INTERNATIONAL CONFERENCE

On
"Advanced Research Strategies for Sustainable Development" (IC- ARSSD-2022)
Date: 03-04 June 2022

Organized By: Career College Bhopal, Association of Chemistry Teachers, Research Foundation of India & RFI-CARE

First Edition 2022

ISBN – **"978-93-91903-63-3"**

Price: **375 INR**

Size: A4

Bibliographic Information:

Title:

International Conference on Advanced Research Strategies for Sustainable Development

Editor

Dr. Sourabh Jain

Publisher

RFI

Year - 2022

Publisher:

Publisher & Editor in Chief, RFI (registered under the government of India book Publication acts) India.

www.publication.rfiindia.com

Printing & Publisher Address:

RO–K185, Ground Floor Sarita Vihar, New Delhi 110076

HO–207, Jai Prakash Nagar, RFI Tower, JBP 482002

Acknowledgement

I would like to express my sincere gratitude to all the authors, researchers and reviewers, who provided their detail research and views for **(IC- ARSSD-2022).**

I would like to thank my family, who supported and encouraged me in spite of all the time it took me away from them. This conference could see the light of day due to generous support from the WFST.

The readers and beneficiaries vary from academicians, professional engineers and scientists, to undergraduate and graduate students from all over the country.

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RFI/ARSSD-2022/151
OBTAINING A COMPETITIVE EDGE THROUGH GREEN HRM

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Abstract - The acts of ecological coverage and the counteraction of herbal infection have evolved due to overdue ecological problems while the human beings noticed that not unusual place property are restricted. Ecological management rehearses have increased with the cognizant demonstrations of businesses on herbal problems due to the fact they have got the satisfactory obligation concerning herbal infection. After the 2000s, businesses have began to need to be a bit of the association as opposed to being at the focus of the problem and might in popular inexperienced commercial enterprise and the board rehearses. For progressed herbal execution, supportable higher hand, and ecological management, environmental cognizance should be mulled over in each unmarried human asset paintings going from enrollment to getting ready of representatives, from execution appraisal to fulfilling. In this sense, inexperienced HR the board (GHRM), allowing progressed employee cognizance and obligation to ecological preserve capacity, has grow to be an exciting issue. In the modern examination, inexperienced HR the board and practices are assessed, important problems are known as interest to, and pointers are made for destiny experts who desire to paintings upon this subject.
Keywords: GHRM, competitive advantage, GHRM practices, environmental management, green management.

RFI/ARSSD-2022/152
HIGH FAT DIET INDUCED ALTERATION IN REPRODUCTIVE PHYSIOLOGY OF FEMALE MICE

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Abstract
Background- The obesity is constantly growing at the rapid rate affecting almost all the age group with the prevalence to women. Obesity enhances the risk of type 2 diabetes, cardiovascular diseases and has a profound effect of female fertility. The consumption of High Fat Diet (HFD) on daily basis shows detrimental effects on female reproductive system. It has been reported that regardless of obese state, HFD declines the number of growing follicles. Not only in vivo, had many of the in vitro studies revealed the ill effects of HFD on folliculogenesis and fertility. So objective of this study is to determine the effect of HFD on histoachitecture of ovary in relation with change in hormone.
Method- For experiment, female mice Mus musculus of 6 weeks old weighing 15±5 grams were used. All the animals were kept in standard condition of temperature and humidity. The experimental animals were divided into two groups, 6 animals each for the duration of 60 days. Group I is control group fed with standard diet. Group II received 60% HFD pellet diet.
Result- Mice on HFD showed increase in body weight and reduced food intake up to 60 days as compare to control. Alteration in gonadotropin level in HFD group was observed along with decreased number of mature follicle and premordial follicles in the ovaries of female mice.
Conclusion- The results shows that hormonal and histoarchitecture alteration induced by HFD may involve feedback mechanism of hypothamo-hypophyseal gonadal axis in relation to female reproductive physiology.
Keywords: Body weight; food intake; fertility; High Fat Diet; obesity.

RFI/ARSSD-2022/153
IMPACT OF POTASSIUM BROMATE IN FEMALE FERTILITY AND NEONATAL DEVELOPMENT

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Abstract-
Introduction: Potassium Bromate (KBrO3) is a potassium salt that is also known as Bromic acid. KBrO3 is an oxidizing agent used as a food additive in bakeries. KBrO3 was reported in drinking water samples as a result of ozone disinfection. It is also used in the pharmaceutical and cosmetic industries, and found in cold wave hair products. Recent study showed that it also affects endocrine and reproductive functionality in female mice mus musculus.
Method: In this study 6 to 8 weeks old female mice Mus musculus was used. The experimental animals were divided into two groups of 5 each for the duration of 60 days. I group-control received standard diet. II group - potassium bromate in drinking water (100 mg /kg bw) & standard diet.
Result: The obtained result showed significant impact on neonatal low body weight, less viability, delay eye opening, delay ear pinna detachment and delay vaginal opening of Potassium bromate group as compared control group.
Conclusion: This study demonstrate that Potassium bromate has reduced the litter growth, litter weight and viability in female mice. KBrO3 has negative fertility aspects in females.

RFI/ARSSD-2022/154
IMPACT OF VITAMIN D DEFICIENT DIET ON DAILY FOOD CONSUMPTION AND BODY WEIGHT IN FEMALE MICE

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Abstract
Introduction: Vitamin D daily requirement derived from cuteneous synthesis by sunlight and few amount obtained from dietary nutrients. The impact of vitamin D on the musculo-skeletal system are well known and, the diverse role of vitamin D is well supported by the functionality of vitamin D receptor and vitamin D activating enzyme present in tissues and cells. Hypovitaminosis D causes rickets, osteomalacia, hyperparathyroidism and increased risk of bone fracture. Many factors affects vitamin D production like limited access to sunlight caused by lifestyle and environmental conditions. Meal quantity and daily food intake is influenced by various factors which regulate energy metabolism. The aim of this study was to determine the importance of vitamin D associated with food intake, body weight and other diet related parameters.
Method: In this study 4 to 6 weeks swiss albino female mice Mus Musculus of 15±5 grams were used. All experimental animals were divided into three groups of 6 each for the duration of 60 days. Group I control, received standard diet, Group II received standard diet with cholecalciferol oral supplementation per week (1000IU/Kg bw). Group III feed with Vitamin D deficient diet containing 2% calcium, 1.25% phosphorus and 0IU/g vitamin D.
Results: The food intake in deficient diet was comparatively low although body weight was slightly increased as compare to control. Food efficiency ratio, weight gain gram per day and percentage weight gain was increase upto 60 days.
Conclusion: The impact of vitamin D deficient food is directly observed as weight gain but lesser food intake as compared to control group.
Keywords: Vitamin D, Hypovitaminosis D, food efficiency, body weight.

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A VALIDATED UV-SPECTROPHOTOMETRIC AND RP-HPLC METHOD FOR DETERMINATION OF BISOPROLOL FUMARATE IN BULK AND PHARMACEUTICAL DOSAGE FORM

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Abstract - This work envisages development and validation of two simple, rapid, precise, and accurate UV and RP-HPLC method for an estimation of Bisoprolol Fumarate (BF) in Bulk and pharmaceutical formulation. The solvent selected for the UV analysis was methanol. Solution of 10µg/ml was scanned in UV region from 200-400 nm and the λmax value determined was 224nm. The % recoveries obtained for the drug showed good accuracy. The applied method was validated according to ICH guidelines and found to be linear in the concentration range of 2-10 µg/mL for BF. The RP-HPLC method was developed on stainless steel C18 column; 250 mm x 4.6mm x 5µ column using acetonitrile and 0.1M Sodium acetate buffer (pH 5 adjusted with 0.1% Orthophosphoric acid) in a ratio of 70:30 (V/V) as a mobile phase at flow rate maintained at 1.0 ml/min and BF was estimation at 224 nm with PDA detector. The sample volume is 20µL. Isocratic elution was opted. The retention time of BF was found to be 4.503 min. The responses were found to be linear for concentration range of 2 to 10µg/mL and the regression coefficient value was found to be 0.9962. The analytical values obtained were acceptable. Precision and accuracy were found to be in acceptable value. The LOD and LOQ were 0.00815µg/ml and 0.02472 µg/ml for BF. Both methods were validated by ICH Q2 (R1) guideline. Both the proposed methods can be effectively utilized for the analysis of BF raw material and its pharmaceutical dosage form and it can be easily and conveniently adopted for the routine quality control analysis in official and non-official testing.
Keywords: Bisoprolol Fumarate, RP-HPLC, UV Spectrophotometry, drug analysis, method development, method validation, ICH Q2 (R1) guideline.

RFI/ARSSD-2022/156

IN-SILICO ANALYSIS UNCOVER ANTIBACTERIAL PROPERTIES OF ALLIUM SATIVUM AGAINST AEROMONAS HYDROPHILA

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Abstract - The establishment of antimicrobial resistance in fish farming as a result of the widespread use of antibiotics in the last three decades has resulted in the persistence of multidrug-resistant bacteria. Aeromonas hydrophilais a Gram-negative bacterium that causes bacterial septicemia in fish. We recognized DNA gyrase as the target protein in A. hydrophila, a tetrameric enzyme required for DNA replication that catalyzes the ATP-dependent negative super-coiling of dsDNA and one of the most promising intracellular drug targets. For generating a 3-D model using homology modeling, we used the DNA gyrase sequence from UniProtKB. The Ramachandran plot was used to validate the 3-D model, and it was discovered that 94.88 percent of amino acids were present in favorable regions. Quercetin, a product of Allium sativum, was discovered to be a more potent therapeutic molecule than other investigated molecules by molecular docking using the DNA gyrase 3D structure, based on ligand binding energy, binding affinity, and significant weighting of the force field components (electrostatic and van-der Waals energies) as docking score -7.812, glide score -7.844, glide emodel -66.175. This study makes it easier to find prospective therapeutic targets by allowing researchers to look for the phytochemical composition and pharmacological activity of quercetin, a key active ingredient in A. sativum. This research also lays the groundwork for medication development against other harmful bacteria that pose a threat to the ecosystem. Since their crucial relevance was

recognized ages ago, switching to herbal medications is the best method to tackle a variety of problems.

