





ICRTMDR-21

International Conference on

Recent Trends in Multi-Disciplinary Research

Hybrid Conference

23nd - 24rd December, 2021 | Maldives



Organized By

Institute For Engineering Research and Publication (IFERP)





4th International Conference on Recent Trends in Multi-Disciplinary Research (ICRTMDR -2021)

Maldives

23rd – 24th December, 2021

Organized By

Institute For Engineering Research and Publication (IFERP)

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MI College, Maldives

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IFERP-Explore

Editorial:

We cordially invite you to attend the 4th International Conference on Recent Trends in Multi-Disciplinary Research (ICRTMDR-21) on 23rd-24th December, 2021. The main objective of ICRTMDR-21 is to provide a platform for researchers, students, academicians as well as industrial professionals from all over the world to present their research results and development activities in relevant fields of Recent Challenges in Science and Technology. This conference will provide opportunities for the delegates to exchange new ideas and experience face to face, to establish business or research relationship and to find global partners for future collaboration.

These proceedings collect the up-to-date, comprehensive and worldwide state-of-art knowledge on cutting edge development of academia as well as industries. All accepted papers were subjected to strict peer-reviewing by a panel of expert referees. The papers have been selected for these proceedings because of their quality and the relevance to the conference. We hope these proceedings will not only provide the readers a broad overview of the latest research results but also will provide the readers a valuable summary and reference in these fields.

The conference is supported by many universities, research institutes and colleges. Many professors played an important role in the successful holding of the conference, so we would like to take this opportunity to express our sincere gratitude and highest respects to them. They have worked very hard in reviewing papers and making valuable suggestions for the authors to improve their work. We also would like to express our gratitude to the external reviewers, for providing extra help in there view process, and to the authors for contributing their research result to the conference.

Since October 2021, the Organizing Committees have received more than 80 manuscript papers, and the papers cover all the aspects in Science and Technology. Finally, after review, about 36 papers were included to the proceedings of **ICRTMDR-21**.

We would like to extend our appreciation to all participants in the conference for their great contribution to the success of **ICRTMDR-21** We would like to thank the keynote and individual speakers and all participating authors for their hard work and time. We also sincerely appreciate the work by the technical program committee and all reviewers, whose contributions made this conference possible. We would like to extend our thanks to all the referees for their constructive comments on all papers; especially, we would like to thank to organizing committee for their hard work.

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Acknowledgement

IFERP is hosting the 4th International Conference on Recent Trends in Multi-Disciplinary Research- 2021 this year in the month of December. The main objective of Multi-Disciplinary Research is to grant the amazing opportunity to learn about groundbreaking developments in modern industry, talk through difficult workplace scenarios with peers who experience the same pain points and experience enormous growth and development as a professional. There will be no shortage of continuous networking opportunities and informational sessions. The session will serve as an excellent opportunity to soak up information from widely respected experts. Connecting with fellow professionals and sharing the success stories of your firm is an excellent way to build relations and be known as a thoughtful leader.

I express my gratitude to all my colleagues, staffs, professors, reviewers and members of organizing committee for their hearty and dedicated support to make this conference successful.

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Rudra Bhanu Satpathy
Chief Executive Officer
Institute for Engineering Research and Publication (IFERP)



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4th International Conference on

Recent Challenges In Multi-Disciplinary Research

(ICRTMDR -21)

Maldives

23rd – 24th December, 2021

Keynote Speakers



Dr. Abdulla RasheedMinister of State for Education
Head of National Institute of Education (NIE),
Maldives

Welcome Message

I would like to cordially invite you to join us this 4th International Conference on Recent Trends in Multi-Disciplinary Research (ICRTMDR-21). It will take place on the 23rd - 24th of December 2021 in Maldives organized by Institute for Engineering Research and Publication (IFERP) in association with the MI College, Maldives. This conference will provide the opportunity and exchange of ideas related with the technology application as well as the challenging issues concerning with the four major fields of academic and industrial research such as: Applied Sciences, Engineering and Technology, Management Studies, and Education & Technology. In addition, this year's conference will attract attendance from all around the world; the keynote speakers are from the topnotch academic institutes as well as leading companies in each industry from all around the globe.

We welcome your participation to come learn, discuss, and enhance your understanding of academia and business in applying technology with the industry experts in scientific research and associated areas; and we look forward to seeing you in Maldives

Sincerely, Dr. Abdulla Rasheed



Dr. Sigamoney NaickerChief Director Inclusive Education,
Western Cape Education Department,
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BIOGRAPHY

Dr. Sigamoney Naicker has worked in many educational roles: teacher, faculty member at the University of Western Cape, Head of Learning Support in Provincial Government, Director of Inclusive Education in National Government, and, now, Chief Director Education Planning in the Western Cape Education Department. He has many publications including, most recently, a chapter entitled Inclusive Education in South Africa: An Emerging pedagogy of possibility (International Paradigms published by Routledge Falmer: London).

Sigamoney was also a National Commissioner on the Committee for Education Support Services appointed by the then President, Nelson Mandela to investigate the state of Special Education during South Africa's transition to a democracy. He is currently Chief Director of Inclusive Education in the Western Cape Education Department. .Dr Sigamoney is greatly respected educationist figure in South Africa and worldwide. Sigamoney is a writer and speaker and his latest book is titled Inclusive Education in South Africa and the Developing World: The Search for an Inclusive Pedagogy. Dr Sigamoney worked previously in the National Department of Education in Pretoria, South Africa as National Director of Inclusive Education. He has assisted in the write up and release of Education White Paper 6 on Special Needs Education: Building an Inclusive Education System in South Africa. He is an important asset in the worldwide education arena. Dr S Naicker believes if we are not good listener the we are total failures in our professional & professional lives. Listening is for happiness, progress and peace.



