract:-

In today's world, Images play a vital role in every aspect of life, including medical images, satellite images, and business images, among others. Image mining is a subset of data mining concerned with the process of information exploration in the context of digital images. Image mining is a fascinating area that encompasses both structured and unstructured data, such as imagedata. Image mining techniques have become essential as the number of images and image databases has increased. Image mining is a set of techniques for analyzing large amounts of image data. The primary goal of this paper is to present an overview of the various types of framework that are used to explain image mining methods and techniques for image mining applications.

Keywords:-

ImageMining, ImageClustering, ImageClassification, DataMining, ImageIndexing



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TB Diagnosis Using Machine Learning Classifiers

Mr. Boopalan, Assistant Professor, Mechanical Engineering, Jaya Sakthi Engineering College, Thiruninravur
Mr. D. Loganathan, Assistant Professor, Mechanical Engineering, Jaya Sakthi Engineering College, Thiruninravur
Mr. J. Samprasanna, Assistant Professor, Mechanical Engineering, Jaya Sakthi Engineering College, Thiruninravur


Abstract:-

This study attempts to model a classification problem to examine the machine learning approach for medical diagnosis by different classifiers. To get detailed analysis in terms of accuracy, the machine learning approach is used. The model is illustrated using tuberculosis patient's minimum level features to find the problem of TB disease diagnosis. In this paper, a Neural Network Model for classification of medical data set and is used to develop predictive model for classification. The Model is developed with PCA for feature selection and classified with Ensemble KNN Classifiers. The data is transferred into the knowledge that the symptoms are the significant ones in diagnosis Tuberculosis. The presented results showed that Ensemble KNN classification accuracy for TB diagnosis is 90.2 % and training time is 1.4661s, also analyzed with ROC curve method.

Keywords:-

Tuberculosis, Neural Network, Machine learning classifiers, Classification




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A Novel Implementation of Triple Secure Data

Mrs.S.Vimala, Assistant Professor, Department of ECE, Jaya Sakthi Engineering College, Thiruninravur.

Mrs. H.JAMUNA, Assistant Professor, Department of ECE, Jaya Sakthi Engineering College, Thiruninravur.

Mrs. N.ABARNADEVI, Assistant Professor, Department of ECE, Jaya Sakthi Engineering College, Thiruninravur.

Abstract:-

Digital images are generally communicated over the web and security plays a fundamental role. Generally, different strategies like cryptography, steganography and fusion are utilized for security. This paper presents a mixed security procedure used encryption, steganography and fusion. The data to be secured is first encoded utilizing secret key and then steganography and fusion are applied to the encrypted image thereby producing a triple secure data. The proposed approach is easy to implement and can resist brute-force attack and is highly suitable for securing data.

Keywords:-

Triple Security, Cryptography, Steganography, Fusion Image



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SeaSurface TemperaturePrediction

Dr.S.Venkatesh Babu, Professor, ECE, Jaya Sakthi Engineering College, Thirininravur
Mrs. S.SASIREKHA, Assistant Professor, ECE, Jaya Sakthi Engineering College, Thirininravur
Mrs. A.MANCHU, Assistant Professor, ECE, Jaya Sakthi Engineering College, Thirininravur


Abstract:-

Prediction of Sea Surface Temperature is the task to predict the future values from the historical data set, which is used for observing and studying hydro climatic variability. An artificial neural network(ANN) model is used to predict the sea surface temperature (SST).The predictions are made one day in advance, using current day's SST for predicting the SST of the next day. The model is also able to capture SST fronts. Here, we use latitude and longitude as input argument to get the temperature of specified location as output. The model is used to predict the SST map for every single day during year. The model performance is dependent on the availability of data during the previous days. When the data availability is comparatively less, the errors in the prediction are slightly higher. Sea Surface Temperature is an essential parameter in weather prediction and atmospheric model simulations, and is also important for the study of marine ecosystems.

Keywords:-

SeaSurfaceTemperature, ArtificialNeuralNetwork.




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Lung Boundary Detection for Chest X-Ray Images Classification Based on Glcm and K-Nearest Neighbor

Mrs. C. Revathi, Assistant Professor, S & H, Jaya Sakthi Engineering College, Thiruninravur
Mrs. R. SUMALATHA, Assistant Professor, S & H, Jaya Sakthi Engineering College, Thiruninravur
Mr. G. SARAVANAN, Assistant Professor, S & H, Jaya Sakthi Engineering College, Thiruninravur

Abstract:-

Extracting the structure of Chest X-Ray (CXR) image and classify the abnormalities can be performed by computer - aided diagnosis/detection (CAD) system. Variation of lungs is shape and size leads to serious disease such as Pneumothorax, Pneumoconiosis and Emphysema. This paper describes for lung boundary detection and abnormalities classification. In this paper, the process is carried out in 5 steps. First, the CXR image is preprocessed by median filter. Second segmentation technique has been applied to extract the shape of the regions, size of the regions and shape irregularities. Next, application of Gray Level Co-occurrence Matrix (GLCM) used to extract 20 features to recognize the pattern for CXR images. Then, K-Nearest Neighbor (KNN) algorithm is applied to classify the abnormalities of images. The performance matrix has been measured using F-measure. The results show that texture features have high differentiations accuracy.

Keywords:-

Chest X-ray image, Gray Level Co-occurrence Matrix, K-nearest neighbor.



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Detecting Covid-19 Symptoms by Applying Classification Algorithms

Dr. G. Saravanan, Professor, S & H Jaya Sakthi Engineering College, Thiruninravur.

Mr. T. MUTHUKUMAR, Assistant Professor, S & H Jaya Sakthi Engineering College, Thiruninravur

Mrs. E. GEETHALAKSHMI, Assistant Professor, S & H Jaya Sakthi Engineering College, Thiruninravur

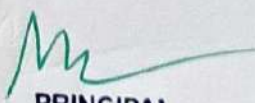
Abstract:-

Data mining is a technique for discovering and extracting useful information from a large set of any raw data. Increase of stored data in medical database needs efficient tools to get access to data, discover knowledge and extract useful information. Data mining can also be used to predict the future based on the existing data. Classification is a type of data mining algorithm used to predict class labels and classify the data to a particular class based on training data sample and then is used to classify the new testing data sets. In December 2019, a novel virus named COVID-19 emerged in the city of Wuhan, China which spread across the world, causing widespread infections and deaths. The COVID-19 pandemic has been termed as the most consequential global crisis since the world wars. Lot of research is conducted worldwide to analyse the various causes and expected symptoms for this deadly virus. In this paper, a new model for predicting the COVID-19 with the given symptoms has been proposed. The model uses the COVID-19 patient's symptoms data to detect whether they are affected by COVID-19 or not. The dataset consists of 20 attributes and 5435 records obtained from Kaggle repository. The existing classification techniques viz. Support Vector Machine (SVM), Naïve Bayes and K-Nearest Neighbor (KNN) were applied in Python 3.8.8. This consists of training set of 80% and 20% of test data. Accuracy, Precision, Recall and F1 score are the performance metrics considered for analyzing the efficiency of the considered algorithms.

Keywords:-

COVID-19, SVM, Naïve Bayes, KNN.




