PROCEEDING OF INTERNATIONAL CONFERENCE 2024

HYBRID EVENT

25th – 26th December 2024

Organized By



Co-organized by



Publisher: International Institute for Technology Education and Research (IITER)

Copyright © 2024 International Institute for Technology Education and Research (IITER)

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system or transmitted in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, without the prior written permission of the publisher.

This edition is produced in India and is intended for worldwide distribution. However, no part of this publication may be exported without the prior permission of the publisher, International Institute for Technology Education and Research (IITER).

Editorial

We are delighted to extend a warm welcome to all participants attending the International Conference 2024 on 25th – 26th December 2024. This conference provides a vital platform for researchers, students, academicians, and industry professionals from all over the world to share their latest research results and development activities in multidisciplinary fields. It offers delegates an opportunity to exchange new ideas and experiences, establish business or research relationships, and explore global collaborations.

The proceedings for International Conference 2024 contain the most up-to-date, comprehensive, and globally relevant knowledge across various disciplines. All submitted papers underwent rigorous peer-reviewing by 2-4 expert referees, and the papers included in these proceedings were selected for their quality and relevance to the conference. We are confident that these proceedings will not only provide readers with a broad overview of the latest research results but also serve as a valuable summary and reference for further studies.

We are grateful for the support of many universities and research institutes, whose contributions were vital to the success of this conference. We extend our sincerest gratitude and highest respect to the professors who played an important role in the review process, providing valuable feedback and suggestions to authors to improve their work. We also appreciate the efforts of the technical program committee, reviewers, and authors for their dedication.

Since October 2024, the Organizing Committee has received more than 55 manuscript papers, covering various aspects of multidisciplinary research. After review, approximately 26 papers were selected for inclusion in the proceedings of International Conference 2024.

We thank all participants for their significant contribution to the success of the conference. Our gratitude extends to the keynote speakers, individual speakers, technical program committee, reviewers, and the organizing committee for their efforts in making this conference a reality.

Acknowledgement

The International Conference 2024, was successfully held in $25^{th} - 26^{th}$ December 2024. We extend our heartfelt gratitude to our colleagues, staff, professors, reviewers, and members of the organizing committee for their unwavering support in making this conference a success.

We would also like to thank all the participants who traveled far and wide to attend this conference and those who attended the event virtually, making it a truly global event. This conference provided a platform for students, professionals, researchers, and scientists to share their latest research and developments in various disciplines.

The aim of the conference was to promote research and development activities and to encourage scientific information exchange between researchers, developers, professionals, students, and practitioners from all around the world. Once again, we thank everyone who contributed to making this conference a resounding success.

Dr. Robert Taylor President International Institute for Technology Education and Research (IITER)

Contents:

New Distribution and Its Applications in Lifetime Data......1

Dr. Sihem Nedjar

Juan Francisco Martell Caldera

- Farid Elbamtari
- Etibaria Belghalia
- Mhamed Elbouhi
- M'barek Choukrad
- Abdelouahid Sbai
- Khalid Elkamel
- Mohammed Bouachrine
- Tahar Lakhlifi
- Mohammed Aziz Ajana*

- Mohammed Bouachrine
- Mohamed Ouabane
- 🚸 Khadija Zaki
- Hanane Zaki
- Chakib Sekkate
- Abdelouahid Sbai
- Tahar Lakhlifi

Magdalena Sabbas

Winslet T.Y. Chan

- Danielle Chang
- Xueyu Zhao

Evaluating the Impact of a Training Program for Early Childhood Caregivers: Advancing Diversity and Inclusion in After-School Programs		
Roni Amit		
Effects of Physical and Mental Function Activation Qigong Intervention on Promoting Physical Fitness Benefits		
✤ Mei-Er Liao		
I-Fei Chen		
Shao-Hsi Chang		
✤ Wei-Chih Lai		
The Impact of the Universal Design Learning Model on Inclusive Education at CUHK12		
 Vivian Lee 		
Students-as-Partners (SaP) Model in Teaching and Learning at CUHK13		
✤ Vivian Lee		
Securing Payment Transactions in a Connected World - lot14		
Kishore Bellamkonda Sunderajulu		
A Data Mining Approach to Market Basket Analysis using the Apriori Algorithm and Association Rule Mining15		
♦ A. Mohammed		
Dr. M.K. Ahmed		
Dr. B. Modi		
Dr. H. Musa		
 U. I. Ismail 		
Estimating Residential Natural Gas Demand and Consumption: A Hybrid Ensemble Machine Learning Approach16		
✤ Mohammed Ajuji		
♦ Ahmed Mohammed		
Muhammad Dawaki		
Abuzairu Ahmad		
GAS Model: A New Hybrid Deep Learning Method for Enhancing Phishing URL Detection17		
💠 Hajara Musa		
♦ A.Y Gital		
Ahmed Mohammed		
🚸 Usman Ali A		
Indoor Spatial Elements and Health Outcomes in Urban Older Adults: A Systematic Literature Review		
Yu-Wei Yu		

Yi-Kai Juan*

Enhane Coil Ur	cing Building Energy Efficiency Through Integrated Thermal Energy Storage and Fan hit Cooling Systems in Hot Climate
*	Haggag, M.*
*	Masood, U
*	Hassan, A.
4000 C Conce	ases of Penis and Glans Enlargement with Hyaluronic Acid Injections: Introducing the pt of Functional Penoplasty20
*	Daniel Drai MD
Effects and Pre	of VOC Emissions on Health and Safety of Ship Personnel in Crude Oil Tankers: Risks otective Measures
*	Hazal Kahraman
*	Turgay Battal
Starch Sorghu	by-Products Digestion from Sorghum Algerian Cultivars with a Great Potential for Im in Livestock and Animal Feeds22
*	SOUILAH Rachid
*	BELHADI, Badreddine
*	KHOUDJA, Elkhalil
*	BEN EL AAKRI, Sara
*	DJABALI, Djaffar
*	NADJEMI, Boubekeur
Flexural Loaded Joints for the Aerospace Industry	
*	Ferhat Kadioglu
Green Charac	Synthesisof AgNPs Using Medicinal Himalaya Fern (Thelypteris Erubescens): Structural sterization, Effect on Seed Germination, and Antimicrobial Function
*	Sadaf Kayani*
*	Tijen Demiral Sert
*	Syed Abidulla
*	Kamran Iqbal Shinwari
*	Salma Kousar
*	Semra KILIÇ
From E Family	Bad Bosses to Broken Marriages: Exploring the Impact of Abusive Supervision on Work- Conflict and Intention to Divorce
*	Issam Ghazzawi, Ph.D.
Value (EUDR a	Chain Analysis of Thai Rubber Products Exported to the European Union: Readiness for and Potential for Profit Growth
*	Nattapa Prathansong
*	Thanakorn Poungpaka
Biology and Beneficial Microbes	
*	Mahsa Talebzadeh