Yehia Abdel-AzizProfessor of Space Flight Dynamics and Control
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BIOGRAPHY

Yehia Abdel-Aziz is Full Professor of Space Flight Dynamics and Control at Solar and Space Research Department, NRIAG, Egypt. He was the Secretary General of the National Egyptian Committee of Space Research for COSPAR since February 2005 up to 2014. He is the founder of the Spacecraft Charging Laboratory at NRIAG, Egypt. He is leading two different teams working in orbital and attitude control, and Spacecraft charging. He received the B. Sc. Degree in Applied Mathematics (1991) and MSc. in Attitude Dynamics of spacecraft (1998) from Mansoura University, Egypt. In December 2002 he received his PhD in orbital Mechanics from Adam Mickiewicz University, Poland. He is also a Visiting Scholar at Laboratory of Spacecraft Environment Interaction Engineering, Kyushu Institute of Technology (KIT), Japan, UNESP, Brazil and CETP, Paris- France. He published more than 33 papers in reputable journals. His area of interest: Attitude dynamics and control of spacecraft, orbital mechanics, Formation Flying satellite, space Debris and spacecraft charging. He is the PI for three projects and member of other four projects.

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4th International Conference on

Recent Trends in Multi-Disciplinary Research

23rd- 24th December, 2021

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ABSTRACTS

ICRTMDR-21

Maldives, 23rd - 24th December 2021

Mathematical thinking among KS4 (grade 9 and 10) students in Maldives

[1] Aishath Shiunee, [2] Prof Dr Parmjit Singh

[1] National Institute of Education, MALDIVES [2] Universiti Teknologi MARA, MALAYSIA

Abstract

The role of developing Mathematical thinking through Mathematics education is an imperative goal of Mathematics teaching and learning in schools. Various findings across the globe has depicted the notion of poor standard of learning taking place in classroom teaching that to a large extend inhibit students' development of mathematical thinking and various measures has been taken for the countries involved. What about the development of mathematical thinking in Maldives? Thus, this cross sectional study utilizing a quantitative approach was embarked upon with the aim to investigate the mathematical thinking of key Stage 4 (Grade 9 and Grade 10) students in Maldives. A descriptive research design by using a paper and pencil test was administered among 298 samples comprising from both Government Schools and International Schools. The findings of the study showed that the overall KS4 students' mathematical thinking achievement was low with a percentage score of 26.97%. Furthermore, Grade 10 students did not attain a significant high scores than their Grade 9 counterparts as one will expect so based on cognitive growth. The findings suggest that radical efforts are needed to be taken by higher authorities to further curb the erosion of mathematics learning in schools.

Keywords

Achievement, Mathematical Thinking, Non-Routine, Problem Solving.

Maldives, 23rd – 24th December 2021

Impact of Political Influence in Recruitment and Selection Practice; Evidence from Maldives Civil Servants

[1] Muna, Fathmath, [2] S. M. Ferdous, Azam, [3] Albattat, Ahmad

Post Graduate Centre, Management and Science University, University Drive, Off Persiaran Olahraga, Section 13, Selangor, Malaysia

Abstract

Orientation: In developed countries, organizations struggle with staffing challenges and become highly competitive regardless of the increasing number of college graduates. Also, the process of staffing inherent in any organizational performance. There are allegations in the Maldivian Civil Servants that recruitment and selection process is being manipulated by political influence, and employees are hired based on Political Appointee's preference rather than hiring a competent employee.

Research Purpose: The purpose of the study is to analyze how political factors impact the recruitment and selection practices of the Civil Service Organization in the Maldives.

Motivation for the Study: The study determines the allegations drawn from the responses of the study.

Research Design: The quantitative research and Stratified Probability sampling method used in the study. The adopted questionnaire was used to collect data from individual employees in the Civil Service in the Maldives. The pilot study evaluates the reliability analysis and feasibility of implementing a study on larger scale and analyzes factors affecting recruitment and selection practices on the performance of the Civil Service in the Maldives.

Main Findings: As shown from the outcome of the analysis, the results indicate that sometimes leaders use their power to influence the recruitment and selection practice by recruiting, family members and friends in the Civil Service organization. From the reliability analysis of the study Cronbach's Alpha value <0.728 was significant to research the broad aspect. The descriptive and inferential analysis revealed that political influence does impact recruitment and selection practices Even though, the respondents believe that recruitment process is based on Merit-Base System, the service delivered by Civil Servants deemed inefficient.

Practical/Management Implications: The study highlights the fact; HR leaders, Practitioners, HR team, and Policy Makers of Maldives Civil Service Organization need to make fair recruitment and selection decisions to sustain the service quality. If the organization has fair and better recruitment and selection practices employees will be more satisfied to deliver efficient service.

Contribution/Value Add: The finding from this study contributes new understanding to current literature and lays the groundwork for future research on the Civil Service Sector.

Keywords

Civil Servants, Civil Service Organization, Human Resource Management, HR Strategies, Merit System, Organizational Performance, Political Influence, Recruitment and Selection practice

Maldives, 23rd – 24th December 2021

Development of Noise Prediction model for some silence zones of Surat city, using FHWA model

[1] Ramesh B. Ranpise, [2] B. N. Tandel

[1][2] Civil Engineering Department, Sardar Vallabhbhai National Institute of Technology, Surat, India.

Abstract

Urbanization has brought ample opportunities, development, and better living standards but has also contributed to the deterioration of the environment immensely. The transportation sector has seen a tremendous rise, be it private mode or public mode. Adversely and directly affected components of the environment due to increasing traffic is air and noise. Sleeplessness, annoyance, imbalance in the organism's homeostasis, and hearing losses are some of the impacts on living beings. There are many noise mitigation strategies like noise barrier, vegetation cover, alternate noise-reducing parts in vehicles, framing of rules and regulations and others. In the present study, an attempt at developing a noise prediction model was developed using the FHWA model in various silence zones of Surat. The study's main objective is to model noise using various parameters like traffic volume, traffic speed, and other geographical conditions and compare the existing noise conditions with predicted values.