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COBRATEchnology

Mrs. C. Revathi, Assistant Professor, S & H, Jaya Sakthi Engineering College, Thiruninravur
Dr. R. ARUN KUMAR, Profesor, S & H, Jaya Sakthi Engineering College, Thiruninravur
Mr. A. KANNIYAPPAN, Assistant Professor, S & H, Jaya Sakthi Engineering College, Thiruninravur

Abstract:-

Distributed objects are the next wave in Internet innovation. COBRA, the Common Object Request Broker Architecture defined by the Object Management Group (OMG), specifies how software objects distributed over a network can work together without regard to client and server operating systems and programming languages. COBRA is a completed distributed object platform, it extends applications across networks, languages, component boundaries, and operating systems. A COBRA Object Request Broker (ORB) connects a client application with the objects it wishes to use. COBRA is an acronym for Common ORB Architecture. The phrase common architecture means a technical standard, so COBRA is simply a technical standard for something called an ORB. COBRA is defined and maintained by the Object Management Group (OMG). COBRA supports many existing languages. COBRA also supports mixing these languages within a single distributed application. Complex technology. COBRA is a very complex technology and enterprises eager to create COBRA-based applications must make the investment in regards to new training and new architecture.

Keywords:-

Introduction of COBRATEchnology, What is COBRA, Advantage and Disadvantage.



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CNN Based Food Identification and Calorie Measurement from Food Image

Mrs.P.Jayasri Archana Devi, Assistant Professor, CSE, Jaya Sakthi Engineering College, Thirunindravur

Mr. S.SELVAKUMARAN, Assistant Professor, CSE, Jaya Sakthi Engineering College, Thirunindravur


Mrs. S.SIVAKAMI, Assistant Professor, CSE, Jaya Sakthi Engineering College, Thirunindravur

Abstract:-

The ease with which food is being delivered at our doorsteps has led to an outbreak of a major chronic disease known as obesity. As the necessity of the food arose among people, the apprehension related to their diet also simultaneously increased. In this paper we propose a calorie measurement system whereby the user is made to upload the image of food item and as a result, number of calories present in the uploaded food image will be predicted. It is a multi-task system which also displays the weekly statistics on how much calorie is consumed by the user and how more/less calories must be consumed to avoid obesity related diseases such as heart attack, cancer etc. We built a dataset of food images collected from existing datasets to detect complex images consisting of 20 classes and each class containing 500 images each. We have curated our own Convolutional Neural Network architecture of 6 layers to extract the features and classify the images. Our experimental results on food recognition showed 78.7% testing accuracy with 93.29% training accuracy.

Keywords:- CNN, food Image




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NewsMedia-JourneyfromProviderto Receiver

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Abstract:-

Curiosity to share information and opinion remains the bedrock of news media. When mere dissemination of news is value-added by feedback and deliberation, it takes the context and essence of news interaction to new level. While radio, television, newspaper, advertisement, cinema, drama, and the like, virtually impose their content and viewpoint upon their respective audiences, for the first time, Internet based alternative media has facilitated an avenue of news and opinion interchange. Its scope encompasses, but not limited to, forums, debates, comments, e-opinions, likings, feedback levels, and the like, in platforms such as feeds and portals, social media and networking, and text, voice and video messenger websites. Diverse possibilities of knowledge update that too instantly at global level, is made possible by this technology, which was unimaginable to previous generations.

In this backdrop, this research paper is an attempt to analyze the journey of news media from a news provider to news receiver. In that course, to ascertain where these developments fit against real life situations, opinion from 70 respondents are sought by a structured Interview Schedule regarding today's most trusted news interchange environment.

Keywords:-

Media, news, news media and social media



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Comparative Study of the Structural and Optical Behaviour of Co and Ni doped ZnO Nanocomposites

Mr. E. G. Sundararaman, Assistant Professor, S & H, Jaya Sakthi Engineering College, Thiruninravur
Mr. E. PRAISE MORE, Assistant Professor, S & H, Jaya Sakthi Engineering College, Thiruninravur
Mrs. J. SUMATHI, Assistant Professor, S & H, Jaya Sakthi Engineering College, Thiruninravur

Abstract:-

The development of rapid and reliable processes for the synthesis of Nanomaterials is of great importance in the field of Nanotechnology. Generally Nanotechnology deals with structures sized between 1 to 100 nm in at least one dimension, and involves developing materials or devices with a variety of applications such as medicine, electronics, biomaterials and energy production. In material science, the Cobalt and Nickel doped Zinc Oxide nanocomposite is being used for various applications. The comparative study of Structural and Optical behaviours of Co and Ni doped ZnO nanocomposites have been discussed in this paper. The nanocomposites are prepared by annealing at 500°C. The synthesised composites are characterized by using XRD, TEM, SEM, EDAX, IR, UV-Vis and PL studies.

Keywords:-

Nanocomposites, Optical Studies, Annealing, EDAX, SEM



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Antioxidant and Antimicrobial Potential of
Green Synthesized Copper Oxide Nanoparticles Using
Phyllanthus niruri

Dr. D. KUMAR, Professor, S & H, Jaya Sakthi Engineering College, Thiruninravur
Mr. S. SUNDRAMOORTHY, Asspstant Professor, Jaya Sakthi Engineering College, Thiruninravur

Abstract:-

Phyllanthus niruri flower extract was effectively used for the synthesis of copper oxide nanoparticles as a natural reducing agent. The XRD and SEM -EDAX analysis confirmed the formation of copper oxide nanoparticles. Based on SEM images, copper oxide nanoparticles were spherical in shape with agglomerated particles. The antibacterial activity of copper oxide nanoparticles were analyzed with *E.coli* and *S. aureus*, high antibacterial activity was observed against both the bacteria. The copper oxide nanoparticles have good potential of antioxidant activity.

Keywords:-

Copper oxide nanoparticles, *Phyllanthus niruri*, *E.coli* and *S.aureus* and antioxidant activity.



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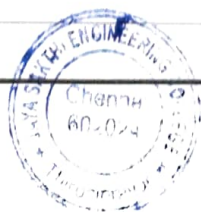
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EERIntPOSCAnt: Energy Efficient Reliable Intelligent Position based Clustering Ant Colony Routing Algorithm for Mobile Ad-hoc Networks

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Thirininravur

Dr.arun Kumar, Assistant Professor, Department Of S&H, Jaya Sakthi Engineering College
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Dr.B.Gobinathan, Professor, Department Of CSE, Jaya Sakthi Engineering College
Thirininravur

Abstract:-

A Mobile ad hoc network (MANET) is a collection of wireless mobile nodes which dynamically join the network and cooperate with each other for multi-hop communication in absence of existing central administration or infrastructure or base. Routing in MANET is particularly challenging due to the variation of network characteristics like topology, traffic, load and mobility of nodes. Ant Colony Optimization (ACO) algorithms have shown to be a good technique to compare the other Swarm Intelligence (SI) based techniques for developing routing algorithms for mobile ad-hoc networks. Ant colony based routing algorithms are based on the foraging behaviour of ants. In recent years several ant colony optimization algorithms were familiarized. These routing algorithms may fail to find a route from a source to a destination in some types of ad-hoc networks due to the mobility of nodes and if they find a route, it may be much longer than the shortest path. The shortcomings of these type of algorithms is large number of control messages and the ant that needs to be sent or the routes are established from a source to a destination after the long delay. Another key challenge is to reduce the total overhead in large scale MANET. To resolve this problem we need to control the total number of nodes involved in the process of Routing and avoid searching the route in the entire network blindly. To overcome these drawbacks this paper proposed a novel protocol named Energy Efficient Reliable Intelligent Position based Clustering Ant Colony Routing Algorithm (EERIntPOSCAnt). It combines the technology of Position based routing and clustering concept. In this work we clustered the nodes using position information to confine the route searching space into a smaller estimated range and used ACO for finding optimized route. This proposed protocol produce high energy efficiency and fast reliable route discovery than existing approaches.

