



**MUC**

Majan  
University  
College



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**December 2024**

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ISSUE 1

VOL. 1

SEPTEMBER 2024

# MUC RESEARCH BULLETIN

TOGETHER WE **TRANSFORM LIVES**



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# MESSAGE FROM THE DEAN

**Dear Colleagues, Students, and Esteemed Readers,**



I am delighted to present to you the first issue of Majan University College (MUC) Research Bulletin. This bulletin marks a significant milestone in our commitment to fostering a vibrant research culture within our academic community.

The 2023-2024 academic year has been a remarkable period for our institution, highlighted by numerous groundbreaking research publications, impactful conference presentations, prestigious grants, and well-deserved honors and awards. This bulletin serves to showcase these outstanding achievements and to recognize the dedication and hard work of the various faculties at MUC.

## **Dr Maha Kobeil Dean and CEO**

Our research endeavors not only advance knowledge within our respective fields but also contribute to solving real-world problems and enhancing the well-being of society. This bulletin ,Issue 1 , Volume 1, will provide a platform to share these contributions and to inspire further collaboration among our academic community. We are pleased to announce that the research bulletin will be published once a year.

At Majan University College (MUC), together we transform lives through education, research, and innovation.



# **PUBLICATIONS IN REFEREED JOURNALS**

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**Research Title:** Investigating boosting techniques' efficacy in feature selection: A comparative analysis

**Journal:** Energy Reports

**Authors:** Ubaid Ahmed, Anzar Mahmood, Majid Ali Tunio, Ghulam Hafeez, Ahsan Raza Khan, Sohail Razzaq

**DOI:** <https://www.sciencedirect.com/science/article/pii/S2352484724001653>

**Dr. Sohail Razzaq, Assistant  
Professor of Communication  
Systems**

Accurate solar irradiance (SI) forecasting is crucial for optimizing solar energy and relies on meteorological features. This study explores boosting algorithms for feature selection, a relatively unexplored area.

The research compares Extreme Gradient Boosting (XgBoost), Categorical Boosting (CatBoost), Random Forest (RF), and Light Gradient Boosting Machine (LGBM) for selecting relevant features. SI data from Islamabad (Pakistan), Basel (Switzerland), and Golden (Colorado, USA) from the National Solar Radiation Database (NSRDB) were used. Features selected by each boosting algorithm were input into a Bidirectional Long-Short-Term Memory (BiLSTM) network for hour-ahead Global Horizontal Irradiance (GHI) forecasting.

Performance indicators included Root Mean Square Error (RMSE), Mean Square Error (MSE), Mean Absolute Error (MAE), Mean Absolute Scaled Error (MASE), and Normalized Root Mean Square Error (NRMSE). The results show that BiLSTM networks trained with XgBoost-selected features achieved the best forecasting results. Specifically, for Islamabad, RMSE and MAE improved by 29.92% and 14.03%, respectively; for Basel, by 14.43% and 28.72%; and for Golden, by 10.5% and 17.38%, compared to conventional models.

# Publications in Refereed Journals



Faculty of Business  
Management

Publication Date: April 2024



**Research Title:** Opportunity Abandonment: Why are entrepreneurs vulnerable to Type I and II Errors?

Journal: Heliyon, 10 (9)

Authors: Tahseen Anwer Arshi, Venkoba Rao, Atif Saleem Butt

**DOI:** [https://www.cell.com/heliyon/fulltext/S2405-8440\(24\)06125-5](https://www.cell.com/heliyon/fulltext/S2405-8440(24)06125-5)

**Prof. Venkoba Rao, Professor  
of Business Administration**

Opportunity actualization is a key competency for entrepreneurs, yet Entrepreneurial Opportunity Abandonment (EOA) remains under-explored. This study investigates why entrepreneurs make errors in opportunity decisions, either abandoning potentially viable opportunities (type I error) or pursuing non-opportunities (type II error) only to later forsake them. Through a scoping literature review, the study identifies psychological variables influencing EOA decisions, such as cognitive limitations in articulating, concretizing, and communicating opportunities.

It highlights how varying construal mindsets lead to reification fallacies and perceptual blocks, which hinder the expression of opportunity ideas. Additionally, subjective stakeholder feedback and biased information exchange significantly affect EOA decisions, mediated by entrepreneurs' information processing capabilities. The paper proposes four hypotheses related to entrepreneurial decision limitations, emphasizing the need for empirical investigation to better understand the factors contributing to EOA.

