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HASIL PENILAIAN SEJAWAT SEBIDANG ATAU PEER REVIEW
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Judul karya ilmiah (artikel) : Design Guidelines for Vegetative Approach Application to Mitigate Riverbank Landslides in Mangkang Wetan and Mangunharjo Villages, Semarang Coastal Area, Indonesia

Jumlah Penulis : 2 penulis (**Santy Paulla Dewi**, Rina Kurniati)

Status Pengusul : Penulis Pertama

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- c. Vol.,no.,bulan,tahun : Vol 30, Issue 4, No. 6, 2022
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 NIP. 196803171997022 002
 Unit Kerja: Departemen PWK FT UNDIP

Reviewer 2,



Dr. Anang Wahyu Sejati, S.T., M.T..
 NIP H.7.198504072018071001
 Unit Kerja: Departemen PWK FT UNDIP

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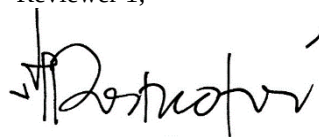
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Dr. Retno Susanti, ST, MT.
 NIP. 196803171997022 002
 Unit Kerja: Departemen PWK FT UNDIP

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b) Ruang lingkup dan kedalaman pembahasan:

pembahasan sangat baik, membandingkan kebaruan mengenai penataan vegetasi sebagai sebuah elemen desain yang menggambarkan upaya penguatan kapasitas dalam penanganan bencana banjir. Kebaruan-kebaruan telah ditampilkan khususnya dalam beberap scenario desain yang diulas lengkap sesuai dengan kepakaran penulis.

c) Kecukupan dan kemutakhiran data/informasi dan metodologi:

data cukup mutakhir dengan pembahasan dan referensi menggunakan 80% dari sumber primer dengan tahun terbit rata-rata 5-10 tahun terakhir. Metode telah jelas disampaikan dengan konsep desain yang mudah dipahami dibantu ilustrasi gambar-gambar dan desain site yang relevan dengan pembahasan.

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H.7.198504072018071001
Unit Kerja : Departemen PWK FT.Undip

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Design Guidelines for Vegetative Approach Application to Mitigate Riverbank Landslides in Mangkang Wetan and Mangunharjo Villages, Semarang Coastal Area, Indonesia

[Dewi, Santy Paulla](#) ; [Kurniati, Rina](#) [Save all to author list](#)^a Department of Urban and Regional Planning, Faculty of Engineering, Universitas Diponegoro, Jl. Prof. Soedarto, SH, Tembalang, Central Java, Semarang, 50275, Indonesia

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The Semarang coastal area is vulnerable to floods, land subsidence, and landslides, including Mangkang Wetan and Mangunharjo villages. The community villages struggle with flooding every year because of the riverbank landslides. The government's efforts to improve the critical embankments have not yet reached these villages. The community prevents landslides by a conventional method, such as using sacks filled with sand. However, this effort did not make it significantly effective. Therefore, this study proposes a vegetative approach as an alternative effort to reduce the landslide possibility and provide directions for riverbank management. This approach emphasizes soil conservation by applying a suitable plant type to reduce the landslides possibility. Determining the design guidelines for the vegetative approach starts by analyzing the physical condition of the village and the river to specify zone types; then continues by analysis of the appropriate vegetation types. Afterward, determine the