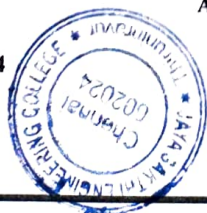
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Analysis of Various Soil Samples in and Around Thoothukudi

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Abstract:-

Soil testing is an important component of nutrient management in India. The analysis of soil is based on various parameters like Colour, pH, Electrical conductivity, Water soluble salts, Calcium, Magnesium, Iron, Carbonate, Bicarbonate and Organic matter. Five soil samples were collected from in and around Thoothukudi for analysis. The methods used are volumetric and spectrophotometric method. Results show that soil sample II & V are more saline and samples I, III & IV are acidic. Sample V has more conductivity. Sample I has more amount of Ca & Mg. Sample II & IV are having more iron content. Sample V & III are having more organic matter. This information will help farmer to decide the problems related to soil nutrients, amount of fertilizers to be added to soil make production economic.

Keywords:-

Soil analysis, Volumetric method and Spectrophotometric method

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Cyclic Voltammetric Studies of the Simple Ascidian *Phallusia Arabica*

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Thirininravur

Mr.J.SamPrasanna , Assistant Professor Mechanical Engineering, Jaya Sakthi Engineering College,
Thirininravur

Abstract:-

Cyclic voltammetry is a powerful tool to study the behavior of a system by systematic study of current-voltage measurements of a given electrochemical cell. Electrochemical workstation CHI 650C (CHI Instruments, USA) was employed for performing cyclic voltammetry, square wave anodic voltammetry and differential pulse anodic voltammetry. The glassy carbon electrode used in the present study whose geometric area of cross section was 0.0314cm^2 . Freshly polished and cleaned glassy carbon electrode surface contained surface functions that showed reversible redox behaviour. Ag/AgCl electrode was used as reference electrode in this investigation. The dried sample was powdered and stored in airtight bottle. Stock solution was prepared with HCl, H_2SO_4 and HNO_3 and then used in the analysis. The peak current, peak potential, and characteristic shapes of the voltammograms virtually fingerprint the individual electrochemical properties of redox systems. Cyclic voltammetry, square wave anodic voltammetry and differential pulse anodic voltammetric studies were carried out.

Keywords:-

Cyclic voltammetry, Square wave anodic voltammetry, Differential pulse anodic voltammetry.

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International Conference on Advances in Science and Engineering-2022 ISBN:978-93-91553-40-1

A Study on Consumer Behavior towards Online Shopping

Dr. G. Saravanan Professor, Department Of S & H, Jaya Sakthi Engineering College

Thirininravur

Abstract:-

Consumer behavior is a field of study which grows rapidly. It is a wider concept that studies the reasons for the consumer in selecting the product which satisfies their need or want. Consumer behavior is a complex and challenging field to analyze by the marketer as preferences vary over a period of time. The traditional method of purchase is replaced with online mode facilitating the consumer anytime purchase providing all the benefits under a single roof. Thus according to Webster, buyer behavior is all psychological, social and physical behavior of potential customer as they become aware of evaluate, purchase, consume and tell other people about products and service. Online shopping is the process whereby consumers directly buy goods or service from a seller in real-time, without an intermediary service, over the internet. It is a form of electronic commerce. There is no intermediary service. If an electronic commerce such as online shopping. The paper build on the relevant literature and at the same time examines consumer behavior towards online shopping by questionnaire. They are benefited with facilities like convenience, timely delivery, product offers, low cost etc. The understanding of the nature, needs and wants of the consumers as such in other business is very much vital for the study. Everywhere in the world paying and taking goods is the most common features for all classes. It also attempts to study the social and economic culture of the online shopping customer and find out the current and future trend in the area of social media marketing.

Keywords:-

consumer, buying behavior, online shopping.

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Green Synthesis of Iron Oxide Nanoparticles from Cymbopogon Citratus Extract

Mrs.P.Jayasri Archana Devi Assistant Professor, Department Of CSE, Jaya Sakthi Engineering College

Thirininravur

Dr.R.Kesavan, Professor, Department Of CSE, Jaya Sakthi Engineering College

Thirininravur

Mrs.S.Uma Maheswari, Assistant Professor, Department Of CSE, *Jaya Sakthi Engineering College*

Thirininravur

Abstract:

Cymbopogon also known as lemongrass, silky heads or fever grass. It belongs to the family Poaceae. It is a medicinal herb and also used in perfumery industry. Various biomolecules present in the plant extract were screened by using standard procedures. Fe₂O₄ nanoparticles were also synthesized and also characterized.

Keywords:-

Cymbopogon, Citratus, Fe₂O₄.

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Assessment of Bioactive Constituents of *Enhalus acoroides* Rich (Hydrocharitaceae): A Marine Angiosperm

Mrs. M. Jayanthi Assistant Professor, Department Of CSE, Jaya Sakthi Engineering College

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Mr. S. Selvakumaran, Assistant Professor, Department Of CSE, Jaya Sakthi Engineering College

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Mrs. M. Pavithra Rao, Assistant Professor, Department Of CSE, Jaya Sakthi Engineering College

Thirininravur

Abstract:-

Seagrass (marine angiosperm), a characteristic asset of beach front biological community offers various prospects of novel, financially significant constituents and one less investigated with respect to bioactive constituents. The present study deals with the phytochemical assessment of *Enhalus acoroides*. Preliminary phytochemical analyses of benzene, methanol and ethanol extracts of *E. acoroides* revealed the presence of catechin, flavonoid, phenol, saponin, tannin, glycoside and fixed oil. The bioactive constituents of the ethanol extract of *E. acoroides* were investigated using Gas Chromatography-Mass Spectrometry (GC-MS), while the mass spectra of the compounds found in the extract was matched with the National Institute of Standards and Technology (NIST) library. Ten bioactive compounds were detected in the ethanol extract of *E. acoroides*. Out of 10 compounds, n-Hexadecanoic acid (49.96%), 9-Octadecenoic acid, (E)- (11.45%), Octadecanoic acid (8.53%), Benzene propanoic acid, 3,5-bis (1,1-dimethyl ethyl) 4-hydroxy, methyl ester (6.38%), Benzene (1-methyldodecyl) (4.43%), Cyclic octatomic sulfur (5.79%), Hexadecanoic acid, methyl ester (3.84%) and Hexathiane (3.32%) were identified as the key bioactive constituents from the ethanol extract of *E. acoroides*.