# Publications in Refereed Journals



Faculty of English  
Language Studies

Publication Date: September 2023



**Research Title:** The interplay between corrective feedback timing and foreign language anxiety in L2 development.

Journal: Language Teaching Research.

Authors: Ehsan Rassaei

DOI: <https://journals.sagepub.com/doi/10.1177/13621688231195141>

**Prof. Ehsan Rassaei**  
Professor of Applied  
Linguistics

Recent research has highlighted the effectiveness of immediate and delayed corrective feedback (CF) on second language (L2) learning. However, the impact of learner individual factors, such as foreign language anxiety (FLA), on the effectiveness of immediate and delayed CF remains less explored.

This study aims to investigate whether learners' FLA moderates the effectiveness of these feedback types. To explore this, 82 learners of English as a foreign language (EFL) were randomly assigned to immediate feedback, delayed feedback, or a control group. During three sessions, participants performed storytelling tasks in groups of four and received either immediate or delayed metalinguistic feedback. Immediate feedback was provided immediately after an error during the task, while delayed feedback was given at the end of each task.

Pretest, posttest, and delayed posttest writing tasks and error correction tests were used to measure development. The findings indicated that immediate and delayed CF were equally effective overall. However, considering learners' FLA, immediate CF was more beneficial for learners with low FLA compared to those with high anxiety, while no significant effects of FLA on delayed CF were observed.



# CONFERENCE PRESENTATIONS



# Conference Presentation



Faculty of Business  
Management

Conference Date: March 2024



**Dr. Dina Ghandour,**  
Assistant Professor of  
Accounting & Finance

This study explores the impact of blockchain on the global telecom industry using a qualitative approach. It identifies key barriers and drivers of blockchain technology integration with the telecom industry and provides practical recommendations. Utilizing the DEMATEL approach, the research analyzes blockchain's challenges and benefits, including improved security, operational efficiency, and cost savings, while addressing regulatory and technological issues. The findings offer valuable insights for academics and policymakers, supporting sustainable practices in the telecom sector.

Conference Link: <https://asfaag.com/south-north-america/>



**ASFAAG**  
ACADEMY OF SUSTAINABLE FINANCE,  
ACCOUNTING, ACCOUNTABILITY & GOVERNANCE



FLORIDA  
INTERNATIONAL  
UNIVERSITY



UNIVERSITY of  
BRADFORD



University of  
Southampton



## Certificate of Attendance

This certificate is awarded to

**Dr. Dina Ghandour**

**Majan University College, Oman**

for successfully presenting the paper on

**Exploring Block Chain Adoption in the Telecom Industry: Navigating  
Barriers and Enablers**

in the ASFAAG American Chapter Conference 2024 on

**Planet, People & Profits: Promoting Sustainable Businesses for Triple Bottom-Line**

held on 29th February – 2nd March 2024, Florida International University,

Miami, Florida, USA

Professor Saeed Akbar  
Senior Vice-President, ASFAAG

Professor Sabur Mollah  
President, ASFAAG

# Conference Presentation



Faculty of English  
Language Studies

Conference Date: March 2024



Dr. Peter Mitchell  
Head of Faculty

**Topic Title:** Re-imagining Online Learning via MOOCs: Challenges and Opportunities in Re-humanizing Language Education

**Conference:** 58th RELC International Conference

**Authors:** Dr. Peter Mitchell

**Venue:** Singapore

**Conference Link:** <https://www.relc.org.sg/elementor-3716/>

In the past five years, MOOCs have rapidly expanded in higher education, offering unprecedented scalability and access to quality content. This shift, accelerated by Covid-19, spurred online learning technology development and acceptance but reduced human interaction. For language learning, this poses challenges for developing intercultural communicative competence but also offers opportunities to rethink teaching methods. Drawing from his experience creating intercultural communication courses for 70,000 learners across 190 countries on Coursera, the author—a leader in ELT and Coursera Top Instructor—explores how to re-humanize language education while maintaining scalability and quality.