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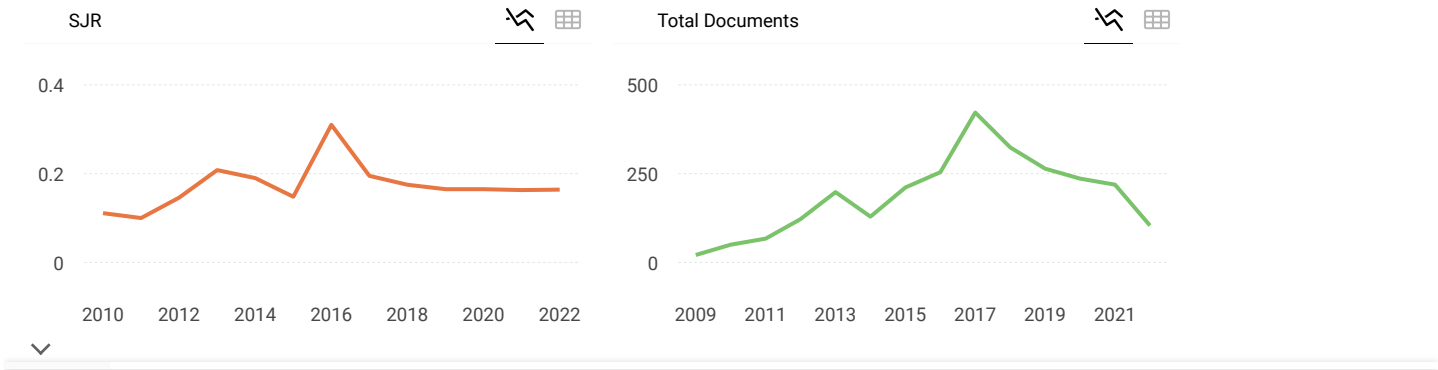
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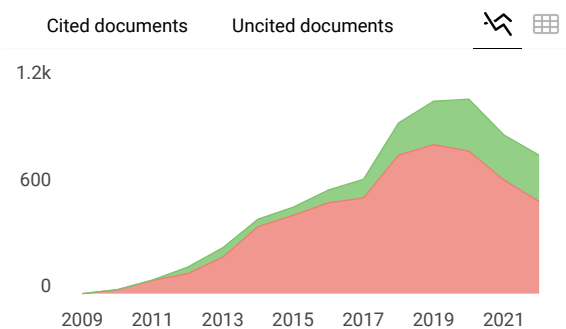
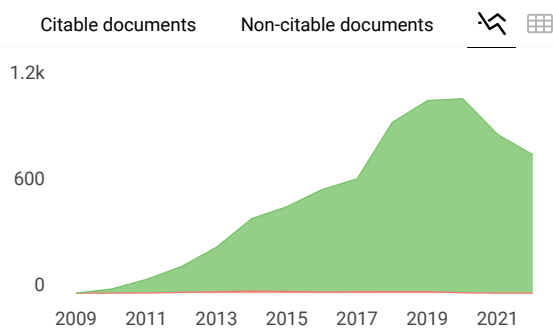
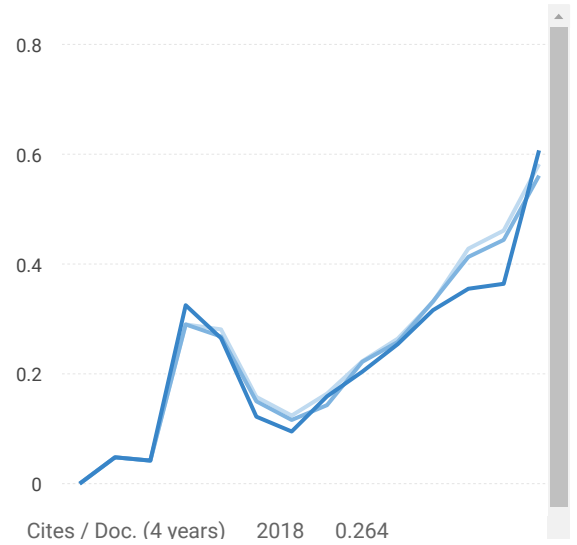
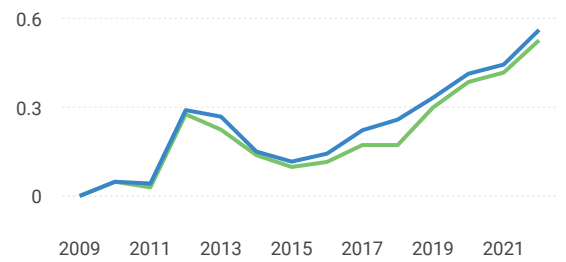
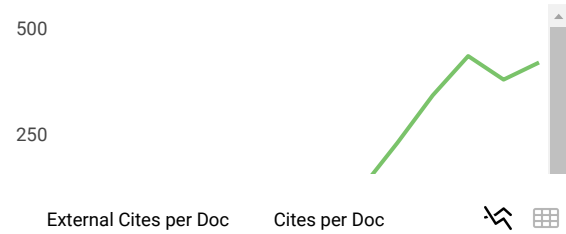
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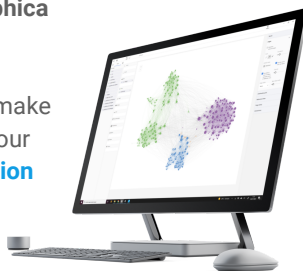
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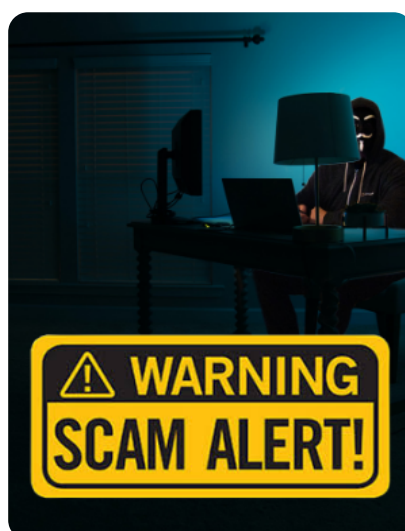
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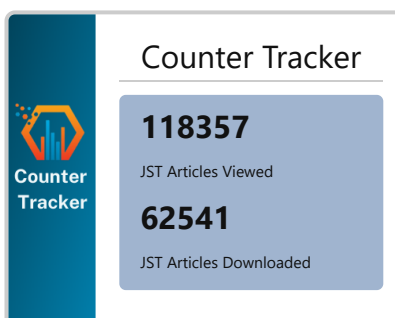
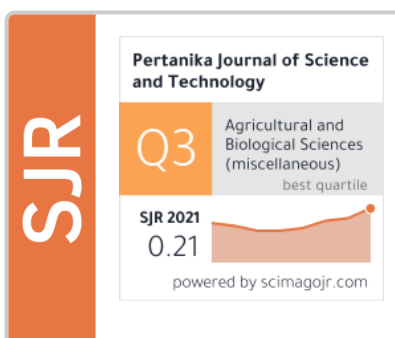


