CSSR 2020

7th INTERNATIONAL CONFERENCE
ON SCIENCE & SOCIAL RESEARCH

9 - 10 December 2020
Virtual Presentation

ABSTRACT BOOK

CONTENTS

FOREWORD

Vice-Chancellor
Universiti Teknologi MARA

Assalammualaikum wbt. and Greetings to all,

It is my great pleasure to extend heartiest congratulations to the Office of Deputy Vice-Chancellor (Research & Innovation) for organizing the 7th International Conference on Sciences & Social Research (CSSR2020) via virtual presentation. Congratulations to all the committee members for all the hard work in ensuring the success of this event, despite the COVID-19 pandemic. I would like to express my gratitude to Professor Dr Nooritawati Md Tahir for chairing this conference, with the direct coordination of Professor Dr Mohd Nazip Suratman, the Deputy Vice-Chancellor (Research & Innovation) of UiTM.

On behalf of Universiti Teknologi MARA (UiTM), I wish to welcome all delegates, distinguished speakers and all participants. A special thanks to the Universitas Negeri Semarang (UNES), Indonesia for the spirit to jointly organize this conference.

It is indeed an honor and privilege to be conducting this virtual conference with the theme of "Translational Research Impact on Sustainable Development Goals". CSSR2020 continues to offer high-quality content and supreme networking opportunities to its participants, yearly. This was aimed for creating the exposure on the latest research findings and new collaboration opportunities in producing more impactful research. SDG theme is the main focus of the conference, in line with the UiTM2025 Strategic Planning that requires the encompassing of SDG elements in the translational research. With the 6 research tracks provided, I truly hope that the sessions offered during CSSR2020 will inspire us to lead research in the right direction for sustainable growth, thus enhancing more scientific discoveries.

To spur these discussions, a stellar assembly of speakers comprising local experts and international delegates from all over the world are on board to provide strategic insights in navigating a new research direction. On that note, I wish you a fruitful and rewarding conference.

Thank you.

EMERITUS PROFESSOR DATUK IR DR MOHD AZRAAI KASSIM
Vice-Chancellor
Universiti Teknologi MARA

In the name of Allah, the most gracious and ever-loving.

I would like to welcome all participants and guests to the 7th International Conference on Science and Social Research (CSSR 2020) that is being held virtually using google platform, FB Live and Youtube live over a two-days course. This year's theme 'Translational Research Impacts on Sustainable Development Goals (SDGs), takes an in-depth look at the sustainable Development Growth in the economy and society. It addresses the challenges and solutions from various points of view, ranging from science and technology to the social sciences.

This conference also serves as a platform for academicians, researchers, graduates and universities profesional to build a networking and engagement with one another in the exchange of ideas and also to be among the experts in the field of research.

Universiti Teknologi MARA continues its stride toward empowering research and innovation to raise the university up to the global academic standards, From research, stems innovation that can enhance development, leading to the betterment of society and economy.

Today's world has changed people adapated living in the new norm. Through this, CSSR 2020 provides a valuable opportunity for researcher and industry specialist to share experiences in virtual platform, and this opportunity should be taken to build more networking in proving expertise in the research and make engagement to expand networking beyond one's area of expertise.

Lastly, I would like to express my infinite gratitude to the organising committee. The hard work and dedication put into this intellectual discourse would definitely benefit those involved, and at a larger scale, the society itself. With that, I wish everyone a beneficial session at CSSR 2020.

PROFESSOR DR MOHD NAZIP SURATMAN
Deputy Vice-Chancellor (Research & Innovation)
Universiti Teknologi MARA

Dear CSSR 2020 Participants and Presenters,

On behalf of the organizing committee and Universiti Teknologi MARA (UiTM), it is my great pleasure to welcome all national and international researchers to the 7th International Conference on Science and Social Research 2020 (CSSR 2020). Undeniably, Malaysia is not spared from the ravages of COVID-19 and for this year, CSSR 2020 will be held virtually and we will embrace the awkward accordingly.

With this year's theme "Translational Research Impacts on Sustainable Development Goals (SDGs)" it is hope that CSSR 2020 will be the forum for researchers, academics, industries partners and practitioners to exchange theories, ideas, techniques and experiences that will be essential for social, economic and environmentally sustainable development as well as to create a more sustainable future. In addition, as part of our global research collaboration initiatives, CSSR 2020 is jointly organized by Universitas Negeri Semarang (UNNES), Indonesia.

Besides the keynote sessions that will be delivered by three prominent researchers, the virtual parallel sessions will cover multi-disciplinary research from science and technology to social science and humanities. The conference track is divided into six areas namely Industrial Technology (IT), Cyber Technology (CT), Health & Wellness (HW), Logistic & Transportation (LT), Energy & Environment (EE) and Social Creativity & Innovation (SCI). These sessions will showcase important scientific advances and highlight impacts of inter-disciplinary research in a world of fast changes and complex interactions. For this year, there will be no running between presentation rooms and we hope it will still be possible for participants to connect with each other through the online platform chat box for networking and further expand each other's view beyond their areas of expertise and for future collaborations as well. CSSR 2020 is also one of the platform for researchers to boost the university's research agenda specifically the indexed journal publications.

Last but not least, I would like to express my sincere thanks to all renowned keynote speakers and my appreciation to all CSSR 2020 reviewers for assisting and ensuring the quality and standard of articles submitted to this conference. My gratitude goes to all session chairs and committee members for their strong commitments in making this conference a success.

Thank you.

NOORITAWATI MD TAHIR (PhD, CEng)
Chairperson CSSR 2020

TRACK 1: INDUSTRIAL TECHNOLOGY (IT)
(Advances Material, Smart Manufacturing, Plant and Process, Construction & Infrastructure)

TRACK 2: CYBER TECHNOLOGY (CT)
(Space & Satellite, Big Data & Data Analytics, Cyber Security, Robotics & Ai, Smart Sensors)

TRACK 3: HEALTH & WELLNESS (HW)
(Preventive Healthcare, Sick Care, Rehabilitative Care, Genomics, Non-Communicable Disease, Natural Product)

TRACK 4: LOGISTICS AND TRANSPORTATION (LT)
(Transportation, Logistics & Halal-hub, EV-AV, UAV Aviation)

TRACK 5: ENERGY & ENVIRONMENT (EE)
(Water Security, Renewable Energy, Environment & Climate Change, Solar Technology, Biodiversity, Food Security)

TRACK 6: SOCIAL CREATIVITY & INNOVATION (SCI)
(Creativity, Islamic Finance Fintech, Socio Innovation, B40-Talent, Entrepreneurship & Artrepreneur, Socio-Economic)

CONFERENCE SCHEDULE
CSSR 2020

Day 1 | 09 December 2020 (Wednesday)

TIME	PROGRAMME
8.00 am	Registration of Presenters & Participants
8.50 am	**Welcoming Remarks** ***YBhg. Professor Dr Nooritawati Md. Tahir*** Chairperson CSSR 2020
9.10 am	**Opening Remarks** ***YBhg. Professor Dr Mohd Nazip Suratman*** Deputy Vice-Chancellor (Research & Innovation) UiTM
9.30 am	**Keynote Speech 1** ***YBhg. Professor Emeritus Dato' Dr Abdul Latiff Mohamad*** Research Fellow, Langkawi Research Centre
10.30 am	Question & Answer Session
10.40 am	Parallel Sessions A
1.00 pm	**Session Adjourn**
2.00 pm	**Keynote Speech 2** ***YBhg. Professor Dr Kirsten Holmes*** Dean, Research Faculty of Business and Law Curtin University, Perth, Australia
3.00 pm	Question & Answer Session
3.10 pm	Parallel Session B
5.40 pm	**End of Day 1**

Day 2 | 10 December 2020 (Thursday)

TIME	PROGRAMME
8.00 am	Registration of Presenters & Participants
8.10 am	Parallel Sessions C
9.30 am	**Keynote Speech 3** ***YBhg. Professor Dato' Dr Mohd Tajuddin Abdullah, FASc*** Institute of Tropical Biodiversity and Sustainable Development, Universiti Malaysia Terengganu (UMT)
10.30 am	Question & Answer Session
10.40 am	Parallel Session D
1.00 pm	**Session Adjourn**
2.30 pm	**Closing Remarks** ***YBhg. Professor Dr Mohd Nazip Suratman*** Deputy Vice-Chancellor (Research & Innovation) UiTM
2.45 pm	CSSR 2020 Montage Presentation Photography session
3.00 pm	Best Paper Award Ceremony Best Presenter Award Ceremony
3.30 pm	**End of Conference**

YBhg. Emeritus Professor Dato' Dr Abdul Latiff Mohamad
Research Fellow, Langkawi Research Centre

TITLE : CONSERVATION OF BIODIVERSITY AND ECOSYSTEMS FOR SUSTAINABLE FUTURE

Malaysia is endowed with one of the richest and diverse tropical biodiversity in the world which is represented by various ecosystems and habitats, species of flora and fauna and the genetic materials contained in them. Ecosystem diversity is represented by a spectrum of marine and aquatic diversity and the terrestrial ecosystems in the lowlands to the highest mountain forests. Species diversity is represented by about 15,000 species of plants whilst the diversity of animals is represented by more than 6,000 species, excluding that of the insects, the largest and most diverse single group which is inadequately known. As the country is pursuing industrialization and high-income economy, administrative conflicts occur between biodiversity conservation for sustainable development and socio-economic development that promises short and medium term economic benefits, unless sustainable development is adopted both at the federal, state and local government levels. To-day a total of 1.39 million ha (about 7.6%) of the forest of all types have been set aside for ecosystem and species conservation. However, a framework for managing biodiversity in protected and unprotected areas is inadequate as strategic planning and management programmes are not in proper places. The country is yet to define priorities for conservation and sustainable use based on ecosystem and species diversity. Measures for sustainable use in agriculture, forestry, fisheries resources are in place but those in biodiversity prospecting, eco-tourism and impacts of urbanisation on biodiversity are yet to be established. In the absence of concrete data of biodiversity loss, it has proved to ascertain the lists of endangered or otherwise threatened ecosystems and species as the various ecosystems are prone to continuous changes and species to losses. However, efforts to assess and monitor these have been initiated through the National Policy on Biodiversity 1998 and revised in 2016. Many factors have contributed to biodiversity loss; among them is the rapid socio-economic development that transformed vast forested lands through logging activities, land openings for agriculture and resettlement and subsequently creating new built-up areas such as urban and industrial areas which are relatively poor in biodiversity. These changing land-use patterns are affecting not only biodiversity but the environment per se. Other factors such as over-harvesting and pollution have also contributed in small parts. These activities had led to significant habitat loss, degradation and forest fragmentation. What is needed are frameworks and strategies for biodiversity and ecosystem conservation, some socio-economic strategies for sustainable use and benefit sharing of biodiversity and also some legal measures for protection and conservation of biodiversity and assessment of land-use patterns.

YBhg. Professor Kirsten Holmes

Dean, Research
Faculty of Business and Law
Curtin University, Perth, Australia

The SDGs, Responsible Research and Making an Impact in the Social Sciences – a Focus on Tourism

The United Nations 17 Sustainable Development Goals have set a target for global improvements across all spheres of life by 2030. Research is integral to the achievement of the SDGs and this is reflected in growing concern for Ethics, Responsibility and Sustainability within academic life, for example through Principles for Responsible Management Education and the call to increase the relevance of research to practice through the Responsible Research in Business movement. Tourism, as an applied field of study, stands on the cusp between academia and practice. Tourism, as a global phenomenon, offers enormous opportunities for sustainable development, yet at the same time tourism has been responsible for numerous cultural, economic and environmental problems.

The past year, which has seen travel severely compromised due to the COVID-19 pandemic, has led academics to call for a new approach to tourism, one which can be a positive force for good. Yet at the same time this requires tourism academics to reflect on their own practice as researchers. This presentation poses a series of questions about the role of research in a post-COVID world: What is the value of academic research for practice? How can we better engage stakeholders, including local communities? How can we make our own research practices more sustainable? The presentation will use the field of tourism as a means to explore the idea of responsible research and the role of such research in achieving the SDGs.

YBhg. Professor Dato' Dr Mohd Tajuddin Abdullah

Institute of Tropical Biodiversity and Sustainable Development,
Universiti Malaysia Terengganu (UMT)

TITLE : CONSERVATION OF BIODIVERSITY AND ECOSYSTEMS FOR SUSTAINABLE FUTURE

Malaysia is endowed with one of the richest and diverse tropical biodiversity in the world which is represented by various ecosystems and habitats, species of flora and fauna and the genetic materials contained in them. Ecosystem diversity is represented by a spectrum of marine and aquatic diversity and the terrestrial ecosystems in the lowlands to the highest mountain forests. Species diversity is represented by about 15,000 species of plants whilst the diversity of animals is represented by more than 6,000 species, excluding that of the insects, the largest and most diverse single group which is inadequately known. As the country is pursuing industrialization and high-income economy, administrative conflicts occur between biodiversity conservation for sustainable development and socio-economic development that promises short and medium term economic benefits, unless sustainable development is adopted both at the federal, state and local government levels. To-day a total of 1.39 million ha (about 7.6%) of the forest of all types have been set aside for ecosystem and species conservation. However, a framework for managing biodiversity in protected and unprotected areas is inadequate as strategic planning and management programmes are not in proper places. The country is yet to define priorities for conservation and sustainable use based on ecosystem and species diversity. Measures for sustainable use in agriculture, forestry, fisheries resources are in place but those in biodiversity prospecting, eco-tourism and impacts of urbanisation on biodiversity are yet to be established. In the absence of concrete data of biodiversity loss, it has proved to ascertain the lists of endangered or otherwise threatened ecosystems and species as the various ecosystems are prone to continuous changes and species to losses. However, efforts to assess and monitor these have been initiated through the National Policy on Biodiversity 1998 and revised in 2016. Many factors have contributed to biodiversity loss; among them is the rapid socio-economic development that transformed vast forested lands through logging activities, land openings for agriculture and resettlement and subsequently creating new built-up areas such as urban and industrial areas which are relatively poor in biodiversity. These changing land-use patterns are affecting not only biodiversity but the environment per se. Other factors such as over-harvesting and pollution have also contributed in small parts. These activities had led to significant habitat loss, degradation and forest fragmentation. What is needed are frameworks and strategies for biodiversity and ecosystem conservation, some socio-economic strategies for sustainable use and benefit sharing of biodiversity and also some legal measures for protection and conservation of biodiversity and assessment of land-use patterns.