RFI/ARSSD-2022/157
COMPARISON OF GENE EXPRESSION PROFILE OF CYANOBACTERIUM NOSTOC MUSCORUM AND ITS SPONTANEOUSLY OCCURRING MUTANTS

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Abstract - Mutants of the cyanobacterium Nostoc muscorum would be grown in Chu No. 10 medium for routine as well as for experimental purposes. 5 cm3 each of the macronutrients and 1 cm3 of the micronutrients mixture solution would be taken in a final volume of 1000 cm3 double distilled water and its pH would be adjusted to 7.5 prior to autoclaving. The cultures would be maintained at a temperature of 25-30 +/-1oC. Clones of algal species were built by the streak plate procedure.

CsCl was found completely lethal to the parent strain of N. muscorum at the concentration of 1.5 mM. TlCl was found completely lethal to the parent strain N. muscorum at the concentration of 0.2 µM under diazotrophic conditions. The pattern of progressive growth was determined by measuring Optical density (OD) at 663 nm. In microarray analysis 51 genes were found to be up regulated. In this category maximum fold change in (alr1461) (F 7.43). This protein is identifies as glutamine-binding periplasmic protein of glutamine ABC transporter. This protein is in volve central intermediary metabolism like nitrogen. In oher hand total 195 genes were found to be down regulated. Among these (asl4263) photosynthesis and respiration related protien of Tl^+-R mutant shows maximum fold change.

RFI/ARSSD-2022/158
IDENTIFICATION OF REGULATORY GENES AND THEIR PATHWAY ANALYSIS OF BRAIN TRANSCRIPTOME DATA OF AUTISM SPECTRUM DISORDER

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Abstract - Autism spectrum disorder is a neuro developmental disorder having deficits in social communication skills and having repetitive behaviours. It is the most emerging issue, as one in eight children is afflicting by this disorder in India. In this study, two RNA-Seq datasets viz. GSE64018 and GSE62098 were chosen of ASD and control samples from Gene Expression Omnibus database. As the objective of study regulatory genes identification was done through the interaction analysis of Transcription factors (TF) – Differentially expressed genes (DEGs) by constructing network by using cytoscape string software version 11.5. Further functional enrichment analysis was done by using Panther tool 16.0 version. This analysis helped in revealing the recognition of significant pathways for ASD. Results signifies that, 2543 genes were identified common from the meta-analysis of DEGs of both the datasets and 1402 DEGs were found to be up regulated. In further results, extension of Gene set enrichment analysis, three major pathways were identified namely ATP synthesis, FAS signalling pathway and Huntington disease pathway. A very noticeable and functionally important CYC1 gene showed common expression in above mentioned significant pathways of ASD. These findings may conclude that the CYC1 gene is most important key regulator gene for identified pathways of ASD.

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ENTANGLEMENT-FREE QUANTUM PROXY SIGNATURE SCHEME BASED ON QUANTUM OTP

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Abstract- Proxy signature is an essential study topic in classic cryptography since it has numerous real-world applications. However, till date, only a few quantum proxy signature techniques have been presented. We present a quantum proxy signature technique in this paper, which is based on a quantum one-time pad (OTP). Because our approach simply requires single-particle states, it is simple to implement. By adding additional particles within the encrypted particles, the proposed system can withstand the assault. It could be useful in e-government and e-commerce, among other things.

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MAGNETOPRIMING EFFECTS ON PHYSIOLOGICAL AND BIOCHEMICAL PARAMETERS IN MERCURY STRESSED SOYBEAN SEEDLINGS

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Abstract - In the present study, the soybean (Glycine max) seeds were pre-treated with static magnetic field (SMF) of 200 mT for 1h to evaluate the effect of magnetopriming on germination and early growth characteristics of seedlings under heavy metal toxicity (mercury, Hg). The adverse effects of Hg were found on germination related parameters of soybean seedlings. The enhanced percentage germination and early seedling growth parameters (root and shoot length, and vigour indices) under different levels of mercuric chloride (0.0, 0.05, 0.1mM HgCl2) indicated that Hg has a negative effects on the seedlings growth parameters at all the concentration used while magnetopriming was more effective in alleviating the Hg stress at early seedling stage of soybean as compared to unprimed seeds. Total-amylase, protease and nitrate reductase activities were also higher in SMF primed seeds under both non-stress and stress conditions. The proline and malondialdehyde (MDA) contents were increased with the increasing concentrations of Hg in seedlings from un-primed seeds, however magnetopriming reduced them. Thus, SMF-pretreatment on ameliorated to a large extent the detrimental effects caused by Hg, and hence, it proved to be a good ameliorating strategy for mercury toxicity.
Keywords: Magnetopriming, vigour indices, seedling growth, germination.

RFI/ARSSD-2022/163

EMERGING TRENDS IN GENOMIC DNA ISOLATION METHODS

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Abstract - Since the first DNA extraction performed by Friedrich Miescher in 1869, scientists have made extraordinary progress in designing extraction methods that are more reliable, easier and faster to perform, more cost-effective and produce a higher yield. The classic liquid-liquid DNA extraction method involves the use of organic and inorganic reagents such as phenol-chloroform which pose a toxic threat to humans. Many newer techniques are now based on physical extraction, which has significantly contributed to developing simpler methods for DNA handling, such as extraction using magnetic beads and cellulose-based filter paper. With the advent of gene-editing and personalized medicine, there has been an increase in the demand for reliable and efficient DNA isolation methods that can yield adequate quantities of high-quality DNA with minimal impurities. In this study, we used five different recent methods to extract genomic DNA from human peripheral blood. From the results, we identified that SDS-Proteinase K method gave good

DNA yields were 20-30 µg/cm and the 260/280 nm absorbance ratio was 1.8-2.0 which indicates a good degree of purity. The extracted DNA was successfully used in PCR, restriction enzyme digestion and for recombinant selection studies.

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EFFECTS OF VITAMIN-C AGAINST DI(2-ETHYLHEXYL) PHTHALATE TOXICITY ON SOME BIOCHEMICAL AND FERTILITY PARAMETERS IN SWISS ALBINO MICE

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Abstract-
Background: Di(2-ethylhexyl) Phthalate [DEHP] is the most commonly used plasticizer in plastics to make them soft and flexible. It is ubiquitous contaminant, identified as Endocrine Disruptor Chemical (EDC). Due to its widespread use in consumer, household, personal care and medical products, the human exposure level reaches to a concerned limit of danger. It is found to cause defects of liver, kidney and lungs. Its anti-androgenic nature brings the main focus on its toxicity associated with reproductive and endocrine system.
Objective: In this research, we compared the effectiveness of Vitamin-C against DEHP toxicity on body weight, gonadosomatic indices (GSI), fertility rate and some biochemical parameters such as Cholesterol and Glucose.
Materials and Methods: In this experimental study,18 young female swiss albino mice Mus Musculus (16-24) grams were used and divided randomly into 3 groups as control (received normal diet, water ad libitum along with corn oil (vehicle), DEHP group (treated with dose of 100mg/kg body weight dissolved in corn oil via oral gavage) and DEHP + Vitamin-C group (given dose of 100 mg/kg body weight each, dissolved in corn oil and double distilled water respectively through oral gavage). Body weight, GSI, fertility rate and some biochemical parameters such as Glucose and Cholesterol were analyzed and compared within these three groups.
Results: Our results showed that in the DEHP treated group, Body weight and Glucose levels increased remarkably as compared to control group. There was significant decrease in Cholesterol level, GSI and fertility rate as compared to control group. Furthermore, the results of group receiving DEHP + Vitamin-C had a better improving effect on balancing cholesterol and Glucose levels. Also, Vitamin-C helped to increase GSI and fertility rate. Conclusively, the results of the experiment indicated positive effectiveness of Vitamin-C against DEHP toxicity.
Keywords: DEHP, Vitamin-C, anti-androgens, Endocrine Disruptors, Fertility Rate.