Faculty of Business  
Management

Conference Date: February 2024



Ms. Bushra Al Hasani  
Senior Lecturer



Dr. Mohammed Hussein  
Assistant Professor

**Topic Title:** The Catalytic Influence of Social Entrepreneurship on Inclusive Economic Growth

**Conference:** 2<sup>nd</sup> International Conference on Strategies for Empowering Oman as a Competitive Economy

**Authors:** Dr. Mohammed and Ms. Bushra

**Venue:** Muscat, Oman

**Conference Link:** <https://shorturl.at/iqobE>



# Conference Presentation



Faculty of Business  
Management

Conference Date: February 2024



## Certificate of Attendance

QS Higher Ed Summit: Middle East 2024  
27-29 February | Ras Al Khaimah & Online



Venkoba Rao  
Head of Research  
Majan University College

This certificate is awarded in recognition of your active participation in the QS Higher Ed Summit: Middle East 2024, Organised by QS Quacquarelli Symonds, hosted by American University of Ras Al Khaimah, which explored the theme "Cultures of Innovation: Elevating quality education for a thriving Middle East". Through engaging sessions and interactive discussions, attendees gained a deeper understanding of the key challenges and opportunities facing the region's higher education sector and learned practical strategies for fostering innovation, sustainability, and excellence in teaching and learning.

Ben Sowter  
Senior Vice President  
QS Quacquarelli Symonds

Organising partner:



**AURAK**

الجامعة الأمريكية في رأس الخيمة  
AMERICAN UNIVERSITY OF RAS AL KHAIMAH

# Conference Presentation



Faculty of Information  
Technology

Conference Date: May 2023



Dr. Mohammed Siddique  
Senior Lecturer of  
Computer Application



Dr. Mohammed Waleed  
Associate Professor of  
Computer Sciences

**Topic Title:** Machine Vision Inspection of Steel Surface Using Combined Global and Local Features

**Conference:** 20th International Conference on Information Technology-New Generations

**Authors:** Mohammed W. Ashour, M. M. Abdulrazzaq, and Mohammed Siddique

**Venue:** Tuscany Suites, Las Vegas

**Conference Link:** <https://shorturl.at/P9wOb>

This paper introduces a framework for classifying defects on hot-rolled steel surfaces using global (DST-GLCM) and local (GLCM, ULBP, SURF) features. Images are preprocessed, and features are evaluated individually and in combination. Classification is performed with multi-class SVM and k-Nearest Neighbor. Tested on the NEU dataset with 1800 grayscale images, the framework effectively classifies six defect types, with the best settings showing promising results. The main challenge is the large appearance variability within defect classes and the similarity between different defect classes. The findings indicate that combining global and local features, along with using advanced classifiers, provides significant improvements in defect classification accuracy.



Faculty of Information  
Technology

Conference Date: December 2023



Dr. Manju Jose  
Assistant Professor of  
Computer Sciences

**Topic Title:** Deep learning classification model for analyzing and predicting road accidents

**Conference:** International Conference On Intelligent Systems In Computing And Communication

**Authors:** Dr. Manju Jose

**Venue:** India

**Conference Link:** <https://shorturl.at/BQRNp>





# GRANTS, HONORS & AWARDS

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# TRC Block Funding Program Grant from the Omani Research Council

مجلس البحث العلمي  
The Research Council

 **MUC** Majan  
University  
College  
كلية مجان الجامعية



**Dr. Ammar Al Balushi**  
Head of Faculty  
Faculty of Business Administration

**Dr. Ammar has been awarded The Research Council (TRC) Block Funding Grant for his research project :**

**“Exploring the Impact of Tourism Development on Coastal Area Communities”**

**Grant Amount: OMR 19,800**



مجلس البحث العلمي  
The Research Council

# SRPP Funding Program Grant

from the Omani Research Council



**Dr. Ramalingam Dharmalingam has been awarded  
The Strategic Research Project Program (SRPP) Funding  
Grant for his research project :**

**“=====”**

**Grant Amount: OMR 65,000**

# BEST PAPER AWARD

Dr. Jacintha & Dr. Ramalingam from the Faculty of Information Technology have won the Best Paper Award at an international conference in the UK for their paper

"HLB Disease Detection in Omani Lime Trees Using Hyperspectral Imaging Techniques."