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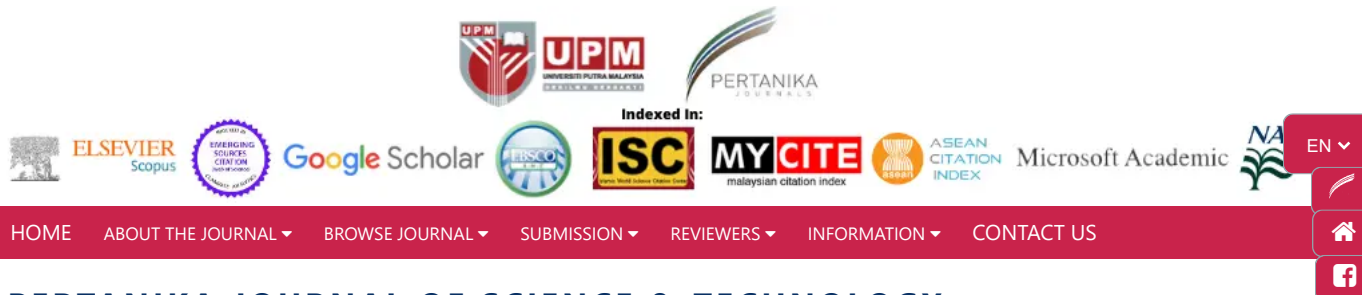
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Foreword

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PJST is an open-access journal for studies in Science and Technology published by Universiti Putra Malaysia Press. It is independently owned and managed by the university for the benefit of the world-wide science community.