RFI/ARSSD-2022/166
IMPORTANCE AND USE OF DHAINCHA (SESBANIA ACULEATA) FIBRES AS SUSTAINABLE FIBRES IN TEXTILE INDUSTRY

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Abstract - Natural fibres are drawing in the enthusiasm of engineers, entrepreneurs, specialists, researcher, professionals and scientists throughout the world as material of abundant unexplored possibilities. The leguminous plant Sesbania aculeata belongs to fabaceae family and grows in diverse climatic conditions. The fibrous plant with pithy stem and long pinnate leaves is grown in the month of July and August and plant serves variety of utility purposes. Locally called dhaincha, it is the most important in situ crop could be used as sustainable fibres in textile industries. The fast-growing tendency of crop, ability to accumulate large quantity of biomass rich in nutrients, especially nitrogen, ease of decomposition when incorporated in paddies, are some of the criteria for establishing its importance in agriculture. The fibres extracted from stem can be used as cordage, fish nets and sackcloth in a way similar to hemp fibres. The fibre is also a promising source of paper manufacturing. The low maintenance cost, fast growing and annual nature of plant offer

wide scope of research opportunities related to dhaincha. The products developed in previous researches included products like needle punched non-woven material used as mulch mats; needle punched non-woven fabric made from dyed fibres and used to develop functional household items and pure and union woven fabric using jute and dhaincha yarns. The research studies focussed on possible use of dhaincha fibres in different textile applications. Bast fibres thus, have an opportunity to enter into high quality textile market through application of appropriate processing techniques which would enhance the physical and chemical properties of fibres. The plant species of Sesbania genus have thus economic and ecological values which necessitates the increased and extensive use of this natural resource.

Keywords: Dhaincha fibres, Sesbania aculeata, natural fibres, sustainable fibres, value added products.

RFI/ARSSD-2022/167
ISOLATION OF BIOACTIVE COMPOUNDS FROM CYANOBACTERIUM NOSTOC MUSCORUM

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Abstract- Cyanobacteria are a good source of various products of commercial Pharmaceutical or Toxicological Importance. They can produce primary metabolites such as proteins, fatty acids, vitamins or pigments. Cyanobacteria are exploited commercially or industrially for the better-ment of humen health. Mycobacterium tuberculosis is the causative agent of tuberculosis. According WHO report more than 20 billians people across the world infected with Mycobacterium tuberculosis. In most cases deaths occurs due to multi drug registant. Therefore, it is necessary to develop new antituberculosis drugs with less toxic side effects.

In present study we are isolating bioactive compounds from Cyanobacterium nostocmuscorum against tuberculosis once the bioactive compound would be isolated. They wil be characterize for chemical synthesis. Cyanobacterium Nostoc muscorum would be investigated for its antagonistics activity. We will able to develop new drug from Nostoc muscorum. This drug would be very effective against mycobacterium tuberculosis.

RFI/ARSSD-2022/168
MICROWAVE-ASSISTED SYNTHESIS, CHARACTERIZATION, AND ANTIMICROBIAL STUDIES OF COMPLEXES OF ND (III), WITH 8-HYDROXY QUINOLINE AND ITS CHLORO DERIVATIVES

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Abstract - The microwave irradiation technique was used to synthesize complexes of Nd(III) with the ligands 8-Hydroxy Quinoline (8-HQ), 5-Chloro-8-Hydroxy Quinoline (5-Cl-8-HQ), and 5,7-diChloro-8-Hydroxy Quinoline (5,7-diCl-8-HQ). Using elemental analysis, FT-IR, and UV-Visible spectrum analysis, the compounds' structure was discovered to be octahedral. A series of newly synthesized complexes were tested for antimicrobial activities against microorganisms. Ampicillin was utilized as a reference for antibacterial activity against E. coli, whereas fluconazole was employed to test for antifungal activity against Candida albicans.

Keywords: 8-hydroxyquinoline, mono chloro-8HQ, dichloro-8HQ, antimicrobial activity.

RFI/ARSSD-2022/169
SUSTAINABLE DEVELOPMENT OF AGRICULTURE USING MACHINE LEARNING

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Abstract - Large amount of data is generated in various fields like Agriculture, Medical, Insurance, Industries, Healthcare and Stock Market etc. Machine Learning techniques are used to analyze the large volume of data by identifying patterns, trends and extract the knowledge which is useful in decision making. In agriculture Machine learning techniques are use to monitor crops and detect various diseases of plants, to develop smart irrigation system, weed detection, suggest the crop for plantation according to the soil type and climatic condition, predict the crop yield, supply chain management etc. Implementation of machine learning in agriculture improves the quality and increase the quantity of the crop production. This paper studies various applications of Machine Learning Techniques in Agriculture field. This study is useful for researchers, farmers, and agribusiness industries.
Keywords: Machine Learning, Unsupervised learning, Artificial Intelligence.

RFI/ARSSD-2022/170
"DEFICIENCY OF VITAMIN-D3, IMPACT ON SOME ENDOCRINE GLANDS AND THEIR ASSOCIATED HORMONES OF MICE, Mus MUSCULUS" (p)

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Abstract - Our present will be based upon the changing the prevailing conditions of the persons which are from the northern regions of the globe. They are living in that area where the real impinging of the sunrays will not be done. So due to this prolong situation of being deprived the persons healthy condition will be becomes deteriorated day by day on their chemical messenger system, (Endocrine system) it will also not properly working. Due to this, they were termed to be deficient of sun shining Vitamin (i.e. Vitamin-D3) then our study is on its various endocrine glands such as (thyroid glands, parathyroid glands adrenal and testis) of the male mice (Mus musculus). In this study the researcher also reveals all the deficient factors on the male mice initially first. And the same will be applicable to the human beings also who are currently deficient by this life threaten vitamin this can be noticed by examining their blood serum level which is present is their blood samples which are to be taken randomly among all my groups of the selected sample organism and also by using the meta-analysis. Then we will be able to observe the good results over this little piece of research work which will be able to get rid of such a high risk evolving factor of being deficient condition of Vitain-D3 among the whole northern region globally. Nowadays, this deficiency will also become higher to become a pandemic one day then it must be overcome as soon as possible from such a life threatening hindrance.
Keywords: Statistical analysis, Endocrine glands, Histology, Sun Shining Vitamin D3, Blood serum level, Hormonal Estimation, Vitamin-D3 deficiency etc.

RFI/ARSSD-2022/171
PEPTIDOMIMETICS, AROMATIC DI SULPHIDES, ISATINS AND PHYTOCOMPOUNDS AS SARS-COV 3CLPRO INHIBITORS

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Research Scholar, Maansarovar Global University

Abstract- Since the day of their emergence both SARS-CoV and SARS-CoV2 caused by Human corona virus have posed as threats to the survival of human kind. Cysteine

protease, 3CLpro plays a significant role in corona virus replication and disease propagation. Therefore several inhibitors targeting it were studied and reported. Recent studies have reported that SARS-CoV and SARS-CoV2 carry about 80% -90% of sequence homology. Adhering to this fact, we can conclude that information available on SARS-CoV 3CLpro inhibitors could be of significant use to design effective antiviral drugs for SARS-CoV as well as for SARS-CoV2. This abstract comes to provide a simple glimpse on SARS and the significance of CADD in drug design. Also various QSAR models of different categories of promising compounds that target SARS-CoV 3CLpro are reported. Informations about the molecular descriptors and physicochemical parameters of these inhibitors which are in correlation to each other and have decisive effect on their biological activities are reported.

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RFI/ARSSD-2022/175

THERAPEUTIC BEHAVIOUR OF SOME TRANSITION METALCOMPLEXES DERIVED FROM SULFATHIAZOLE: A REVIEW

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Abstract - In medicinal chemistry, sulfur-based moieties, notably sulfonylor sulfonamide-based analogues are interesting research subjects. Sulfa drugs, particularly sulfathiazole, exhibit a diverse set of pharmacological properties. Many researchers have been drawn to them because of the breadth of their therapeutic activity. Sulfathiazole gave rise to metals and their complexes. This review article focuses on the sulfonamide-based transition metal complexes for a variety of applications, including antimicrobial, antibacterial, and antifungal properties. The biological activities of transition metal complexes with sulfathiazoles were tested using Gram-positive, Gram-negative bacteria, and certain fungal

agents. The findings show that metal complexes derived from sulfathiazole have significantly higher biological activity than the parent ligand.

RFI/ARSSD-2022/176
GREEN BANKING PRACTICES IN INDIA – THE CUSTOMER PERSPECTIVE

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Abstract - Banking Sector is a significant stakeholder in an economy, and they play a substantial role in creating a sustainable ecosystem. An appropriate framework of economic instruments and cost-effective regulation can help us in achieving sustainable development. Stringent environmental policies, customer boycotts or lawsuits can threaten Bank's very survival. So, it is always better for Bank or any other institution to operate with a framework that ensures sustainable development. This research highlights the importance and prominence of green banking, contributing to India's sustainable banking and development. No research has focused on knowing the perception of customers about green technology in Indian banks. This paper explores the customer's idea of Green Banking through secondary data, Researcher has tried to look into the effectiveness of bank's efforts toward the Green Banking initiatives. It also looks into the idea that how customer can contribute to these efforts for sustainable banking.

RFI/ARSSD-2022/177
A REVIEW STUDY ON EXPLORING AYURVEDA AS ALTERNATIVE MEDICINE IN HEALTHCARE

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Ayurveda is a science of life with a holistic approach to health and personalized medicine. Health is defined as a state of equilibrium with one's self (svasthya) but which is inextricably linked to the environment. Ayurveda is a traditional Indian medicinal system being practiced for thousands of years. Considerable research on pharmacognosy, chemistry, pharmacology and clinical therapeutics has been carried out on ayurvedic medicinal plants. Many of the major pharmaceutical corporations have renewed their strategies in favor of natural products in medicine discovery, though it is equally important to follow systems of clinical trials to monitor biological applications before preparing the formulations. The present review highlights various fields of research including literary, fundamental, drug, pharmaceutical, and clinical exploration in Ayurveda.