ABSTRACTS FOR ORAL PRESENTATION
CSSR 2020

TRACK 1: INDUSTRIAL TECHNOLOGY (IT)

TRACK 1: INDUSTRIAL TECHNOLOGY (IT)

	ID	AUTHORS	TITLE
1	7	Mohd Noorwadi Mat Lazim (Universiti Teknologi MARA & Malaysia Nuclear Agency, Malaysia); Faiza Mohd (Universiti Teknologi MARA, Malaysia); Chai Chee Keong (Malaysia Nuclear Agency, Malaysia); Norazura Ibrahim (Universiti Teknologi MARA, Malaysia)	The Effect of HDDA, n-BA and TMPTMA on Physical, Chemical and Thermal Properties of UV Irradiation Vulcanization Natural Rubber Latex

The NR latex was vulcanized by exposing it to UV irradiation for 1.5 hours in the presence of different acrylate monomers, namely HDDA, n-BA and TMPTMA. The 2 - hydroxy-2-methyl-1-phenylpropanoid was used as a photo-initiator. The effect of HDDA, n-BA and TMPTMA on physical, chemical and thermal properties of ultraviolet irradiation vulcanization natural rubber latex (UVNRL) was investigated. The wetting and absorption of acrylate monomer into NR film were determined by using contact angle and absorption tests. Tensile strength, modulus and crosslink density were determined to study the physical properties while the FTIR spectroscopy was used to determine the chemical interaction between acrylate monomer and NR. The thermal properties of UVNRL samples were determined using TGA and DSC. It was found that NR latex formulated with HDDA had the highest tensile strength and stable thermal degradation. The existence of carbonyl group attached in UVNRL is shown in the FTIR spectrum. The diffusion of acrylate monomer into NR latex particles and number of functional groups in acrylate monomer influenced the properties of UVNRL.

	ID	AUTHORS	TITLE
2	15	Nor Syafikah Pezol (Universiti Teknologi MARA, Malaysia)	Temperature Control of Essential Oil Extraction Process Using Non-Integer Controller (CRONE)

Steam distillation is commonly used to extract the essential oils. Due to its behavior that is volatile and fragile to excess heat, steam temperature needs to be regulated within a permissible range. Changes in the dynamics of steam temperature because of several factor such as variation of water level, capacity of loads, error in modelling and others had made the control effort more challenging. In fact, variation of parameters in plant model have interrupted the stability of the system and may jeopardized the quality of essential oils. In this paper, a CRONE controller which means Non-integer order robust controller will be applied to suppress the effect of variability in process parameter changes to the control loop. CRONE controller design pursued in frequency domain approach made it easier to achieve a constant transient within an Iso-damping region. The CRONE performance will be compared with Internal Model Control PID with fractional-order Filter (IMC-PID-FOF). The comparative study was done in time and frequency domain to reveal the robustness of the two controllers. It was shown that both controllers have good performance in time domain of closed-loop system. However, simulation shows that CRONE had better performance while handling with time constant variations in plant model.

	ID	AUTHORS	TITLE
3	29	Mohd Arif Mat Norman (Universiti Selangor & Universiti Teknologi MARA, Malaysia); Jamaluddin Mahmud (Universiti Teknologi MARA, Malaysia)	Investigation of Kevlar/Glass Hybrid Laminates Natural Frequency Using Finite Element Simulation

This paper aims to investigate the effect of various lamination schemes, boundary conditions and fibre compositions on natural frequencies of hybrid composite laminates. A 150mm x 75mm plate model made of Kevlar/glass hybrid composite laminates under free vibration was developed using commercially available Finite Element Software (ANSYS). Parameters analysed involved various lamination schemes (cross ply and unidirectional ply); boundary conditions (Clamp- Clamp-Clamp-Clamp (CCCC), Clamp-Free-Free-Free (CFFF) and Free-Free-Free- Free (FFFF)); and various compositions of Kevlar and glass fibres. For each case, finite element simulations were performed, and the natural frequencies were determined. Mode shapes were also analysed to observe the plates' deformation behaviour. The results show that for cross ply laminates, increasing the Kevlar composition had increased the plates' natural frequency. In term of boundary conditions, it shows the CCCC produced the highest natural frequencies (859.49Hz), while CFFF produced the lowest natural frequencies (37.248 Hz). In general, it can be concluded that the current study is useful and has contributed significant knowledge to better understanding the effect of various fibre composition and boundary conditions on the natural frequencies of hybrid composite laminates.

	ID	AUTHORS	TITLE
4	62	Muhammad Nasrun Faris Mohd Zulkifli (Textile Research Group, Malaysia); Mohamad Faizul Yahya (Textile Research Group, Malaysia); Mohd Rozi Ahmad (Universiti Teknologi MARA & Textile Research Center, Malaysia); Suzaini Abdul Ghani (Universiti Teknologi MARA, Malaysia)	Multiple Yarn Pull Out Response on E-Glass Twill 4/1 Woven Fabric

Yarn pull out analysis is an evaluation to determine the friction force behavior of yarn within woven fabric during pull out action. It is imperative to investigate yarn pull out performance as it can pre-determine the mechanical tensile strength and impact resistance performance of the woven fabric. To understand the friction force response of E-glass twill 4/1 woven fabric sample, multiple yarn pull out analysis is conducted by using a different number of yarn, 10, 20, and 30 yarns. Multiple yarn pull out analysis represents the most realistic frictional mechanism of yarn being pulled out from woven fabric due to impact penetration and tensile elongation conditions. This paper intends to discuss the influence of multiple yarn pull out performance according to woven fabric direction, fabric density, yarn linear density and yarn crimp factors. Interestingly, increases number of yarn significantly improve the friction force as 30 yarn recorded the highest value at 21.38 N at weft direction while the least friction is recorded with 10 yarn with 4.02 at warp. Meanwhile, weft direction with the least fabric density and yarn crimp at 29 yarn.cm-1 and 3.33% respectively produced excellent force-elongation performance than warp direction. In-depth determination on average force and yarn tenacity of individual yarn recommended that fabric direction plays a major influence. Fabric weft direction generated the highest average force and yarn tenacity for individual yarn with 0.7 N and 2.1 cN.Tex compared with warp direction.

TRACK 1: INDUSTRIAL TECHNOLOGY (IT)

ID	AUTHORS	TITLE
5 **85**	**Puteri Effanur Hidayah Ab. Rahman** (Faculty of Civil Engineering, Universiti Teknologi MARA, Shah Alam, Malaysia); **Rohana Hassan** (Universiti Teknologi MARA, Malaysia)	**Effect of Embedment Depth to Withdrawal Resistance of Timber Dowelled Connection Made from Merbau**

Each individual joint in timber structure is the most critical part to carry the load capacity of structural members. Current Malaysian Standard for designing timber structure is MS: 544 (2001) being referred to in Malaysia. However, there is incomplete information for withdrawal capacity of wood dowel in MS: 544 for Part 2 (Permissible Stress Design of Solid Timber) and Part 5 (Timber Joints). Therefore, this research is aimed to evaluate the optimum withdrawal performance of different selected embedded length of wood dowel for Merbau species. Common standard test methods for withdrawal capacity of timber fasteners is used in determining the withdrawal capacity of wood dowel which has been inserted into the timber. The test was conducted in four (4) different embedment lengths of wood dowel which were 30 mm, 60 mm, 90 mm and 120 mm with constant dowel diameter at 16 mm. From the test, withdrawal capacity that had been recorded by embedded lengths of 30 mm, 60 mm, 90 mm and 120 mm were 1234.75 N, 2619.90 N, 3128.80 N and 3963.96 N respectively. These ultimate load-carrying capacities were selected from the average load-carrying capacity from each group of the embedded length. Whilst, the withdrawal resistance that had been recorded for these embedded lengths were 41.46 N/mm, 43.66 N/mm, 34.76 N/mm, and 33.03 N/mm accordingly.

6 **109**	**Muhd Azimin Ab Ghani** (Universiti Teknologi MARA, Malaysia); **Khairul Imran Sainan** (FKM Universiti Teknologi MARA Shah Alam, Malaysia); **Norhisyam Jenal** (Universiti Teknologi MARA, Malaysia); **Firdaus Mohamad** (Universiti Teknologi MARA, Malaysia); **Muhamad Nazmi Mohamad Tarmizi** (FKM Universiti Teknologi MARA Shah Alam, Malaysia)	**Deflector Plate Integrity Analysis of Oil & Gas Standpipe Separator with 6mm**

In petroleum surface production facility, oil and gas separator is a device used to separate a mixed phase of well stream into gas and liquid phases. The integrity of the separator is essential in producing reliable operation that promotes better petroleum productivity by preventing failures in separation system. In this study, whenever a two-phase fluid arrives at a T junction, the low-density natural gas condensate tends to change its direction to flow upward to the standpipe while the crude oil maintains a linear path because of its higher density. The natural gas condensate hits the deflector plate and separates the oil droplets from the gas as it flows through the standpipe separator. The flow of gas exerts force and distributes pressure towards the deflector plate. High stress at the plate causes it to deflect. For this integrity analysis study, the working fluids consisted of Methane, Ethane and Butane gas flowed at certain velocity at Reynolds (Re) number of 35000, 70000 and 140000 across the standpipe. The integrity analysis is done through CFD and FEM simulation using ANSYS. Result and discussion were done based on the analysis of pressure distribution and deformation of deflector plate. At highest Re, the lowest density of gas will flow at highest velocity and produces the highest pressure at plate. Based on the study, it can be concluded that the natural gas with this range of fluid densities can run through the oil and gas standpipe separator with 6mm plate thickness since the highest stress obtained from this study did not exceed the ultimate tensile strength of deflector lining pipe.

7 **114**	**Siti Aisyah Binti Jaafar** (University of Technology MARA, Malaysia); **Sukarnur Che Abdullah** (Universiti Teknologi MARA, Malaysia); **Mohammad Azzeim Mat Jusoh** (Universiti Teknologi MARA, Malaysia); **Farok Bin Azmat** (Universiti Teknologi MARA, Malaysia); **Ahmed Jaffar** (Universiti Teknologi MARA, Shah Alam, Malaysia)	**Augmented Reality Real-Time Cloud-Based Simulation for Off-Site Monitoring in Industrial Manufacturing Application**

It is essential to realize that conventional AR-IoT applications only specialize in the localized area for on-site application thus leaving a research gap in the utilizations of Augmented Reality for off-site monitoring purposes. Therefore, this paper introduces the use of AR as support to off-site IoT monitoring data visualization, called "AR-Simulasi". An experimental investigation was conducted to investigate the ability to establish an off-site monitoring system using AR visualization approach for the "AR-Simulasi" Apps. As a case study, this system was applied to a simple developed material handling system, which is a color sorting conveyor. The real-world machine was re-designed in CAD and imported into Unity to create a working simulation. The simulation is in sync with the movements of the real machine, through the communication between smart sensors and microcontroller, ESP32. The connection is cloud-based and using MQTT to communicate between different devices. Therefore, the "AR-Simulation" Apps is easily accessible and used to view the real-time process of the conveyor in 3D visualization. The numbers of colored cubes, color errors, and several controls were projected in the application's interface. The relationships among accuracy and augmented simulation error were investigated. The results showed that by average the maximum lag time is 1 second, and despite this fluctuation in lagging time, the difference is somehow minuscule. Presented results showed a great potential for the improvements in the current AR-IoT monitoring applications used by industries and shall enhance user interaction for more flexible viewing and control of the designated process off-site.

TRACK 1: INDUSTRIAL TECHNOLOGY (IT)

ID	AUTHORS	TITLE
121	Napisah Sapiai (Universiti Teknologi MARA, Malaysia)	Low Velocity Impact Response of Glass-Galvanized Iron Fiber Metal Laminates

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Low velocity impact response of woven E-glass fiber/galvanized iron metal laminate specimens, manufactured using hot compression technique were investigated according to ASTM D7136. The specimens prepared with different stacking sequence of 2/1 and 4/5 were tested under impact energy of 10 Joules (J), 20J, and 30J. The response of the fiber metal laminates (FMLs) were compared to those of pure woven glass fiber reinforced polymer (WGFRP) laminate and plain Galvanized Iron (GI) metalsheet in terms of peak load, maximum deflection, absorbed energy, specific absorbed energy, load-deflection behavior and resulting damage area. The increasing impact energy attributed for higher peak load, maximum peak load, absorbed energy and more severe damage area. It was found that the FML stacking sequence 4/5 (FML 4/5) exhibited highest peak load when subjected to 20J and 30J impact energy loading. The highest maximum deflection was observed amongst other laminates subjected to same impact energies also show that the FMLs able to absorbed higher energy when impacted under 20J and 30J energy. The damage area of FMLs was dominantly failed by composite/metal interface delamination.

ABSTRACTS FOR ORAL PRESENTATION
CSSR 2020

TRACK 2: CYBER TECHNOLOGY (CT)

TRACK 2: CYBER TECHNOLOGY (CT)

	ID	AUTHORS	TITLE
1	24	Muhamad Sukri Hadi (Universiti Teknologi MARA, Malaysia); Aida Nur Syafiqah Shaari (Universiti Teknologi MARA, Malaysia); Intan Z. Mat Darus (Universiti Teknologi Malaysia, Malaysia); Rickey Ting (Universiti Teknologi Malaysia, Malaysia)	Active Vibration Control of Flexible Beam System Based on Cuckoo Search Algorithm

Flexible beam is recognized as lightweight structure which easily prone to excessive vibration and resulting in poor performance. This vibration may cause a loss of system stability and eventually leads to system failure. Thus, controlling the unwanted vibration is necessary to maintain the system performance. Therefore, this study presents the technique to suppress the undesired vibration of the flexible beam structure by introducing active vibration control. However, to develop an effective controller, an appropriate modelling of flexible beam that represent the real characteristic of the structure must be obtained. Recently, one of the best methods used to model the flexible beam structure is system identification via swarm intelligence algorithm. In this study, an intelligence algorithm known as Cuckoo Search (CS) is presented. The performance of the proposed algorithm was validated using three robustness methods which are correlation test, pole zero diagram stability and mean square error (MSE). The simulation result showed that CSA achieved superior performance by achieving lowest MSE of 6.1547x10-9, correlation test between 95% confidence level and high stability of root locus. Next, the PID controller tuned by Ziegler-Nichols method was developed using the transfer function accomplished from CS model. Two types of disturbances which are single and multiple sinusoidal were exerted to the system to validate the effectiveness of the controller. The controller has successfully achieved 30.2 dB of attenuation level for both disturbances. The percentage of reduction for single and multiple disturbances are 52% and 47.1% respectively.

	ID	AUTHORS	TITLE
2	25	Muhamad Sukri Hadi (Universiti Teknologi MARA, Malaysia); Nadzirah Mohd Mokhtar (Universiti Malaysia Pahang, Malaysia); Muhammad Izzuddin Akmal Zamri (Universiti Teknologi MARA, Malaysia	PID Controller Based on Ant Colony Optimization for Vibration Cancellation of Horizontal Flexible Plate Structure

Flexible plate structure provides many benefits over their rigid counterparts including small energy consumption, effective, lightweight and quick response. However, the vibration easily affected the flexible plate structure resulting in structural damage. This study introduces the modelling of a flexible plate structure using a system identification technique known as ant colony optimization (ACO) algorithm for vibration control. Firstly, the input-output vibration data that represent the actual system of flexible plate structure is obtained from the previous researcher. Next, the acquired vibration data was used to develop a dynamic model of the flexible plate structure. The performances of the ACO algorithm was validated using mean squared error (MSE), pole-zero plot and correlation test in order to get a precise and reliable outcome. The result shows that ACO algorithm has achieved the minimum MSE which is 6.7613×10^(-6), high stability of pole-zero plot and excellent correlation test. After that, the best model of ACO was used for the controller development based on an active vibration control technique. It was noticed that the controller has managed to obtain 6.19 dB reduction at the first mode vibration which percentage reduction of the controller is 10.63 % for sinusoidal disturbances and 9.64 % for multiple sinusoidal disturbances.