Abstract

New Distribution and Its Applications in Lifetime Data

Dr. Sihem Nedjar

National Hight School of Technology and Engineering, LTS laboratry, 23005, Annaba Algeria

Abstract:

This The paper proposes a recent version of compound Poisson distributions named Poisson gamma Lindley (PGaL) distribution by compounding Poisson and gamma Lindley distributions. Some properties of the distributions are given with estimation and some illustrative examples.

Keywords:

Lindley distribution, Poisson distribution, Poisson Lindley distribution, gamma Lindley distribution, maximum-likelihood estimation

Accelerated Expansion of the Universe in Bounce Cosmology

Juan Francisco Martell Caldera

University of Guadalajara, Mexico

Abstract:

The standard cosmological model faces several fundamental challenges, one of which is the problem of the initial singularity. In response, new alternative models, such as bouncing cosmology, have been developed to address this issue. In this work, we analyze the accelerated expansion of the universe within the framework of bouncing cosmology using the modified Friedmann equations. We establish a comparison between the descriptions of the universe in both the standard cosmological model and the bouncing model. The study focuses on deriving the dynamic equations for the scale factor that approximates our universe, and the equations for the decelerated expansion behavior, with no significant differences observed between the two models in the present era. This indicates that the bouncing cosmology model can provide a viable alternative to the standard model, at least in the current cosmic phase. This research was conducted in collaboration with Dr. José Edgar Madriz Aguilar and supported by the University of Guadalajara.

25th – 26th December 2024

Histone Deacetylase (HDAC) Inhibitors as Potential Antivirals. In-Silico Study Based on Molecular Docking, Pharmacokinetics/Toxicity, and Molecular Dynamics

Farid Elbamtari

Molecular Chemistry and Natural Substances laboratory, Faculty of Science, Moulay Ismail University of Meknes, Morocco

Etibaria Belghalia

Molecular Chemistry and Natural Substances laboratory, Faculty of Science, Moulay Ismail University of Meknes, Morocco

Mhamed Elbouhi

Molecular Chemistry and Natural Substances laboratory, Faculty of Science, Moulay Ismail University of Meknes, Morocco

M'barek Choukrad

Molecular Chemistry and Natural Substances laboratory, Faculty of Science, Moulay Ismail University of Meknes, Morocco

Abdelouahid Sbai

Molecular Chemistry and Natural Substances laboratory, Faculty of Science, Moulay Ismail University of Meknes, Morocco

Khalid Elkamel

Molecular Chemistry and Natural Substances laboratory, Faculty of Science, Moulay Ismail University of Meknes, Morocco

Mohammed Bouachrine

Molecular Chemistry and Natural Substances laboratory, Faculty of Science, Moulay Ismail University of Meknes, Morocco

Tahar Lakhlifi

Molecular Chemistry and Natural Substances laboratory, Faculty of Science, Moulay Ismail University of Meknes, Morocco

Mohammed Aziz Ajana*

Professor, Molecular Chemistry and Natural Substances laboratory, Faculty of Science, Moulay Ismail University of Meknes, Morocco

Abstract:

The Zika virus belongs to the flavivirus family, which includes several major viruses with singlestranded RNA and positive-sense RNA. This virus is transmitted to humans by mosquito vectors. ZIKV infection is usually asymptomatic, but it can also cause mild flu-like illnesses or serious symptoms, posing a serious threat to human health. Several studies have shown that histone deacetylase 6 (HDAC6) inhibitors have antiviral effects on Zika virus. Therefore, we present a new study of a highly selective HDAC6 inhibitor, J27820. This study is based on computational chemistry and several in-silico techniques such as molecular docking, ADMET predictions, and molecular dynamics. First, the physicochemical and pharmacokinetic properties related to ADMET were evaluated. Then, molecular docking simulations were carried out to study the inhibitory therapeutic potential of the studied compounds J22352, and J27820 against three proteins (5H4I, 5TFR, and

25th – 26th December 2024

6THV) and the nature of their binding interactions. The docking results revealed that our compounds bind significantly with the highest binding affinity towards the targets. Molecular dynamics simulations of 100 ns were performed to confirm the durability of the interactions and the stability of the studied complexes. The results of this study highlight that the studied compound J27820 offers notable advantages, providing more targeted inhibition and encouraging prospects for the development of more effective antiviral therapies against the Zika virus.