This issue contains 35 articles; four review articles and the rest are regular articles. The authors of these articles come from different countries namely Bangladesh, Indonesia, Iraq, Japan, Malaysia, Nigeria and Saudi Arabia.

An investigation on optimal material selection for manufacturing prosthetic feet was conducted by Fahad Mohanad Kadhim et al. from Iraq. This investigation simulates chosen materials to find the optimal material selection for manufacturing prosthetic feet by assuming boundary conditions, reaction forces, design considerations, and application. The result shows that the Hybrid composite material has excellent improvement in mechanical properties such as lightweight, stiffness, high mechanical properties, and cost-efficiency. Furthermore, by considering the body weight of the amputee and gait cycle, and analyzing the material properties, the hybrid composite material that is the best suitable should be selected to manufacture foot prostheses. Further details of the investigation can be found on page 2363.

A review on computed tomography and other imaging modalities in pediatric congenital heart disease was conducted by Hongying Chen and colleagues from Universiti Putra Malaysia. Congenital heart defects (CHD) are the most common congenital disabilities. Therefore, an early and accurate diagnosis of coronary heart disease is very important for patients to get timely and effective treatment. At present, the clinical application of echocardiogram (echo), cardiovascular magnetic resonance (CMR) and computed tomography angiography (CTA) in coronary heart disease anatomy and function has increased significantly, which plays an important role in preoperative diagnosis, intraoperative monitoring, and postoperative recovery evaluation. Details of this study are available on page 2439.

A regular article titled “Effective Emergency Management: Scrutinizing the Malaysia Lead Responding Agency Planning and Information Management Approach During Disaster Exercise” was presented by Khairilmizal Samsudin and co-researchers from Malaysia. This study proposes several areas of improvement for planning and information management elements in effective emergency management theory by identifying its challenges through the Fire and Rescue Department Malaysia (FRDM). Four disaster

exercises at the state and federal levels were observed using a structured checklist. The result indicates challenges were found in terms of proactivity in gaining information, disseminating critical information during emergencies, developing a specific incident action plan, and media management. Detailed information about this study is available on page 2521.

In the last 12 months, of all the manuscripts peer-reviewed, 46% were accepted. This seems to be the trend in PJST.

We anticipate that you will find the evidence presented in this issue to be intriguing, thought-provoking and useful in reaching new milestones in your own research. Please recommend the journal to your colleagues and students to make this endeavour meaningful.

All the papers published in this edition underwent Pertanika's stringent peer-review process involving a minimum of two reviewers comprising internal as well as external referees. This was to ensure that the quality of the papers justified the high ranking of the journal, which is renowned as a heavily-cited journal not only by authors and researchers in Malaysia but by those in other countries around the world as well.

We would also like to express our gratitude to all the contributors, namely the authors, reviewers, Editor-in-Chief and Editorial Board Members of PJST, who have made this issue possible.

PJST is currently accepting manuscripts for upcoming issues based on original qualitative or quantitative research that opens new areas of inquiry and investigation.

Chief Executive Editor

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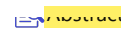
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The Chief Executive Editor

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Design Guidelines for Vegetative Approach Application to Mitigate Riverbank Landslides in Mangkang Wetan and Mangunharjo Villages, Semarang Coastal Area, Indonesia

Santy Paulla Dewi* and Rina Kurniati

Department of Urban and Regional Planning, Faculty of Engineering, Universitas Diponegoro, Jl. Prof. Soedarto, SH, Tembalang, Semarang, 50275, Central Java, Indonesia