Keywords:-

Seagrass, *Enhalus acoroides*,

Phenol, n-Hexadecanoic acid

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Environmentally Benign Synthesis of ZnO/TiO₂/Starch Nanocomposites

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Mrs.N.Abarnadevi, Assistant Professor, Department Of ECE, Jaya Sakthi Engineering College

Thirininravur

Mrs.A.Manchu, Assistant Professor, Department Of ECE, Jaya Sakthi Engineering College

Thirininravur

Abstract:-

In present study we use natural polymers support for the Environmentally benign synthesis of ZnO/TiO₂/starch Nanocomposites. The XRD and SEM revealed the crystallinity and morphology of the nanocomposites. The size and shape of the nanocomposites was deduced from XRD and SEM. UV and IR spectra revealed the chemical composition and functionality of the samples. The redox behaviour of synthesized ZnO/TiO₂/starch nanocomposites was monitored by Cyclic Voltammetry studies.

Keywords:-

Starch, Zinc Oxide, Titanium dioxide, Cyclic Voltammetry.

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Investors Satisfaction towards Stock Market in ThoothukudiCity

Mrs.C.Revathi Assistant Professor, Department of S&H Jaya Sakthi Engineering College Thirininrayur
Mrs.P.Parameshwaran Assistant Professor, Department of S&H Jaya Sakthi Engineering College Thirininrayur
Mr.A.Kanniyappan Assistant Professor, Department of S&H Jaya Sakthi Engineering College Thirininrayur

Abstract:-

The globalization of economic markets has been raise the size of the society of retail investors' in excess of the past two decades by providing a wide range of market and investment options. Therefore, it makes their investment decisions development more multifaceted. The factors influence investor's awareness are return on investment, market trend or risk, short term profitability, price of the share, dividend policy, past financial presentation, company character, standing of the board, current earnings of the company and specialist judgment. This study focuses investor satisfaction towards stock market in Thoothukudi city.

Keywords:-

Investors, stock market, Satisfaction.

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Green Synthesis of Magnesium Oxide Nanoparticles using *Coleus Aromaticus*

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Mrs.Sasirekha, Assistant Professor, Department Of ECE, Jaya Sakthi Engineering College

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Mrs.H.Jamuna, Assistant Professor, Department Of ECE, Jaya Sakthi Engineering College

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Abstract:-

Coleus aromaticus leaves was effectively used for the synthesis of magnesium nitrate nanoparticles as a natural ligation agent. The XRD and SEM revealed the crystallinity and spherical morphology of the bio synthesized nano particles. The size of the particles was found to be 60-70 nm as deduced from XRD and SEM. UV and IR spectra revealed the chemical composition and functionality of the samples. The successful formation of Magnesium Nitrate nanoparticles was confirmed employing XRD, SEM-EDX, UV and IR analysis.

Keywords:-

Green synthesis, *Coleus aromaticus*, SEM and EDAX

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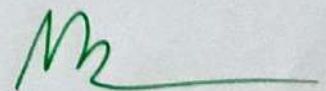
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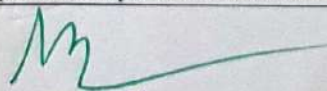
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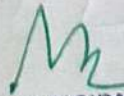
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A Note on the subgroup intersection graph of finite groups

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PROFESSOR, Assistant Professor
Department of Science & Humanities,
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Thiruninravur


Abstract

Let G be a finite group with the identity e . The subgroup intersection graph $\Gamma_{SI}(G)$ of G is the graph with vertex set $V(\Gamma_{SI}(G)) = G - e$ and two distinct vertices x and y are adjacent in $\Gamma_{SI}(G)$ if and only if $|\langle x \rangle \cap \langle y \rangle| > 1$, where $\langle x \rangle$ is the cyclic subgroup of G generated by $x \in G$. In this paper, we discuss certain connections between the graph theoretic properties of this graph and certain algebraic properties of a finite group. Also we classify finite groups whose subgroup intersection graphs are ring graph.

Keywords: clique, ring graph, cyclic group.

Mathematics Subject Classification: 05C25, 13M05, 20A05, 57M50.




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Separation Axioms in N_r -topological Ordered Space via N_r - Semi Open Sets

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ASSISTANT PROFESSOR,
Department of Science & Humanities,
Jaya Sakthi Engineering College
Thiruninravur

1. Abstract

In this paper, we introduce the concept of N_r -semi- T_1 -ordered space and N_r -semi- T_2 ordered space in N -Topological Ordered Space and discuss some of their properties here.

Keywords: Semi- T_1 -space, separation, axioms



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Fuzzy Positive implicative ideals of K-Algebras

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ASSISTANT PROFESSOR,
Department of computer science engineering,
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Thiruniravur

Abstract

In this paper, the notion of fuzzy positive implicative ideals of K-algebras is introduced. We state and prove some theorems about fundamental properties of it. Moreover, we give the concepts of the image and the inverse image of fuzzy positive implicative ideals in K-algebras is defined under homomorphism of K-algebras.

Keywords: Fuzzy positive implicative ideal, image and inverse image of fuzzy positive implicative ideals.



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k-STEPWISE EDGE IRREGULAR GRAPHS

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ASSISTANT PROFESSOR,
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AbstractA simple graph $G(V,E)$ is k- Stepwise edge irregular graph(k-SEI) if the edge degree difference between any two adjacent edges in G is either 0 or k . In this paper, we have proved the existence of such k-SEI graphs and also kSEI trees. We have investigated some of its properties and proved some results on it. We have given the construction method of k-SEI graphs from given kSEI graphs and also some standard graphs. It is shown that every graph is an induced subgraph of some k-SEI graph..

Keywords: edge degree, stepwise irregular graph, line graph.

AMS Subject Classification: Primary: 05C12, Secondary: 03E72, 05C72.



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PRINCIPAL
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St. Mary's Nagar, Near Avadi,
Thiruninravur, Chennai-602024

Database Management Systems of A NoSQL Analysis


Mr.P.Karthikeyan, Mr. S.VIGNESH, Mr. D.LOGANATHAN
ASSISTANT PROFESSOR,
Department of Mechanical Engineering,
Jaya Sakthi Engineering College
Thiruninravur

Abstract-

Addressing today's ever increasing changes in data management needs require solutions that can achieve unlimited scalability, high availability and massive parallelism while ensuring high performance levels. The new breed of applications like business intelligence, enterprise analytics, Customer Relationship Management, document processing, Social Networks, Web 2.0 and Cloud Computing require horizontal scaling of thousands of nodes as demanded when handling huge collections of structured and unstructured data sets that traditional RDBMS fail to manage. The rate with which data is being generated through interactive applications by large numbers of concurrent users in distributed processing involving very large number of servers and handling Big Data applications has outpaced the capabilities of relational databases thereby driving focus towards the NoSQL database Adoption. NoSQL database systems have addressed scaling and performance challenges inherent in traditional RDBMS by exploiting partitions, relaxing heavy strict consistency protocols and by way of distributed systems that can span data centres while handling failure scenarios without a hitch. In this paper different database management systems are discussed and their underlying design principles namely ACID, CAP and BASE theorems respectively, are evaluated.