In Silico Screening of Variola Major H1 Phosphatase Inhibitors: Exploring Moringa oleifera-Derived Compounds for the Development of Novel Smallpox Antivirals

Mohammed Bouachrine

Professor, Molecular Chemistry and Natural Substances Laboratory, Chemistry Department, Faculty of Science, My Ismail University, B.P. 11202, Meknes 50000, Morocco

Mohamed Ouabane

Molecular Chemistry and Natural Substances Laboratory, Chemistry Department, Faculty of Science, My Ismail University, B.P. 11202, Meknes 50000, Morocco

Chemistry-Biology Applied to the Environment URL CNRT 13, chemistry department, Faculty of Science, My Ismail University, B.P. 11202, Meknes 50000, Morocco

Khadija Zaki

Molecular Chemistry and Natural Substances Laboratory, Chemistry Department, Faculty of Science, My Ismail University, B.P. 11202, Meknes 50000, Morocco

Hanane Zaki

Biotechnology, Bioresources, and Bioinformatics Laboratory at the Higher School of Technology, 54000, Khenifra, Morocco

Chakib Sekkate

Chemistry-Biology Applied to the Environment URL CNRT 13, chemistry department, Faculty of Science, My Ismail University, B.P. 11202, Meknes 50000, Morocco

Abdelouahid Sbai

Molecular Chemistry and Natural Substances Laboratory, Chemistry Department, Faculty of Science, My Ismail University, B.P. 11202, Meknes 50000, Morocco

Tahar Lakhlifi

Molecular Chemistry and Natural Substances Laboratory, Chemistry Department, Faculty of Science, My Ismail University, B.P. 11202, Meknes 50000, Morocco

Abstract:

This study investigates the antiviral potential of Moringa Oleifera, known for its therapeutic properties, by specifically targeting the smallpox virus. Bioactive compounds extracted from its leaves are being evaluated for their ability to inhibit the viral enzyme phosphatase H1, which plays a critical role in regulating the replication and maturation of the virus through protein dephosphorylation. Inhibition of this enzyme could disrupt the viral life cycle and reduce the ability of the virus to infect host cells. Molecular docking simulations were performed using Maestro software to evaluate the interactions between Moringa Oleifera compounds and phosphatase H1. Two precision methods, Standard Precision (SP) and Extra Precision (XP), were used to measure the binding affinity of these compounds with the enzyme's active site. The study identified four compounds-epicatechin, kaempferol, myricetin, and quercetin- that exhibit strong affinity and stable molecular interactions with phosphatase H1. These findings suggest that Moringa oleifera compounds may act as specific inhibitors of phosphatase H1, paving the way for developing novel natural antiviral treatments against pathogens such as the smallpox virus.

Keywords:

Moringa oleifera, phosphatase H1, Smallpox Antivirals, Docking, ADMET, Docking, MD Simulation

The Case Report of MobiCascais in Cascais: Learning from a Successful Implementation of Mobility as a Service (MaaS)

Junko Matsuzaki Carreira

English Literature, Tokyo Keizai University, Japan

Abstract:

Mobility as a Service (MaaS) integrates various transportation options, such as public transit, taxis, bike-sharing, and car rentals, into a single platform, enabling users to plan, book, and pay seamlessly. Introduced by Sampo Hietanen of Finland, this concept led to the founding of MaaS Global in 2015 and the launch of the Whim app in 2017. Whim offered a subscription-based solution for multimodal transport, attracting 10,000 active users in Helsinki at its peak and expanding to cities like Tokyo and Vienna. However, MaaS Global faced financial losses and declared bankruptcy in 2024 due to an unsustainable model and reduced public transit usage during COVID-19. In contrast, MobiCascais, launched in 2016 in Cascais, Portugal, remains a successful example of MaaS implementation. Operated by the city, it integrates public transit, bike-sharing, parking, and other transport options into a unified platform, offering flexibility and efficiency for users. MobiCascais is notable for its focus on sustainability and local governance, demonstrating the importance of adapting services to community needs. This presentation examines MobiCascais's background, current success, and the lessons Japan can learn from its approach.

25th – 26th December 2024

Middle Power Diplomacy in Human Security: The ASEAN Way in Addressing South China Sea Claims and Transboundary Haze Pollution

Magdalena Sabbas

Universiti Teknologi MARA, Malaysia

Abstract:

The Association of Southeast Asian Nations (ASEAN) nonviolent approach to conflict resolution, known as "the ASEAN Way," has been criticised for failing to produce noticeable results, notably in terms of regional security issues, due to various factors. As a regional organisation, ASEAN's role is crucial in strengthening human security among its member countries. Thus, this study aims to gain a deeper understanding of ASEAN's middle power diplomacy and its effectiveness in tackling critical human security issues in the region focusing on South China Sea territorial claims and transboundary haze pollution. This study employs a narrative review methodology to examine ASEAN's middle power diplomacy in addressing human security issues, particularly the South China Sea territorial claims and transboundary haze pollution. A systematic search of academic articles published from 2019 onwards was conducted using databases like Google Scholar and Scopus, focusing on keywords related to ASEAN and its diplomatic strategies. Selected literature was analysed to identify key themes and frameworks illustrating ASEAN's conflict resolution approaches and regional cooperation. The analysis reveals that while ASEAN has made strides in addressing human security challenges, significant obstacles remain, including external pressures and the need for enhanced collaborative frameworks. The study highlights the importance of adapting strategies to maintain unity and effectively respond to emerging challenges in the region.

Keywords:

Middle Power Diplomacy, Human Security, ASEAN, South China Sea, Transboundary Haze Pollution

Discover a Metaverse Built for Business Education: A Tool for Augmenting Creativity and Innovation

Winslet T.Y. Chan

Department of Management and Marketing, The Hong Kong Polytechnic University Hung Hom, Kowloon, Hong Kong

Abstract:

Adapting to changes in the complex and rapidly evolving business environment and market trends requires a combination of skills, including creativity, critical thinking, and innovation. It also calls for more advanced training tools in supporting learners to understand business management and marketing through an interactive and immersive way.

The objectives of this study in two-folded. First, this study aims to explore the integration of metaverse, where learning transcends traditional classroom boundaries and enters immersive virtual environment that enable leaners to explore complex and practical concepts in visually stimulating ways, in business education for fostering creativity and innovation. Second, while the digital transformation of learning and teaching pedagogies provides opportunities for engaging, interactive, and personalized educational experience, this study draws on technology acceptance model to examine relationships among learners' attitude, perceived usefulness and learning effectiveness in metaverse.

This study collected data from 120 undergraduate business students who enrolled in the advancedlevel course – Product Management. Participants had experience on using metaverse for developing product collaboratively and delivering sales pitches on launching and managing product in one semester. Upon the completion of the course, participants were asked to rate on their openness to experience metaverse, perceived usefulness, attitude towards learning, engagement, and express the benefits and challenges of using metaverse for learning.