Keywords

Road traffic noise, Noise prediction model, Noise barrier, FHWA

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Maldives, 23rd – 24th December 2021

Assessment Strategies of Teachers for Learners with Special Educational Needs in a Regular Classroom: A Phenomenological Inquiry

Ansona C. Arboiz

Associate Professor at University of Mindanao Tagum College

Abstract

this qualitative-phenomenological inquiry explored the lived experiences of teachers in the assessment strategies for LSEN in a regular classroom in Tagum District. The purpose of this study was to explore and understand the lived experiences of teachers on the assessment strategies for LSEN in a regular classroom and how they face the challenges encountered. Thirteen (13) teachers participated in the in-depth interview and focus group discussion. They were selected using the snowball sampling method. The results revealed the participants' lived experiences, which include the use of differentiated assessments, employing individualized instruction and sense of fulfillment and satisfaction. There are also chief issues emerged in the study namely: difficulty in handling undesirable behaviors, communication problems and lack of training. To address the challenges encountered, they mentioned five ways: collaboration and support, positive attitude and motivation; acceptance, continuous education and modification of assessment. They also cited insights they can share to others: additional proper training for teachers, more assessment tools and materials, background profiling and lessen the number of students in the general education classroom. The result of the study implies that varied assessment strategies should be employed to address the unique needs of LSEN. Assessing and handling both regular, and LSEN is quite challenging for the participants. Hence, the findings suggest using varied assessment to meet the unique needs of the students, send teachers to trainings specifically in assessing LSEN.

Keywords

Classroom assessment, education, Learners with Special Educational Needs (LSEN), teachers.

Maldives, 23rd - 24th December 2021

Factor Analysis of the Influence Factor to Adopt E-voting in Thailand using Structural Equation Model (SEM)

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Abstract

The objective of this study was to determine the factor that influence changes of ballot paper to e-voting in Thailand general election. The mathematical analysis method was applied which is factor analysis: Exploratory Factor Analysis (EFA) for the preliminary model and Confirmatory Factor Analysis (CFA) for the measurement model. Then used Structural equation model (SEM) to evaluate consistency of the model fit. This study examined the e-voting adoption factor according to 12 variances. A total 342 responses were collected. The analysis results of EFA indicate that the factors could be divided into three main groups: Infrastructure consisted of 8 factors, E-participation consisted of 2 factors, and Human capital consisted of 2 factors. Then CFA was confirmed the hypotheses which assessed by convergent validity. Composite reliability and average variance were computed. The result showed that interrelationship of the construct was pass the criteria. The last analysis: SEM was measured the structure model and it fit to conditions. In this regard, all 2 models confirmed that these 3 factors had the impact to Thailand e-voting adoption which the Infrastructure ($\beta = 0.84$) had the highest loading factor, Human capital ($\beta = 0.62$) and E-participation ($\beta = 0.54$) had the same loading factor.

Keywords

E-voting, Factor analysis, Structural equation model.

Maldives, 23rd – 24th December 2021

Fuzzy based an Optimal Strategy for Industrial Appliances with EV Charging-Discharging to Integrate RE and Grid

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Abstract

One of the major problems in the world today is maintaining the balance of the environmental atmosphere. The main objective of this paper is to design an optimal controller that effectively charges the electric vehicles using renewable energy as well as grid that can protect the environmental atmosphere. For this research, a charging-discharging station is considered to interconnect within micro-grid and EVs. The fuzzy controller is designed with intelligent rules to control the charging-discharging of electric vehicles, solar PV energy and micro-grid. The fuzzy rules are developed by using the human thinking in where first priority is to charge the electric vehicles after fulfilling the load demand. After that, extra power is sent to the grid. Thus, 32 fuzzy Rules have been developed for five conditions of any time of the day. Simulation results for different conditions of the day are shown in where fuzzy rules are working properly. The entire system environmentally friendly and does not emit any kind of harmful gases.

Keywords

Energy Optimization, Fuzzy Technique, Renewable Energy (RE), Electric Vehicle (EV), Micro-grid

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Maldives, 23rd – 24th December 2021

Build Back Better (BBB) amidst the Coronavirus Disease (COVID-19): Analysis on Critical Success Factors (CSFs) in Managing Natural Disasters and Facing the COVID-19 Pandemic

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Abstract

A disaster can be viewed, from the project perspective, as a unique public problem to be addressed by stakeholders including the government through appropriate response, recovery, risk reduction and readiness measures. In view of effectively delivering such projects, this paper explores CSFs in the context of post-disaster reconstruction and recovery, as well as certain countries' relative successes in curbing COVID-19. The paper thus aims to examine the elements of disaster and pandemic management to enhance understanding on applicable CSFs. Further, it interrelates the CSFs culled from relevant literature and interprets them with reference to the BBB framework. Results reveal that major dimensions of CSFs can be commonly linked to the three-pronged approach of BBB (disaster risk reduction, community recovery and effective implementation). However, the emerging environment sees political influences and public policy driving community resilience which are not currently highlighted in the framework. The foregoing analysis is not meant to be exhaustive whereas mostly Asia-Pacific countries were considered and the solution to COVID-19 has yet to be realized. Interview with community members and further comparative reviews into the pandemic will help verify the findings and could form the basis of future research.

Maldives, 23rd – 24th December 2021

Mood Based Music Recommendation for a Mall using Real-time Image

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Abstract

Human beings have the natural ability to guess the mood of a person just through their facial expression. This ability is highly valuable to be learnt by a computing device, like computers or robots. Music affects the human emotional core and their memories very deeply, thereby affecting our mood. Similarly, the background music played in malls affects a shopper's behaviour. Customers who listen to music they like, are more likely to have a positive experience. Time becomes more pleasant even if it is spent waiting in line or waiting to speak to a customer service associate. The proposed system is built to give customers a better and more satisfactory experience, which would make them stay longer and purchase more. It also helps the workers to be in a better mood. All leading to an increase in sales in the mall. The system uses the latest crowd image and finds the 2 most common facial moods using a CNN. In the backend, the songs present in the database are classified based on audio and lyrical features. Finally, a playlist of songs is recommended based on a percentage mapping of moods found in facial features.