	ID	AUTHORS	TITLE
3	31	Muhammad Izzuddin Mohd Sani (Universiti Teknologi MARA, Malaysia); Nur Atiqah Sia Abdullah (Universiti Teknologi MARA & Faculty of Computer and Mathematical Sciences, Malaysia); Marshima Mohd Rosli (Universiti Teknologi MARA, Malaysia)	Review on Hypertension Diagnosis Using Expert System and Wearable Devices

The popularity of smartphones and wearable devices is increasing in the global market. These devices can track physical exercise records, hypertension, medicines, and self-health diagnosis. The wearable devices can also collect personal health parameters for many applications, and one of them is hypertension diagnosis. Hypertension is one of the risk factors for cardiovascular-related diseases among the Malaysian population. Many mobile applications are paired with a wearable device to monitor health conditions, but none of them able to diagnose hypertension. In this study, we aim to review previous research papers that focus on hypertension using expert systems and wearable devices. We performed a systematic literature review to categorize and structure published research papers in the area of hypertension, expert systems, and wearable devices. We found 15 research papers after the filtering process and consideration of the accessibility constraints. The key findings highlighted three main focuses, which are the expert system techniques, the factors of hypertension, and the types of sensors in wearable devices. The blood pressure is the most common factor of hypertension that can be collected by wearable devices. As for the expert system techniques, we determined the three most common techniques are machine learning, neural network, and fuzzy logic. Lastly, the wrist band is the most common sensor for wearable devices in hypertension-related research.

	ID	AUTHORS	TITLE
4	33	Maslina Abdul Aziz (Universiti Teknologi MARA, Malaysia); Nur Amirah Jasri (Universiti Teknologi MARA, Malaysia); Mohd Razif Shamsudin (Universiti Teknologi MARA, Malaysia); Ruhaila Maskat (Universiti Teknologi MARA, Malaysia); Nurulhuda Noordin (Universiti Teknologi MARA, Malaysia)	Predicting Common Diseases Among Students Using Decision Tree (J48) Classification Algorithm

Predictive analysis is very useful in the process of decision making. It discovers useful information by predicting the future outcome. However, it is essential to find the suitable technique before the predictive analytical model can be developed. This research explains the techniques compared which are decision tree technique (using J48 algorithm) and rule induction technique (using JRip algorithm) in order to build the predictive model for health datasets of UiTM Shah Alam Health Centre. Using medical profiles such as gender, diseases, the symptoms of the diseases, the organs of the diseases and the body systems of diseases, it can predict the likelihood of disease that may occur. It enables significant knowledge, for instance the patterns, relationship between medical attributes related to the diagnosis datasets. In this study, we also identify the most common disease for the students of UiTM Shah Alam over the past five years.

TRACK 2: CYBER TECHNOLOGY (CT)

	ID	AUTHORS	TITLE
5	38	Norizan Mat Diah (Universiti Teknologi MARA, Malaysia); Zaidah Ibrahim (Universiti Teknologi MARA, Malaysia)	Prediction of Early Symptoms of COVID-19 Infected Patients Using Supervised Machine Learning Models

The Coronavirus disease 19 (COVID-19) is an ongoing global pandemic where it is easily transmittable and life threatening the world. The number of infected and non-survived patients is increasing in almost all the affected countries. Currently, there is no clinically approved vaccine available yet. Early prediction is necessary to assist the healthcare systems to strategize and reduce the spread of this virus. This is a very critical decision that is considered as a potential threat to others. Supervised Machine Learning (SML) models have demonstrated promising performance in various prediction applications that can improve decision making. Thus, this research investigates the capabilities of SML models to predict whether a patient is infected with COVID-19 or not based on certain symptoms. A comparative analysis of the impact of seven standard SML prediction models has been conducted. They are Adaboost, K-Nearest Neighbor, Logistic Regression, Naive Bayes, Neural Network, Random Forest, and Support Vector Machine. A publicly available dataset from kaggle.com has been utilized for this research that consists of twenty symptoms collected from eight different countries. The outcome from Random Forest revealed that the five most important symptoms are tiredness, fever, dry cough, nasal congestion and age that is more than 60 which are consistent for all eight countries. Besides that, experimental results of the SML models indicate that Neural Network achieves the best predictive results followed by Adaboost.

	ID	AUTHORS	TITLE
6	42	Nur Shahellin Mansur Huang (Universiti Teknologi MARA, Malaysia); Sharifalillah Nordin (Universiti Teknologi MARA, Malaysia)	A Comparative Study of Blockchain Framework for Waqf Management System

This paper discusses the blockchain frameworks for evaluating trustworthiness in managing waqf management system. The frameworks are Ethereum, Hyperledger, Finterra Waqfchain and Waqf Blockchain (WB). The invention of the blockchain has offered many benefits to the waqf institution since this institution faced many challenges such as lack of data transparency, accountability issues, weak of historical records, improper audit and improper compliance practices that may breaks donors' trust to use waqf system as a platform to make donation. However, the framework has their own pros and cons in order to make waqf management system more transparent, trusted and efficient. As a result, Ethereum framework shows the most suitable blockchain platform that can be used for the waqf management system.

	ID	AUTHORS	TITLE
7	48	Nasuhar Ab Aziz (Universiti Teknologi MARA, Kelantan, Malaysia)	Box-Jenkins Model for Forecasting Malaysia Life Expectancy

Life expectancy is an estimate of how long the average person might be expected to live and is most often quoted for an entire lifetime. Forecasting of future life expectancy is needed to plan for health and social services and pensions. This article attempts to propose the most appropriate time series model based on Box-Jenkins methodology to explain the behavior of Malaysia life expectancy at birth for the purpose of forecasting future life expectancy. Several autoregressive integrated moving average (ARIMA) models were developed to model Malaysia life expectancy on data collected from year 1966 to year 2012. The data which separated by gender are provided by Department of Statistics Malaysia (DOSM) on yearly basis. ARIMA(0,2,1) and ARIMA(1,2,0) model was found to be the most suitable model for Malaysia life expectancy for male and female respectively with the least value of Akaike information criteria (AIC) and Bayesian information criteria (BIC) for in-sample fitting. The models further evaluate out-sample forecast accuracy using two different accuracy measures. The results indicate that both ARIMA(1,1,0) and ARIMA(2,2,3) model performed well for both in-sample fitting and out-sample evaluation for male and female respectively.

	ID	AUTHORS	TITLE
8	59	Khairilmizal Samsudin (Universiti Sains Malaysia, Malaysia); Nurulilyana Sansuddin (Universiti Sains Malaysia, Malaysia); Mohamad Fahmi Hussin (Universiti Teknologi MARA, Malaysia); Nur Emileen Abd Rashid (Universiti Teknologi MARA, Malaysia); Ainul Husna Kamarudin (Institute of Medical Science Technology (UniKL-MESTECH), Malaysia); Nor Ayu Zakaria (Universiti Teknologi MARA, Malaysia); Nur Eizati Mohd Ali (Consist College, Malaysia); Nur Fatin Najihah Ghazali (Universiti Sains Malaysia, Malaysia); Nur Hannani Abdul Ghani (Universiti Sains Malaysia, Malaysia)	Evaluating User Satisfaction Towards E-Learning Platform During COVID-19 Crisis

The outbreak of the COVID-19 epidemic has spread worldwide causing Movement control order in Malaysia since mid-March 2020 however, the teaching and learning process in university still needs to proceed as usual. Hence universities improvised their teaching and learning process to fully online via an online platform. This study concentrates on student satisfaction as an end-user towards E-learning hence, the objective of this paper is to assess the acceptance of students; to evaluate the overall satisfaction; to identify challenges, and finally; to proposed improvements towards the implementation of the teaching and learning process through E-learning. Based on the standards population sampling of 95% confidence level with a 5% margin of error, the respondent has answers sets of five (5) section pre-developed questionnaires aiming at measuring end-user satisfaction towards E-learning platform. Results show that the information quality, system usefulness, system usage characteristics of E-learning is highly acceptable with overall satisfaction mean of 3.7 and SD of 0.8, although lecturer capacity and effort in centralizing teaching and learning process and system improvement for E-learning need to be improved. Hence, the authors are in the opinion that the teaching and learning process through E-learning can be drastically improved.

TRACK 2: CYBER TECHNOLOGY (CT)

	ID	AUTHORS	TITLE
9	60	Farah Yasmin Abdul Rahman (Universiti Teknologi MARA, Malaysia); Amirul Asyraf Kamaruzzaman (Universiti Teknologi MARA, Malaysia); Shahrani Shahbudin (Universiti Teknologi MARA, Malaysia); Roslina Mohamad (Universiti Teknologi MARA, Malaysia); Nor Surayahani Suriani (University Tun Hussein Onn Malaysia, Malaysia); Saiful Izwan Suliman (Universiti Teknologi MARA & University of Nottingham, Malaysia)	Translating Hand Gestures Using 3D Convolutional Neural Network

Hand gestures are one of the mediums that many people use to communicate with each other. The use of gesture recognition applications has become increasingly popular in recent years especially in computer vision areas. Typically, gestures can easily be recognized from a single image frame (i.e. alphabet from sign language), however the ability to recognize complex gestures with subtle differences between movement requires more works and larger datasets. In this work, we introduce a simple gesture recognition system that translates 5 different hand gestures, namely "doing other things", "swiping down", "swiping left", "zooming out with two fingers" and "drumming fingers". We used datasets obtained from Jester dataset. The inputs were processed in 'RGB' format during the pre-processing phase and a spatiotemporal filter were used as a feature extraction method, which were also the main building block in this system. Next, we trained the features using 3D Convolution Neural Network (3D-CNN). Further, we used real-time video to test the developed recognition system with 5 different actors. Findings show that the developed model can translate hand gestures with accuracy of 85.70% and 0.4% losses.

	ID	AUTHORS	TITLE
10	68	Nur Hasni Nasrudin (Universiti Teknologi MARA (UiTM), Malaysia); Afdallyna Fathiyah Harun (Universiti Teknologi MARA, Malaysia)	Social Media a Platform of Online Food Taste Experience: A Proposed Conceptual Model

The social media and its visual content is a great platform for digital marketing including food advertisement. Marketers as well as individuals love to edit and share appealing food photos without knowing the guideline to prompt food taste experience in their visuals. This paper aims to propose a conceptual model as a guideline to produce -food visuals that are able to trigger food taste experience. This study is a qualitative research and involves three major steps. First, a literature review of related research was done to gather relevant data elements from previous studies. Then, an interview was conducted with a professional food photographer to gain his experience and knowledge. Finally, a proposed conceptual model was developed by comparing and analyzing both data findings. Perhaps, this conceptual model can facilitate and help food marketer as well as individual visual producers to produce food visuals while presenting the food taste experience. This is the initial conceptual model and we believe that future research is needed to enhance the proposed model. We encourage researcher to test and apply the model and suggest and make improvement whenever necessary

	ID	AUTHORS	TITLE
11	78	Wahidah Mansor, W. (Universiti Teknologi MARA, Malaysia); Sutri Nur Amira Naushad (Universiti Teknologi MARA, Malaysia)	Spectral Analysis of EEG Signals During Working Memory Tasks

Assessment of the working memory performance is important to assist in the design of an effective pedagogical technique that suits the requirements of each learner. Most researchers used bulky equipment and an invasive technique to study working memory performance. The use of non-invasive electroencephalogram (EEG) to examine the working memory status directly from the brain is very limited. This paper describes the analysis of EEG signals during working memory tasks using power spectral density to identify the suitable frequency range for examining the working memory performance. The recorded EEG signals were filtered to remove the unwanted signals. Power spectral density was computed on four frequency band signals to identify the signal strength at each location on the scalp and to examine the brain active regions. Results from the analysis showed that the low-frequency theta could reveal the working memory status for all activities. The findings in this work can be used to develop an EEG-based Working Memory Assessment system that can assist educators to strategise in helping learners to succeed academically.

	ID	AUTHORS	TITLE
12	81	Abdul Hafiz Mohamed (Universiti Teknologi MARA, Malaysia); Yuslinda Wati Mohamad Yusof (Universiti Teknologi MARA, Malaysia); Murizah Kassim (Universiti Teknologi MARA, Malaysia; Saiful Izwan Suliman (Universiti Teknologi MARA & University of Nottingham, Malaysia); Shahrani Shahbudin (Universiti Teknologi MARA, Malaysia)	The Design of Internet of Things Energy Monitoring System on Blynk Platform

The Internet of Things technology system has been designed in many concepts to be accessed within a long-range using Wireless Fidelity communication which included energy monitoring. The concept of energy monitoring today due to a lot of spending time on using electrical appliances such as laptops, chargers, personal computers, especially young users like students. Most students spend most of their time playing games, listen to music, and watch movies on the laptop. Due to this, energy monitoring and analysis are important as a guide to students on their spent energy. This project helps them to reduce their monthly electricity bills and reduce their energy usage. The objective of this research is to design an energy monitoring system using Arduino as a microcontroller. The system used Wi-Fi communication which interacts with this system. The hardware is comprised of energy sensors for recording and analyses energy usage in daily life. This research aims in an implemented system that automates and recording the daily energy of appliances usage. Daily data collections for 2 weeks data were collected, and 421 samples have been recorded based on 6 hours of data collected during day and night. The results present that the energy usage for nighttime is 68% higher than the daytime. A real-time energy recording on a Blynk platform has been designed and accessed on mobile. This research is significant for accessing the real-time energy for electricity based on daily usage via Android apps. It benefits the consumers on monitoring energy usage and knows how to save energy efficiently. This research also significant for building facilities on monitoring energy usage based on the user's capacity.

TRACK 2: CYBER TECHNOLOGY (CT)

	ID	AUTHORS	TITLE
13	93	Zulfadhli Hisam (Universiti Teknologi MARA, Malaysia); Murizah Kassim (Universiti Teknologi MARA, Malaysia); Saiful Izwan Suliman (Universiti Teknologi MARA & University of Nottingham, Malaysia); Shahrani Shahbudin (Universiti Teknologi MARA, Malaysia)	Quality of Services of 4G/LTE Mobile Wireless Communications Signal Among Providers for Campus Network

Wireless communication is very important in this generation where internet connection is one of the important mediums for information, marketing, and development of communication in many sectors. Network in Malaysia has been supported by many telecommunication companies such as Digi and U-mobile. The problem arises is the Quality of Services from the service providers where some 4G signal strength are poor supported especially in the campus area where certain times student need access to mobile data. This research presents a performance analysis of Quality of Services for 4G wireless Communication among Providers supported in a campus area. Two telecommunications providers were identified for the testing which is Digi network and U-Mobile Network. A 4G wireless analyzer names Nemo Outdoor was used to collect data on the signal strength based on the identified road maps on a campus. Collected of the transmission data and performance of 4G signal strength for both wireless communication between Digi network and U-Mobile Network are compared and analyzed. The identified signal strength of the 4G network is called Reference Signal Received Power (RSRP). The identified road maps were analyzed along the routes while testing signals are collected while driving. Results present some points of a big difference of signal strength along the way of data collections while traveling through the road maps. It is identified that Digi supports better for the Mobile broadband network which shows an excellent and good connections of 30% and 0% signal loss in the drive areas. RSRP signal for U-Mobile shows there is 8% signal loss and the connections provided only at the Mid-Cell and Cell Edge connections for 91%. The concluded that the 4G signal strength in the campus area having good signal strength, but some medium signal strength is also identified based on the road locations. This research is significant for QoS of supports mobile network in a campus area.