The study revealed that learners with open attitude to experience metaverse perceived more usefulness during the class activities. Incorporating the metaverse significantly enhances student creativity, collaboration, and critical-thinking skill. This study also presented the challenges of the metaverse for educational purposes. This study discusses metaverse's role in business education, and offers practical implications to practitioners who are interested in using innovative pedagogies and tools, such as virtual reality and gamification, for dynamic learning environment.

Keywords:

Metaverse, Experiential Learning; Pedagogical Development; Business Education; Openness to Experience, Perceived Usefulness; Attitude Towards Learning

25th – 26th December 2024

Examining the Correlation between English Proficiency and Cross-Cultural Conflicts among Chinese University Students

Danielle Chang

Duke Kunshan University, China

Xueyu Zhao

Duke Kunshan University, China

Abstract:

Learning a new language may have a profound influence in shaping learners' cultural identity because language learning involves not solely the acquisition of linguistic knowledge, but also ways of thinking and behaving. In China, public school students learn English as a foreign language (EFL) starting third grade. In most cases, Chinese university students have learned English for at least 9 years to establish a certain level of proficiency. It is the hypothesis that the higher the English proficiency, the more linguistic and cultural exposure students may have, and the more competent they are in dealing with cross-cultural conflicts. This quantitative investigation examines how the level of English proficiency of Chinese university students influence the ways in which they deal with cross-cultural conflicts with strangers or friends both online and offline. Data was collected from 1010 questionnaires of undergraduate students in Chinese public and Sino-foreign joint venture universities. Findings of this research indicate that students with higher English proficiency tend to be more open-minded and less patriotic; whereas students with lower proficiency are more likely to actively defend home culture. Ultimately, this study addresses the role of multilingual identity in interpreting and reacting to cross-cultural conflicts for Chinese university students.

Keywords:

multilingual identity, cross-cultural conflicts, language proficiency, Chinese university students.

25th – 26th December 2024

Evaluating the Impact of a Training Program for Early Childhood Caregivers: Advancing Diversity and Inclusion in After-School Programs

Roni Amit

Adva Research & development

Abstract:

This study evaluates a training program aimed at enhancing early childhood caregivers' abilities to integrate cultural diversity and social-emotional learning (SEL) into after-school programs. The program included eight group training sessions and personalized coaching, offering targeted support to foster caregivers' skills.

Methodology: A mixed-methods approach assessed program effectiveness and areas for improvement. Data collection included written materials, online surveys, focus groups, and interviews. Sixteen caregivers completed the questionnaire, seven joined a focus group, and two trainers shared their insights.

Findings: Participants expressed high satisfaction with the program's structure and content. The training significantly improved caregivers' understanding of cultural diversity, inclusivity, and SEL strategies. Persona dolls emerged as a key tool for teaching social skills and facilitating discussions on cultural diversity. Caregivers reported increased confidence in addressing cultural topics and fostering inclusive practices.

However, the program's eight-session format was identified as a limitation. Caregivers found the time insufficient to fully internalize and implement the strategies. Extending the duration of training and reinforcing concepts through ongoing coaching were recommended to ensure sustainable changes.

Conclusion: The program effectively enhanced caregivers' capabilities to create inclusive environments, meeting its primary goals. To maximize long-term impact, future iterations should include longer training sessions and institutionalized coaching. These adjustments will enable caregivers to embed diversity and tolerance principles more deeply into their practice, better supporting children in diverse social settings.

Effects of Physical and Mental Function Activation Qigong Intervention on Promoting Physical Fitness Benefits

Mei-Er Liao

Tamkang University Department of Management Sciences, Taiwan

I-Fei Chen

Tamkang University Department of Management Sciences, Taiwan

Shao-Hsi Chang

Department of Physical Education and Sport Sciences, National Taiwan Normal University, Taiwan

Wei-Chih Lai

Taipei Songshan Sports Center, Taiwan

Abstract:

With advancements in medical technology, increasing life expectancy, and declining fertility rates, aging societies face growing medical, and caregiving demands. The COVID-19 pandemic accelerated the adoption of digital technologies, making smart solutions for elderly care a future trend. This study developed the "Silver Health Intelligent Management Platform" to promote health among elderly individuals through online exercise and health courses. Using surveys, focus groups, and a quasi-experimental design involving 50 elderly participants, the study compared traditional exercise handouts with smart platform interventions. Results showed the platform effectively improved participants' functional fitness after eight weeks and enabled real-time analysis of health consumption trends. Industry-academia collaboration further enhanced the platform's value by providing data for sports coaches and businesses to align with market needs, advancing health promotion and fostering synergy between academia and the sports industry.

Keywords:

aged society, smart exercise platform, fitness test, industry-academic cooperation.

The Impact of the Universal Design Learning Model on Inclusive Education at CUHK

Vivian Lee

The Chinese University of Hong Kong, Hong Kong

Abstract:

Quality education is important to groom all students in the tertiary educational environment. To achieve quality education, we must ensure inclusive and equitable quality education for all students. Therefore, the readiness of teachers at CUHK to cultivate an inclusive study environment for all students is crucial. The current study will evaluate the understanding of the inclusive framework in Universal Design Learning (UDL) in terms of growth mindset, self-efficacy, self-regulation, and motivation for the university teachers in CUHK. This proposal aims to establish a one-stop interactive platform for teachers at the university with a view to increasing their awareness of UDL in supporting students with or without Special Education Needs (SEN), as well as communicating and sharing their experiences in accommodating these students. A series of workshops will be organized to promote the UDL framework. The micro-modules will be generated on the webpage as learning materials for teachers. Two evaluation surveys for teachers and students will be conducted to evaluate the UDL inclusive practice in the university with a view to establishing an inclusive campus environment. We also recognize the teacher's support to SEN students. Most of the studies in special education examine the learning needs and support of students with SEN, but fewer studies investigate teachers' beliefs and attitudes toward inclusive education such as their mindset toward students with SEN, their teaching efficacy, self-regulation when confronted by students, as well as their motivation in teaching students with SEN in higher education. Therefore, the current project also evaluates the impact of UDL on the changes of teacher's mindsets and the support to SEN students.