Keywords

Music Mood Classification, Mood Recognition, Music Mood, Lyrics Mood, SVM, XGBoost, Convolutional Neural Network, CatBoost, GeniusAPI, SpotifyAPI

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Maldives, 23rd – 24th December 2021

Household Diversification: A Village Based Survey in India during the Pre-Covid and Covid 19 Pandemic Era

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Abstract

This research focuses on household diversification in the rural economy. In the rural economy, household diversification is the norm. In rural households, very few people obtain all of their income from one source. Using data from a hamlet in southern India throughout the pre-pandemic (2012) and pandemic (2020) periods. According to a local poll, the majority of males work in the manufacturing industry. According to the majority of households, the pandemic has impacted rural workers' income and jobs. During the pre-pandemic and pandemic periods, mixed households (those with farm and non-farm jobs) were the most common. This article's authors examine the growing trend of household diversification. The number of mixed households is increasing as diversification increases. The current pandemic has impacted the income and employment of rural workers. Mixed households rely on their finances to survive during pandemics. There is marginal rise of depressed caste and dominant caste in mixed households during pandemic period

Keywords

Household Diversification, Rural Economy, Tamil Nadu, Rural Workers

Maldives, 23rd – 24th December 2021

Hybrid User Evaluation Methodology for Remote Evaluation: Case study of Educational games for children during Covid-19 Pandemic

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Abstract

Games learning (G-learning) eases educational process for teachers and learners. In Oman, this technology-based learning makes education more convenient, but its acceptance among students is affected by the students' awareness of it. The appropriateness of games used by Omani children has yet to be assessed. Furthermore, most of these games were developed and presented in foreign languages, and were following western culture. Meanwhile, usability assessments are generally done face-to-face with participants, but due to COVID-19 pandemic, such method is impracticable. Thus, new approaches must be developed for Human Computer Interaction (HCI), in usability evaluations especially. For assuring sufficient usability evaluation at least, a hybrid methodology comprising combined techniques was proposed in this study. The efficiency, effectiveness, and appeal of this methodology were qualitatively tested by selected experts. The obtained results show that the methodology is successful.

Keywords

User evaluation method, remote evaluation, educational games, games learning, Covid-19 pandemic

Maldives, 23rd – 24th December 2021

Language and Identity in Business Writing

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Abstract

Writing is more than a medium of expression. It reveals not only the thoughts and feelings but even the identity of the writer. Therefore, understanding the approach, style, and nature of writing is understanding the writers. In the business world, the entry point is via application letter. Therefore, how do applicants present themselves? How does their writing reveal their identity? In this study, the researcher tried to uncover the features and language used in business application letters and the identity reflected in the research partners' writings through qualitative discourse analysis. Findings reveal that although writers followed the conventional format of writing, their style of expression has changed. Moreover, the respondents exhibited careless use of words and boldness in expressing intentions, which leaves an arrogant personality to those who do not understand their nature as Generation Z. On the other hand, the same communication style depicts an attitude of hopefulness, openness and willingness to learn, patience and politeness. The study recommends that the writing teachers' pay close attention to the content and embedded messages in the students' writing, considering that writing is both technical activity and a social representation.

Keywords

business correspondence, discourse analysis, linguistic identity, writing.

Maldives, 23rd – 24th December 2021

Evaluation of E- Learning Method as a Mean to Support Autistic Children Learning in Oman

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Abstract

Children with Autism require more attention and care from their peers, particularly those who are active in their schooling. There are far fewer online learning programs and materials available for schooling children with Autism Spectrum Disorder. However, because the use of technology can aid in the education of autistic children, e-Learning systems are one of the areas of inquiry that should be included in autistic children's education in Oman. This study intends to determine the existing state of educational support for autistic children in Oman, as well as to provide a specific solution to aid in the education of autistic children. Because quantitative approaches are appropriate for this type of research, a questionnaire survey was utilized to gather the necessary data. The researchers discovered that impairment in social contact is one of the main challenges faced by autistic children in their daily lives, based on the information received from the Oman questionnaire and the findings of the literature study. Furthermore, these children had moderate autism. There is a shortage of schools, centers, and employees who are meant to be trained to educate autistic children, according to the findings. The findings of this study suggested that a specific e-Learning system be designed and implemented in Oman to support autistic children, which would give them with rapid support under the supervision of the surrounding community, regardless of their background or specialty.

Keywords

E-Learning, Children with Autism, Teaching Environment, Communication, Educational Basics.

Maldives, 23rd - 24th December 2021

The Impact of Machine Learning on Educational Institutions: An Empirical Study

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Abstract

To be successful in today's competitive world, an institute must be able to predict student performance, classify people according to their abilities, and work to enhance that performance in future assessments. Prior to starting a course, students should be told to concentrate their attention on one specific subject area. An institute may be able to lower its failure rates with the support of research like this. Based on their past performance in similar courses, this research predicts students' success in a given course. A strategy to finding hidden patterns in large amounts of existing data known as machine learning is involved. These patterns could be beneficial for research and forecasting purposes in the future. In the realm of education, education data mining is a collection of data mining applications that are put to use. Data from students and teachers is analyzed by these applications. The results of the study could be utilized to make classifications or forecasting of performance. Researchers are investigating machine learning techniques such as C4.5, Naive Bayes, and SVM. UCI machinery student performance data is used in the experiment. The accuracy and error rate of algorithms are used in the evaluation of the effectiveness of the algorithm.

Keywords

Learning Analytics, Deep Learning, Educational Data Mining, Machine Learning, Student Performance, Classification, Prediction

Maldives, 23rd – 24th December 2021

Linguistic Identity of Conference Messages in the Philippines

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Abstract

Writing is an expression of oneself. Hence, it becomes an avenue in constructing identity. This study explored the structure of the conference messages, examined the linguistic features that characterized a certain group of writers, and explained how identity gets constructed using linguistic features. Discourse analysis was used in the analysis of 246 messages from different international conference programs held in the Philippines. The messages are revealed to be structured in an introduction-conference details-closing structure, which resembles a linear writing pattern. The linguistic features characterize such as the lexical bundles provided immediate clues that serve as essential means in facilitating discourse processing and producing with ease. Metadiscourse markers empowered the writers to express themselves as authorities while guiding the readers towards a clear, fluid, and engaging discourse. The linguistic styles such as code-switching, the language of religion, polite expressions, and positive tone reflected the distinct ways of expressing ideas. Moreover, the other linguistic elements, including deictics, the generic pronoun 'all,' and addition and reiteration, strengthened clarity and inclusiveness in the discourse. In conclusion, linguistic features in the conference messages were instrumental in constructing a clear, interactive, inclusive, religious, polite, and positive linguistic identity.