	ID	AUTHORS	TITLE
14	94	Roslina Mohamad (Universiti Teknologi MARA, Malaysia); Saiful Izwan Suliman (Universiti Teknologi MARA & University of Nottingham, Malaysia); Murizah Kassim (Universiti Teknologi MARA, Malaysia); Farah Yasmin Abdul Rahman (Universiti Teknologi MARA, Malaysia)	Development of a Solar-Powered Car Ventilation System with Wireless Monitoring

The heat effect induced by hot weather causes car cabins to absorb heat from the surrounding area, making the temperature inside the compartment higher than the temperature outside. The excessive heat that gets trapped in closed cabins makes drivers and passengers uncomfortable when they enter their cars. This situation can be resolved by increasing air conditioning power while the engine is running, and this condition would increase the heat load of the air conditioner system. To this end, the present study describes the development of a solar-powered car ventilation system that relies on the Internet of things (IoT). The proposed solar-powered car ventilation system consists of a temperature sensor (DHT22) that detects the temperature inside the car cabin. Further, NodeMCU ESP32 has been used as a microcontroller to control the system. Temperature, fans, windows, and rainfall conditions were monitored via wireless connections using the Blynk application. The results show that the proposed ventilation system can reduce car cabin temperature and that its temperature readings can be monitored through the user's mobile device. Furthermore, because the system operates on solar energy, it is environmentally friendly.

	ID	AUTHORS	TITLE
15	96	Afdallyna Fathiyah Harun (Universiti Teknologi MARA, Malaysia); Nurfarahhanis Abdul Rasid (Universiti Teknologi MARA, Malaysia)	Architecting Digital Information Design: Case Study on Recycling Information in Social Media

Recycling is a process of transforming old things into a new product. Recycling offers many benefits environmentally and financially. However, many census and research imply that Malaysia has low recycling participation rate compared to other countries. Moreover, there is the lack of understanding on social media content design in the promotion of recycling initiatives which is believe may influence the motivation to persuade recycling habits among Malaysian. Instagram is among the fastest growing social networks around in the world capable in producing high level of user engagement. Therefore, we were motivated to identify user perception towards recycling society Instagram content. Hence, this study aims to understand how recycling NGOs design their social media content as well as user perception towards those content. The case study approach was applied where Instagram accounts from two non-government recycling organisation were selected, content type categorised, and user perception were analysed. We found that recycling initiatives are largely promoted using video type information design as it has high user engagements as users perceived favourably to such content. The outcome of this study can serve as guidelines on suitable content design technique to persuade user recycling engagement as well as could potentially dive into virality element that fit user perception and preferences.

TRACK 2: CYBER TECHNOLOGY (CT)

	ID	AUTHORS	TITLE
16	97	Shahrani Shahbudin (Universiti Teknologi MARA, Malaysia); Syafiq Farhan Haris (Universiti Teknologi MARA, Malaysia); Farah Yasmin Abdul Rahman (Universiti Teknologi MARA, Malaysia); Murizah Kassim (Universiti Teknologi MARA, Malaysia); Yuslinda Wati Mohamad Yusof (Universiti Teknologi MARA, Malaysia)	Real-Time Parking System Monitoring Using Google Sheets

Nowadays, looking for available parking spaces is becoming more time consuming and tiring experience, especially in high density area such as university area. To overcome this problem, an improvement to the smart parking system have been made to provide users with the real-time information on the availability of parking spaces using Google Sheets. The enhancement makes the system cheaper and easier to implement. This paper presents a parking system monitoring that providing a real-time information about the availability of parking spaces using Google Sheets. This system consists of four HC-SR04 ultrasonic sensors, two Arduino Mega, and an ESP-8266 Wi-Fi module as part of hardware components. For the software parts, Google Sheets was applied as a back-end database, and web pages to display the availability of parking spaces. The web pages provided by the system is accessible on any web browser. In addition, the analysis on the availability of parking spaces for each hour on a weekday is also provided. The results show that 90 to 100 percent of occupied spaces are mostly happen the time between 8:00 AM to 12: 00 PM and 01:00 PM to 04:00 PM. It reveals that the best periods of time to find a vacant parking space are on early morning, during lunch hour, and on an evening

	ID	AUTHORS	TITLE
17	104	Mohamad Dzulhelmy Amari (Universiti Teknologi MARA, Malaysia); Sukarnur Che Abdullah (Universiti Teknologi MARA, Malaysia); Ng Shi Yen (Mysyntec Technology Sdn. Bhd., Malaysia); Hanafiah Yusoff (Universiti Teknologi MARA, Malaysia)	Performance Evaluation of Distance Measurements Detection Using 3 Axis Binocular Vision System

The world currently entering industry 4.0, which the industrial processes become automated and remotely control by computer with little input from human operators. Binocular vision is the result of signal sent to brain from eyes simultaneously which having advantage of depth perception. This project is about distance measurement of the object in 3-axis by using the advantages of binocular vision system. In this project, two webcams were used as binocular vision system to capture image and detect the distance measurement of the sample objects in 3-axis. The cameras must be calibrated before start to computing the distance measurement due to the fish eyes effect caused by the lens. In this project, the cameras were calibrated by using chessboard pattern with the size of 9x6 internal corners due to the simple geometry. The distance measurement algorithm will be executed once the cameras are calibrated, and the distance measurement is computed by using trigonometry concept.

	ID	AUTHORS	TITLE
18	110	Nurain Izzati Shuhaimi (Universiti Teknologi MARA, Shah Alam, Malaysia); Mohammad Iimam Shafiq (Universiti Teknologi MARA, Shah Alam, Malaysia); Ezmin Abdullah (Universiti Teknologi MARA, Malaysia); Norhafizah Burham (Universiti Teknologi MARA, Malaysia); Rafidah Rosman (Universiti Teknologi MARA, Malaysia); Suzanna Ridzuan Aw (Faculty of Electrical & Automation Engineering Technology, TATiUC, Malaysia)	Autonomous Fire Fighting Robot with Smart Monitoring System

The fire incident is one of the man-made disasters in Malaysia due to the frequency of reported fire cases recently. The majority of all cases that involved domestic buildings had very catastrophic effects such as property losses, permanent disability to the victim, and death. We are all aware of how fast fire can spread when it rages. Therefore, owners have to be alert at all times to any factor that might lead to any small fire and that is not possible to achieve. As humans, we might get distracted by other surrounding activities but not for robots. Thus, a Fire Fighting Robot has been developed and was controlled by Arduino Uno. It is designed in a smaller size in order to ease small location entry, fully equipped with high sensitivity sensors to achieve the required research objectives of searching, detecting, and extinguishing the fire. The combination of ultrasonic and flame sensors creates a perfect guide for the robot to work effectively. This autonomous robot will search and locate the fire and send a notification to the user through Blynk application; before the extinguishing process occurs. Blynk application will also provide a monitoring platform for the user to receive information including live streaming and flame data. We tested the performance of the robot by varying the distance and size of fire source to the robot. The graph trend line showed that the time taken was linearly proportional to the distance and size of fire. We managed to obtain the equation of the dependent variable from simple linear regression. From the R^2 value of 0.9888 and 0.9865, we can say that it has a strong relationship between both variables. To summarize, the experimental result has proved its capabilities as a reliable fire protection system by searching and extinguishing a fire in time.

TRACK 2: CYBER TECHNOLOGY (CT)

	ID	AUTHORS	TITLE
19	118	Abdul Hadi Abdul Razak (Universiti Teknologi MARA & Victoria University, Malaysia); Mohd Faizul Idros (Universiti Teknologi MARA, Malaysia)	Accelerating Smith-Waterman (SW) Algorithm Using Graphics Processing Unit (GPU) Shared Memory Optimization

The study of computational biology is one of the important fields in science which consists of a variety of study and searching for sequence alignment is one of the subjects in these fields which consists of numerous applications. The Smith-Waterman algorithm is one of the alignment tools use as a method to gain optimal local alignment of Deoxyribonucleic Acid (DNA) by finding similarities of the pairwise alignment. However, with the growth of the biological sequence database, it has affected the performance of the Smith-Waterman algorithm. To counter this issue the hardware accelerator has been used to optimize the performance of this algorithm. This paper presents the evaluation of how the Graphics Processing Unit (GPU) accelerate the computational of The Smith-Waterman algorithm using share memory. In this work, the code has been developed in the C-programming language with the extension of NVIDIA Compute Unified Device Architecture (CUDA). The result indicates the optimized version of Smith-Waterman has better performance in the computational time of DNA sequence alignment.

	ID	AUTHORS	TITLE
20	129	Yusnani Mohd Yussoff (Universiti Teknologi MARA, Malaysia); Lucyantie Mazalan (Universiti Teknologi MARA, Malaysia); Rizzo Mungka Rechie (Universiti Teknologi MARA, Malaysia)	Security Analysis and Feasibility of Smart Entrance System in Smart Home Applications

Technology advancement, especially in the area of Internet of Things has enabled many high-end applications to be developed. The complexity of the applications will continue to grow with the coming of 5G technology. The technology has improved our life. However, there are many security issues that exist together with the advancement. This paper first discussed on the security issues focusing on IoT and Home Digital Voice Assistant (HDVA) applications. Outcome from the study shows an alarming security issue. To prevent one of the security issues, a Secure Smart Entrance system is designed and implemented using Alexa; a type of home device voice assistant, Raspberry Pi and RFID. The developed system is designed and implemented to study and validate the vulnerability issues in the IoT applications that utilize HDVA devices. The analysis on the energy consumption and feasibility of the Secure Smart Entrance System using HDVA is presented in this paper. The results show an acceptable amount of energy and is therefore suitable for future IoT related applications. Further study will focus on the security analysis using the developed system.

	ID	AUTHORS	TITLE
21	147	Nur Khalidah Zakaria (Universiti Teknologi MARA, Malaysia); Nooritawati Md Tahir (Universiti Teknologi MARA, Malaysia); Rozita Jailani (University Teknologi MARA, Malaysia)	Anomaly Gait Detection in ASD Children Using Markerless-Based Gait Features

The aim of this study is to explore the potential of the proposed markerless-based gait features for anomaly gait detection in children with Autism Spectrum Disorder (ASD). Firstly, a depth sensor namely Kinect sensor is used during data acquisition of the walking gait for all 23 ASD children and 30 typical healthy developing (TD) children. Next, the gait features are translated into two categories labeled as Direct Joint (DIR) and Reference Joint (REF) features. For each category, five (5) sets of features are derived that represented the whole body, upper body, lower body, right and left side of the body. To evaluate the effectiveness of the features, Support Vector Machine (SVM), Naïve Bayes Classifier (NBC) and Artificial Neural Network (ANN) are employed in the classification stage. Results attained showed that the highest accuracy specifically 94.22% is achieved using ANN as classifier based on DIR Set 1 feature set that represent the full body. This showed that the proposed markerless-model gait feature namely the Set 1 DIR features is able to classify the walking gait of both ASD and TD children with 94.49% as the highest sensitivity and 93.93% as the optimum specificity using ANN and DIR Set 1 as well

	ID	AUTHORS	TITLE
22	148	Ali Abd Almisreb (International University of Sarajevo, Bosnia and Herzegovina); Nooritawati Md Tahir (Universiti Teknologi MARA, Malaysia); Sherzod Turaev (United Arab Emirates University, United Arab Emirates); Mohammed A. Saleh (Malaysia)	ARABIC TEXT CLASSIFICATION USING DEEP TRANSFER LEARNING TECHNIQUES

In this study, seven transfer learning methods namely AlexNet, GoogleNet, ResNet18, ResNet50, ResNet101, VGG16 and VGG19 are used in determining the most apt deep learning for recognising Arabic handwritten due to challenges faced that includes variation in human handwriting. Two handwritten database images are used and categorised as either native or foreigner writers. Further, the training and validation sets are conducted based on original datasets as well as augmented datasets. Results attained showed that the highest accuracy is GoogleNet for both normal and augmented datasets with highest accuracy of 95.5% using augmented data and recognising native handwriting with specificity of 97.0% as well as sensitivity of 93.9%.

TRACK 2: CYBER TECHNOLOGY (CT)

ID	AUTHORS	TITLE
149	Nurul Farhana Mohamad Zamri; Nooritawati Md Tahir; Megat Syahirul Amin Megat Ali; Nur Dalila Khirul Ashar	Street Crime Prediction and Classification Methods: A Review

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Crime rates are one of the biggest problems in today's modern society especially in urban cities. Various techniques on crime prediction and detection have been developed by previous researchers in reducing the crime rates that keep increasing throughout the year as well as to assist the government authorities in combating crimes. These include studies on forecasting crime activities based on both primary and secondary data that include numerical data, statistics, videos and images related to various category of crimes. Thus, in this study a mini review is conducted related to the database used as well as methods that have been developed by previous researches related to crime classification, crime analysis along with forecasting crime or crime prediction. Further, a new technique will be proposed in detection crime activities. The proposed technique involves evaluation and validation of several Deep Learning (DL) specifically the Convolutional Neural Network (CNN) along with the type of database to be used specifically for street crime detection focusing on snatch theft.

ABSTRACTS FOR ORAL PRESENTATION
CSSR 2020

TRACK 3: HEALTH & WELLNESS (HW)

TRACK 3: HEALTH & WELLNESS (HW)

	ID	AUTHORS	TITLE
1	4	Nik Nur Hassha Nik Kamaruzamil (Universiti Teknologi MARA, Malaysia); Mohd Hafizi Mahmud (Universiti Teknologi MARA, Malaysia); Noor Shafini Mohamad (Universiti Teknologi MARA & Faculty of Health Sciences, Malaysia)	Diagnostic Accuracy of Chest Computed Tomography for Coronavirus Disease 2019 (COVID-19) Lung Infection: A Systematic and Meta-Analysis Review

Current diagnostic test for COVID-19 is real-time reverse transcription - polymerase-chain-reaction (RT-PCR) requires a longer time to detect the disease. Therefore, a rapid and accurate diagnostic test is urgently needed. The current study aimed to perform a systematic and meta-analysis review on the diagnostic accuracy of chest Computed Tomography (CT) in the diagnosis of COVID-19 lung infection. The systematic review and meta-analyses were conducted using Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guideline. Two databases, namely Pubmed and Dimensions were utilised for an extensive search. The studies were selected based on inclusion and exclusion criteria. The risk of bias in selecting studies was assessed by using the Quality Assessment of Diagnostic Accuracy Studies-2 (QUADAS-2) tool. The heterogeneity of the studies was evaluated by using the Cochran's Q test and the Higgins I2 test. Meta-regression analysis was performed to evaluate the heterogeneity of the studies. A total of ten studies (n=10) were included in this review. Overall, the summary sensitivity and specificity of the included studies are 0.95 (95% CI, 0.92-0.97) and 0.42 (95% CI, 0.19-0.69), respectively. Meta regression analysis reveals that study design, clinical symptoms, history of travel or exposure to COVID-19, study origin and CT images blinding to RT-PCR results are not significant factors affecting the heterogeneity of the studies (p < 0.05). This review concludes that chest CT imaging shows high sensitivity and low specificity in the diagnosis of COVID-19 lung infection.