25th – 26th December 2024

Students-as-Partners (SaP) Model in Teaching and Learning at CUHK

Vivian Lee

The Chinese University of Hong Kong, Hong Kong

Abstract:

Students' participation in teaching development is one of the important strategies in the CUHK Strategic Plan 2025. Involving students-as-partners (SaP) in teaching and learning development is an essential strategy that encourages students to take bolder steps in their learning. The traditional SaP approaches have been developed and applied in the Western context. Nevertheless, it may not be fully applicable in the Chinese teaching and learning environment. Therefore, the current project aims to develop a SaP model at CUHK. The present study will focus on the evaluation of existing practices in SaP at CUHK. Furthermore, it is significant to address the barriers in curriculum design and difficulties in collaborative teaching and learning throughout the process of implementing SaP. Therefore, this proposal aims to periodically update and enriches the SaP platform, for teachers at the university with a view to increasing their awareness of SaP in supporting teachers. A series of workshops will be organized to promote the SaP framework in teaching. The micro-modules will be generated on the webpage as learning materials for teachers. Two evaluation surveys for teachers and students will be conducted to explore the SaP practices in the university with to establish teaching and learning partnerships at the university. Five exemplars of SaP curricula will be developed as the exemplar in this proposed project. Therefore, the current project also evaluates the impact of changes in teachers' mindsets and students' skills and competencies.

Securing Payment Transactions in a Connected World - lot

Kishore Bellamkonda Sunderajulu

Payments Fintech Leader

Abstract:

Ensuring payment integrity is crucial to fostering trust among customers, merchants, and payment service providers. A robust encryption solution is key to safeguarding transactions against eavesdropping, replay attacks, and data tampering. By addressing vulnerabilities and preventing data compromise, such solutions enhance transaction integrity, bolster user confidence, and protect identity within the payment ecosystem.

In an era of escalating compliance demands from regulators, the development of scalable security frameworks becomes increasingly imperative. These frameworks must seamlessly integrate across diverse IoT devices, ensuring universal protection and adaptability. A comprehensive, forward-looking approach to payment security not only mitigates risks but also strengthens the foundation of modern digital transactions, enabling secure and seamless financial interactions across connected ecosystems.

Keywords:

Cryptograms, Payments, Compliance, CyberSecurity.

25th – 26th December 2024

A Data Mining Approach to Market Basket Analysis using the Apriori Algorithm and Association Rule Mining

A. Mohammed

Department of Computer Science, Gombe State University, Gombe, Nigeria

Dr. M.K. Ahmed

Department of Computer Science, Gombe State University, Gombe, Nigeria

Dr. B. Modi

Department of Computer Science, Gombe State University, Gombe, Nigeria

Dr. H. Musa

Department of Computer Science, Gombe State University, Gombe, Nigeria

U. I. Ismail

Department of Computer Science Federal University of Kashere, Gombe Nigeria.

Abstract:

Every day, new business data is generated. This necessitates the analysis of such data, which is crucial. Data mining, which provides methods and techniques for extracting knowledge and insights from data, can meet this demand. The basic purpose of data mining is to transform the data into useful knowledge. This research focuses on the principles of data mining and the patterns that may be mined in order to turn data into usable knowledge by examining it. This research will make use of the Bread Basket dataset for market basket analysis. Market basket analysis is a strategy mostly used by marketers to improve their companies' performance. One of the methods that aids in the discovery of association rules for frequent item sets is the Apriori algorithm. Market Basket Analysis looks for meaningful association rules in the form of statements like "People who buy X are likely to buy Y" in customer purchase data.

Keywords:

Apriori Algorithm, Market Basket Analysis, Bread Basket Dataset, Association Rules, Patterns.

25th – 26th December 2024

Estimating Residential Natural Gas Demand and Consumption: A Hybrid Ensemble Machine Learning Approach

Mohammed Ajuji

Department of Computer Science, Faculty of Science, Gombe State University (GSU), Nigeria

Ahmed Mohammed

Department of Computer Science, Faculty of Science, Gombe State University (GSU), Nigeria

Muhammad Dawaki

Department of Computer Science, Faculty of Science, Gombe State University (GSU), Nigeria

Abuzairu Ahmad

Department of Mathematical Sciences, Abubakar Tafawa Balewa University (ATBU), 740272, Nigeria

Abstract:

The present work employed a hybrid ensemble regression machine learning technique to forecast the demand for natural gas in residential settings. Precise forecasting of natural gas demand is crucial for effective resource allocation and energy management. The hybrid ensemble approach combines many regression algorithms, such as K-Nearest neighbor (KNN), support vector regression (SVR), decision tree regression (DTR), and linear regression (LR), to maximize the benefits of each unique model and improve prediction performance. The hybrid ensemble regression model has two steps in its process. In the first step, individual regression models are trained using the dataset. In the second step, each model's predictions are assessed. The predictions from each model are evaluated in the second stage. Several metrics, such as mean absolute error (MAE), mean squared error (MSE), coefficient of determination (R2), and accuracy, are produced and contrasted with those of individual regression models to assess the performance of the hybrid ensemble model. To ensure resilience, the model's predicted accuracy is also evaluated using cross-validation methods. The experimental findings showed that, in terms of prediction accuracy, the hybrid ensemble regression strategy regularly outperforms individual regression models. Combining different models makes it possible to capture the various relationships and patterns that are present in the data, thereby improving the overall performance of the model.

Keywords:

Estimation, natural gas, hybrid, ensemble, machine learning.