Keywords: Customer Relationship Management, RDBMS and NoSQL




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Evolving Operating Systems and their Contribution in Computing Focus on Windows Family

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ASSISTANT PROFESSOR,
Department of Mechanical Engineering,
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Thiruninravur

Abstract

The features of operating systems determine the efficiency of the computing most of the time. Hence selecting an appropriate operating system with respect to all the levels of computing and processing is challenging task. The evolution of operating systems though monotonically increasing the set of features is not complete due to ever varying user experience and requirements. In this paper we propose a framework for comparing Windows family of operating systems as an use case and compare the versions to be readily applied for computational purposes.

Keywords: operating systems, computing and framework.



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AN EFFICIENT DISSEMINATION AND DYNAMIC RISK MANAGEMENT IN A WSNs

Mrs.S.Vimala, Dr. M.GOPU, Dr. S.VENKATESH BABU
ASSISTANT PROFESSOR,
Department of Electronics and Communication
engineering,
Jaya Sakthi Engineering College
Thiruninravur

Abstract - A sensor cloud consists of many different regions holds many wireless sensor networks (WSNs). These WSNs will have different owners and run a wide variety of user applications on demand in a wireless communication medium. Hence, they are moved to various security attacks. We are in need to exist to do effectiveness and efficient ways of security measures that safeguard these Applications impacted from attack in the sensor cloud. After the node get deployed in a hostile environment we are in need to check for impact levels of attacks and its measures. A risk assessment framework for WSN in a sensor cloud that make use of database. Code dissemination is the process of reprogramming a new code image or relevant commands based on sensor node commands through wireless links which is provided by a owner in a region after the deployment of sensor node in a WSN. Inorder to remove the bugs and adding new operations, code dissemination is an important operation function of WSNs. As a WSN is usually deployed in hostile environments, secure code dissemination is important and they will continue to be a major concern. Many code dissemination protocols are based on the centralized base station approach in which only the admin has the authority to initiate code dissemination.

Keywords: owners, dissemination, WSN, attacks.



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A NOVEL APPROACH FOR MRI BRAIN IMAGE CLASSIFICATION AND DETECTION

Mrs.A.Sasirekha, Mrs. H.JAMUNA, Mrs. N.ABARNADEVI
ASSISTANT PROFESSOR,
Department of Electronics and Communication
engineering,
Jaya Sakthi Engineering College
Thiruninravur

Abstract - Medical image processing is the most challenging and emerging field now a day's. In this field, detection of brain tumor from MRI brain scan has become one of the most challenging problems, due to complex structure of brain. The quantitative analysis of MRI brain tumor allows obtaining useful key indicators of disease progression. In this paper, a new method for MRI brain image classification & detection is to be designed using Discrete Wavelet Transform based feature extraction, Support Vector Machine based classifier and New tumor detection method is to be designed using Incremental Supervised Neural Network and Invariant moments.

Key Words: Discrete Wavelet Transform (DWT); Support Vector Machine (SVM); Incremental Supervised Neural Network (ISNN); Invariant Moments.



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INVESTIGATION ON 2,4,11,15-Tetraoxatrispiro[1.2.1.4.2.1] decane

Mr. R. Ayyappan, Mrs. E. GEETHALAKSHMI, Mrs. J. SUMATHI
ASSISTANT PROFESSOR,
Department of Science & Humanities,
Jaya Sakthi Engineering College
Thiruninravur

ABSTRACT

The title compound, (I), is an important intermediate in the synthesis of pesticides. The crystal structure determination of (I) has been carried out in order to elucidate the molecular conformation. The asymmetric unit of the title compound, (I), contains one-half molecule, in which the bond lengths are within normal ranges. Ring B (O1/O2/C5—C8) is not planar, having total puckering amplitude, Q_T , of 0.943 (3) Å. It adopts chair conformation [$\varphi = -32.96$ (2)° and $\theta = 58.52$ (3)°]. Ring A has envelope conformation with atom C1 displaced by -0.222 (3) Å from the plane of the other ring atoms. In the crystal structure, intermolecular C—H···O hydrogen bonds link the molecules, in which they may be effective in the stabilization of the structure.

Keywords: pesticides, molecular conformation and hydrogen bond.



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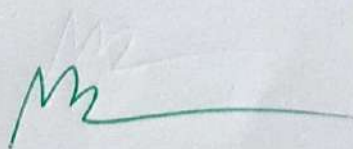
Bad Bluetooth: Breaking Android Security Mechanisms via Malicious Bluetooth Peripherals

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Electronics and Communication engineering,
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Thiruninravur

ABSTRACT

Bluetooth is a widely used communication technology, especially under the scenarios of mobile computing and Internet of Things. Once paired with a host device, a Bluetooth device then can exchange commands and data, such as voice, keyboard/mouse inputs, network, blood pressure data, and so on, with the host. Due to the sensitivity of such data and commands, some security measures have already been built into the Bluetooth protocol, like authentication, encryption, authorization, etc. However, according to our studies on the Bluetooth protocol as well as its implementation on Android system, we find that there are still some design flaws which could lead to serious security consequences. For example, it is found that the authentication process on Bluetooth profiles is quite inconsistent and coarse-grained: if a paired device changes its profile, it automatically gets trust and users would not be notified. Also, there is no strict verification on the information provided by the Bluetooth device itself, so that a malicious device can deceive a user by changing its name, profile information, and icon to be displayed on the screen. To better understand the problem, we performed a systematic study over the Bluetooth profiles and presented three attacks to demonstrate the feasibility and potential damages of such Bluetooth design flaws. The attacks were implemented on a Raspberry Pi 2 device and evaluated with different Android OS versions ranging from 5.1 to the latest 8.1. The results showed adversaries could bypass existing protections of Android (e.g., permissions, isolations, etc.), launch Man-in-the-Middle attack, control the victim apps and system, steal sensitive information, etc. To mitigate such threats, a new Bluetooth validation mechanism was proposed. We implemented the prototype system based on the AOSP project and deployed it on a Google Pixel 2 phone for evaluation. The experiment showed our solution could effectively prevent the attacks.

Keywords: mobile computing, Bluetooth protocol and AOSP project.



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Database Management Systems of A NoSQL Analysis

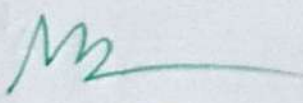
Mr.P.Karthikeyan, Mr. S.VIGNESH, Mr. D.LOGANATHAN
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Thiruninravur

Abstract-

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Keywords: Customer Relationship Management, RDBMS and NoSQL




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Evolving Operating Systems and their Contribution in Computing Focus on Windows Family

Mr.S.Vignesh ,Mr. J.SAMPRASANNA , Mr. K.VIJAY KARAN
ASSISTANT PROFESSOR,
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Abstract

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Keywords: operating systems, computing and framework.