	ID	AUTHORS	TITLE
2	5	Masrifah Binti Zakaria (Universiti Teknologi MARA & Universiti Kebangsaan Malaysia, Malaysia); Fatimah Sham (Faculty of Health Science, Universiti Teknologi MARA, Malaysia)	Effectiveness of Educational Intervention Towards Nurses' Knowledge on Sedation Assessment and Management in Intensive Care in Tertiary Hospital

Sedative management was a critical task in providing comfort, minimize pain for patients who are critically ill in intensive care units (ICUs) worldwide. Providing an appropriate degree of sedation remains a challenge because the amount required varies with patient conditions and needs. Nurses play an important role to ensure the effectiveness of sedation administration to eliminate the risk of extended ICU stay; development of post-ICU psychological issues and increased care costs. A quasi-experimental study was conducted to assess the effectiveness of educational intervention towards ICU Nurses' knowledge of sedation assessment and management in Tertiary Hospital. The Educational Intervention comprising various theoretical approached and was evaluated using a self-administered questionnaire; pre, immediate post and three months following the intervention. The respondents were 80 nurses divided into two groups from two different hospitals; Intervention Group (n = 40) and Control Group (n = 40). The baseline result showed that most of the respondents had fair in sedation assessment and management knowledge (62.5%), and there were no differences between the groups (t-test: 0.27; p-value: 0.79). Post-intervention showed that there was significantly increased in level of knowledge on sedation assessment and management with a p-value less than 0.05 (F: 10.84; p-value: 0.01) among nurses in the intervention group immediately after the intervention was carried out and the knowledge remains high compared to the pre-intervention knowledge although after three months post-intervention. It was also noted that the nurses' level of education, year of services, especially in ICU and their clinical speciality influenced the knowledge of sedation assessment and management among nurses. Educational intervention and the educational approaches were found useful in improving nurses' knowledge and understanding of sedation management, and it should be emphasized the importance of continuing education to enhance the understanding of intensive care practices among nurses.

	ID	AUTHORS	TITLE
3	11	Normala Salim (Universiti Teknologi MARA, Puncak Alam Selangor, Malaysia); Fatimah Sham (Faculty of Health Science, Universiti Teknologi MARA, Malaysia); Norhafizatul Akma Shohor (Faculty of Health Sciences, Universiti Teknologi MARA, Malaysia)	Quality of Life and Social Support in Breast Cancer Patient in National Cancer Institute, Malaysia

Cancer incidence and mortality are rapidly growing worldwide and breast cancer is one of the leading cause of death among women in Malaysia. Social support is an important aspect in Quality of Life (QoL) as it affect the psychological well-being and health of the patients. The aim of this study was to assess the quality of life and the relationship of QoL with social support among female patient with diagnosed breast cancer. This study is a Cross Sectional study involving 259 female patients with diagnosed breast cancer from outpatient's unit National Cancer Institute Putrajaya Malaysia. The European Organization for Research and Treatment of Cancer Quality of Life Questionnaire (EORTC QLQ-C30) and its breast-specific module (QLQ-BR23) to measure QoL and social support by using Perceived Social Support (MPSS) questionnaires. The data was analyzed by using SPSS version 23.0. The result of this study found that women with Breast Cancer in Malaysia had an excellent global quality of life in which they were able to achieve the highest score in their role and physical function. The result also showed a high rate of social support especially support from family. There was a positive relationship between QoL and social support (rs: 0.25) generally with a p-value less than 0.05. Therefore, effective measures need to be taken and implemented concerning improving the QoL of breast cancer patient.

TRACK 3: HEALTH & WELLNESS (HW)

	ID	AUTHORS	TITLE
4	37	Abdul Rauf Abdul Rasam (Universiti Teknologi MARA Shah Alam, Malaysia); Wan Nor Syahirah Jumali (Universiti Teknologi MARA Selangor, Malaysia)	Susceptibility Risk Index of Tuberculosis Epidemics in Klang, Selangor

This paper presents the spatial susceptibility risk mapping of tuberculosis (TB) using index model and GIS technology. The common TB risk factors contributing to the 22 high burden countries worldwide are low socio-economic status and environmental factor. TB distribution pattern in Malaysia is rather complex due to the dynamics of the disease and the characteristics of the affected areas, and therefore, a geographical information system (GIS) based index model is proposed as an alternative method for defining potential high-risk areas of local TB cases in Klang, Selangor. The methodology used is started from project planning, and followed by data collection, data processing, data analysis. The level of risk for every factor has been classified into five classes from level 1 which is no risk to level 5, high risk according to expert opinion and previous studies. The final step is that data aggregation for deriving the index value using overlay analysis and weighted linear combination. From the previous studies, five factors that contributed to the tuberculosis diseases are selected. including urbanization, population, type of housing, built-up area and health care centre. The classifications of each risk factor are ranked into 5 risk level. The risk mapping has shown that high cases in Klang are located at urban and populous areas.

	ID	AUTHORS	TITLE
5	41	Tengku Mardhiah Tengku Jalal (Universiti Teknologi MARA, Kelantan, Malaysia); Nor Fatihah Abd Razak (Universiti Teknologi MARA Kelantan, Malaysia); Idari Ismail (Universiti Teknologi MARA, Kelantan, Malaysia); Nur Syaliza Hanim Che Yusof (Universiti Teknologi MARA, Kelantan, Malaysia); Nur Izzati Abd. Aziz (Universiti Teknologi MARA, Kelantan, Malaysia); Nurul Syafiqah Mokhtar (Universiti Teknologi MARA, Kelantan, Malaysia); Nurul Syazwani Muda (Universiti Teknologi MARA, Kelantan, Malaysia)	Determinants of Experiencing Sleep Paralysis: Case Study on Undergraduate Students in North-East Malaysia

Sleep paralysis is a benign phenomenon, and it has been discussed all over the world. Several factors associated to sleep paralysis have been highlighted by previous studies since 1980s. Since very limited studies on sleep paralysis were conducted in Malaysia, this study was aimed to identify the determinants of experiencing sleep paralysis among undergraduate students in North-East Malaysia. Thus, a cross-sectional study was carried out on 232 samples of undergraduate students from Universiti Teknologi MARA Kelantan by identifying their history of sleep paralysis (Yes/No) and analyzing the determinants using Multiple Logistic Regression. Out of 232 samples, 50.4 % claims that they have experienced of sleep paralysis and it was found that the anxiety level is a significant determinant of experiencing sleep paralysis (OR:1.373, 95% CI:1.187,1.588).Thus, dealing with anxiety problem are very recommended to avoid sleep paralysis since persons with higher anxiety level are having higher odds of experiencing sleep paralysis.

	ID	AUTHORS	TITLE
6	50	Idari Ismail (Universiti Teknologi MARA, Kelantan, Malaysia); Nor Azima Ismail (Universiti Teknologi MARA, Kelantan, Malaysia); Norafefah Mohamad Sobri (Universiti Teknologi MARA, Kelantan, Malaysia); Siti Nurani Zulkifli (Universiti Technologi MARA, Kelantan, Malaysia); Kiki Camerena Zaini (Universiti Teknologi MARA, Kelantan, Malaysia); Ezza Suraya Mokhtar Rodi (Universiti Teknologi MARA, Kelantan, Malaysia)	Assessing Knowledge and Attitude of Human Papillomavirus (HPV) and Its Vaccination Among Female University Students

Cervical cancer is one of the most frequent cancer among women worldwide. In most cases, cervical cancer is caused by high risk subtypes of human papilloma virus (HPV). HPV vaccination are recommended to prevent HPV infection where it is freely given to 13 years old school girl in Malaysia as part of National HPV Immunization Program. This study aimed to assess knowledge of HPV and attitude towards HPV vaccination among female students in Universiti Teknologi MARA (UiTM) Kota Bharu. This cross-sectional study was also conducted to determine whether knowledge of HPV affects attitude towards HPV vaccination. The sample of this study comprises of 262 respondents with a response rate 84.73%. The dependent variable is attitude towards HPV vaccination where it is measured by averaging the attitude score. The range of the score is 1-5 where score that closer to 5.0 indicates more positive attitude towards the HPV Vaccination. Higher knowledge score indicates that the respondent is more knowledgeable on HPV. The finding shows the median of knowledge score is 31.25% while the median of attitude score is 3.75%.. Simple linear regression analysis shows knowledge of HPV has a significant effect on attitude towards HPV vaccination. There are several recommendations discussed in this study such as the strategies to aggressively educate the community on knowledge of HPV and HPV vaccination.

TRACK 3: HEALTH & WELLNESS (HW)

	ID	AUTHORS	TITLE
7	58	Khairilmizal Samsudin (Universiti Sains Malaysia, Malaysia); Mohamad Fahmi Hussin (Universiti Teknologi MARA, Malaysia); Nur Fatin Najihah Ghazali (Universiti Sains Malaysia, Malaysia); Nur Hannani Abdul Ghani (Universiti Sains Malaysia, Malaysia); Ainul Husna Kamarudin (Institute of Medical Science Technology (UniKL-MESTECH), Malaysia); Nurulilyana Sansuddin (Universiti Sains Malaysia, Malaysia); Zuhani Ismail Khan (Universiti Teknologi MARA, Malaysia); Kamariah Hussein (Consist College, Malaysia)	Association Between Workload and Psychological Well-Being in Malaysia Elite Firefighter

Emergency responders frequently exposed to life-threatening risks when attending to the critical incident event causing an increasing number of psychological health issues among emergency responders. However, to date, there are still not many studies related to workload and its association to mental health problems among Malaysian emergency responders. Hence, the study objective is to identify the level of workload, determine the level of psychological well-being and their association in Malaysian firefighters. Through a purposive sampling method, a cross-sectional study was conducted among Grade A and B stations firefighters in Kota Bharu Kelantan using a validated NASA-TLX and DASS-21 questionnaire. Respondents were divided into normal operations teams and elite teams such as EMRS. Results show that although EMRS, the medical team has the highest overall workload demand, firefighters deemed performance and effort demand an important workload demand comparing to others. It is also found that most firefighters have higher anxiety issues comparing to depression and stress where 30% to 61% of respondents develop a certain level of anxiety comparing to only 15% to 39% for depression and 13% to 28% for stress. Hence, it is suggested that further research should be conducted in investigating and understanding the contributing factors towards Malaysian firefighters' psychological health problems so that they can be managed or even prevented

	ID	AUTHORS	TITLE
8	61	Norhaini Majid (Faculty of Health Sciences, Universiti Teknologi MARA, Malaysia); Fatimah Sham (Faculty of Health Science, Universiti Teknologi MARA, Malaysia); Khairil Anuar Md. Isa (Faculty of Health Sciences, Universiti Teknologi MARA, Malaysia); Norimah Said (Faculty Health Sciences & Universiti Teknologi MARA, Malaysia)	Perception of Preoperative Education Among Postoperative Patient in Tertiary Hospital

Patient education is an essential nursing practice standard that meaningfully impacts the patient's health and quality of life. The aim of the study is to assess the perception of preoperative education among the postoperative patients in one of the tertiary hospital in Malaysia. A cross-sectional survey was conducted among the postoperative patient to determine their perception of preoperative education. Self-administration questionnaires were distributed to all participants. The study highlights five dimensions to determine how the patients give their perception of preoperative education. Among 93 participants, it was revealed that 63.6% of the patients perceive that education before surgery was very important. 28.1% perceive important, while 6.7% perceive moderately important about education prior to surgery. Only 1.0% of the patient perceived somewhat important while 0.6% perceived not important education before surgery. The study found that a majority of participants (91.7%) perceived that education before surgery was important. The result of the study suggested that preoperative teaching was very important to the patients. As conclusion, patients perceived to have reliable information before their surgery to enhance their knowledge and improve their quality of life.

	ID	AUTHORS	TITLE
9	106	Mohd Zulkifli Kassim (Faculty of Dentistry, Malaysia); Nor Wati Nur Atikah Mustafa (Faculty of Dentistry, Malaysia); Rohana Ahmad (Universiti Teknologi MARA, Shah Alam & Integrative Institute of Pharmacogenomics, Malaysia); Mariam Ab Ghani (Faculty of Dentistry, Malaysia); Hazlina Abdul Ghani (Faculty of Dentistry, Malaysia)	Masking Ability of Translucent Monolithic Zirconia Ceramic: Effect of Thickness - A Pilot Study

The minimum thickness required to monolithic zirconia restorations to achieve sufficient masking ability for optimal aesthetics is unclear. Hence, this study investigated the minimum thickness required to achieve acceptable and perceptible tolerance thresholds by testing monolithic zirconia discs in various thicknesses from 0.4 to 2.0 mm on a D4 shade substrate using spectrophotometry. Delta-E (dE) were calculated and compared with the established acceptable (dE = 5.5) and perceptible (dE = 2.6) tolerance thresholds. There was a significant negative correlation between thickness and dE (R2 = 0.952, p < 0.001). The mean dE decreases from 13.43 (±0.34) to 3.07 (±0.03) as thickness increases from 0.4 to 2.0 mm. Significant differences in dE were detected when there was at least 0.4 mm difference in thickness between the groups. Acceptable tolerance threshold was achieved with a minimum thickness of 1.4 mm, but the perceptible tolerance threshold was unachievable even at the maximum thickness of 2.0 mm. In conclusion, the masking ability of translucent monolithic zirconia reduces with decreasing thickness, and a minimal thickness of 1.0 mm is recommended as the baseline thickness for future studies investigating the masking ability of various types of monolithic zirconia on a dark substrate.

TRACK 3: HEALTH & WELLNESS (HW)

	ID	AUTHORS	TITLE
10	125	Effat Omar; Hapizah Nawawi; Nurul Aishah Muhammad; Nurul Ain Abu Bakar	Effects of Tocotrienol-Enriched Mixed Fraction on Experimentally Induced Early and Established Atherosclerosis: Preventive Model

Atherosclerosis is the underlying pathology for cardiovascular disease; the main cause of mortality worldwide. The preventive effects of palm oil-derived tocotrienol-enriched mixed fraction (TEMF) on atherosclerosis formation and progression remains unclear. Objective: To determine the effects of TEMF supplementation on atherosclerotic lesion development and stability in early and established atherosclerosis administered in a preventive technique. Methods: Twenty New Zealand white rabbits were divided into two groups; TEMF (n=5) and placebo (n=5) groups. Treatments were given by oral gavage for 8 weeks followed by 1% high cholesterol diet (HCD) plus TEMF or placebo for another two (to induce early atherosclerosis) or eight weeks (established atherosclerosis). At the end of the study, serum was taken for total cholesterol (TC), low-density lipoprotein-cholesterol (LDL-C), and C-reactive protein (CRP). The aorta was qualitatively analysed for atherosclerotic lesion and immunohistochemically for interleukin-6 (IL-6), CRP, nuclear factor kappa beta (NFκB), E-selectin, intercellular adhesion molecule-1 (ICAM-1), vascular cell adhesion protein-1 (VCAM-1), smooth muscle actin (SMA) and matrix metalloproteinase-12 (MMP-12). Results: TC, LDL-C, and CRP were significantly reduced in TEMF group in early, but not in established atherosclerosis. In both early and established atherosclerosis groups, there were significant reduction of atherosclerotic lesions and aorta atherogenic biomarkers; IL-6 (7.0±1.9 vs. 24.8±3.7%;p<0.05), CRP (5.1±1.7 vs. 45.2±3.4%;p<0.05), E-selectin (5.4±1.2 vs. 21.2±2.8%;p<0.05), SMA (15.7±2.8 vs. 35.6±3.7%;p<0.05) and MMP-12 (3.9±2.0 vs. 26.1±2.5%;p<0.05). Conclusion: Palm-derived TEMF given before HCD-induced atherosclerosis reduces atherosclerosis, plaque inflammation, and proliferation. This suggests TEMF's effect on the prevention of plaque formation and increasing plaque stability.