GAS Model: A New Hybrid Deep Learning Method for Enhancing Phishing URL Detection

Hajara Musa

Department of computer Sciences, Gombe State University, Gombe, Nigeria

A.Y Gital

Department of Mathematical Sciences, Abubakar Tafawa Balewa University Bauchi, Nigeria

Ahmed Mohammed

Department of computer Sciences, Gombe State University, Gombe, Nigeria

Usman Ali A

Department of Computer Sciences, Federal collage of education technical Gombe, Nigeria

Abstract:

Technological advancements have transformed cyberspace into a hub for banking, shopping, education, and entertainment. However, as human activities increasingly shift online, cybercriminals, including phishers, are exploiting this space, and posing significant risks to users, businesses, global security, and the economy. Traditional methods for classifying and detecting phishing URLs often rely on content-based approaches, which struggle with generalizing to new, unseen URLs. To address these limitations, our approach leverages the ability to automatically capture the semantic and sequential patterns in URLs, achieving notable success. This research introduces a new method called GAS, which employs GRU (Gated Recurrent Units), an Attention mechanism, and a sigmoid activation function for phishing detection in cyber-attacks. This research utilizes benchmark datasets to enhance detection accuracy for various phishing URLs. Specifically, the phishing URL data is sourced from the University of California, Irvine (UCI) repository. The experimental dataset consists of 11,055 URL entries, with 4,898 legitimate URLs and 6,157 phishing URLs. The results indicate that the GRU-ATT-Sigmoid model outperforms previous methods, achieving an accuracy rate of 96.36% on the UCI Repository dataset.

Keywords:

Machine leaning algorithms, Deep learning algorithms, Nature inspired algorithms, hybrid deep learning algorithms and optimized algorithms.

Indoor Spatial Elements and Health Outcomes in Urban Older Adults: A Systematic Literature Review

Yu-Wei Yu

Ph. D. candidate, Department of Architecture, National Taiwan University of Science and Technology, #43, Sec.4, Keelung Rd. Taipei, 106, Taiwan, R.O.C.

Yi-Kai Juan*

Professor, Department of Architecture, National Taiwan University of Science and Technology, #43, Sec.4, Keelung Rd. Taipei, 106, Taiwan, R.O.C

Abstract:

As individuals age, their living spaces must adapt to meet evolving needs. Research indicates that indoor spatial elements significantly impact the health and well-being of older adults. However, the diversity of these elements and their complex effects on different health domains challenge prioritizing home modifications. To synthesize the relationship between indoor spatial elements and the physical, mental, and emotional health of older adults, we conducted a systematic literature review following PRISMA-ScR guidelines. We analyzed 50 empirical studies published between 2005 and 2024, sourced from relevant journal databases. VOSviewer software facilitated the identification of keyword networks and research trends. Results revealed six primary research focus areas: sleep, health, temperature, quality of life, individual responses, and design. We recommend prioritizing future investigations into the impact of indoor spatial elements on the physiological health of older adults, particularly within the context of smart health monitoring systems. Furthermore, architects, interior designers, and policymakers should collaborate to develop personalized and feasible age-friendly renovation solutions that create supportive environments.

25th – 26th December 2024

Enhancing Building Energy Efficiency Through Integrated Thermal Energy Storage and Fan Coil Unit Cooling Systems in Hot Climate

Haggag, M.*

Associate Professor, Architectural Engineering Department, College of Engineering, UAE University, UAE.

Masood, U UAE University, Al Ain, UAE

Hassan, A. UAE University, AI Ain, UAE

Abstract:

This study investigates an innovative approach to enhancing building energy efficiency by integrating a thermal energy storage unit with a fan coil unit (FCU) and a chiller system for improved space cooling and thermal management. The experimental setup involves supplying chilled water from the chiller to a test room equipped with an FCU, where the room temperature is studied under varying chilled water flow rates. Crucially, the excessive chilled water flow is diverted and utilized to solidify a phase change material (PCM) in the thermal energy storage unit, enabling thermal energy storage. Furthermore, the refrigerant from the chiller's compressor is bypassed and supplied to the thermal energy storage unit and then fed to the condenser, allowing an evaluation of the temperature drop achieved through this configuration. ANSYS Fluent simulations are employed to numerically model and analyze the thermal energy storage unit to complement the experimental investigation. The study explores the potential of integrating thermal energy storage with building space cooling systems for enhanced energy efficiency and thermal management. The findings of this research contribute to the development of innovative cooling strategies and the optimal utilization of available thermal energy resources, ultimately leading to improved building energy performance and reduced environmental impact.

Keywords:

Building energy efficiency, Thermal energy storage (TES), Phase change material (PCM), Thermal management.

25th – 26th December 2024

4000 Cases of Penis and Glans Enlargement with Hyaluronic Acid Injections: Introducing the Concept of Functional Penoplasty

Daniel Drai MD

Tel Aviv sexual health medical center, Israel

Abstract:

This conference, led by Dr. Daniel Drai, MD, a renowned Israeli Andrologist and sexologist, presents a comprehensive overview of the innovative technique of functional penoplasty, demonstrated through an extensive case series of 4000 patients.

The session will delve into the clinical indications for penile and glans enlargement, the significance of the initial consultation in determining patient suitability and setting realistic expectations.

The contraindications will be outlined to ensure patient safety and to delineate clear guidelines for candidacy.

Dr. Drai will detail the procedural methodology of using hyaluronic acid injections for enlargement, providing insights into the technical nuances that optimize outcomes.

Post-operative care will be discussed, highlighting essential instructions to patients for recovery and maintenance of results.

The presentation will reveal key statistical outcomes, illustrating the efficacy and patient satisfaction associated with the procedure.

Potential complications, their management, and preventive strategies will be examined to provide a holistic view of patient care.

Finally, Dr. Drai will explore the future developments in functional penoplasty, discussing the potential for innovative techniques and materials to enhance patient outcomes and satisfaction further.

This conference aims to shed light on the evolving field of cosmetic and functional genital enhancement, offering a deep dive into its current state and future prospects.