Keywords

construction, discourse analysis, linguistic identity, language features

Maldives, 23rd – 24th December 2021

Effective Tax Planning and Stock Crash Risk

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Abstract

Firms design tax planning strategies to generate a lower payment; indirectly, the results stimulate higher valuation because of lower non-capital expenditure. In mainstream research using developed market data, tax planning stimulates crash risk because the activities are considered to hide bad news and information asymmetry to investors. Using Indonesia stock exchange data, one of the emerging stock markets, firms with effective tax planning strategies tend to have less crash risk. However, when firms report higher profitability, tax planning generates a higher probability of future crash risk. Our findings contribute to behavioral aspects in the stock market and taxation.

Keywords

behavior, crash risk, stock market, tax planning

Maldives, 23rd - 24th December 2021

China's Digital Silk Road Project in Myanmar

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Abstract

China's Economic Expansion to other countries is not only a conventional economy but also information technology. This study examines China's breakthroughs in Myanmar's technology and information sector, examines the international debate on Chinese technology, and advises Myanmar on what to watch out for. Digital Silk Road (DSR) was officially introduced by the Chinese government in 2015 as part of the Belt and Road Initiative (BRI) or One Belt One Road (OBOR). Chinese digital company Huawei has four main operations in Myanmar: Carrier Business Unit, Business units, Consumer Business Units, and Cloud Business Units. Myanmar must weigh the potential benefits of cooperating with China, as well as the potential downsides. There is an urgent need for the Government of Myanmar to adopt a digital policy in identifying and preventing various cyber disturbances and non-military threats.

Keywords

Digital Silk Road, Myanmar, Non-Military Threats, Cyber.

Maldives, 23rd – 24th December 2021

Policy Analysis of Primary School Education Management Standards in Indonesia

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Abstract

This study explores the analysis of management standards for primary school education in Indonesia and the analysis results. This research is qualitative research with a SWOT analysis approach consisting of (1) strengths, (2) weaknesses, (3) opportunities, and (4) threats. The subject of this research is the Minister of National Education Regulation Number 19 of 2007, which regulates the National Education Standards in Indonesia. The analysis results found several things regarding the management standard's strengths, weaknesses, opportunities, and challenges. Therefore, it is necessary to define several critical steps in primary school education management standards in Indonesia. The stages consist of: (1) school leadership, (2) effective school leadership, (3) standards of school principals in Indonesia, (4) management and information systems, and (5) legal basis for management information systems. Of course, implementing the five critical steps in the management standards of primary school education in Indonesia requires adequate supervision and guidance from various parties to achieve standardizing education management ideals in Indonesia.

Keywords

Policy Analysis, Standard Management, Primary School Education.

Maldives, 23rd - 24th December 2021

A Simulation Method to Reduce Traffic Congestion at Signalized Road Intersection

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Abstract

A fine traffic flow is one of the parameters of good traffic management, including in regulating traffic flow at intersections. Setting the duration of time at traffic lights at intersections must be perform accurately in accordance with traffic density, to create a smooth and balanced traffic flow in terms of queue length and waiting time experienced by all vehicles. Some of the problems that often occur at traffic intersections are long queues on one of road section but do not occur on the other roads. This condition occurs due to improper traffic light settings. In this article, we propose a method to be able to provide a precise setting for traffic lights. The method used is to test the time duration of the red and green traffic lights through simulation using the MATLAB SimEvents Toolbox. Through this method, it is possible to predict the exact duration of traffic lights based on the arrival of vehicles on the four lanes. Timing is considered optimal, if each path experiences a system waiting time in a balanced system.

Maldives, 23rd – 24th December 2021

Near infrared hyperspectral imaging for predicting water activity of dehydrated pineapples

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Abstract

Water activity (aw) of dehydrated pineapple is one of the most important quality factors that must be determined in the routine operation of a factory. A non-destructive technique for detecting aw of dehydrated pineapples in the factory is required. Near infrared hyperspectral imaging (NIR-HSI) that has previously been shown to be a possible non-destructive, rapid, accurate and robust method was used in this study. The model for aw was established using partial least square regression (PLSR). Spectra in the wavelength of 935–1720 nm of samples were measured by using NIR-HSI and preprocessing methods tested before model establishment. The accuracy of the prediction model for aw gave a correlation coefficient of prediction (Rp) of 0.72 and root mean square error of prediction (RMSEP) of 0.0054. Results showed that NIR-HSI could possibly be used for determining aw of dehydrated pineapple non-destructively and could be incorporated into the production process for online grading in dehydration factories.

Keywords

fruit, spectra, model, quality, non-destructive

Maldives, 23rd - 24th December 2021

Non-destructive prediction of pineapple fruit firmness using NIR-HSI

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Abstract

Texture, and particularly firmness, is an important and commonly used indicator of internal quality and ripeness of fruit. An objective method of measuring firmness would be beneficial in achieving quality control and reducing costs in fruit marketing, especially for export. Reflectance near infrared hyperspectral imaging (NIR-HSI) has been used as a nondestructive method for this purpose and was tested on predicting the firmness of pineapples. The spectral data, using NIR-HSI, and firmness, using a texture analyzer, were tested on 120 pineapples in order to develop a calibration model using partial least squares regression (PLSR). Samples were divided into a calibration set (N = 80) and a prediction set (N = 40) for establishing and testing the model, using the best method from spectral pretreatments was by multiplicative scatter correction (MSC). The accuracy of the model had Rp and RMSEP of 0.77 and 0.15 kgf, respectively indicating that there was good correlation between NIR-HSI and texture analyzer measurement showing that the model could be used for screening intact pineapples for firmness nondestructively.