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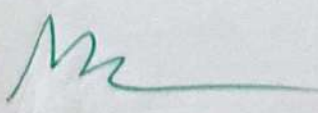
AN EFFICIENT DISSEMINATION AND DYNAMIC RISK MANAGEMENT IN A WSNs

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Sri Sarada College for Women (Autonomous)

Reaccredited with 'B++' grade by NAAC

Affiliated to Periyar University

Salem-16

PROCEEDINGS OF THE INTERNATIONAL CONFERENCE ON RECENT TRENDS IN ADVANCED COMPUTING AND ITS APPLICATION (ICRTACIA-19)



Organized by

**Sri Sarada College for Women Research Center,
Department of Computer Application**

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ABOUT THE INSTITUTION

Sri Sarada College was started in 1961 as an affiliated college to the University of Madras with two sections of Pre-University class. Later, it has increased in strength to become a First Grade college with twelve under-graduate courses, seven post-graduate courses, nine M.Phil. programmes, nine Ph.D. Programmes and two Self Financing P.G. Programmes. Autonomous status was conferred by the University Grants Commission in the year 1988-1989 under the able guidance of Yatiswari Saradapriya Amma. The College was accredited with Four stars in 2002, re-accredited with B' Grade (2.94 on a 4 point scale) in 2008 and re-accredited with 'A' Grade in 2014 by NAAC. In the fourth cycle our college was re-accredited with B++ Grade by NAAC. The foundation stone of Sri Sarada College for Women was laid by Former President of India, Dr. Sarvapalli Radhakrishnan. The College offers upto-date career oriented education which is integrated with our ancient culture and tradition. Extensive efforts are taken to concretize the aims and goals of the college through curricular, co-curricular, outreach and extension activities. Under DIT-STAR college scheme Rs.63 Lakhs has been sanctioned to the departments of Mathematics, Botany and Zoology.

ABOUT THE CONFERENCE

Mathematics plays a vital role in Engineering, Physical, Biological, Economical Medical, Computer Science and Real-World Applications. INTERNATIONAL CONFERENCE ON RECENT TRENDS IN ADVANCED COMPUTING AND ITS APPLICATION (ICRTACIA-19) aims to bring together academic researchers and industrialists to share their recent research in the lifesciences based on the applications of Mathematics. It also provides the premier interdisciplinary forum for researchers who develop and apply mathematical and computations tools to the fields of Biology, Ecology, Medicine, Biotechnology, Bioengineering, etc.

International conference on Recent Trends in Advanced Computing and Its Applicaton(ICRTACIA-19)

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POLYNOMIALS ASSOCIATED WITH GRAPHS

Mrs. G. ANITHA & Mrs. V. SUGANYA

Department of COMPUTER SCIENCE AND ENGINEERING, Jaya Sakthi Engineering College

Abstract

Let $G = (V, E)$ be any simple graph of order n . The simplest polynomials associated with any graph are the characteristic polynomials and the chromatic polynomials. In this lecture we associate some more polynomials with graphs and discuss their basic properties.

For each nonnegative integer i , let a_i be the number of i -subsets of $V(G)$ that induce an acyclic subgraph of G . We define $A(G, x) = \sum_{i \geq 0} a_i x^i$ to be the acyclic polynomial for G . We discuss the relation between acyclic and characteristic polynomials.

For $0 \leq i \leq n-2$, the i -common neighbor set of G is defined as $N(G, i) = \{(u, v) : u, v \in V(G), u \neq v \text{ and } |N(u) \cap N(v)| = i\}$. The common neighbor polynomial of G denoted by $N[G; x]$ is defined as $N[G; x] = \sum_{i=0}^{n-2} |N(G, i)| x^i$.

We determine the common neighbor polynomial of several standard graphs and discuss some of its properties.

Hosoya polynomial was introduced by Hosoya in 1988.

It is defined as $H(G, x) = \sum_{j=1}^l d(G, j) x^j$

where $d(G, j)$ is the number of pairs of vertices in G that are distance j apart and l is the diameter of the graph. We determine Hosoya polynomial for some standard graphs.

Let $D(G, i)$ be the collection of dominating sets of a graph with cardinality i . Let $d(G, i) = |D(G, i)|$. Domination polynomial $D(G, x)$ of G is defined as $D(G, x) = \sum_{i=1}^n d(G, i) x^i$

where $d(G)$ is the domination number of G . We determine the domination polynomial of several standard graphs and discuss some of its properties.

Extension of Nil-Clean ring and Its Properties

Mrs. P.JAYASRI ARCHANA DEVI & Mrs. S.ARUMAI SHINEY

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Abstract:

An element r of ring R is feebly nil clean, if $r = n + e - f$, where n is a nilpotent element and e, f are orthogonal idempotents. Further if the idempotents and nilpotent commutes the ring is called strongly feebly nil clean. Feebly nil clean rings generalize nil clean rings and it is a proper generalization of weakly nil clean rings. Also we introduce the concept of Abelian feebly nil clean.

Keywords: Clean rings, feebly nil clean rings, power series rings,

AMS Subject classification (2000): 13B30, 16N40, 16N60, 16U99.

RELATIVELY PRIME INVERSE DOMINATION ON LINE GRAPH

Mrs. M.JAYANTHI & Mr. S.SELVAKUMARAN

Department of COMPUTER SCIENCE AND ENGINEERING, Jaya Sakthi Engineering College

Abstract

Let G be non-trivial graph. A subset D of the vertex set $V(G)$ of a graph G is called a dominating set of G if every vertex in $V - D$ is adjacent to a vertex in D . The minimum cardinality of a dominating set is called the domination number and is denoted by $\gamma(G)$. If $V - D$ contains a dominating set S of G , then S is called an inverse dominating set with respect to D . In an inverse dominating set S , every pair of vertices u and v in S such that $(\deg u, \deg v) = 1$, then S is called relatively prime inverse dominating set. The minimum cardinality of a relatively prime inverse dominating set is called relatively prime inverse dominating number and is denoted by $\gamma_{rp}^{-1}(G)$. In this paper we find relatively prime inverse dominating number of some line graphs.

Keywords: Domination, Inverse domination, Relatively prime domination.

Subject Classification Number: 05C15, 05C69

PROCEEDINGS OF THE INTERNATIONAL CONFERENCE ON RECENT TRENDS IN
ADVANCED COMPUTING AND ITS APPLICATION (ICRTACIA-19) ISBN: 978-81-933821-7-2
**4-SQUARE PRODUCT E-CORDIAL LABELING FOR SOME
CLASS OF GRAPHS**

Dr. B.GOBINATHAN & Dr. R.KESAVAN

Department of COMPUTER SCIENCE AND ENGINEERING, Jaya Sakthi Engineering College

Abstract

Let G be a simple graph. A labeling $f: E(G) \rightarrow \{1, 2, 3, 4\}$ with induced labeling $f^*: V(G) \rightarrow \{0, 1\}$ defined by $f^*(v) = \prod \{f(uv)^2 / uv \in E(G) \pmod{2}\}$. The labeling f is called 4-square product E - cordial labeling if $|v_{f(0)} - v_{f(1)}| \leq 1$ where and $|e_{f(i)} - e_{f(j)}| \leq 1$ where $v_{f(0)}$ and $v_{f(1)}$ is the number of vertices labeled by 0 and 1 respectively. A graph admits 4-square product E -cordial labeling is called 4-square product E- cordial graphs.

Keywords : Star graph, Crown graph, Armed crown graph, Jelly fish graph, Quadrilateral Snake graph etc.,

Differential Chromatic Number of Central Graph of Some Standard Graph

Dr. B.SASIKUMAR & Dr. V.K.SHANMUGANATHAN

*Department of COMPUTER SCIENCE AND ENGINEERING &
Department of MECHANICAL ENGINEERING
Jaya Sakthi Engineering College*

Abstract.