ABSTRACT

The Semarang coastal area is vulnerable to floods, land subsidence, and landslides, including Mangkang Wetan and Mangunharjo villages. The community villages struggle with flooding every year because of the riverbank landslides. The government's efforts to improve the critical embankments have not yet reached these villages. The community prevents landslides by a conventional method, such as using sacks filled with sand. However, this effort did not make it significantly effective. Therefore, this study proposes a vegetative approach as an alternative effort to reduce the landslide possibility and provide directions for riverbank management. This approach emphasizes soil conservation by applying a suitable plant type to reduce the landslides possibility. Determining the design guidelines for the vegetative approach starts by analyzing the physical condition of the village and the river to specify zone types; then continues by analysis of the appropriate vegetation types. Afterward, determine the design direction for each zone and recommend a suitable type of vegetation. The analysis results show two strategies related to the possible application of a vegetative approach. The do-nothing strategy is for locations that cannot physically intervene because there is no river border. In contrast, the do something strategy

is applied to locations that physically allow for a vegetative approach at the river border. However, no single effort can prevent landslides, so it needs to combine mechanical and vegetative approaches that adjust to the physical characteristic of the river and the soil type.

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E-mail addresses:

santy.paulla.dewi@pwk.undip.ac.id (Santy Paulla Dewi)

rina.kurniati@pwk.undip.ac.id (Rina Kurniati)

* Corresponding author

Keywords: Design, landslide, riverbank, vegetative approach

The Relationship Between Bangladesh's Financial Development, Exchange Rates, and Stock Market Capitalization: An Empirical Study Using the NARDL Model and Machine Learning

Rehana Parvin

*School of Mathematical Sciences, Universiti Sains Malaysia, 11800 USM, Minden, Penang, Malaysia
Department of Quantitative Sciences, International University of Business Agriculture and Technology,
Dhaka-1230, Bangladesh*

ABSTRACT

This research looks at the interplay between financial development, exchange rates, and the stock market in Bangladesh from 1995 to 2019 and employs the Nonlinear Autoregressive Distributed Lag (NARDL) model. The machine learning technique uses the iterative classifier optimizer to beat other classifiers in stock market capitalization prediction. According to our NARDL findings, changes in financial development and exchange rates positively impact stock market capitalization in Bangladesh. Negative changes in financial development and the currency rate, on the other hand, have mixed long-term and short-term consequences for the stock market. The dynamic multiplier graphs show that the response of the stock market capitalization to positive changes in financial development and exchange rates is nearly comparable to the response to negative changes. According to the Wald test, there are asymmetries among variables. We urge governments to remove barriers to development, upgrade infrastructure, expand the stock market's capacity, and restore market participants' confidence in the Bangladesh stock market.

Keywords: Dynamic multiplier, iterative classifier, NARDL, prediction, Wald test

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E-mail address:

rehana.parvin@iubat.edu

INTRODUCTION

The stock market's performance substantially impacts a country's economic development by bringing surplus fundholders and users together. Creating an enabling climate for investor confidence is crucial to the stock market's growth and development in a market economy. Bangladesh's economy

Robust Hybrid Classification Methods and Applications

Friday Zinzendoff Okwonu^{1,2}, Nor Aishah Ahad^{1*}, Innocent Ejiro Okoloko³,
Joshua Sarduana Apanapudor⁴, Saadi Ahmad Kamaruddin^{1,2,5} and Festus
Irimisose Arunaye⁴

¹*School of Quantitative Sciences, College of Arts and Sciences, Universiti Utara Malaysia, 06010 Sintok, Kedah, Malaysia*

²*Institute of Strategic Industrial Decision Modeling, School of Quantitative Sciences, College of Arts and Sciences, Universiti Utara Malaysia, 06010 Sintok, Kedah, Malaysia*

³*Faculty of Computing, Dennis Osadebay University, Anwai Rd., Asaba, Nigeria*

⁴*Department of Mathematics, Faculty of Science, Delta State University, P.M.B.1, Abraka, Nigeria*

⁵*Centre for Testing, Measurement, and Appraisal (CeTMA), Universiti Utara Malaysia, 06010 Sintok, Kedah, Malaysia*