25th – 26th December 2024

Effects of VOC Emissions on Health and Safety of Ship Personnel in Crude Oil Tankers: Risks and Protective Measures

Hazal Kahraman

Iskenderun Technical University Graduate Education Institute, Turkey

Turgay Battal

Iskenderun Technical University Department of Maritime Transportation Engineering, Turkey

Abstract:

This article discusses the effects of emitted VOCs on health safety of shipboard personnel in crude oil tankers considers some protective measures that may be used to mitigate the risks. The term VOC defines any chemical compound that is volatile at typical environmental conditions and can be emitted into the atmosphere during a specific source activity. For example, transportation of crude oil can generate many serious hazards because of either the fire hazard or the toxic nature of VOCs. Health effects of VOCs on crew range from short-long-term diseases, mainly pointing to respiratory diseases disorders of the nervous system. Simultaneously, emissions of VOC enhance fire and explosion hazards, hence becoming one of the serious safety concerns for ships. The paper will present an assessment of different technical and operational strategies for mitigation of those risks, which include the use of vapor recovery units, personal protective equipment, risk assessment methodologies such as HAZOP and LOPA. It also addresses negative effects on the marine ecosystem, as well as other environmental hazards, due to VOCs especially around sensitive areas. Generally, this requirement is a holistic approach to reduce adverse effects on crew health safety of ships due to the emanation of VOCs.

Keywords:

Oil, Tanker, Emission, Ship Personnel Health.

25th – 26th December 2024

Starch by-Products Digestion from Sorghum Algerian Cultivars with a Great Potential for Sorghum in Livestock and Animal Feeds

SOUILAH Rachid

Laboratoire d'Etudes et Développement des Techniques d'Epuration et de Traitement des Eaux et Gestion Environnementale, Département de Chimie, Ecole Normale Supérieure de Kouba, Algiers, Algeria

BELHADI, Badreddine

Laboratoire d'Etudes et Développement des Techniques d'Epuration et de Traitement des Eaux et Gestion Environnementale, Département de Chimie, Ecole Normale Supérieure de Kouba, Algiers, Algeria

Département des sciences et techniques, Faculté de technologie, Université Amar Télidji, Laghouat, Algeria

KHOUDJA, Elkhalil

Laboratoire d'Etudes et Développement des Techniques d'Epuration et de Traitement des Eaux et Gestion Environnementale, Département de Chimie, Ecole Normale Supérieure de Kouba, Algiers, Algeria

BEN EL AAKRI, Sara

Laboratoire d'Etudes et Développement des Techniques d'Epuration et de Traitement des Eaux et Gestion Environnementale, Département de Chimie, Ecole Normale Supérieure de Kouba, Algiers, Algeria

DJABALI, Djaffar

Laboratoire d'Etudes et Développement des Techniques d'Epuration et de Traitement des Eaux et Gestion Environnementale, Département de Chimie, Ecole Normale Supérieure de Kouba, Algiers, Algeria

NADJEMI, Boubekeur

Laboratoire d'Etudes et Développement des Techniques d'Epuration et de Traitement des Eaux et Gestion Environnementale, Département de Chimie, Ecole Normale Supérieure de Kouba, Algiers, Algeria

Abstract:

The aim of the present study was to assess the nutritive value of by-products obtained after sorghum starch extraction, as dietary starch from feed grains. We use small-scale laboratory steeping in NaOH, and wet-milling process of starch extraction from sorghum whole grain cultivated in the Algeria (Tidikelt and Hoggar region). The kinetic of the starch digestion in sorghum meal and by-products was studied. The in vitro starch digestion was determined according to the modified method of Goni et al. (1997) by α -amylase (type VI.B from porcine pancreas) and amyloglucosidase from Aspergillus niger enzymes. Five by-products differing in their particle sizes and starch contents were collected. The substrates from whole grain meal, prepared by dry milling, and from by-products differed in their in vitro starch digestion. The mean values for kinetic parameters ranged from 0.0066 to 0.0147 min-1 for the rate constant (k), from 53.66 to 98.58% for the starch hydrolysis at infinite time (C $^{\infty}$) and from 6.06×103 to 8.47×103 %.min for the area under the hydrolysis curve (AUC). Generally, a high digestibility of by-products of sorghum starch isolation with a great potential for sorghum in livestock and animal feeds are considered in this work.

Keywords:

Sorghum, Starch digestion, Animal feed.

Flexural Loaded Joints for the Aerospace Industry

Ferhat Kadioglu

Department of Aerospace Engineering, Ankara Yildirim Beyazit University, Ankara, Turkiye

Abstract:

Thermoplastic composites are expected to play an important part in the structural material repairs, and one of the best examples is through use of the Single Strap Joint (SSJ), albeit works related to the joint are limited. This study focuses on the co-cured SSJ with thermoplastic adherends, subjected to four-point bending. The performance of the joints by flipping positions of the strap (strap-up and strap-down) were investigated, with a particular focus on the capacity of the load as well as the applied displacements. The joint having a strap of 30 mm length was also numerically analyzed via an ABAQUS program. The results showed the joints with the strap-up were stronger than those with the strap-down because the strap remined mainly in normal compression stresses where the critical points exist for the joints with strap-up, while for those with the strap-down, the strap suffered from the peeling stresses in the same region. Two different failure mechanisms were observed; while failure of adherends was the case for the former, the strap failed for the letter. Nevertheless, the failure zones for both cases were in tensile and/or shear out-of-plane stresses. Simulations show the joint design could be improved for better performance.

Keyword:

thermoplastic adherends, fusion bonding, single strap joint, bending test, numerical analyses.

Green Synthesisof AgNPs Using Medicinal Himalaya Fern (Thelypteris Erubescens): Structural Characterization, Effect on Seed Germination, and Antimicrobial Function

Sadaf Kayani*

Assistant Professor, Department of Biology, Faculty of Engineering and Natural Sciences, Süleyman Demirel University, 32260 Isparta, Türkiye.

Department of Botany Mohi-ud-Din Islamic University, Nerian Sharif-12010, Azad Jammu & Kashmir, Pakistan

Tijen Demiral Sert

Department of Biology, Faculty of Engineering and Natural Sciences, Süleyman Demirel University, 32260 Isparta, Türkiye.

Syed Abidulla

Department of Botany Mohi-ud-Din Islamic University, Nerian Sharif-12010, Azad Jammu & Kashmir, Pakistan

Kamran Iqbal Shinwari

Department of Biology, Faculty of Engineering and Natural Sciences, Süleyman Demirel University, 32260 Isparta, Türkiye

Salma Kousar

Department of Biology, Faculty of Engineering and Natural Sciences, Süleyman Demirel University, 32260 Isparta, Türkiye.