	ID	AUTHORS	TITLE
11	127	Radzi Ahmad; Gabriele Ruth Anisah Froemming; Suhaila Abd. Muid; Muhamed T Osman; Hapizah Nawawi; Thuhairah Abdul Rahman	In-Vitro Atheroprotective Effects of Trigonella Foenum Graecum and Its Saponins in LPS-Stimulated Human Coronary Artery Endothelial Cells

There has been a shift towards utilizing natural products as an adjunct therapy to standard treatment in the prevention of coronary artery disease, and Trigonella foenum graecum (TFG) is one of the potential natural products of interest. In the present study, we attempted to determine the effects of TFG and its saponins on atherosclerosis related biomarkers in-vitro. Protein expression of markers of inflammation, endothelial activation and transcription factors were measured by Procarta™ and ELISA assays. Gene expression of the same markers were determined by qPCR and the interaction between monocytes and HCAECs were evaluated through monocyte binding assay following 16 hours of treatment with TFG and saponins. Both TFG and its saponins exhibited reducing effects on atherosclerosis-related markers. Based on the area under the curve (AUC) analysis, TFG reduced protein and gene expressions of ICAM-1 and VCAM-1 better than the saponins [Protein: 80.4%vs34.5% and 69.8%vs28.7% respectively; Gene: 31.9%vs8.5% and 51.6%vs21.9% respectively], while saponins reduced E-selectin expression better than TFG [Protein: 76.6%vs32.5%; Gene: 20.3%vs21.5%]. Saponins showed a reduction of gene and protein expressions of IL-6, IL-8, NF-κB p50 and p65 better than TFG [Protein: 11.4%vs8.1%, 13.1%vs7.8%, 40.2%vs23.8% and 58.8%vs55.3% respectively; Gene: 36.4%vs23.3%, 25.9%vs18.2%, 34.7%vs24.3% and 58.7%vs13.5% respectively]. TFG is more effective in reducing binding of monocytes to endothelial cells than saponins [30.2%vs28.0%]. TFG better reduced endothelial activation but exerted weaker anti-inflammatory effects than saponins, suggesting the possible synergism with other compounds in the crude extract which enhances attenuation of endothelial activation while inhibiting anti-inflammatory properties of saponins in the crude extract.

	ID	AUTHORS	TITLE
12	145	Noor Alicezah Mohd Kasim; Thuhairah Abdul Rahman; Hapizah Nawawi; Noor Shafina Mohd Nor; Suraya Abdul Razak; Suhaila Abd Muid	Enhanced Pro-Thrombotic Status and Its Correlation-Association with Serum LDL-C Concentration in Familial Hypercholesterolaemia and Related Unaffected Family Members

The risk of developing coronary artery disease (CAD) in related, unaffected family members (RUF) of Familial Hypercholestrolaemia (FH) is higher compared to the normal population. However, the possible reasons for this are not clear. Although it is well established that CAD risk is increased in FH and enhanced pro-thrombotic state, the pro-thrombotic status of FH patients and their RUF are not well studied. Thus, we aimed to compare pro-thrombotic biomarkers between subjects with FH, RUF, and normal controls (NC); and investigate the correlation and association of pro-thrombotic biomarkers with LDL-C. We also measured the correlation between pro-thrombotic biomarkers with age, anthropometry measurement, blood pressure, and other lipid profile.120 FH patients, 68 RUF, and 178 NC were matched for age, gender, tobacco smoking status, hypertension, and diabetes. 10mls of blood were collected for biochemical analyses. PAI-1 (p<0.005), t-PA (p<0.05), and fibrinogen (p<0.001) were significantly higher in FH compared to NC. Only fibrinogen in the FH group was elevated compared to RUF (p<0.001). The levels of PAI-1, fibrinogen, and t-PA were higher in RUF compared to NC. Homocysteine biomarkers showed comparable concentrations across all groups. A positive correlation between t-PA (r=0.132, p<0.05); and fibrinogen (r=0.315, p<0.001) with LDL-C and significant association between quartile of t-PA and fibrinogen with quartile of LDL-C were noticed. The status of pro-thrombotic is elevated in both FH and RUF. Besides, elevated LDL-C level is associated with enhanced pro-thrombotic status, which could be due to hypercholesterolaemia-induced inflammatory response and endothelial dysfunction, leading to enhanced pro-thrombotic status.

ABSTRACTS FOR ORAL PRESENTATION
CSSR 2020

TRACK 4: LOGISTICS & TRANSPORTATION (LT)

TRACK 4: LOGISTICS & TRANSPORTATION (LT)

	ID	AUTHORS	TITLE
1	23	Mohammad Haziq Mohd Fadhil (Universiti Teknologi MARA, Malaysia); Nursuriati Jamil (Faculty of Computer and Mathematical Sciences, Universiti Teknologi MARA & Digital Image, Audio and Speech Technology, Malaysia); Raseeda Hamzah (FSKM, Malaysia); Izzad Ramli (Universiti Technologi MARA, Malaysia)	Comparing MobileNet-SSD and YOLO v3 Learning Architecture for Real-Time Driver's Fatigue Detection

Convolutional Neural Network is known to achieve high accuracy in solving classification, recognition, and detection problems. In a real-time environment, time is an important factor of consideration. Even though most CNN-based architectures achieved considerably high accuracy, they are still slow even with high-end hardware. Therefore, this paper compares the time-accuracy tradeoff between two recent CNN-based learning architectures in detecting a driver's fatigue status. In our work, we define fatigue based on the rate of eye blinking. We developed a proof of concept systems, and evaluate the systems based on accuracy and detection speed. The accuracy and speed of both learning architectures were trained and tested using the Closed Eyes in the Wild (CEW) containing 1,193 closed eyes images and 1,232 opened eyes images. As MobileNet-SSD and YOLO v3 were pre-trained using a general COCO dataset, they were further configured and fine-tuned to optimize the results based on the CEW datasets, The results showed that YOLO v3 has slightly higher meanAveragePrecision(mAP) than MobileNet-SSD but slower detection speed(ms), while MobileNet-SSD proved that it has much faster speed but still maintaining high accuracy. The results of the research also showed that there is a trade-off between speed and accuracy which there was a loss of accuracy to obtain faster speed. This research also proved that lightweight MobileNet-SSD can minimize the accuracy loss to gain speed. The accuracy of the MobileNet-SSD learning model was still considered high and the detection speed was far higher than YOLO v3 learning model. Therefore, MobileNetSSD learning model was selected to have the best speed and accuracy trade-off in this research.

	ID	AUTHORS	TITLE
2	30	Kok Mun Ng (Universiti Teknologi MARA, Malaysia); Mamun Bin Ibne Reaz (Universiti Kebangsaan Malaysia, Malaysia)	Performance Evaluation of Heuristics and Meta-Heuristics Traffic Control Strategies Using the UTNSim Traffic Simulator

In the past few decades, intelligent traffic controllers have been developed to responsively cope with the increasing traffic demands and congestions in urban traffic networks. Various studies to compare and evaluate the performance of traffic controllers have been conducted to investigate its effect on traffic performances such as its ability to reduce delay time, stops, throughputs and queues within a traffic network. In this paper, the authors aim to present another comparative study on heuristics versus meta-heuristics traffic control methods. To our knowledge, such comparison has not been conducted and could provide insights into a purely heuristic controller compared to meta-heuristics. The study aims to answer the research question "Can heuristics traffic control strategies outperformed meta-heuristics in terms of performance and computational costs?" For this purpose a heuristics model-based control strategy (MCS) which was previously developed by the authors is compared to genetic algorithms (GA) and evolution strategy (ES) on a nine intersections symmetric network. These control strategies were implemented via simulations on a traffic simulator called UTNSim for three different types of traffic scenarios. Performance indices such as average delays, vehicle throughputs and the computational time of these controllers are evaluated. The results reveal that the heuristic MCS outperformed GA and ES with superior performance in average delays whereas vehicle throughputs were in close agreement. The computation time of the MCS is also feasible for real-time application compared to GA and ES that has longer convergent time.

	ID	AUTHORS	TITLE
3	71	Fatihahtul Husna Md Nor (Universiti Teknologi MARA, Malaysia); Jalaini Bin Abu Hassan (Universiti Teknologi MARA, Malaysia)	Object of Safety: Investigating Visual Language of Personal Safety, Assurance and Insecurity Through the Manifestation of Safe Objects in A Body of Work

The inquiry focuses on the awareness of personal safety that have constituted an exploration of visual diary that is anchored based on the understanding of the issue on individual security, insecurity and assurance. The longing for assurance of my wellbeing derives from my personal experience of commuting that requires me to utilize public transportation and e-hailing services. The daily communal activity puts me in a highly risky situation particularly on issue regarding my personal safety. This uncertainty of my wellbeing elevates the question within the context of safety and assurance. Within my travelling, I began to question what constitutes the conditions of safe environment, the validity of safety objects such as padlocks, CCTV cameras, identity card, license plates and even the personal characteristic such as the grab driver and security guards. These subjects and phenomena provide me a new judgment and interpretation that leads to my new body of artwork. Documenting every day journey helps me to reassure and accommodate personal assurance within myself by capturing moments, sceneries, objects and people around me. Collection of these memories function as evidence to my existence, of places that I have been, which explores the relationship of material objects and how these objects contribute to the understanding of personal security, assurance, and uncertainty. Relocating experience through photo documentation, painting, and sketches become essential in initiating my conceptual framework as it allows me to expand the notion of personal assurance where I became more critical in investigating related materials. Therefore, this research aims to record and investigate my daily commuting experience in order to understand the aspects of personal security, assurance and insecurity in my attempt to establish a coherent conceptual framework for my studio art research and to use and manipulate selected objects such as CCTV, locks, signage, photographs and other safety related items as 'object-sign' and symbolic representation to create new meaning in a body of work. Significantly, this practice-based research will converse the signification of studio participation in the process of art making that contributes to a cohesive conceptual framework that are constructed within a miscellaneous ingredient in art making.

TRACK 4: LOGISTICS & TRANSPORTATION (LT)

	ID	AUTHORS	TITLE
4	76	Mohd Heidhir Bin Hamdan (Universiti Teknologi MARA, Malaysia); Jalaini Bin Abu Hassan (Universiti Teknologi MARA, Malaysia)	Middle Class Muddle: The Idea of Detribalization as Commentary on Self-Concept Obsoleting Caused by the Escalation in Digital Age

Detribalization is a confiscation of some individual, original traditional social structure to another dominant social structure that has been altered and selectively westernized. I was brought up in a lower middle class with drastic societies and culture changes that inflicted me towards my detribalization of my social culture. Due to the lack of community development in term of physical and digital infra towards the development of societal community direction, physical and digital environments, has brought me to these difficult living standards. As a person who faces the drawbacks, I struggle to balance and keep up with my shortcomings and try to compensate what I was missing in this virtual world. Hence, because of this condition that put me in a very disadvantage and outdated position particularly within the digital age of growing up. My artwork emphasizes the self-conflicting dilemma that I am facing and the way I am cooping with the sense of self-concept of obsolete in my attempt to make a commentary on modern society at large.

	ID	AUTHORS	TITLE
5	77	Nurshafiqa Shuhada Mazlan Azhar (Universiti Teknologi MARA, Malaysia); Jalaini Bin Abu Hassan (Universiti Teknologi MARA, Malaysia)	Stitching Patches of Love: Celebrating Mother and Daughter Intimacy Through Series of New Artwork

I am using the theory of Iconographical approach, mainly used by ethnographers in their research, to analyze my visual data. In my studio practice I am interested in creating a new body of work celebrating mother and daughter relationship that was inspired by my personal experience and relationship with my mother, the dressmaker. Dressmaking and sewing is a culture phenomenon in my personal historical narrative. My mother has spent her whole life with her sewing machine, and as her daughter I assisted to finish most of her work especially during the peak seasons. My growing-up experiences lingered within domestic, hardship, commerce and the commitment of a loving mother. The objective of this study is to create a new body of artwork from the patches of discarded fabric in my attempt to celebrate and provide comfort that embodies warmth feeling of 'love' that involves in a mother and daughter relationship. The work is my personal tribute to my mother for all the sacrifices she endured. Besides that, I am using fabric as a material and stitching as a process of domestic consumption by doing patches compilation in order to create new meaning. This technique uses the stitching of patches as a symbol of 'strong bonding' between mother and daughter relationship and the usage of nature element as subject matter representing growth in a new body of work. As a practitioner, studio is my working space, where all my investigations and experimentations take place supported by a theoretical framework. I systematically document my visual data collection and sketches, construct the mock-up, develop my idea into the artwork within the constraint of my studio process, and discussion towards the final artwork.

	ID	AUTHORS	TITLE
6	100	Wan Fairos Wan Yaacob (Universiti Teknologi MARA, Kelantan, Malaysia); Nur Azreen Faizul Azran (Universiti Teknologi MARA, Kelantan, Malaysia); Ainin Sorfina Afizan (Universiti Teknologi MARA, Malaysia); Syerina Azli; n Md Nasir (Universiti Teknologi MARA, Malaysia); Shahirah Ibrahim (Universiti Teknologi MARA, Kelantan, Malaysia); Norazlina Che Harun (Ibu Pejabat Kontigen Kelantan, Malaysia)	Spatio-Temporal Clustering of Road Accidents in Kelantan

Road accidents have become a global issue concern. Accidents may occur in different places with different incidents that can make it difficult to determine which areas are prone to accidents. This information is needed by the community and the respective authority for law enforcement. This study utilized spatio-temporal clustering to analyze the high-risk area of road accidents in the state of Kelantan, Malaysia. It aims to identify the hotspot area of accident location in Kelantan using spatio-temporal analysis and to cluster the road accident locations according to the geographical area in Kelantan using cluster analysis. Analysis of spatio-temporal is utilized to identify the hotspot areas of high-risk road accidents by mapping spatio-temporal heterogeneity road accidents' cases of ten districts in Kelantan by day. The results indicated that the area of Kota Bharu is identified as the hotspot of road accident location in Kelantan. By using K-means clustering, four different clusters were formed. The first cluster is Kota Bharu which represents a very high-risk accident area. The second cluster of high-risk accidents area is Gua Musang, Pasir Mas and Tanah Merah. While the third cluster which is a moderate-risk accident area consists of Machang, Kuala Krai, Tumpat, Pasir Puteh and Bachok. Lastly, the fourth cluster of low-risk accidents area is Jeli. The findings from this study can be used by the authorities in preventing and reducing the statistics of road accident cases in Kelantan and can be further utilized by the other states in Malaysia.