ABSTRACT

The sample mean classifier, such as the nearest mean classifier (NMC) and the Bayes classifier, is not robust due to the influence of outliers. Enhancing the robust performance of these methods may result in vital information loss due to weighting or data deletion. The focus of this study is to develop robust hybrid univariate classifiers that do not rely on data weighting or deletion. The following data transformation methods, such as the least square approach (LSA) and linear prediction approach (LPA), are applied to estimate the parameters of interest to achieve the objectives of this study. The LSA and LPA estimates are applied to develop two groups of univariate classifiers. We further applied the predicted estimates from the LSA and LPA methods to develop four hybrid classifiers. These

classifiers are applied to investigate whether cattle horn and base width length could be used to determine cattle gender. We also used these classification methods to determine whether shapes could classify banana variety. The NMC, LSA, LPA, and hybrid classifiers showed that cattle gender could be determined using horn length and base width measurement. The analysis further revealed that shapes could determine banana variety. The comparative results using the two data

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E-mail addresses:

o.friday.zinzendoff@uum.edu.my (Friday Zinzendoff Okwonu)

aishah@uum.edu.my (Nor Aishah Ahad)

Okolokoinno@yahoo.com (Innocent Ejiro Okoloko)

japanpudor@yahoo.com (Joshua Sarduana Apanapudor)

s.ahmad.kamaruddin@uum.edu.my (Saadi Ahmad Kamaruddin)

ifarunaye@yahoo.com (Festus Arunaye Irimisose)

*Corresponding author

The Kinetic Evaluation and DFT Study of Cis-[Pt(Asc)(NH₃)₂] Complex as an Inhibitor to Type 2 Diabetic Human Amylase

Khalid Farouk Al-Rawi¹, Khaldoon Taher Maher², Othman Ibrahim Alajrawy^{3*} and Firas Taher Maher⁴

¹Department of Chemistry, College of Science, University of Anbar, 00964 Iraq

²Al-Amal National Hospital for Cancer Management, Baghdad 00964 Iraq

³Department of Applied Chemistry, College of Applied Science, University of Fallujah, 00964 Iraq

⁴Department of Chemistry, College of Science, Tikrit University, Tikrit 00964 Iraq

ABSTRACT

Several metal complexes and organic compounds and extracted herbs that might be involved in the bio-mechanism of the type 2 diabetes mellitus treatments. This research aims to synthesize a new platinum (II) complex and study its kinetics as an inhibitor for freshly purified amylase from type 2 human diabetics. The amylase enzyme was precipitated from diabetic patients. The complex cis- [Pt(Asc)(NH₃)₂] was synthesized and characterized experimentally and theoretically by DFT calculations to conclude the structure. Both calculations confirmed the square planar geometry for the prepared complex. The results showed that the complex is more stable and polar than the L-ascorbic acid derivative. Therefore, we suggested that the synthesized Pt(II) complex is appropriate to be examined as an inhibitor for the amylase enzyme. Several concentrations from the Pt(II) complex were prepared for kinetic purposes. Kinetic results have shown that the newly prepared

complex has a remarkable inhibition effect on the amylase enzyme. Kinetic parameters were fitted using the Lineweaver–Burk plot. The inhibition reaction was confirmed as a non-competitive inhibitor. Also, an inorganic compound derived from vitamin C was prepared and diagnosed by several spectroscopic methods, and a comparison between the experimental and theoretical data was conducted. The DFT study of the prepared complex gave a useful explanation for the complex and its stability. Thus, an

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E-mail addresses:

sc.kfwi72@uoanbar.edu.iq (Khalid Farouk Al-Rawi)

khaldontaher@gmail.com (Khaldoon Taher Maher)

othman-ibrahimasc@uofallujah.edu.iq (Othman Ibrahim Alajrawy)

Firastaher3@gmail.com (Firas Taher Maher)

* Corresponding author