Keywords

absorbance, model, spectrum, fruit, calibration

Maldives, 23rd - 24th December 2021

Detection of Adulteration of Alcoholic Beverages Using Near Infrared Hyperspectral Imaging

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Abstract

Adulteration of alcoholic beverages creates problems to both commerce and consumers. A rapid, accurate and reliable technique for detecting the adulterated of alcoholic beverages would be highly beneficial. Near infrared hyperspectral imaging (NIR-HSI) in the wavelength range of 935-1720 nm was tested in order to predict the adulteration in alcoholic beverages by quantitative and qualitative analysis. Denaturalization of an alcoholic beverage, using a blend of ethanol with isopropyl alcohol (EI), was tested as an adulterant in this study. It was added into an alcoholic beverage at various percentages. For quantitative analysis, partial least squares regression (PLSR) was used to develop the calibration model for predicting the percentage EI in the adulterated beverages. Smoothing spectral pretreatments were tested for establishing the calibration model. Accuracy for EI prediction gave a correlation coefficient (Rp) of 0.852 and root mean square error of calibration (RMSEP) of 18.25%. For qualitative analysis, partial least squares-discriminant analysis (PLS-DA) was used to develop the classification model for discriminating the pure alcoholic beverages from the adulterated alcoholic beverages. The smoothing and standard normal variate transformation (SNV) spectral pretreatment was used for establishing the classification calibration model. Accuracy of classification using leave-one-out cross-validation (LOOCV) was 90.71%. Therefore, it was concluded that NIR-HSI has potential to be used for both the prediction of EI in adulterated alcoholic beverages as well as the level of contamination.

Keywords

calibration, prediction, model, quantitative, qualitative, isopropyl alcohol

Maldives, 23rd – 24th December 2021

The Impact of Covid 19, Rupiah Exchange Rate, and SBI Interest Rate on IDX

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Abstract

This study aims to investigate the effect of Covid 19, Rupiah Exchange Rate, and SBI Interest Rate on Indonesia Stock Exchange (IDX). The data analysis was performed using multiple linear regression. Data collection techniques are carried out by processing data that has been published by Bank Indonesia. The results showed that Covid 19 and SBI Interest Rate did not influence IDX. Meanwhile, Rupiah Exchange Rate positively affected on IDX. This study contributes to understanding the macroeconomic factors that affect on IDX in developing countries such as Indonesia during the financial crisis period caused by the Covid 19 pandemics. Thus, this study as a reference for the Indonesia Government in making policies concerning to IDX problem. This study only revealed three variables as determinants of IDX. The next studies should consider more variables such as inflation, gross domestic product, and the amount of money in circulation. Secondly, the future studies should consider other methods of OLS difference one model can be used to predict well the IDX.

Keywords

Rupiah Exchange Rate, SBI Interest Rate, Covid 19, IDX

Maldives, 23rd – 24th December 2021

Development of Spa Service Model in the Southern Thailand Border Context: A Case Study of Elderly in Yala Province

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Abstract

The objectives of this research and development were to investigate the needs in spa service model, to develop spa service model, and to determine an effectiveness of the developed spa service model for the elderly in the southern Thailand border in Mueang District, Yala Province. The research underlying on the premises in consumer's behavior theory 6W's and 1H as well as 7P's integrated marketing concept was conducted in three phases; 1) survey phase, 2) model development phase, and 3) evaluation phase. The results indicated that four important aspects included in the developed model of spa service. The first is process of quality and standard which entail a standard training certification of personnel's quality service, availability of safety deposit boxes for customers' valuable belongings, allocation of male and female service staffs, and availability of disposable panties. The second is different products in spa business and service for elderly customers which concern sound therapy, Ayurvedic medicine, massage therapy, meditation, hydro therapy, body massage, body scrub, body mask, mineral water bath, milky bath, head massage, and massage for disposing of cellulite. The third is expenditures on daily, weekly, monthly bases. And, the last is a quality, clean, and safe place of service. A relaxing and peaceful atmosphere with decoration of trees can support a sense of relaxation to elderly customers. The results also showed that an overall effectiveness of the developed spa service model was at a high level (M=4.29, SD=0.36).

Keywords

Development of Spa Service Model, Spa Service for Elderly, the Southern Thailand Border

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Maldives, 23rd - 24th December 2021

Top Technological Trends in Fintech and Their Impact on the Financial Sector

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Abstract

Fintech describes the technologies that seek to enhance and automate the delivery of financial services in the finance industry. At its core, fintech is used to help the financial sector better manage its financial procedures and operations by leveraging the specialized algorithms and software used in smartphones and computers. With the constant rise in technological innovations every year, the fintech industry has become the fastest-growing industry in the world. During the coronavirus in 2020, the digital transformation went to new heights as people shifted towards easier options that meet their financial needs. Fintech apps have helped improve customers' access to financial services at their comfort, but their demand is not yet over and continues to increase, further welcoming new technology trends that help to shape the industry. With many people moving towards digital solutions to manage their financial needs, stiff competition among financial institutions is expected to increase. Furthermore, banks and other financial institutions are adopting new ways to improve their banking experience. As a result, they have had to jump on the latest fintech trend to help them sustain a competitive advantage. The paper addresses major fintech trends, including Artificial Intelligence, blockchain, and partnerships, their benefits, and their impact on the finance industry.

Keywords

Fintech, Artificial Intelligence, Blockchain, Biometrics, Crypto market, Voice Banking

Maldives, 23rd – 24th December 2021

Social media activism and offline campaigns in the fight against domestic violence in Ghana. A study of selected activists on Facebook

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Abstract

An emerging area concerning social media is how it can be used to champion a social cause through activism. Social media has demonstrated the potential for mobilising attention and accountability to women's rights and challenging discrimination and stereotypes. Also, social media has proven to be a powerful vehicle for bringing women's rights issues to the attention of a wider public. This study seeks to explore how social media activisms and "offline" campaigns can be used in the fight against domestic violence in Ghana. With the use of cyber ethnography, interviews, and theories like the social capital, social network theory and the resource mobilisation theory, the usefulness of social media (Facebook) in amplifying the atrocities of victims of domestic violence was investigated. Purposive sampling and snowballing were the two major types of sampling used to arrive at seven activists who were interviewed and observed on Facebook. Social media was identified as an avenue for victims to vent, this offered them the opportunity to tell the whole world what they are going through. Also, the activists noted that the content of their posts on Facebook has been able to educate people on domestic violence. Facebook offers a ground for activists to network and share ideas on how to assist victims who reach out to them. Funding for activism was one interesting area that emerged in this study. This is when the activists can use SM space to raise money and other resources needed to boost the particular cause they are working on.