Let $G = (V, E)$ be a connected graph. For a set $S \subseteq V$, the differential of S , denoted by $\partial(S)$, is defined to be $\partial(S) = |B(S)| - |S|$, where $B(S) = N(S) \cap (V - S)$. A set $S \subseteq V$ is said to be a positive differential set if $\partial(S) \geq 0$. A partition $\{V_1, V_2, V_3, \dots, V_k\}$ of V is said to be a positive differential chromatic partition of G if every V_i is both independent and positive differential. The minimum order of a positive differential chromatic partition of G is called the differential chromatic number of G and is denoted by $\chi_\partial(G)$. In this paper we investigate the differential chromatic number for the central graph of double star graph, path, cycle, wheel, complete bipartite graph denoted by $\chi_\partial(C(K_{1,n,n}))$, $\chi_\partial(C(P_n))$, $\chi_\partial(C(C_n))$, $\chi_\partial(C(W_n))$ and $\chi_\partial(C(K_{m,n}))$ respectively.

Key Words: Central graph, Differential coloring, Differential chromatic number.

2000 Mathematics Subject Classification Number: 05C15.

CONNECTED HUB SETS AND CONNECTED HUB POLYNOMIALS OF THE LOLLIPOP GRAPH $L_{p,2}$

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Abstract

Let $G = (V, E)$ be a simple graph. Let $Hc(G, k)$ be the family of connected hub sets of G of cardinality k . Then the polynomial $Hc(G, y) = \sum_{k=hc(G)}^{|V(G)|} hc(G, k)y^k$ is called the connected hub polynomial of G where $hc(G, k)$ is the number of connected hub sets of G of cardinality k , and $hc(G)$ is connected hub number of G . Let $L_{p,2}$ denotes the Lollipop graph with $p + 2$ vertices and $Hc(L_{p,2}, k)$ denotes the family of connected hub sets of $L_{p,2}$ of cardinality k . Then, the polynomial,

$$Hc(L_{p,2}, y) = \sum_{k=hc(L_{p,2})}^{|V(L_{p,2})|} hc(L_{p,2}, k) y^k$$

is called the connected hub polynomial of $L_{p,2}$, where $hc(L_{p,2}, k)$ is the number of connected hub sets of $L_{p,2}$ of cardinality k , and $hc(L_{p,2})$ is connected hub number of $L_{p,2}$.

In this paper, we obtain a recursive formula for $hc(L_{p,2}, k)$. Using this recursive formula, we construct the connected hub polynomial of $L_{p,2}$ as,

$$Hc(L_{p,2}, y) = \sum_{k=2}^{p+2} hc(L_{p,2}, k) y^k$$

where $hc(L_{p,2}, k)$ is the number of connected hub sets of $L_{p,2}$ of cardinality k and some of the properties of this polynomial also have been studied.

Keywords : Lollipop Graph, Connected hub sets, Connected hub number, Connected hub polynomials.

GAUSSIAN TRIBONACCI r -GRACEFUL LABELING OF SOME TREE RELATED GRAPHS

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Abstract

Let r be any natural number. An injective function $\phi: V(G) \rightarrow \{0, ki, 1, 1+ki, 2, 2+ki, \dots, GT_{q+r-1}\}$, for all k , where GT_{q+r-1} is the $(q+r-1)^{th}$ Gaussian Tribonacci number in the Gaussian Tribonacci sequence is said to be Gaussian Tribonacci- r -graceful labeling if the induced edge labeling $\phi^*: E(G) \rightarrow \{GT_1, GT_2, \dots, GT_{q+r-1}\}$ such that $\phi^*(uv) = |\phi(u) - \phi(v)|$ is bijective. If a graph G admits Gaussian Tribonacci- r -graceful labeling, then G is called a Gaussian Tribonacci- r -graceful graph. A graph G is said to be Gaussian Tribonacci arbitrarily graceful if it is Gaussian Tribonacci r -graceful for all r . In this paper we investigate the Path graph P_n , the Comb graph $P_m \odot K_1$, the Coconut tree graph $CT(m, n)$, the regular caterpillar graph $P_m \odot nK_1$, the Bistar graph $B_{m, n}$ and the Subdivision of Bistar graph $S[B_{m, n}]$ are Gaussian Tribonacci arbitrarily graceful.

Keywords: Gaussian Tribonacci sequence, Gaussian Tribonacci graceful labeling, Path graph, Comb graph, Coconut Tree graph, Regular caterpillar graph, Bistar graph and Subdivision of Bistar graph.

Subject Classification: 05C78

ON THE STUDY OF EDGE MONOPHONIC VERTEX COVERING NUMBER

Mr. K.VIJAY KARAN & Mr. P.KARTHIKEYAN

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Abstract:

For a connected graph G of order $n \geq 2$, a set S of vertices of G is an *edge monophonic vertex cover* of G if S is both an edge monophonic set and a vertex covering set of G . The minimum cardinality of an edge monophonic vertex cover of G is called the *edge monophonic vertex covering number* of G and is denoted by $m_{e\alpha}(G)$. Any edge monophonic vertex cover of cardinality $m_{e\alpha}(G)$ is a $m_{e\alpha}$ -set of G . Some general properties satisfied by edge monophonic vertex cover are studied.

Keywords: Edge monophonic vertex, connected graph and cardinality

IBEDE and SIBEDE Approach For Snack Family Related Graphs and Corona Graphs

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Abstract:

Let $G (V(G), E(G))$ be a graph with n vertices is said to be Incident Binary Equivalent Decimal Edge Graceful Labeling (IBEDE) graph if the vertices are assigned distinct numbers from $0, 1, 2, \dots, (n-1)$ such that the labels induced on edges by the values obtained using binary equivalent decimal coding of end vertices for each edge which are distinct. A graph G is said to be Strong Incident Binary Equivalent Decimal Edge Graceful Labeling (SIBEDE) if the vertices of G are labeled with distinct positive integers from $0, 1, 2, \dots, (n-1)$ such that the label induced on the edges by Binary equivalent decimal coding are distinct from the vertex labeling. This paper is concerned with the IBEDE and SIBEDE Approach For Snack Family Related Graphs and Corona Graphs

Key words: BEDE, Binary, Graceful, IBEDE, Incident Labeling, SIBEDE, Corona Graphs

GEODETIC COTOTAL DOMINATION NUMBER OF A GRAPH

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ABSTRACT

In this paper the concept of the geodetic cototal domination number of a graph is introduced. Also, geodetic cototal domination number of some graphs like path graph, complete bipartite graph and some special graphs are studied. It is shown that for any three integers a , b and c such that $3 \leq a \leq b \leq c$, there exists a connected graph G with $g(G) = a$, $\gamma_g(G) = b$ and $\gamma_{gct}(G) = c$. Also, it is shown that for every pair of integers a , p with $2 \leq a \leq p$, there exists a connected graph G of order p such that $\gamma_{gct}(G) = a$.

Keywords: geodetic set, geodetic number, cototal domination number, geodetic cototal domination number.

AMS subject Classification: 05C12.