Department of Botany Mohi-ud-Din Islamic University, Nerian Sharif-12010, Azad Jammu & Kashmir, Pakistan

Semra KILIÇ

Department of Biology, Faculty of Engineering and Natural Sciences, Süleyman Demirel University, 32260 Isparta, Türkiye.

Abstract:

The green synthesis of silver nanoparticles (AgNPs) is a promising alternative to nanotechnology due to its stable, non-toxic, and eco-friendly approach. One such novel approach is the use of medicinal plants for the synthesis of AgNPs. In this study, the medicinal Himalayan fern Thelypteris erubescens was used for the green synthesis of AgNPs, and its effects on seed germination of maize and antimicrobial properties were investigated. AgNPs from Thelypteris erubescens were synthesized by adding silver nitrate to plant extract and the synthesis of AgNPs was validated and characterized through ultraviolet spectroscopy (UV), scanning electron microscopy (SEM), and X-ray diffraction (XRD). AgNPs of varying concentrations displayed antibacterial and antifungal activity through agar well diffusion. Thelypteris erubescens nanoparticle synthesis demonstrated superior antibacterial efficiency compared to methanol and aqueous extracts. The application of AgNPs derived from Thelypteris erubescens stems significantly enhanced maize seed germination, surpassing traditional methods. Silver nanoparticles have been proven to enhance plant growth and seed germination ability at controlled envioroment. This eco-friendly and cost-effective approach maximizes the effects of growth-regulating hormones and exploits plants' potential against microbial strains.

Keywords:

Nanoparticles, Green synthesis, Pteridophytes, AgNPs.

From Bad Bosses to Broken Marriages: Exploring the Impact of Abusive Supervision on Work-Family Conflict and Intention to Divorce

Issam Ghazzawi, Ph.D.

Distinguished Professor of Management Director, REACH/Fleischer Scholars Program & Enactus Adviser University of La Verne College of Business

Abstract:

The effects of abusive supervision on work and family roles have not been extensively explored specifically in the hospitality industry. To address this gap, we conducted exploratory sequential research to identify the outcomes of abusive supervision on work-family conflict and intention to divorce. The current study is based on primary data collected from hotel employees in the union territory of Jammu and Kashmir.

This study adopted the exploratory sequential method consisting of two studies. While in the first study, we interviewed 20 hospitality employees to explore the outcomes of abusive supervision, in the second study, we used a large dataset of 386 employees to empirically test our hypotheses.

Our findings suggest that abusive supervision not only affects employee well-being but also harms family life, as evidenced by an increased intention to divorce. Study results highlight the importance of understanding the full context of abusive supervision in the workplace and the need for organizations to take action to prevent and address such behaviors.

Keywords:

Abusive supervision, work-family conflict, divorce intention, emotional exhaustion.

25th – 26th December 2024

Value Chain Analysis of Thai Rubber Products Exported to the European Union: Readiness for EUDR and Potential for Profit Growth

Nattapa Prathansong

University of the Thai Chamber of Commerce, Thailand

Thanakorn Poungpaka

University of the Thai Chamber of Commerce, Thailand

Abstract:

Thailand's rubber industry is a significant source of employment and revenue for the country, with rubber plantations expanding to 24.2 million rai by 2022. The majority of rubber production is exported to international markets, particularly the European Union (EU), which is a key export destination for Thai rubber. However, the implementation of the EU Deforestation Regulation (EUDR) has posed challenges to exports, as it requires verification of the origin of rubber products to ensure they are not sourced from deforested areas. This research assesses the readiness of Thailand's rubber supply chain to comply with EUDR requirements. The findings indicate that increasing the use of traceability technology, developing certification systems, and fostering collaboration among stakeholders are crucial factors in enhancing the competitiveness and sustainability of the supply chain. Moreover, compliance with EUDR opens up new market opportunities for Thai rubber exporters in the European Union.

Keywords:

Thailand's rubber industry, EUDR compliance, sustainability, deforestation-free supply chain, market opportunities.

Biology and Beneficial Microbes

Mahsa Talebzadeh

Islamic Azad University Karaj Branch

Abstract:

During the first couple years of life, contents of the lower intestine are populated by microorganisms such as bacteria, fungi, viruses, phages, yeast and archaea i.e., by the microbiota. P. tunicoides is a perennial herbaceous plant that grows in Yunnan, Sichuan, and Guizhou Provinces and Tibet in China. It is a highly valued traditional Chinese medicine with analgesic, anti-inflammatory and immunoregulatory properties, which is widely used in Chinese patented medicine and health supplements. The main goal of this research is Biology and Beneficial Microbes. The literature looked at four main areas, such as Stress, Asthma, Mind-body medicine, and gut microbiota were used as search terms in the first section's literature search in Pub Med, Google Scholar, Psychl INFO, Embase and the Web of Science. We used around 124 published literature articles from the Pub Med, Google Scholar, Psychl INFO, Embase and the Web of Science to perform this review. Prospective eligible citations were gathered and screened for eligibility based on title and abstract before being read in full. References of included articles and articles of prominent non indexed peer-reviewed journals were searched in order to have a complete understanding of the subjects and relevance with the stated title. Manipulating the plant microbiome through metabolite engineering can benefit plant health under environmental stresses. However, key root metabolites and biosynthetic pathways responsive to different environmental signals and their associated microbes must be identified to fully understand and fully utilize the potential of microbiome-metabolite engineering. Studies involving metabolomics and other omics technologies will be important in successfully applying metabolomics to plant health. While challenges may be associated with transforming plants and overcoming endogenous regulation, the prospect of in situ engineering the root metabolome for improved stress resistance justifies further efforts. As metabolomics continues to develop, technical challenges can be overcome to build genetic circuits that direct the engineering of plants with improved stress resilience. This will contribute to establishing sustainable agriculture in a fast-changing climate, making each challenge overcome a valuable resource for the field.

Keywords:

Bacteria, Beneficial Microbes, Biology, Metabolomics, Plants.