Keywords

Social media, Activism, Social capital, resource mobilisation, domestic violence

Maldives, 23rd - 24th December 2021

The Employment of the Doctor of Education Graduates in a University of Ilocandia

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Abstract

This study described the employment of the Doctor of Education (EdD) graduates of a University in Ilocandia, and to established changes in employment status, level of satisfaction on the state of school-related factors, graduates' views on the program's relevance, identified the problems encountered, and solicited feedbacks and recommendations to improve the program. This study used the descriptive survey method of research and utilized a questionnaire. Frequency, mean, and percentage were the statistical tools applied.

Findings of the study revealed that all the EdD graduates were permanently and gainfully employed primarily in the public schools both basic and higher education, within and outside Ilocos Region. Many of them were promoted with substantial number occupying administrative positions, and claimed with high relevance to their profession. The graduates are highly satisfied with the EdD curriculum, faculty and facilities, but not satisfied with the adequacy of reading materials and availability of ICT resources. Time management with various demands of graduate school classes, employment, family, and other social commitment was the greatest challenge to the graduates. They recommended implementing learning strategies such as but not limited to offering online courses and integrating flexible learning modalities, authentic and outcomes-based activities, and curriculum updating to improve the program.

Maldives, 23rd - 24th December 2021

Importance of Discourse Competence in Tourist Guides' Activities in Uzbekistan

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Abstract

The article discusses the discursive nature of Spanish-speaking Uzbek guides in tourism which plays an important role in the economic development of Uzbekistan.and their role in the process of oral communication. Discourse concepts and the scientific ideas of leading scholars are used to explain the author's attitude to Uzbek culture and its reflexion in their activity.

Keywords

Uzbekistan, Samarkand, tourism, education, discourse, discourse studies, speech, guide, interpreter, speaker and listener, discouse marker

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Qur'anic Terminology on Human Sense, Rational and Intuitive Potency

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Abstract

This study aims to analyze the terminology of the Qur'an about human potential. This Study is designed in the form of library research or library research that uses various library sources as a source of research data. The data studied were sourced from the Qur'an, books and research results of Muslim scholars and scholars. The data analyst used the text analysis method. The results of this study are: First; The potential of Human Sense, mentioned in the Qur'an with three terms al-sam'u repeated 185 times, al-bashr repeated 139 times, and al-dhuq, repeated 48 times. Second, the potential of reason, etymologically, the term "aql" is mentioned in the Qur'an more than 49 words, which are collected in dzakara, faqiha, 'alima, tadab bara, tafakkur and Ulul al-Bab. Third, the potential of the heart, the mashdar form of the root qalaba-yaqlibu-qalban which means trun. The Qur'an uses the term heart to refer to the human heart, but the heart or heart In the Qur'an the word heart is mentioned 122 times spread over 45 letters and 112 verses, collected in the terms qalb, shadr, lubb, and fu'ād.

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Fault diagnosis via thermal modeling of Surface Inset **PMSM**

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Abstract

This paper reports the thermal analysis of surface inset type permanent magnet synchronous motor (SI-PMSM) having variation in winding configurations and different winding encasing materials with water coat cooling. Using lumped parameter thermal network (LPTN) models, the thermal performances of two design cases are analyzed and compared. The heat transfer modeling in water coat channel, motor air gap and stator slot is conferred. It is observed that SI-PMSM with concentrated and distributed winding exhibit different thermal constraints and different winding casing material has distinct impact on thermal performance of two winding configurations. This study idealizes the impact of winding configurations over thermal performance of the motor and also helps to diagnose the faulty part in the motor.

Keywords

SI-PMSM, finite element analysis, LPTN, water cooling.

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Exploration of factors of Information Communication Technology (ICT) in the Socio- economic Development of Nagaland, India- A Citizen Perspective

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Abstract

Information Communication Technology (ICT) in recent years is acting as a vital force in the socio-economic development of a Country. The potentiality of ICT impacting many activities like-economic, social, education, healthcare, productivity, poverty alleviation can be observed in extant literature. However, the direction and magnitude of the impact of ICT on socio- economic development have not been examined elaborately and statistically in particular to the North-Eastern part of India. Thus, this study attempts to fill the gap by emphasising on ICT driven socio-economic development from the perspective of a developing country. The theoretical model adapted from the works of Palvia et al. (2018), which was influenced by Madon (2000) conceptual design was used to achieve the objectives of this study. A principal component analysis (PCA) was performed at first to extract the factors, and later through confirmatory factor analysis (CFA), the construct reliability was calculated on a separate sample. This study also examines the extent of the impact of ICT on socio-economic development by fitting a structural model. The findings suggest that the empowerment factor of ICT has the highest predictive capability of socio-economic development in the State of Nagaland, followed by the social contact factor. However, the complementary potential of ICT in the economic transformation can be adequately exploited, provided the State government brings out the cuttingedge policy on entrepreneurship through setting up of micro and small- scale units preferably agro-based and servicebased. Thus, the policymakers need to give more emphasis on ICT to significantly speed up the overall socio-economic development and inclusive growth in the State of Nagaland.

Keywords

ICT, Socioeconomic Development, Empowerment, Economic Transformation.