TRACK 4: LOGISTICS & TRANSPORTATION (LT)

	ID	AUTHORS	TITLE
7	120	Rohana Zur (Universiti Technologi MARA, Malaysia)	Delphi Study Process Towards Standard Operating Procedure for Malaysian SME Apparel Sector

This study aims to comprehend the process of Delphi study development using experts' consensus validation on the Standard Operating Procedure (SOP) framework of the SME apparel sector in Malaysia. The main objective of this research is to understand how the Delphi study can be used to ascertain the appropriate framework for SOP on the SME apparel sector. Due to the absence of any generic model as guidance, this research study is observed to be relevant to the needs of the industry. To obtain a coherent picture, an expert panel appointed in the Delphi study can assist in determining the suitable framework. All the data were acquired using the median, quartile, IQR, and QD analyses. Even though the findings obtained are only based on Delphi first round, the entire study findings are continued based on the analysis that will be obtained in subsequent Delphi rounds.

	ID	AUTHORS	TITLE
8	138	Faiz Mohamed Yunus (Universiti Teknologi MARA, Malaysia); Ramlan Abdullah (Universiti Teknologi MARA, Malaysia)	The Exploration Extrinsic Property of the Material in Environmental Concern in Aesthetic Process

"The natural and material worlds collide to spark inspiration - a catalyst to expression. To be inspired is to give freedom to one's intuition, allowing it to spearhead an artist's journey, interweaving the process with layers of expression, in the end birthing a new body of work. I think my artworks as a by-product of transformation, a translation of inner vision to outer reality. I consider the potential and charms behind the disparate energies of plastic fragments to create a dynamic, sensuous and organic disposition. I was guided by both emotions and form throughout the process of nurturing and developing this piece and specimen - inquiring into different shades, exploring the capacity for change. While the use of a variety of techniques and processes are premeditated, the hope is always to reveal the nature of the material in an almost accidental nature, allowing spectators to analyse and experience the artwork individually. The artwork stands as a reminder of the relationship between man and nature, even when the world around us is becoming increasingly distant and removed from its basic, united core. Therefore with the colours I try to use being clearly man-made, the outcome of my collaboration with them is a fuzzy divide between nature and structure; texture and form; colour and space. This results in a strong symbiosis between the formal elements of my artworks. Artwork with the surroundings, both its architecture and nature. I create art that challenges people's expectations. My exploration and experimentation create tension between unity and balance; despite the sheer audacity of weight and volume, or perhaps because of it, the colours can flow freely, suggesting an eventual evolution into poetry and melodies. Ideally, the viewer engages with my work at the subconscious level, allowing the interaction to create a personalized, unique experience".

	ID	AUTHORS	TITLE
9	139	Burhanuddin bin Bakri (Universiti Teknologi MARA, Malaysia); Ramlan Abdullah (Universiti Teknologi MARA, Malaysia)	Wooden Sculpture Inspired by Good Wisdom in Islamic Calligraphy Character as to Show Dynamism, Interlocking, Cultural Symbol in Public Space

As a human being, artist cannot escape the vertical relationship with god and horizontally with fellow human beings. Thus, an artist must not neglect their 'spiritual contract' with god and 'social contract' with other human beings. In the field of Islamic art, an artist can perfect the right of 'hablum minallah' through sacred art and solve matters of 'hablum minannas' through profane art.

	ID	AUTHORS	TITLE
10	140	Hamizah Ramli (Universiti Teknologi MARA, Malaysia); Ramlan Abdullah (Universiti Teknologi MARA, Malaysia)	Understand the Idea of Isolation as Symbolism of Self-Anxiety in My Attempt to Reflect My Experience of Isolation in Body of Work

Isolation meaning is when something or someone or somebody is separated or apart from other things or person. Isolated means far away from everyone or everything else.There are many significance for isolation in many term.A variety of circumstances have led the artist being isolated from society. Enclosed space means a space which has any of the following characteristics space that is surrounded by something. Enclosed space also is space that limited opening for entry an exit.An enclosed space is viewed as any structure, room or walled in area.Therefore the focus of this study is to understand the idea of isolation as symbolism of self-anxiety in my attempt to reflect my experience of isolation in body of artwork that was based on the enclosed space that want to show in artwork. The relate literature was important because to guide and understanding what really the focus point.The selected artist also link into this study. The idea also composed from the crowd in enclosed space that imitate the concept of cage as symbolism of self anxiety in my attempt to create a new meaning and to establish the crowd image and concept of cage in an expressive way as to instil enthusiasm in art making.This project was successfully construct with the idea through the progress.

	ID	AUTHORS	TITLE
11	151	Jalaini Bin Abu Hassan	Adaptations and Negotiating Socio-Political Issues on Painting

This project aimed to discuss how the adaptations and negotiating of socio-political issues are discovered in painting throughout the processes of creativity and work making. The artistic research supported the whole phases, which begin with the visual analysis, selecting possible imagery and studio logistic for artwork making. The artwork development stimulates different formulation character of the artwork. They have included where the complex socio-political issues have emerged out of the changing socio of our developing nation and region, Therefore, this approach signalling a call for artists to play the role as the voice of conscience or social commentator in their creative work.

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TRACK 5: ENERGY & ENVIRONMENT (EE)

TRACK 5: ENERGY & ENVIRONMENT (EE)

	ID	AUTHORS	TITLE
1	1	Chiau Yuan Lim (Universiti Teknologi Petronas, Malaysia)	**Choline-Chloride Based Deep Eutectic Solvents: Thermal Properties and Desulfurization Performance**

Deep Eutectic Solvent (DES) is used in various applications due to its simplicity in synthesis procedure, biodegradable, inexpensive and easily available chemical ingredients. DES is a viscous and non water-miscible mixture of hydrogen bond acceptor (HBA) and hydrogen bond donor (HBD). This study is aimed to find out the relationship between HBD and their respective mol ratio in the DES with the desulfurization performance of each synthesized DES respectively. A total of 16 DES were synthesized from choline chloride salt and HBD such as Glycerol (GLY), Ethylene Glycol (EG), Tetraethylene Glycol (TEG) and Polyethylene Glycol-400 (PEG-400) in molar ratio of 1:1, 1:2, 1:3 and 1:4 respectively. The synthesized DES was characterized with the use of Thermogravimetric Analysis (TGA). In this study, authors discovered that ChCl-PEG (1:4) had the highest desulfurization performance (20.28%) compared to other synthesized DES. Differential Scanning Calorimetry (DSC) was then carried out and the melting temperature of ChCl-PEG (1:4) is found to be 3.18◦C. The operable temperature of the desired Deep Eutectic Solvent, ChCl-PEG (1:4) is found to be in between 3.18◦C and 259.49◦C, which proves that it is very likely to be utilized in the industrial field.

	ID	AUTHORS	TITLE
2	20	Syarifah Haniera Sheikh Kamal (Universiti Teknologi Mara, Malaysia); Mohd Nazip Suratman (Universiti Teknologi MARA, Malaysia); Shamsul Khamis (National University of Malaysia, Malaysia); Ahmad Najmi Nik Hassan and Mohd Syaiful Mohammad (Pulau Banding Foundation, Malaysia)	**Host-Parasitic Relationships Between Tetrastigma Rafflesiae and Rafflesia Azlanii and R. Cantleyi in Belum-Temenggor Forest Complex**

Rafflesia is a holoparasite plant that depends solely on its host to get the nutrients where at early stage this parasite is living inside the host vine. The lack of host specificity and preference information for Rafflesia can largely be attributed to the absence of a comprehensive taxonomic study in Tetrastigma. Without the host, the Rafflesia will not be survived. The understanding of the association between species has a great importance in the conservation as the growth of Rafflesia depends on the presence of Tetrastigma. In addition, this association can be used as an indicator for understanding biodiversity status in a forest ecosystem with special reference to Belum-Temenggor Forest Complex as state park. Therefore, this research was conducted to study the host-parasitic relationships between the two species under anatomical observation and to study the micrographs images using light microscope (LM) and scanning electron microscope (SEM). The anatomical study consisted of three stages of Rafflesia buds; emergence of cupule stage, bracts presence stage and full cover of dark brown bracts ¬¬attached with the host. All samples were underwent sliding technique and were observed using LM and SEM. Based on the results, the anatomical characteristics of host-parasite for cupule stage clearly showed the penetration of the parasite-affected tissues inside the vascular bundles with the visibility of flower bud. However, penetration from other stages, the penetration of parasite-affected tissues to the vascular bundles were disrupted and cannot be seen clearly using this sliding technique. New method using paraffin wax technique might improve to provide clear vision for this relationship. The information from this study is expected to provide baseline information and an understanding on the host-parasitic relationship between the species. In addition, further anatomical studies with the different stages of buds will give a better view of their relationship with the host.

	ID	AUTHORS	TITLE
3	28	Norshahida Shaadan (Universiti Teknologi MARA, Malaysia); Zainura Idrus (Universiti Teknologi MARA Shah Alam, Malaysia)	**A Comparative Study of Several EOF Based Imputation Methods for Long Gap Missing Values in a Single- Site Temporal Time Dependent (SSTTD) Air Quality (PM10) Data Set**

Missing data often being a major problem in many scientific fields of environmental research, which often leads to the problem of prediction accuracy and biased analysis results. This study aims to investigate the performance of several Empirical Orthogonal Functions (EOF) based imputation methods to solve for the problem of long gap sequence of missing values that exist in a Single- Site Temporal with Time Dependent (SSTTD) multivariate structure air quality (PM10) data set. Based on several performance indicators including RMSE, MAE, R2 and AI, the analysis results have shown that the EMPCA method outperformed the non-iterative based EOF in some identified sizes of long gap missing values. The performance of EMPCA is superb for not so large size of long missing gap and have shown a relatively similar performance with other EOF based methods for a very large gap size; such as for one month (720 hourly consecutives missing points). The results also show that the proposed EOF-median and EOF-trimmean give better performance compared to the existing EOF-mean based method.

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	ID	AUTHORS	TITLE
4	32	Mohd Amirul Hilmi Mohd Hanoin (Faculty of Civil Engineering Technology, Universiti Malaysia Pahang Malaysia); Nor Amirah Safiah Muhamad (Faculty of Civil Engineering Technology, Universiti Malaysia Pahang Malaysia; Nadzirah Mohd Mokhtar (Faculty of Civil Engineering Technology, Universiti Malaysia Pahang Malaysia; mir A. Razak (Faculty of Mechanical and Automotive Engineering Technology, Universiti Malaysia Pahang Malaysia; Muhamad Sukri Hadi (Faculty of Mechanical Engineering, Universiti Teknologi MARA Selangor, Malaysia)	Effect of Design Parameters in the Fabrication of Serpentine-Shaped Flat Plate Solar Collector Towards Thermal Efficiency

Solar thermal energy plays a vital role in the industrial sector, especially for water heating applications. Further research to improve the efficiency of flat plate solar collector (FPSC) by focusing on collector design modification is imperative. The aim of this research work was to carry out an experimental investigation on comparative designs and fabrication approaches which deals with analysis of FPSC thermal performance, thermal efficiency, effect of various mass flow rate, and pressure drop analyses. In this paper, a different design modification of pipe collector with serpentine-shape was established with different tube diameter (D = 3/4-inch and 3/8-inch), and different pipe spacing (S =18.5 cm and 27.0 cm). Under the same solar radiation intensity and constant mass flow rate, a pipe collector with tube diameter of 3/4-inch achieved 3.5% and 9.4% higher thermal performance and collector efficiency respectively compared to the tube diameter of 3/8-inch. Furthermore, the pipe collector with pipe spacing of 18.5 cm exhibited 4.3% and 12.6% higher thermal performance and collector efficiency respectively compared to pipe spacing of 27 cm. The relationship between collector efficiency and temperature difference was also investigated. Moreover, the effect of different mass flow rate was studied upon and it was found that a flow rate of 0.017 kg/s exhibited optimum thermal performance for the pipe collector. Additionally, a pressure drop was observed with the increase in flow rate, while decreases when the fluid temperature increases.

	ID	AUTHORS	TITLE
5	57	Khairilmizal Samsudin (Universiti Sains Malaysia, Malaysia); Mohamad Fahmi Hussin (UiTM, Malaysia); Ainul Husna Kamarudin (Institute of Medical Science Technology (UniKL-MESTECH), Malaysia); Nur Hannani Abdul Ghani (Universiti Sains Malaysia, Malaysia); Nur Fatin Najihah Ghazali (Universiti Sains Malaysia, Malaysia); Juliana Johari (UiTM, Malaysia); Siti Amalina Enche Ab Rahim (Universiti Teknologi MARA, Malaysia); Khairul Khaizi Mohd Shariff (Faculty of Electrical Engineering, Universiti Teknologi MARA, Malaysia);	Emergency Management: A Case Study on Knowledge and Practice of Planning and Information Management by Lead Responding Agency in Malaysia

The impact of a disaster is closely related to the response and recovery of the lead responding agency in managing disaster effectively. Malaysia has established the MNSC 20 policy in managing disasters, unfortunately, the implementation of MNSC 20 can only be evaluated through lead responding agency disaster exercise. Hence, it is the objective of this paper to identify challenges and suggest an appropriate area of improvement through the evaluation of lead responding agencies in Malaysia during disaster exercise. Four (4) disaster exercise at states and federal level were observed using a structured checklist and result indicates that challenges were found in the element of planning and information management within an effective disaster management concept. Proper area of improvement was suggested based on the evaluation and it is hoped that this paper could contribute to the development of better management of disaster by the lead responding agency in Malaysia.

	ID	AUTHORS	TITLE
6	84	Amirah Amalina binti Ahmad Tarmizi (Universiti Teknologi MARA Shah Alam, Malaysia); Mohd Nor Ashrawi Hakim Mohd Dali (Universiti Teknologi MARA Shah Alam, Malaysia); Siti Nur Liyana Mamauod (Universiti Teknologi MARA Shah Alam, Malaysia)	Effect of Coating Mild Steel with Polyaniline Added Extracted Silica from Rice Husks and Its Corrosion Behaviour in Hydrochloric Acid Solution

This study was conducted to study the effect of extracted silica content in polyaniline silica composite towards corrosion protection of mild steel in 2 M hydrochloric acid. The silica was extracted from paddy husk by incineration method at 800ºC for 5 hours in a muffle furnace. The white ash formed was then treated with NaOH to obtain trisilicate, which was then treated further with H2SO4 to obtain silica precipitate on the top of the solution. Polyaniline (PANI) was prepared by in situ polymerizations of aniline, HCl and potassium dichromate. The polyaniline silica composite (PSC) was prepared by adding the extracted silica, weighing 0.2g (PSC 0.2), 0.4g (PSC 0.4) and 0.6 g (PSC 0.6), into the synthesized PANI. The extracted silica, PANI and PSC 0.6, were characterized by FTIR analysis. The presence of extracted silica is supported by the FTIR analysis. The corrosion protection performance of PANI, PSC 0.2, PSC 0.4 and PSC 0.6 was then compared by immersing the bare mild steel, mild steel coated with PANI and mild steel coated with PSC 0.2, PSC 0.4, and PSC 0.6 in 2 M HCl for 24 hours. The weight loss method was used in this study to investigate the corrosion behaviour of the samples. PCS 0.6 revealed the lowest corrosion rate, which was 0.95 g. The corrosion protection of PSC coating increases directly proportional to the silica contents in PSC. The temperature study showed as the temperature increased, the corrosion rate will also be increased. This occurred due to the rise of kinetic energy as a higher temperature was used. PSC 0.6 showed the best protection even at a high temperature compared to other samples. FESEM analysis was also conducted to observe the surface properties of the sample when immersed in HCl solution.