RFI/ARSSD-2022/178
POTENTIAL FILTERINGSHEET FOR PB(II): PREVENTIVE MASKS FOR PATIENTS

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The increasing air pollution is a prime concern for environmental scientists due to fatal release of pollutants from vehicle exhaust fumes, exhaust from industrial plants and factories, construction and agricultural activities etc. These pollutants also contain highly toxic heavy metals such as cadmium, lead, mercury etc. which are lethal to human, plants, animals and even environment leading to airborne diseases. Lead is a toxic heavy metal and is highly fatal when consumed. The developed device detects the presence of lead and

thereby level of toxicity for remediating as well as it adsorbs the metal through complexation. The developed tool is formulated by immobilizing Potassium Iodide and Starch solution on Whatman filter paper. It is used as a sandwiched layer between layers of mask to adsorb Pb (II) and preventing the toxic metal reaching the lungs. Thus, the proposed sheet can be a preventive measure to help serious asthmatic patients and others suspected towards lung diseases.

Keywords: Preventive Masks, Toxic Metal, Lead, Air Pollution.

RFI/ARSSD-2022/179
STUDIES TO COMPARE EFFICACY OF NEWLY DESIGNED QSAR ASSISTED DRUG MOLECULE WITH CHEMOTHERAPY AGAINST BREAST CANCER

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Abstract - Breast cancer remains as a concerning global health issue, therefore there is a substantial need to explore novel strategies to combat breast cancer. Recently drug discovery efforts are highly focused towards identification design, and synthesis of small molecules as anticancer agents. With this aim, we are working on design and synthesize novel compound with efficacy and specificity for the treatment of breast tumours. Based on the obtained results we are constructing a QSAR model using data set of compounds able to predict the in vitro antitumor activity against MCF-7 cancer cell line new derivatives. This QSAR model provides an effective technique for understanding the observed antitumor properties and thus could be adopted for developing effective lead structure. In this work, we aim to design a novel molecule and compare the same against chemotherapeutic treatment.

Keywords: Breast Cancer, Chemotherapy, QSAR.

RFI/ARSSD-2022/180
NEUROMARKETING: AN ADVANCED RESEARCH STRATEGY FOR SUSTAINABLE DEVELOPMENT

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Senior Faculty of Marketing and Ph.D Guide

Abstract- Marketing is a very dynamic field wherein daily there are lots of developments. It is generally observed that majority of the marketers waste their time just measuring the outward expressions of the consumer. The traditional marketing research tools are full of limitations. No doubt market research and knowledge of buyer behaviour are the base of any successful marketing strategy. In this complex situation which common worldwide, there is a solution of adopting Neuromarketing techniques and tools to strengthen the market research. This tool is one of the recent trends in the field of marketing and an answer to all confusion in the area of marketing. Neuromarketing is an excellent combination of neuroscience, technology and marketing.

Keywords: Neuromarketing, Sustainable Marketing, Brand Building, Market Research etc.

RFI/ARSSD-2022/182
MICROWAVE ASSISTED SYNTHESIS, CHARACTERIZATION AND ANTIMICROBIAL STUDIES OF COMPLEXES OF TRANSITION METALS WITH SACCHARIN

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Abstract - The microwave irradiation approach was used to report the synthesis, characterization and biological characteristics of complexes of novel saccharin (sac) with transition metals Mn(II), Co(II), Ni(II) and Cu(II). The structure of the compounds was

discovered to be octahedral using elemental analysis, magnetic analysis, FT-IR and UV-Visible spectrum analysis. Antimicrobial tests on the ligand and its complexes against Escherichia coli, Staphylococcus aureus and Bascillus subtilis bacteria were conducted in vitro.

Keywords: Saccharin, Microwave irradiation, Antimicrobial studies.

RFI/ARSSD-2022/183
THERAPEUTIC IMPORTANCE OF TRANSITION METAL COMPLEXES DERIVED FROM SUBSTITUTED THIZOLES

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Abstract - Schiff base ligands are considered as prosperous ligands as they can be simply synthesized by condensation of an amino compound with carbonyl compounds. Schiff bases are Tenoned to possess remarkable therapeutic activities due to presence of the azomethine (C=N) moiety. Substituted thizoles based transition metal complexes have gained much attention because of their unique properties. In the field of therapeutic science. subsithuted thiazoles are of extra ordinary importance, because of their potent and significant biological activities their derivatives are found In various powerful naturally and biologically active compounds which possess a broad specuum of biological activity. Present paper sununarizes the therapeutic importance of transition metal complexes of Schiff bases derived from substituted thizoles.

Keywords: Schiff base, Thizoles, Transition metals, Metal complexes, co-ordination chemistry.

RFI/ARSSD-2022/184
NEED OF AWARENESS REGARDING SUSTAINABILITY IN FASHION AND INTERIOR DESIGN STUDENTS

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Abstract- To save the planet and conserve the limited resources, it is utmost important to take preventive measures and move towards sustainability. Every section of the society is rapidly developing. These sections need sustainable development. Sustainability can be achieved by inculcating the values in the youth that can last a lifetime. For this there arises a need to make the youth aware of sustainability and the sustainable development goals. Up to what extent the youth has an understanding of sustainability has to be known and then and then only measures can be taken to achieve the sustainable development goals. In general, the sensitive young generation has to be made conscious of the advantages of moving towards sustainable development. In this study emphasis has been given to the students of fashion and interior design streams as these fields have a high potential of achieving sustainability. This research aims at getting a knowhow of the basic knowledge the students of fashion design and interior design disciplines have regarding sustainability so that relative actions can be taken accordingly.

Keywords: Sustainability, Fashion Design, Interior Design.

RFI/ARSSD-2022/185
A STUDY AND ANALYSIS OF E-WASTE MANAGEMENT USING CLUSTER TECHNIQUES

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Abstract- Electronic waste (E-waste) is one of the fastest growing wastes streams in the country. Growth of information and communication technology sector has enhanced the

usage of the electronic equipment exponentially. The unconventional disposal of electronic equipment generates toxicity of high levels ,toxic dust found on computer monitors have certain chemicals which are found to be harmful to the reproductive system and may also is a cause for neurological disorders. E-waste is growing in India at a rate of 10%. This paper is a survey of electronic waste in India. In this paper, four different stages were used. The first stage describes the different sources of the e-waste, the second stage describes the toxic elements in different sources of e-waste, the third stage deals with the health and environmental problems of the toxic element and fourth stage deals with state wise e-waste generation in India. There is a strong need for analysing the e-waste in different manners. There are various clustering algorithms for analysing e-waste. This paper deals with three kinds of algorithms – k means clustering, Partition Around Medoids (PAM) clustering and hierarchical clustering. The performance parameters like APN, AND, AD and FOM are used to evaluate the clustering validity.

Keywords: Recycling, E-waste, Waste management, k-means clustering, (PAM) clustering, hierarchical clustering algorithms.

APPLICATION OF A NEW SYNTHESIZED 3D METAL COMPLEX FOR PATHOLOGICAL DETECTION OF CHOLESTEROL

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Abstract - Transition metals have extraordinary complexation capacities to bind with ligand and thus can be used for diagnostic activities. Various complexes of transition elements especially 3 D series elements have been studied for complexation and their application towards the diagnosis for many biological, toxic entities.

Cholesterol, which is resulting in accumulation in our body due to changing standards of life, became a matter of concern amongst clinical researcher. The tools, methods or strategies which could efficiently detect its presence below the harmful level in our body is highly anticipated from researchers. Looking into the applicability of 3D transition metal to form complexes for chelation and the problem of increasing cholesterol related problem, we chose this topic for the current communication.

Keywords: Transition metal, complexation, ligand, cholesterol, diagnostic activities, chelation.

THE EFFECT OF PRODUCTION CONDITIONS ON BIOCHAR YIELD AND ENVIRONMENTAL STABILITY

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Abstract - Biochar, a solid by-product of the pyrolysis of biomass, is a potential approach for climate change mitigation and adaptation since it can absorb $CO2$ in the atmosphere while enhancing soil quality. However, in order to realise this potential, biochar must have high environmental stability, i.e., the ability to withstand multiple decomposition processes over a long period of time. The main goal of this study was to determine the relationship between biochar production conditions and yield, as well as biochar qualities, especially long-term stability. We made biochar from specified feedstocks using our lab-scale pyrolysis facilities at different temperatures ranging from 350 to 500oC (Pigeon pea stalk, mustard stalk, and subabul). We first assessed biochar yield before using an accelerated ageing experiment to determine biochar stability. We determined the yield of biochar and then utilised an accelerated ageing assay to determine the biochar's stability. Such data is critical for determining biochar's climate change mitigation potential, as it is unclear how much biochar is permanently stored and how much is released back into the atmosphere in the short to medium term. The findings of this study revealed that, despite an increase in

biochar stability with increasing pyrolysis temperature, the yield of stable biochar is nearly temperature independent. These findings are critical for optimising pyrolysis conditions for producing biochar with specific qualities, as well as modelling biochar systems and their climate change mitigation potential in comparison to other biomass-based products like bioenergy, biofuels or chemicals.

Keywords: Biochar, biochar yield, pyrolysis temperature, stability

RFI/ARSSD-2022/191
NANOPARTICLES AND THEIR ROLE IN SUSTAINABLE DEVELOPMENT: GREEN CHEMISTRY APPROACH

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Abstract - The size and dispersibility of nanoparticles make them unique for applications in different fields. In medical sciences, industries, electronics, energy and sustainable development. These are being used in the development of sensors. Size of the nanoparticles give a great surface to area ratio, the pore size. Thus, forming a great matrix for catalytical activity by forming a proper reaction site. Catalytic activity viz., hydrogenation, oxidation, transformation of some nanoparticles which have been playing important roles in sustainable development are emphasized. Various aspects of green chemistry utilizing nanoparticles towards the sustainable development are given importance and discussed.