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Preliminary Study on Degradation Efficiency of Expanded Polystyrene by Pseudomona Flourescens

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Abstract

The following work is a preliminary investigation that aimed to calculate the efficiency of Pseudomonas fluorescens in expanded polystyrene degradation, developing a biological treatment system; in order to reduce the time degradation and the environmental impacts by this residue. P. fluorescens bacteria initially the two means of liquid culture, meat broth (nutrient) and distilled water was inoculated; where three types of assemblies, aerobic, anaerobic and anaerobic to above ambient temperature worked. The selected material were 6 grams of a sheet and a plate of expanded polystyrene for food. As a result it was found that 67% of the samples the biodegradation process developed by the action of the bacterium P. fluorescens, the process being effective in assemblies whose temperature was maintained at an average of 28 ° C, developing a means of alkaline pH neutrally.

Keywords

Biodegradation, Polystyrene, Pseudomonas fluorescens

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Project-Based Implementation Case of Hospitality Project at Vocational High School

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Abstract

Vocational High School (SMK) as institution for developing students' skills and technical competencies which is different with other regular high school that aim to equip students with more general administrative skills and competencies. In understanding the vocational competence depend on the regional and situational environment where the vocational high school is located. This relates to the potential of the area where the vocational high school is located to support learning and the success of the school's vision and mission. Situational analysis such as industry potential, the natural resources availability can be benefitted and further developed into project of product or service of the school to increase its practical competencies as well as becoming source of income. In this project, SMKN 4 Samarinda applies social media and digital marketing media to promote, event organizers and hotel publications run by the school. This study also examined the application of entrepreneurship in the development of project event organizers and hotel launching through digital marketing. The study used a qualitative approach with interview, observation and documentation studies at SMKN 4 Samarinda, East Kalimantan Indonesia. Meanwhile, the analysis technique uses the SWOT analysis technique and the Boston Consulting Group (BCG) Matrix analysis technique. The results of the study show that the Project of School Development Program following stages of careful planning, continue with two months of project implementation and last stage was the evaluation of the implementation. The project in developing the hospitality service was using social media marketing to promote the service to public and customers. Facebook, Instagram and WhatsApp alumni groups were among the social media created to support the promotion of the project.

Keywords

Hotel Launching, Event Organizer, Vocational High School, Social Media Marketing

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Effects of Virtual iRest Yoga Nidra Programme on Depression, Anxiety, and Stress of Sedentary Women during the Second Outbreak of Covid-19

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Abstract

People with healthy mental health are frequently sad, ill, furious, or unhappy, and this is a natural part of living a complete life. Despite this, mental health is frequently viewed as a purely positive state characterised by emotions of enjoyment and a sense of control over one's surroundings. The coronavirus pandemic of 2019 (COVID-19) outbreak affected overall well-being status of people. The focus of this research was to see the effects of short virtual training of iRest yoga programme on depression, anxiety, and stress of sedentary women during the second outbreak of Covid-19. In this study, all sedentary women were assigned to intervention group. Mindfulness training is one holistic method to supporting mental wellness. iRest Yoga Nidra is a mindfulness-based supplementary and integrative health therapy. A descriptive survey design with a pre- and post-intervention period was adopted. Participants took a DASS 21-item questionnaire comprising of three validated instruments: stress, anxiety, and depression, before and after experiencing iRest meditation. For the intervention group, the Virtual iRest Yoga Nidra (ViRYN) Programme was delivered online for 6 weeks. After data analysis, the study's findings revealed that the intervention group improved when compared to base line. The findings suggest that the Virtual iRest Yoga Nidra (ViRYN) Programme may be one of the most effective programmes for improving Depression, Anxiety, and Stress of sedentary women during the Covid-19 Crisis.

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Corporate Governance and Earnings Management: Evidence from Canada

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Abstract

This paper investigates the relation between corporate governance and earnings management in the Canadian setting characterized by ownership concentration in the hands of large shareholders and a separation between ownership and control. We find that earnings management decreases with the level of cash flow rights of the largest ultimate owner and increases with the magnitude of separation between its control and cash flow rights. Earnings management is higher in firms controlled through pyramidal structures and multiple classes of shares, and lower in firms where there is a second ultimate owner with sufficient bargaining power vis-à-vis the largest ultimate owner. Finally, earnings management is higher in family controlled firms. Our results highlight the importance of firm-specific corporate governance in determining earnings management.

Keywords

Earnings Management, Ownership Structure, Corporate Governance, Accruals

Maldives, 23rd – 24th December 2021

Fractional Order Systems and Its Applications: A Review

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Abstract

Analysis of various systems with different complexities present in power system, control system, communication system, power electronics etc. depends on electrical circuit theory. Classical circuit theory revolves around integer order model. The applications of integer order electrical circuit in different fields of science and technology are well known to all of us. Now-a-days, fractional order systems, involving non-integer order differential equation, has gained a lot of interest due to its more accurate analysis as compared to an integer order analysis in various fields of science and technology. Fractional order systems are those which involves integration and differentiation of arbitrary order. Fractional order circuits are those which comprises of fractional order circuit element. The development of fractional order components for circuit design and fractional order circuit analysis has been an ongoing process for a long time now. Many authors have presented various works on fractional electrical components and fractional order electric circuits. In this paper, we have presented a review on fractional order elements.

Keywords

Fractional order elements, fractional calculus, fractance, fractor, fractional RC circuit, fractional RL circuit.

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Effect of Biodegradable Detergents on Water Quality

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Abstract

This research was conducted to study the chemical and biochemical contribution by the addition of biodegradable detergents when used in laundry processes which are discharged as contaminants to domestic wastewater. Three types of commercial detergents were selected (A, B, C) with different specifications in terms of biodegradability in which laboratory analyses were developed with water from the washing process to study representative parameters such as DBO5, DBO21, DQO, phosphates, pH, salinity, dissolved solids, and surfactants. The results indicated that in the use of non biodegradable detergents there was a decisive increase in the concentration of surfactants, conductivity, phosphates and dissolved solids in wash water compared to biodegradable, while changes were found little variables in the other chemical parameters. It could also be considered that only two detergents obtained the percentage of biodegradability according to the proportion given by the ratio DQO/DBO21 and DBO5/DQO. The highest concentrations of contaminants reflect the non-biodegradable detergent, which also leaves a concern for the content of phosphates and high concentrations of surfactants, in addition to being the highest commercial consumption.

Keywords

surfactants, biodegradability, detergents

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