Modular Coloring And Switching in some Planar Graphs

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Abstract

For a connected graph G , let $c: V(G) \rightarrow \mathbb{Z}_k$ ($k \geq 2$) be a vertex coloring of G . The color sum $\sigma(v)$ of a vertex v of G is defined as the sum in \mathbb{Z}_k of the colors of the vertices in $N(v)$, that is $\sigma(v) = \sum (\text{mod } k)$. The coloring c is called a modular k -coloring of G if $\sigma(x) \neq \sigma(y)$ in \mathbb{Z}_k for all pairs of adjacent vertices $x, y \in G$. The modular chromatic number or simply the mc-number of G is the minimum k for which G has a modular k -coloring. A vertex switching G_v of a graph G is obtained by taking a vertex V of G , removing the entire edges incident with V and adding edges joining V to every vertex which are not adjacent to V in G .

Keywords: *Wheel Graph, Friendship graph, gear graph.*

MSC AMS Classification 2010: 05C15

COMMON FIXED POINT THEOREMS IN D^* METRIC SPACES

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ABSTRACT

In this paper we establish some Common fixed point theorems for four mappings satisfying generalized contraction condition in D^* Metric Space which is introduced by Shaban Sedghi, Nabi Shobe and Haiyun Zhou.

Keywords : Complete D^* Metric Spaces, Common Fixed point theorem.

The Connected Vertex Strong Geodetic Number of a Graph

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Department of S&H CHEMISTRY AND ENGINEERING &
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Abstract

In this paper we introduce the concept of connected vertex strong geodetic number $cvsgn(G)$ of a graph G at a vertex v and investigate its properties. We determine bounds for it and find the same for some special classes of graphs. We prove that $cvsgn(G) \leq cvsgn(v)$ for any vertex v in G is connected graphs of order $n \geq 2$ with one are characterized for some vertex v in G . Necessary conditions for $cvsgn(G)$ to be n or $n - 1$ are given for some vertex v in G . It is shown for every pair of integers a and b with $2 \leq a \leq b$, there exists a connected graph G such that $cvsgn(G) = a$ and $cvsgn(v) = b$ for some vertex v in G .

Keywords: strong geodetic number, vertex strong geodetic number, connected strong geodetic number.

AMS Subject Classification: 05C15.

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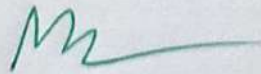


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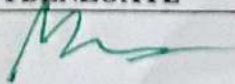


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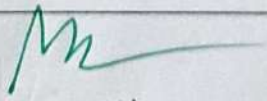
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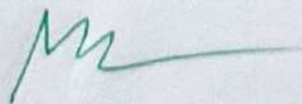
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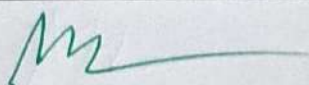


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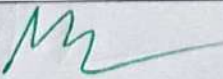
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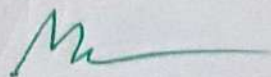
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Fuzzy Queue Based Bee Routing Algorithm for MANET

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Abstract: MANET plays an important role for wireless device communication with self organized way. The increasing popularity of using MANET, make it a logical support QoS over ad hoc networks. QoS support is very much related with allocation of resources to satisfy requirement of applications; these include end-to-end delay, packet loss ratio, and energy consumption etc., In order to overcome these drawbacks, in this paper, we propose a fuzzy based scheduling algorithm and finds an alternate path to destination by applying bee routing protocol which aims to select the shortest path based on energy consumption prediction. The simulation results show that the proposed work can enhance the route stability and network performance effectively.

Keywords: Fuzzy Logic, Ad hoc networks, QoS, Scheduling algorithm.



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Decomposition of Toeplitz Intuitionistic Fuzzy Matrices

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Abstract: In this paper, a Toeplitz Intuitionistic Fuzzy Matrices can be expressed as the product of a lower and upper Triangular Toeplitz Intuitionistic Fuzzy Matrices (IFM) under certain conditions is proved and the equivalent condition for the idempotency of a Triangular Toeplitz Intuitionistic Fuzzy Matrices (IFM) is discussed.



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Complementary Domination in Intuitionistic Fuzzy Graphs

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Abstract: Let G be an intuitionistic fuzzy graph. Let u and v be two vertices of G . Let D be a minimal dominating set of $G(V, \sigma, \mu)$. If $V-D$ contains a dominating set D' , then D' is called a complementary dominating set of G with respect to D . The complementary intuitionistic fuzzy domination number $\gamma_{cf}(G)$ of a fuzzy graph G is the minimum cardinality of a complementary dominating set of G . The aim of this study is to define the complementary domination set and complementary domination number $\gamma(G)$. Further discusses the properties and bounds of the complementary domination number of the intuitionistic fuzzy graphs.

Keywords: Intuitionistic Fuzzy Graph, intuitionistic Fuzzy Domination, intuitionistic Complementary Fuzzy Domination and intuitionistic Complementary Fuzzy Domination number.



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Multiple Domination in Bipolar Fuzzy Graphs

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In this paper we introduce the concept of multiple dominating set in bipolar fuzzy graph. Multiple domination number $\gamma_k(G)$ for several classes of bipolar fuzzy graphs have been determined. The definition of k -dominating set and its domination number in bipolar fuzzy graphs are defined and some properties are analyzed with suitable examples. Also, we obtain the bounds of the multiple domination number in operations on bipolar fuzzy graphs like join, Cartesian product, composition.

Keywords: Bipolar fuzzy graphs, multiple dominating set, multiple domination number.



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Bipolar L-Fuzzy ℓ -HX group and its Level sub ℓ -HX group

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Abstract: In this paper, we discussed some properties of bipolar L - fuzzy sub ℓ - HX group of a ℓ - HX group. We establish the relation between bipolar L - fuzzy sub ℓ - HX group and bipolar anti L - fuzzy sub ℓ - HX group . The purpose of this study is to implement the fuzzy set theory and graph theory in bipolar L - fuzzy sub ℓ - HX group. Characterizations of level subsets of a bipolar L - fuzzy sub ℓ - HX group are given. We also discussed the relation between a bipolar L- fuzzy sub ℓ - HX group and its level sub ℓ - HX groups and investigate the conditions under which a given sub ℓ - HX group has a properly inclusive chain of sub ℓ - HX groups. In particular, we formulate how to structure an bipolar L - fuzzy sub ℓ - HX group by a given chain of sub ℓ - HX groups.



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Deriving Shape Functions for Hexahedron Element by Lagrange Functions and Verified

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In this paper, I derived shape functions for hexahedron element by lagrange functions and also I verified two verification conditions for shape functions. First verification condition is sum of all the shape functions is equal to one and second verification condition is each shape function has a value of one at its own node and zero at the other nodes. For computational purpose I used Mathematica 9 Software [2].

Keywords: Hexahedron element, Lagrange functions, Shape functions.



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Aspects of Classroom Discourse

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Abstract

Among different types of discourse, classroom discourse is a special type of discourse that occur between teacher and students and among the students in classrooms (Nunan, 1993). Classroom discourse largely consists of explanations, instructions, descriptions and arguments. Due to the importance of classroom discourse in educational setting, this study attempts to review different aspects of classroom discourse. The results of this study shows that the type of student, and teachers' discourse, the types of questions and the patterns of classroom discourse can be different in different classrooms and in various learning situations. Besides, the results of previous studies showed that IRF (Initiation-Response-Feedback) is a typical pattern of classroom discourse.

Keywords: classroom, discourse, patterns, questions, language



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