Keywords: Nanoparticles, Green Chemistry, Sustainable development.

RFI/ARSSD-2022/192
BETA CARYOPHYLLENE FROM CLOVE OIL: SAFER REMEDIATION

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Abstract - Caryophyllene more formally β-caryophyllene (BCP) is a natural bicyclic sesquiterpene. β-caryophylleneis highly useful as a drug and is a main ingredient of many herbs such as rosemary, clove etc. The oil from the stems and flowers of Syzygiumaromaticum (cloves) is found to have considerable amount of BCP. Looking into it's potential as medicinal component, we have extracted BCP from clove buds.

The BCP from clove oil was isolated by distillation with ethanol and was identified by GC/GC-MS with other heavy metals presence. Repeated purification was also performed to increase percent purity. The structure elucidation of main compound (BCP) was done using 900 MHz-NMR.

Keywords: BCP, NMR, GC-MS, Clove oil

RFI/ARSSD-2022/193
PRODUCTION AND CHARACTERIZATION OF FRUIT PEELBIOCHAR AND ITS SOIL AMENDMENT

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Abstract – Biochar from fruit peel (FPB) were produced by pyrolys is of the biomass at the temperature of 350ºC for two hours. Biochar is characterized for pH, electrical conductivity, bulkdensity, particle size distribution, proximate analysis and scanning electron microscopy (SEM) analysis for identification of pore size. The FPB presented high values of fixed carbon(57% for FPB), volatile matter (29% or FPB) and pH(8.79 for OPB). The SEM images showed complex network of heterogeneous pores for OPB. The results indicate that FPB can be used as asoilamendment and as low-cost adsorbentsinad sorption process.

This study provide sane idea for turning waste biomass into treasure and eliminating the hidden danger of environmental pollution.
Keywords: Biochar, Proximate analysis, Fruit peel, Soil amendment.

RFI/ARSSD-2022/194
DIVERSITY ANALYSIS OF AZOTOBACTER STRAINS FROM AGRICULTURAL LANDS OF MADHYA PRADESH THROUGH RFLP TECHNIQUE

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Abstract - Azotobacter, a non symbiotic nitrogen fixing bacteria plays a remarkable role in cycling of N2. Field trials have demonstrated that inoculation with Azotobacter has beneficial effects on plant yields. Present study was aimed to analyze the genetic diversity of Azotobacter sp. in soil of Madhya Pradesh, India. Twelve different strains of Azotobactersp were isolated from rhizosphere of different agricultural fields and characterized through morphological, biochemical and genomic analysis. The phylogenic relation among these isolates was identified at molecular level by using 16S rDNA & RFLP techniques. In RFLP analysis, similarity coefficient ranged from 0-0.35. On the basis of similarity pattern these twelve strains can be placed in four groups. Four isolates A6, A7, A8& A9 showed 100 % similarity clearly indicating a very close relation with each other while a pair of isolates A1& A2 showed some distinct features which was evident from molecular evaluation in dendrogram.
Keywords: ARDRA, Diazotrophs, Dendrogram, RFLP

RFI/ARSSD-2022/195
ROLE OF MACHINE LEARNING IN DATA ANALYSIS FOR HEALTHCARE-INDUSTRY:A SURVEY BASED STUDY

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Abstract - In recent years, healthcare data analysis has emerged as one of the most promising fields of study. Clinical data, Omics data, and Sensor data are all sorts of data in the healthcare industry. Clinical data consists of electronic health records that hold patient records gathered during therapy. Omics data is one of the high-dimensional data types that also include genome, transcriptome, and proteome data. Multiple wireless and wearable sensor devices are used to collect sensor data. Manually manipulating this raw data is really challenging. Machine learning has developed as a crucial tool for data analysis. Machine learning utilizes numerous statistical techniques and complex algorithms to more precisely anticipate the outcomes of healthcare data. In machine learning, supervised, unsupervised, and reinforcement algorithms are employed for analysis, among others. This paper describes many types of machine learning algorithms. Then, the use and role of machine learning algorithms to the analysis of diverse healthcare data is examined.
Keywords: Healthcare, Machine Learning, Sensor Data, and Omics Data.

RFI/ARSSD-2022/196
HIGHPRESSURE IMPACT ON ENERGY BAND GAP AND EQUATION OF STATE FOR GERMANIUM

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Abstract - In this work, we study the formulate of different equation of state reported in the literature and use to fit the best curve fitting in case of Germanium. We find that the different expression of energy band gap verses pressure dependence obtains by a straightforward integration of the energy band gap verses pressure equation of state. We present an easy theoretical model is developed to review the high-pressure behaviour with energy band gap of semiconductors. Some other documented equation of states according

within the literature has additionally been enclosed within the study. The comparison of calculated values from all these equation of state with experimental values reveals that the present model yields the best agreement. The present study additionally. Shows that it's a decent approximation to think about the pressure to be quadratic within the density.
Keywords: Energy band gap, Best curve fitting, High Pressure.

RFI/ARSSD-2022/197
ANIMAL GENETIC RESOURCES FOR FOOD, AGRICULTURE AND LIVELIHOODS

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Abstract - Animal genetic resources are helpful and used for the production, cultivation and harvesting of food and agriculture. These include semi-domesticated as well as wild species of animals comprising 40 species that have been diversified into more than 7000 breeds. The five species most extensively used for this purpose are cattle, goats, sheep, pigs and chickens. Cattle is the biggest source of livelihoods. Globally, 70% of the rural population depend on livestock for their livelihood generation. Genetic studies in livestock for example higher milk production need to be studied to obtain higher productivity and income.

Extensive use of genetic diversity by human since centuries posed serious risk and threats to theses species. Thus, biodiversity as well as conservational studies need to done parallelly to safe guard theses breeds.
Keywords: Animal genetic resources, species, breed, genetics.

RFI/ARSSD-2022/198
GLOBAL PANDEMIC EFFECT ON POVERTY AND SUSTAINABLE DEVELOPMENT

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Abstract - The recent highlighting challenge on global perspective is a pandemic which has its huge impact on poverty which is a major goal of Sustainable Development. India is a developing country and still various strategies have been adopted to mitigate poverty. However, in 2020, the outbreak of Covid-19 has highly destabilized the economic growth of a country. It has significantly affected middle class family, below poverty group and business class family too, where the source of income has been reduced and has a major impact on health also. Poverty is the most highlighted goal which has been considered first goal out of 17 major goals in 'United Nations Sustainable Development Goals.' The number of people living in extreme poverty in developed, developing and under-develop countries. However, the wake of pandemic has entered as another challenge in public health perspectives as well as poverty. As its negative effect is majorly hampering on hunger and poverty issue which demands another goal of SDGs along with 17 major goals. Poverty and world pandemic goes hand in hand. As in society, pandemic is a challenging issue which is restricting to achieve the goal one i.e. poverty of SDGs. This paper highlights the major challenging and interlinking issues on global pandemic and poverty and way to mitigate its negative effect by sustainable development.
Keywords: Pandemic, poverty, sustainable development

RFI/ARSSD-2022/199
ENERGY SECURITY: A KEY TO SUSTAINABLE DEVELOPMENT

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Abstract - Ever increasing population in the country has resulted in the growing needs of energy. Energy resources available often do not match the demand and thus are over used/exploited causing undue pressure on natural resources, adversely affecting the environment. Energy security is the key to the sustainable development of any country's

economy. The International Energy Agency (IEA) describes energy security as "the uninterrupted physical availability at a price which is affordable, while respecting environmental concerns". Energy security is therefore, concerned with the availability of primary resources and easy access to these resources on the one hand, and the sustainable development of the country, on the other. Sustainable development requires a specific pattern of resource use, i.e., to say basically use environment friendly approach which aims to preserve the environment so that human needs can be met, not only in the present, but also for future generations.

India must actively develop and promote technologies as well as a well empowered legal system that maximise energy efficiency, demand side management, conservation and energy security. This all can be done effectively only by encouraging in-depth domestic research into above mentioned areaand free access to suitable energy related technologies and policies available and adopted abroad. In the last few decades, the international community has expressed its concern for achieving sustainable development. India has also taken major initiatives to implement these international concerns in Indian system through various laws and policies.

Keywords: Energy security, resource, laws, policy

RFI/ARSSD-2022/200
BIOSPHERE HAS POCKET OF HOPE FOR SUSTAINABLE DEVELOPMENT GOALS

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Abstract - The Sustainable Development Goals (SDGs) are a set of global goals for fair and sustainable health at every level: from planetary biosphere to local community. Its aim is to end poverty, protect the planet and ensure that all people enjoy peace and prosperity. In this study, the researcher will try to link the relation of nature and how it is significant to increase the number of biosphere reserves in India from sustainable development approach. Biodiversity is the living fabric of our planet. It underpins human well-being in the present and in future, with its rapid decline, threatens nature and people alike. In the last 50 years or so much has been accomplished for the protection of nature, including the establishment of conservation of areas. Moreover, number of international conventions have been signed and ratified. Biosphere reserves connect humans live in harmony with nature with an effective combination of sustainable development and nature conservation. The point is that, if these pockets of hope can expand with more and larger with the help of private sector, it will give the realisation to millions of people that a better future it is truly possible. Now is the time to act for biodiversity.
Keywords: Biosphere, biodiversity, sustainable development

RFI/ARSSD-2022/201
DEVELOPMENT OF NEW LUMINESCENT MATERIAL FOR PREPARATION OF PHOTOLUMINESCENT INK

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Abstract - Counterfeiting of currency, precious documents and ingrained products is a gruelling problem. It is posing security hazards to governments, businesses and consumers around the world. To combat counterfeiting cases, a high-tech solution to discourage the acts is an urge. Photoluminescent inks has been proved as a successful alternative. The phosphorescent ink, their historical background and various methods of their synthesis has proved it efficient for security reasons. The usability of Phosphorescent ink in developing unclonable security codes for anti-counterfeiting processes has provoke us to develop the same. The paper discusses the new luminescent material to explore its potential as photoluminescent ink.
Keywords: Luminescent material, phosphor, photoluminescent ink.