[https://link.springer.com/chapter/10.1007/978-3-031-53085-2\\_7](https://link.springer.com/chapter/10.1007/978-3-031-53085-2_7)

**Dr. Jacintha Menezes**  
Assistant Professor, Faculty of  
Information Technology (FoIT)



**Dr. Ramalingam**  
Assistant Professor, Faculty of  
Information Technology (FoIT)





# BEST PAPER AWARD



Faculty of Information  
Technology

"HLB Disease Detection in Omani Lime  
Trees Using Hyperspectral Imaging  
Techniques."

Authors Names: Jacintha Menezes, Ramalingam Dharmalingam, &  
Palaiahnakote Shivakumara

Omani acid lime cultivation has recently been impacted by Citrus greening (HLB) disease, a severe citrus disease with no known cure. Traditional detection methods, such as Polymerase Chain Reaction (PCR) and Enzyme-linked Immunosorbent Assay (ELISA), involve lengthy and labor-intensive procedures requiring specialized equipment and staff.

To overcome these limitations, this research employs hyperspectral imaging technology for automatic HLB detection. Leaf images from healthy, nutrition-deficient, and HLB-infected citrus trees were captured using a Specim IQ hyperspectral camera. These high-resolution images were processed into RGB spectral-spatial cubes, which were then analyzed using a Convolutional Neural Network (CNN) for deep feature extraction.

The method achieved a 92.86% classification accuracy, with significant spectral bands identified at 560 nm, 678 nm, 726 nm, and 750 nm. This innovative approach demonstrates a promising and efficient solution for HLB detection and management in the citrus industry.





# PHD AWARDS



**Dr. Albert successfully completed his PhD thesis**  
**“Mathematical Modelling for Forecasting and Optimization: A Basis For Operations Management”**

**Dr. Albert Tayong**  
Senior Lecturer of  
Mathematics

**Dr. Mohammed Successfully completed his PhD thesis in**  
**Computer Applications**



**Dr. Mohammed Siddique**  
Senior Lecturer of Computer  
Application



**Dr. Muhammed successfully completed his PhD thesis**  
**“Developing Speaking Test Tasks that Elicit the Construct of English Language Proficiency for Employability”**

**Dr. Muhammed Tanveer**  
Senior Lecturer of English  
Language



# Books & Book Chapters

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**Edited Book by**

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**Mr. Mohamed Salah Younis**  
**Senior Lecturer**  
**Faculty of Business Management**  
**Link: <https://shorturl.at/xuP90>**

# Utilizing AI for Assessment, Grading, and Feedback in Higher Education

Nasser Hamed Al Harrasi and Mohamed Salah El Din



**IGI Global**  
Publishing Tomorrow's Research Today



# Book Chapters



**Chapter Title:** Navigating the Impact of AI Integration in Higher Education: Ethical Frontiers

**Book:** Utilizing AI for Assessment, Grading, and Feedback in Higher Education

**DOI:** <https://shorturl.at/aviO4>

**Dr. Dina Ghandour,**  
Assistant Professor of  
Accounting & Finance

This chapter explores the ethical considerations of integrating AI into higher education, highlighting both its potential to enhance learning outcomes and the associated challenges. It aims to develop a comprehensive framework with actionable guidelines for educators, administrators, students, and policymakers. Key issues addressed include data privacy, bias, transparency, and academic integrity. By establishing best practices and ethical standards, the chapter seeks to ensure that AI is used responsibly and effectively, ultimately benefiting the educational sector.



**Chapter Title:** AI-Driven Innovation in Higher Education Marketing: An Exploration of Oman's Academic Landscape

**Book:** Utilizing AI for Assessment, Grading, and Feedback in Higher Education

**DOI:** <https://shorturl.at/e8snr>

**Dr. Ammar Al-Balushi**  
Head of the Faculty of  
Business Management

**Mr. Ali Al Bolushi**  
Lecturer of Business  
Administration

This chapter explores AI's impact on higher education marketing and the challenges of its integration. It highlights the need for AI literacy, addresses ethical issues such as data privacy, and balances technology with human interaction. Proposing a strategic framework for AI in marketing, the chapter aligns with Oman's Vision 2040, identifies research gaps, and suggests future investigations. It provides guidance on strategic planning and execution, offering insights for Omani institutions on effectively using AI and noting emerging trends.



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*Dr. Dina Ghandour*