RFI/ARSSD-2022/202
SMART WASTE MANAGEMENT

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Abstract - Global trash production is estimated to exceed 4 billion tonnes by 2050. The quick increase may be traced back to rising urban populations and consumer culture in recent decades, neither of which is expected to slow down very soon. Communities all over the world are turning to smart waste management technology and solutions to alleviate the load on the environment and waste collection services.

Any method that uses technology to make trash collection more efficient, cost-effective, and environmentally friendly is referred to as smart waste management. To help optimise waste collection and inspire future innovation, the majority of these devices are equipped with the Internet of Things, a monitoring technology that collects and tracks real-time data.

Keywords: smart waste, environment, consumer culture, trash, optimise, real-time data.

RFI/ARSSD-2022/203
SUSTAINABLE DEVELOPMENT: CHALLENGES AND SOLUTION TO ENVIRONMENTAL CRISIS

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Abstract - The study demonstrates that the environment is one of the most important public assets in a human system, and that it must be safeguarded as such. According to our current understanding, all human systems require sustainability, and the principles of sustainable development must be applied to all human system assets.Sustainable development is defined as development that does not degrade the social, ecological, or political systems on which it is based, but expressly approves ecological limits within the economic activity framework and has full understanding of how to meet human needs.The paper has outlined the requirements for environmental sustainability, as well as the resources, methodologies, and approaches for resolving ecological threats and executive main process in the pursuit of sustainable development.

Keywords: Sustainable development, public assets, resources

RFI/ARSSD-2022/204
SUSTAINABLE DEVELOPMENT TO MITIGA TECLIMATE CHANGE

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Abstract –The most significant challenge which is emerging globally is climate change. An emersion and accumulation of green house gases in the atmosphere which poses dangers to life on this planet cause ahigh impact on this issue. The 'United Nations Conference on the Human Environment' i.e. Stockholm Conference, 1972, has first time highlighted on environmental issue and sustainable development under Principle 2. Whereas, the 'Brundtl and Report' published in 1987 by 'United Nations World Commission on Environment and Development' along with rest of the conferences has reemphasized 'Sustainable Development. 'Moreover, an environment al issue is always considered a primarytargetinm any conferences with scientific studies and researches. In the meantime, climate change stands challenging issue in the world wide. The UN member states has adopted' The 2030 Agenda on Sustainable Development' in 2015 where 17 major goals were strategize for human development and preserving various environmental challenges in alls herein order to transform our world. Out of these, climate action is the 13th goal of the agenda. Each of these 17 goal sultimately strives for the universal reduction of climate change. This paper

examines climate change through the lens of sustainable development viascientific research in order to lay out various strategies to bead opted to mitigate the issue.

RFI/ARSSD-2022/205
SHIFT FROMEDUCATION POLICY TO NEW EDUCATION POLICY: AFLEXIBLE APPROACH TO SUSTAINABLE DEVELOPMENT

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Abstract - A quality education is the backbone for the growth of any society and through educationpolicyitcanbeachieved.Earlier,theeducationpolicywasnotuptothemark.Simultaneously, with the pace of timein2020, the National Education Policy has been introduced where it majorly focus on conceptual learning rather than mugging and also to transform the future of all the children and youth in the country. The new eduction policy is also in line of Goal 4 of the United Nation Development Goals(SDG 2030), which believes access to quality education is the base of Sustainable Development. The new education policy aims to achieve' universal foundation literacy and numeracy' in primary schools by 2025. The policy even seeks to standardize the school curriculum for region languages. It even shifts from traditional approach to holistic approach where multidisciplinary subjects is a key goal for' Higher Education Institution'. The policy is aligned to the Sustainable Development of 2030 Agenda with holistic, flexible and multidisciplinary approach. This paper highlights the approach of new education policy in consonant with Sustainable Development.

RFI/ARSSD-2022/206
PHYTOCHEMICAL SCREENING, ANTIOXIDANT ACTIVITY AND HIGH-PERFORMANCE LIQUID CHROMATOGRAPHY ANALYSIS OF EXTRACT OF CHENOPODIUM ALBUM

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Abstract-
(1) Background: The present study aims to screen and quantify hydroalcoholic extract for phytochemical content and HPLC profiles of Leaves extract of Chenopodium album.
(2) Methods: HPLC was carried out using a RP-C18 analytical column with a mobile phase composed of acetonitrile: methanol (50:50 v/v) and was isocratically eluted at a flow rate of 1 mL min-1. A small sample volume of 20 µL was used for each sample run, being injected into the HPLC system. The chromatogram was monitored with UV detection at a wavelength of 256 nm. Phytochemical screening of Chenopodium leaf extract showed the presence of flavonoids, amino acids, carbohydrates and protiens.
(3) Results: The results of phytochemical analysis of the extract are Flavonoids, carbohydrates and saponins were found to be medicinally active Constituents Quantification of total flavonoids showed that hydroalcoholic extract of Chenopodium leaf had flavonoid content 0.623 mg/100mg equivalent to quercetin.
(4) Conclusions: The data presented here could be used for the standardization of hydroalcoholic extract of Chenopodium album in herbal drug formulations.
Keywords: Chenopodium album, Quercetin, HPLC, Phytochemical, antioxidant

RFI/ARSSD-2022/207
HEALTH AND PANDEMIC IN THE LIGHT OF SUSTAINABLE DEVELOPMENT

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Abstract- Currently, world is facing a global health crisis on pandemic which is ultimately affecting human life as well as destabilizing global economy along with the population crisis. Good health and well being is an essential to sustainable development goals which is included in 2030 targets. Goal 3 is to achieve improvisation in health sector out of 17 goals of SDGs. Before the outbreak of pandemic, major steps and measures were taken in

improving the health of millions of people. In the wake of Covid-19, world is facing a high health and economic crisis for which in the year 2020, strategies got updated and provided further guidance for the public health response to Covid-19. To some extent vaccination doses has been implemented but still majorly it is yet to get controlled. The under-developing and developing countries are highly vulnerable to tackle this crisis. In addition, sustainable development policies incline us toward longer- term, in a broad spectrum. Health and environment become an integral part of sustainable development in order to list out right strategies with proactive prevention support. In this paper, it is to be highlighted the effect of pandemic hampering the health globally in the light of sustainable development.

RFI/ARSSD-2022/209

EFFECT OF AQUEOUS LEAF EXTRACT OF PHYLLANTHUS EMBLICA ON RESPIRATORY BURST ACTIVITY (NBT ASSAY) OF CLARIAS BATRACHUS FISH

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Abstract - Fish is an essential source of animal protein in our diet. It contains all essential vitamins, minerals, and trace elements in the appropriate amounts. India produced 108 million tons of fish in 2016, the third-highest in the world after China and Indonesia. The objective of the current study is to enhance the immunity power of Clarias batrachus by using Phyllanthus emblica leaf extract as an immunostimulant on respiratory burst activity (NBT assay) of fish. For the experimentation, fishes of the average weight of 80-120 gm were taken and three groups of 7 each in triplicate (3×7 x 3=63 fish). Group I was control, Group II and Group. III were experimental groups. When mixed with feed and put in the experimental aquaria, the immunomodulatory effect of the aqueous leaf extracts of Phyllanthus emblica on Clarias batrachus was studied. The result was observed in fish's respiratory burst activity (NBT assay) after 7, 15 & 30 days of feeding at 2% & 5% doses (20g/kg, 50g/kg). The experimental results were compared with those of controls. It was found that the phagocytic activity as assessed by NBT assay was enhanced by Phyllan thus emblica leaf extract at different doses as compared to duration in increasing the phagocytic activity. The significant increase could be due to phenolic compounds like tannins, phenol, flavonoids, etc.
Keywords: Clarias batrachus, Phyllanthus emblica, respiratory burst activity, NBT assay.

RFI/ARSSD-2022/211

A REVIEW ON ADVANCED GRAPHICAL AUTHENTICATION TO RESIST SHOULDER SURFING ATTACK

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Abstract - In today's world of newly prominent technologies, an authentication plays an important role to provide better authenticity to every user's information from different of system attacks. So we need to provide strong authenticity to avoid from such an unsecured problems. Up till now most of the users prefer text passwords to provide authenticity to their account. In many cases there will be a risk of textual password by selecting an irrelevant or easily remembered password or the way of putting it in the insecure way are said to be "the unsecured way" in the authentication chain. Except using a strong textual password, the user will select the modern password which is much shortened or less complicated which is easier to keep in mind. So with new & advanced, emerging technologies and a large set of mobile application to be developed on regular basis. Due to this user can easily access their account at anytime and anywhere on any device like mobiles, Laptops etc. It's a better to decrease the time consumption which will

automatically increase the chance of exposing the credentials to the attacker's. It can be happened directly or indirectly with naked eyes or indirectly by using some hidden recording devices to detect user's confidential data.

Most of the traditional authentication systems uses text based passwords. For providing better authenticity against brute force attack the strong password is generated using the combination of upper case characters and lowercase characters along with numerical values and special characters. Whereas some system generated strong passwords are randomly generated and not have specified meaning. Remembering such a random passwords is very hard to memorize and recollect. Due to this reason most of the users tried to set very easy passwords which having some dictionary meaning. As per the article in computer world, 80% user set such easy password and those can be cracked by hackers within 30 seconds. Based on the Psychological study user is able to remember images with long time span rather than textual words. To dispose of text based passwords, I proposed the technique of image based secured authentication.

Keywords: Graphical Authentication, Text Based Passwords, Surfing Attacks, Image Password, Password Hacking.

RFI/ARSSD-2022/212
A NEW APPROACH FOR WORMHOLE ATTACK REMOVAL IN NETWORK USING NS2

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Abstract - A wireless network is that network which uses wireless data connections for interconnecting network nodes (1). Wireless Network can be categorized into two varieties named as structure grounded and Ad- hoc network. In structure based network, every user needs to transfer with an access points or base stations whereas in Ad- hoc network, nodes produce and maintain the communication links without the help of apre-existing structure. Lack of Structure in network means lack of central realities.

Security in Ad hoc network is sensitive because network topology is dynamic as easily as links between nodes is unreliable. Wireless network are more prone to attacks separating from eavesdropping to snooping. Wireless Sensor Network (WSN) as a part of MANET consists of a large number of tiny sensor nodes that continuously monitors the environmental conditions. Sensor nodes perform varied tasks Similar as signal calculation, processing, and self- configuration of network which help in expanding network coverage and strengthen its scalability.

A WSN is framed of tens to thousands of Sensor Nodes distributed in a wide area. These sensors are tiny and are suitable to sense, proceeding data and communicate through radio frequentness channel with each other.

A Wireless Networks are additionally accessible to distinct types of attack than wired Network. One similar attack is Wormhole Attack, in which traffic is encouraged and replayed from one Position to another through the Wormhole tunnel without concerting any cryptographic approaches over the network. Therefore, it's challenging to justify against this attack. In this Work we reanalyze WSN conception and Wormhole Attack. Also we talk over category of wormhole Attack and also mention many types of determine the Wormhole Attack.

Keywords: Wireless Sensor Networks, Wormhole Attack.

RFI/ARSSD-2022/215
A STUDY ON FUTURE OF E-COMMERCE IN INDIA

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Abstract - E-commerce may be playing a stand out amongst the key part done business alternatives and encourage on investigate later on. E-commerce may be concerning the standard shift in the benefits of the business planet to exchanging. Conjecture for E-commerce is indicating uncommon prospects in business Growth of Indian economy. Those clients base of web shopping may be increased Toward utilizing web about things (IOT)

What's more cell telephone requisitions. Hence those Indian e-commerce business need seen energizing Growth clinched along side since from few quite sometime. It taking under attention India's demo graphic inst all ment framework Also expanding web accessibility, those E-commerce benefits of the business may be Experiencing childhood will more terrific statures. However, India's in general retail good fortune will be substantial, those internet businesses will be plagued with a few discriminating tests. Henceforth over going to current consider need been conveyed out to portray those available condition and the future prospective of e-commerce benefits of the business clinched alongside India. It facilitates with dissect the available trends, investigate those tests and chances for e-commerce benefits of the business over India.

RFI/ARSSD-2022/216
ANALYTICAL STUDY ON PARTIAL SYNCHRONIZATION PATTERNS IN BRAIN NETWORKS

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Abstract - Partial Synchronization Patterns of Brain Networks is a very important research direction in the study of complex brain network dynamics because the complexity of the structural characteristics of complex brain networks has a multifaceted impact on the dynamics of synchronization. This direction has been a focus of research in recent years. At present, most of the partial synchronization research on complex brain networks has been done to investigate the impact of topology on the partial synchronization capability, but the synchronization process rarely been studied. In fact, the partial synchronization process is very important, because synchronization is a gradual process. Research on the synchronization process is helpful for revealing the evolutionary mechanism of complex systems and for exploring interesting phenomena that occur when a brain network reaches global synchronization.

Partial synchronization patterns play an important role in the functioning of neuronal networks, both in pathological and in healthy states. They include chimera states, which consist of spatially coexisting domains of coherent (synchronized) and incoherent (desynchronized) dynamics, and other complex patterns. In this perspective article we show that partial synchronization scenarios are governed by a delicate interplay of local dynamics and network topology. Our focus is in particular on applications of brain dynamics like unihemispheric sleep and epileptic seizure.

RFI/ARSSD-2022/218
RECONFIGURABLE FINITE FILED MULTIPLIER USING REDUNDANT REPRESENTATION

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Abstract- In this paper the simple and particularly normal architectures for finite discipline multipliers the usage of a redundant illustration is presented. The combination of a finite field into a cyclotomic ring which has a foundation with the fashionable multiplicative shape of a cyclic group is the main idea behind this article. These architectures will provide area-time trade off and this will activates us to design the partial or hybrid type of multipliers. This hybrid structure has a good significance in its VLSI implementation in very large fields. The transformation of coordinates is simply a unessential representation using squaring operation. It is observed that the proposed bit-serial and hybrid multiplier architectures have less area complexity when there is an optimal normal basis. In the redundant representation there is an advantage of constant multiplication.

RFI/ARSSD-2022/219
SOFTWARE TESTING FOR WEB BASED APPLICATIONS USING PROPERTIES OF NON FUNCTIONAL SYSTEM

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Abstract- Non-functional system testing is becoming increasingly important. Software complexity grows in direct proportion to demand, making performance, energy consumption, and reliability increasingly important. It has been discovered that optimising the software simultaneously for both of these properties and the functional properties is difficult. This procedure is automated by search-based software testing using various meta-heuristic methods. It ensures the low-cost creation of a large number of test cases. Testing in this situation necessitates a high level of expertise as well as the use of a highly adaptable strategy. There is an urgent need for a guide that helps practitioners (testers) and researchers optimise non-functional properties using search-based software testing. In order to apply search-based software testing in academia and industry, this thesis first looks into non-functional properties, difficulties encountered, and approaches/suggestions from practitioners. The second objective is to compile all the data into a conceptual or theoretical framework so that experts in search-based software testing can use it to enhance the non-functional system properties.
Keywords: Non-functional system properties, Search-based Software Testing, Search-based Software Engineering, Meta-heuristic techniques, Framework.

RFI/ARSSD-2022/220
DESIGN A FFT AND VERIFY USING RAZOR FLIP FLOP RAM SETS

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Abstract- Large integers make up cryptographic algorithms like RSA and Diffie-Hellman. This algorithm primarily executes laborious tasks like modular multiplication. The modular multiplication function in RSA requires more than 75% of the processing time for moduli larger than 1024 bits. Through pipelining and parallelism, fast multiplier architectures are used in this case to decrease delay and boost throughput. These structures are ineffective and take up a lot of room, though. In order to achieve high area-time efficiency, this paper introduces the fast Fourier transform method into the framework and develops an enhanced Montgomery modular multiplication (MMM) algorithm based on the FFT. Zero extra space is employed in the present structure to straight calculate the modular multiplication steps utilising side - chain and unconstructive side - chain convolution layer. In the amount graded theory method, the FFT classifier, that also offers quick permutation calculation, is used to cut the permutation length in half. The suggested methodology introduces a generalized method for effective parameter estimation. In this proposed system, which is put in place on Xilinx Virtex-6 FPGAs, solitary as well as double butterfly constructions are designed to provide low area-latency solutions. As a result, in terms of area-latency efficiency, the proposed system outperforms the existing system.
Keywords: Montgomery modular multiplication, number-theoretic weighted transform, fast Fourier transform (FFT), field-programmable gate array (FPGA).

RFI/ARSSD-2022/221
AN EFFICIENT HYBRID RECOMMENDATION SYSTEM FOR HEALTH CARE SYSTEM USING BIG DATA ANALYTICS

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Abstract- In the real world, where significant amounts of data are occasionally accumulated, the healthcare industry is a necessary component. Such data exhibits big data characteristics, making its analysis and discovery of latent relationships between

variables in healthcare data desirable. The healthcare industry generates a wealth of informative data. To mine the data and obtain business intelligence, a thorough big data approach is necessary. Big data analytics has a wide range of applications. However, it is essential to have knowledge-driven recommendations that benefit all stakeholders in the healthcare industry. The introduction of cloud computing has made big data analytics a reality. To handle big data, dispersed programming frameworks with affiliated Dispersed File Systems (DFS) are accessible. A few examples include Hadoop and Spark. Many scientists worked on creating device learning-based methodologies, which would be a component of machine learning (AI). Given that the healthcare sector is one of the sources of big data, it requires distributed system surroundings. For a thorough overview of health records, big data analytics are required. The cloud computing and big data eco - systems are helpful when using big data analytics to provide medical advice. Creating advice across the board is the aim of a typical recommender system in the healthcare sector. This study provides information on various healthcare recommender system that generate suggestions using big data analytics. It debated gaps in research that could be utilized to activities relate studies to improve the current state of the art throughout in addition to providing useful insight.

Keywords: Big data, big data analytics, healthcare recommender system, business intelligence.

RFI/ARSSD-2022/222
VALIDATION OF BIG DATA ENTERPRISES USING KEY-VALUE BASED APPLICATION

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Abstract Modern businesses face significant challenges as a result of big data. Sample enterprise applications are falling behind points of time due to inadequate processing capacity for large volumes of data, changing constantly data streams, and unordered. Moreover, huge, complicated, easy enterprise systems aren't any longer fashionable, whereas lighter weight and fragmented implementations are becoming common just for web internet and mobile internet bursts. This article proposes a big data application system for businesses to easily create and manage personalised retrieval of information, data processing, business analytics, as well as other information assistance in this type of situation. It is differentiated from competing products by the layout of key-value based hybrid data storage and a service-oriented outsourcing architecture. The former is employed to address the commonly observed issue of diverse and huge data storage, while the latter provides an inclusive environment for 3rd distributors, fostering a self-growing services eco - system for big data developing applications. The outcome of our laboratory activity demonstrates that the framework has the opportunity to successfully enable the growth of data-intensive applications.

Keywords: Big data, Data models, Business, Databases, Computer architecture, Software, Libraries.

RFI/ARSSD-2022/223
EVALUATION OF DATA MINING USING META LEARNING ANALYSIS

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Abstract- Existing data mining techniques are distinguished by a multitude of methodologies but a lack of guidance for selecting the appropriate technique based on the characteristics of the issue being investigated. The ground of meta-learning has a main goal of generating such guidance; the study objective is to comprehend the interplay between both the training algorithm as well as the tangible situations where that method is relevant. In recent years, the ground of meta-learning has already seen steady growth, with intriguing recent innovations in the development of appropriate prototype assistants,

mission students, and a strong conceptual model. In this paper, we provide an overview of the different techniques needed to construct strategy systems. We begin by discussing an idealised meta-learning structure that includes a number of applicable element methods. We then examine how prior studies has researched and put in place each technique. Furthermore, this demonstrates that meta teaching has already recognised as a major element in practical uses.

Keywords: Meta Learning, Multi Agent System, Data Mining Tasks, Parameter Space, Optimal Configuration, Dataset Ontological Compatibility.

RFI/ARSSD-2022/224
EVALUATION OF SERVICE LEVEL AGREEMENT IN CLOUD COMPUTING APPLICATIONS

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Abstract- Cloud computing and the Internet of Things (IoT) are computing technologies that enable organisations to become more agile and flexible by providing services to consumers and businesses. As a result, ensuring Quality of Service (QoS) for such cloud-based services via Service Level Agreements (SLAs) is critical for both service providers and service consumers. SLA management in cloud and IoT has thus become an important and necessary aspect, as SLAs are critical for cloud deployments and wider adoption of cloud services. This paper investigates the existing research on the management of SLAs in cloud-based IoT applications. A Systematic Mapping study (a well-defined method) is carried out to identify published research results that are relevant to SLAs. The paper identifies and categorises 328 primary studies into seven broad technical categories: service level management, service level definition, service level modelling, service level negotiation, service level monitoring, service level violation and trustworthiness, and service level evolution. The paper also summarises the study's research types, research contributions, and demographic data. Most approaches to managing SLAs, according to the findings, are used in academic or controlled experiments with limited industrial settings rather than in real-world industrial settings. Many studies concentrate on proposal models and methods for managing SLAs, with a lack of emphasis on the evolution perspective and adequate tool support to assist practitioners in their SLA management activities. Furthermore, the scarcity of studies focusing on concrete metrics for qualitative or quantitative assessment of QoS in SLAs emphasises the importance of in-depth research on metrics definition and measurements for SLAs.

Keywords: Service-level agreements, SLAs, internet of things, IoT, industrial IoT, IIoT, cloud computing, systematic mapping study.

RFI/ARSSD-2022/225
MINING FREQUENT SEQUENCES USING APPROPRIATE AND EFFECTIVE ALGORITHM

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Abstract- In this paper we present SPADE, a new algorithm for fast detection of Sequential Patterns. The existing results to this case make repeated database scans, and exercise complex hash structures which have poor locality. SPADE utilizes combinatorial properties to decompose the initial case into smaller sub-problems that can be independently solved in main- memory using efficient lattice search techniques, and utilizing simple join operations. All sequences are discovered in only three database scans. Trials show that SPADE outperforms the best former algorithm by a factor of two, and by an order of magnitude with some preprocessed data. It also has linear scalability with respect to the number of input- sequences, and a number of other database parameters. Eventually, we discuss how the results of sequence mining can be applied in a real application domain.

Keywords: Sequential patterns, SPADE algorithm, lattice search.

RFI/ARSSD-2022/226
STUDY AND ANALYZE SELF-SUPERVISION MODIFICATIONS TECHNIQUES

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Abstract - Self-supervised approach can learn to estimate optical flow with any form of occlusions from unlabeled data. Our work is based on distilling reliable flow estimations from non-occluded pixels, and using these predictions to guide the optical flow learning. Our idea illustrates that to create synthetic occlusions by perturbing superpixels. We further utilize temporal information from multiple frames to improve flow prediction accuracy within a simple CNN architecture. The resulted learning approach yields the highest accuracy among all unsupervised optical flow learning methods on Sintel and KITTI benchmarks. The basic idea behind Self-supervised learning is to make a model learn only the important representation of the data from the pool of unlabelled data. In this learning method the models are trained as they can supervise themselves and after supervising they can provide a few labels on the data so that supervised learning tasks can be performed on it. If we are talking about computer vision the supervised learning task can be the simplest image classification task or it can also be semantic segmentation which is a complex task in the computer vision field.

Self-supervised learning has become a prominent approach in pre-training for computer vision. These methods are able to achieve state-of-the-art representation learning with unlabeled datasets. In this thesis, we apply Self-supervised Learning to the object detection problem. Previous methods have used large networks that are not suitable for embedded applications, so our goal was to train lightweight networks that can reach the accuracy of supervised learning.

Keywords: Self-supervised Learning, Object Detection, Computer Vision, Deep Learning, KITTI.

RFI/ARSSD-2022/227
ANALYZING DISASTER RECOVERY USING NATURAL LANGUAGE PROCESSING

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Abstract- This paper presents a new NLP method to facilitate analysis of text corpora that describe disaster recovery. The aim of the method is to allow users to measure the degree that user-specified propositions are expressed within a corpus that describe a disaster recovery process. The semantic measurements output by the method were evaluated through a user study of twenty professional emergency managers. The user study results show that our method can be useful for gaining insight into disaster recovery from a specific event when the method is applied to an appropriate news article corpus and, potentially, large corpora in general. We are encouraged by the potential for future method improvements and its application for after-action learning, recovery decision making, and disaster research. NLP, and specifically semantic matching of large text data, may facilitate unique and novel understandings of disaster recovery; for example, we envision that disaster management researchers and practitioners could use qualitative text data from past disasters to inform pre-event long-term recovery planning or perform exploratory research for generating new hypotheses. Our method might include accounting for larger and smaller passages, especially if this is coupled with more preprocessing, such as finding all expressions that refer to the same entity. While the richer semantic matching models we investigated offer small improvements over the results from just the fast filter, our method should be improved through detecting more than sentence-level entailment. In addition, a more involved user study that includes more significant user training and engagement time is warranted. This study could leverage their assistance in tuning the threshold for determining what candidate sentence score warrants being considered a match, either in a query-specific or general way. Lastly, to ensure utility and credibility of method outputs, it

is important to investigate the effectiveness of visualizations, particularly those that integrate quantitative and qualitative representations interactively.

Keywords: Natural Language Processing, Semantic Matching, Disaster Recovery.

RFI/ARSSD-2022/228

FRAMEWORK DESIGN FOR NETWORK TRAFFIC PREDICTION USING MACHINE LEARNING ALGORITHM

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Abstract - Network traffic analysis is a crucial step in developing efficient congestion control systems and identifying valid and malicious packets. Because network resources are apportioned based on predicted usage, these solutions reduce network congestion. For a variety of reasons, including dynamic bandwidth allocation, network security, and network planning, the ability to forecast network traffic is critical. Machine learning (ML) techniques to network traffic analysis have received a lot of interest. This article outlines an approach for analyzing network traffic. Three machine learning-based methodologies make up the methodology. The experimental investigation employed the NSL KDD data set. On the basis of accuracy and other criteria, KNN, Support vector machine, and nave bayes are compared.

Keywords: Machine Learning, Classification, Prediction, Accuracy, Network Traffic Analysis.

RFI/ARSSD-2022/229

QUANTITATIVE ANALYSIS OF E-COMMERCE APPLICATION AND OPERATION PERFORMANCE IN SMES BASED ON DATA MINING

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Abstract - The development of information technology changes people's consumption patterns, more and more people are starting to accept online shopping, because E-commerce platform has the advantages of convenience, low price and security. In this paper, the author analyze how e-commerce application will effect on small and medium enterprises, by using the data mining method, result shows that e-commerce platform has significant performance in increasing customer and enhancing the brand awareness, more than 77.67% companies agree that application of e-commerce platform can immediately increase orders. The result of factor analysis shows that information quality and service quality is the key factors that will influence the network platform. Therefore, enterprises should strengthen the application of electronic commerce, at the same time; they should also pay attention to the quality of their own network platform.

Keywords: Data Mining, Electronic commerce, SMEs, information quality.