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	ID	AUTHORS	TITLE
7	87	Abdul Quddus Bin, Puteh (Universiti Teknologi MARA, Malaysia)	Comparative Quality Study of Carotene Content in Ripe and Unripe Fresh Fruit Bunches

Currently Elaies Guineensis is the most widely planted commodity crop in Malaysia. In the year 2017, oil palm sectors contributed to around RM 71.5 billion to the country's economy. However, the current processing method of producing palm oil for human consumption will deteriorate the carotene content. Carotene are the natural chemical compounds that give palm oil its orange-red colour. The compound is good for human health as it can strengthen body immunity system and also act as antioxidant. It was reported that carotene are abundant in crude palm oil derived from ripe fresh fruit bunches (FFB) as it can reach 500-700 ppm and the beta carotene found in it will be converted into Vitamin A as it enters body systems. The objective of this study was to compare the carotene content in ripe and unripe oil palm FFB and show that the Unripe FFB contains carotene comparable to the Ripe FFB. The analysis of oil samples was done using Near Infrared Spectroscopy Diode Array (NIRS DA) 1650. Result for the carotene showed that mean for the Ripe FFB was 968.07 ± 20.48 ppm and for the Unripe FFB was 927.37 ± 23.97 ppm whilst the result for the Free Fatty Acids (FFA) were 22.08 ± 2.48 and 14.47 ± 5.054, respectively. This study showed that the carotene contents of Ripe and Unripe FFB were almost similar and thus Crude Palm Oil from Unripe FFB can be used for further carotene extraction study and uses.

	ID	AUTHORS	TITLE
8	98	Muhammad Aiman Bin Azuddin (MARii, Malaysia); Mohammad Azzeim Bin Mat Jusoh (Universiti Teknologi MARA Shah Alam, Malaysia); Sukarnur Che Abdullah (Universiti Teknologi MARA, Malaysia); Zulkifli Mohamed (Universiti Teknologi MARA & Faculty of Mechanical Engineering, Malaysia); Mohd Hanif Mohd Ramli (Universiti Teknologi MARA, Malaysia)	Development of a Pico-Hydro Generating System with SES-BMS for Domestic Use

For the past decade, non-renewable resources have reduced drastically. The currently available renewable energy system is expensive and more focused on large-scale use. The objective of this project is to design a consumer-friendly pico-hydro system with a smart energy storage battery management system (SES-BMS) to fully utilize the potential of domestic water flow; at the same time to save the daily energy consumption and cost. The overall system is a combination of the standard pipeline, a pico-turbine, the SES-BMS, and a simple light source. The flow of water is utilized by converting kinetic energy into electrical energy. The design was performed by using the Engineering Design Process (EDP) and coding via Arduino microcontroller. The main outcome of this project is a proof of concept, which shows the potential of the pico-hydro system combined with the SES-BMS system for domestic use. As a result, an optimum charge duration of 10-hours can support a 3.5-hours usage of a 12W LED light. Compared to the previous mini-hydro design, the new system shows an improvement of performance during the average flow rate in the domestic pipeline.

	ID	AUTHORS	TITLE
9	111	Che Ahmad Hafiz (Faculty of Plantation & Agrotechnology, Universiti Teknologi MARA, Melaka Malaysia); Siti Noor Hajjar Md Latip (Sustainable Crop Protection Research Group, Universiti Teknologi MARA Shah Alam Malaysia)	Economic Impact of Severe Bagworm Infestation on Oil Palm Yield

Bagworm, Metisa plana, is one of the most serious pests in oil palm plantation. The bagworms are polyphagous insects and start to eat immediately upon hatching. Continuous infestation occurs, resulting in serious canopy defoliation, giving a significant reduction of 30%-44% yield within two years. Infestation area keeps on increasing over the years, even though all control strategies have been carried out. This study aims to access the value of yield loss after the bagworm outbreak and to evaluate the relevance of introducing the 'Early Warning System' (EWS). The infestation occurred in 2016. The monthly yield was recorded throughout the year 2015-2018 in the infested and non-infested plot, planted in the same year. All data were analyzed using analysis of variance (ANOVA), an independent t-test for each parameter including tonnage per hectare (t ha-1) average bunch weight (ABW) and average bunch number (ABN). The result clearly shows a declining yield at 37.96% in 2017(p=0.001) and 2018 at 36.81% (p=0.002) over a potential yield within one to two years after the outbreak. An economic loss at an average of RM 4,306.45 ha-1 each year was recorded at the current crude palm oil (CPO) price of RM2000 t-1. Implementation of EWS by introducing a dedicated monitoring team cost up to only 0.9% compared to the potential value loss suffered. In conclusion, the implementation of a dedicated monitoring team is worthwhile and recommended. Also, systematic pest forecasting models with the Internet of Things (IoT) supporting the system is strongly recommended for the future.

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	ID	AUTHORS	TITLE
10	130	Aqilah Dollah (Universiti Teknologi MARA, Malaysia); Nurfarahain Abu Bakar (Universiti Teknologi MARA, Shah Alam, Malaysia); Nur Hidayati Othman (Universiti Teknologi MARA, Malaysia); Nur Shuhadah Japperi (Universiti Teknologi MARA, Malaysia); Siti Nurliyana Che Mohamed Hussein (Universiti Teknologi MARA, Malaysia)	Effect of Magnetic Graphene Oxide on the Heavy Oil Demulsification Process

The difficulties associated with the crude oil emulsions and produced water cause the oilfield researchers to investigate into practical demulsification methods for many decades. Surfactant is the main component in stabilizing the interfacial film surrounding the dispersed phase droplets which contribute to emulsion stability. The most efficient demulsification approach is chemical demulsification which able to attain desirable separation efficiency while complying with the environmental regulations and imposing the least economic burden on the petroleum industry. A magnetic graphene oxide (MGO) was synthesized by one-step coprecipitation method from graphene oxide (GO). The properties of the MGO were characterized by XRD analysis and supported by FTIR analysis. Different concentrations of MGO used to demulsify the heavy oil emulsions of different water cut were studied. The magnetic graphene oxide (MGO) was successfully synthesized and used for separating diluted heavy oil emulsions. Demulsification tests which is bottle test indicated that MGO could separate the emulsions within a few minutes. The residual oil content in the separated water analyzed by UV-Visible spectrophotometer was as low as 20 mg/mL corresponding to a demulsification efficiency of 99.98% at an optimal dosage. The interfacial tension of the emulsions during demulsification process were also analyzed.

	ID	AUTHORS	TITLE
11	144	Muhammad Shaffiq Azman (Universiti Teknologi MARA, Malaysia); Norliza Mohamad Zaini (Universiti Teknologi MARA, Malaysia); Mohd. Fuad Abdul Latip (Universiti Teknologi MARA, Malaysia)	Computation of Energy in Currency Values Using Long Short-Term Memory-Based Approach for Energy Prediction

The high demand for electricity has led to a large amount of wasted energy, which shows that people are not aware of their energy consumption. This has also caused a higher energy cost in electricity bills. Tenaga Nasional Berhad (TNB), which is the largest electricity producer in Malaysia has resolved 85% of over 18,000 "sky-high" electricity bill complaints received from consumers, particularly in April and May of 2019. Therefore, accurate forecasting of energy demands is crucial for people to understand their electricity consumption. This paper presents the load forecasting methodology with an analysis that had been done with different machine learning techniques which are the Long Short Term Memory (LSTM) and Autoregression (AR). These two methods are used to learn and predict energy consumption patterns. In this regard, the study aims to investigate whether and how the newly developed deep learning-based algorithm such as the Long Short -Term Memory (LSTM) is better than the traditional algorithm such as the Autoregression (AR) model. The model's performance of prediction is assessed by using the Mean Absolute Percentage Error (MAPE) and R-square (R) regression score. Based on the analysis done, LSTM is found to provide more accurate predictions than AR, especially for large-scale datasets. Therefore, the LSTM model was chosen as the prediction model employed for the second key feature proposed in this project, which is to convert energy consumption rates into currency values. Such conversions are made based on the standard tariff and trigger warnings to users to help them realize their energy usage is more wasteful compared to their normal energy usage pattern.

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TRACK 6: SOCIAL CREATIVITY & INNOVATION (SCI)

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	ID	AUTHORS	TITLE
1	12	Norol Hamiza Zamzuri (Universiti Teknologi MARA, Malaysia)	The Internet Addiction Among Youth in Tertiary Education

This paper attempts to bring forward the idea of internet addiction at one of the public universities in Semarang, Indonesia. Social influence and coordination are seen as factors that determine the influence of internet addiction among youth. There are 164 youth involved in this study from one of the universities in Semarang, Indonesia. The results revealed that there has been an influence of social influence and coordination towards internet addiction among students. The data were collected from 168 youth, but only 164 returned the questionnaire. The research was limited only at one of the universities in Semarang and further data collection could be conducted in other areas due to increase in the generalizability of the result. Apart from this, this study was only conducted by using random sampling technique and, therefore further discussion could be elaborated further by using qualitative research methodology and understanding in-depth the cultural behaviour among youth.

	ID	AUTHORS	TITLE
2	13	Veera Pandiyan Kaliani Sundram (Universiti Teknologi MARA, Malaysia)	Sustainable Transportation On University Campus: A Case At UiTM Selangor, Puncak Alam Campus, Selangor, Malaysia And UNNES Indonesia

The increased awareness of the impact of CO2 emissions and consumption of fossil fuels on the environment has led to world-wide research focused on sustainable transportation solutions. University campuses are one of the affected environments involved in this issue as a high dependency on private vehicles causes' traffic congestion in the campus area particularly during peak hours leading to concerns about parking especially for the established universities. Therefore, alternative transport solutions should be considered in minimizing the environmental consequences specifically within the campus area. This study aims to examine the extent of sustainable transportation practices implemented by a university campus in a developing country, Malaysia and Indonesia. Understanding to what extent the various university supply chain partners such as the university management, students, government and private sectors have contributed to the university sustainable transportation effort. A survey methodology is applied using self-administrated questionnaire as the main technique of data collection. Both, UiTM Puncak Alam, Malaysia and UNNES, Indonesia are selected as the sample study and the target observations are focus on the transportation pathway which includes transportation modes, passengers, terminal, parking space and etc. The study is expected to enrich the existing sustainable model with Stakeholder Theory to deliver a more robust competency model to provide solution in creating a sustainable transportation in university campus. Subsequently, the outcome would support Sustainable Development Goals (SDGs 2030), Mid-term Review of the Eleventh Malaysia Plan [2016 - 2020], Indonesia's long-term development plan to phase IV period 2020-2025. through better adoption of low-carbon supply chain practices in order to reduce GHG emission. This is in line with Malaysia's and Indonesia commitment in being a key part of the global transition to a low-carbon, and eventually carbon-neutral society by 2050

	ID	AUTHORS	TITLE
3	18	Marlina Muhamad (Universiti Teknologi MARA, Malaysia)	The Motivation to Become a Seniorpreneur: Spiritual Motivation

This qualitative study aims to contribute by exploring the existing theory on push and pull motivations within the entrepreneurial event model to see what is missing from the existing researches. This study uses semi-structured, face-to-face interviews with total of six Malaysian seniorpreneurs for data collection. Content analysis method was used to extract their motivation from the qualitative data. The results reveal that in term of theoretical, spiritual motivation is one of the motivations in driving seniorpreneurs to do business apart from push and pull motivations. The findings from this study may expand a research area of practical applications of spiritual motivation in the business environment which still empirically not sufficient covered.

	ID	AUTHORS	TITLE
4	22	Mazlan Bin Che Soh (Universiti Teknologi MARA, Malaysia); Makmor Tumin (Universiti Malaya, Malaysia)	Full Paying Patient Services (FPPS) in Malaysia: A Counter-Hegemony Response from a Civil Society Organization

Brain drain of specialists from public hospitals to private hospitals has been a major problem faced by the government. In order to find a solution to this problem, the Malaysian government had taken many steps to avoid the migration of medical specialists from public to private hospitals, and the Full Paying Patient Services (FPPS) is one of those said steps. However, these measures have received a wide range of reactions from various parties, including the civil society organizations (CSO's). One of the important CSO's against this scheme was the Coalition against Healthcare Privatization (CAHP). This study aims to examine what is the justification for the government's implementation of this services and explain the response of civil society organizations over the government's action, and, in the process, understanding the dynamic of the civil society organization in its response towards government policy and initiatives. Employing Gramsci's counter-hegemony and Habermas' communicative rationality theory, and taking the case of Coalition against Healthcare Privatization, this study utilised a qualitative approach (through an interpretative lens), benefiting from secondary data as well as primary data through interviews. Besides, this study revealed that despite many objections and pressure conveyed by the CSO's, many of them fell on deaf ears, and the efforts made by civil society movements, at best, were only able to help delay the services.

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ID	AUTHORS	TITLE

5 | **34** | Nor Hapiza Mohd Ariffin (Universiti Teknologi MARA, Malaysia); Fauziah Ahmad (Universiti Teknologi MARA, Malaysia); Khairul Anwar Mohamad (Universiti Teknologi MARA, Malaysia) | **A Development of Islamic E-Commerce Ethics Model**

The purpose of this paper is to understand the Islamic online e-Commerce (EC) transactions and develop a reference business model. Based on a preliminary investigation, it was found that sellers who use EC were not aware and did not have access to proper guideline to guide them on the Islamic business ethics during online transactions. Hence, this study was undertaken to fulfill the need of such guide, and the scope of this study is within the interest of the ethical Islamic transactions. The objectives of this paper were to describe the online transactional elements in Islamic and conventional businesses transactions, to discuss the factors of Islamic EC ethics in EC transactions and finally to propose an Islamic EC Ethics model to increase the awareness among businesses in EC transactions. Both qualitative and quantitative methods were deployed as the primary method where experts were interviewed and questionnaire were distributed. Using selective sampling method, data collection from 100 respondents who have performed online selling transactions in the past were collected. SPSS was used to analyze the data collected and followed by model development. The proposed and validated Islamic EC ethics model provides proper guideline for online sellers, to know the right and wrong things to do in accordance to Islamic beliefs, while they are performing online transactions.

6 | **36** | Abdul Rauf Abdul Rasam (Universiti Teknologi MARA, Shah Alam, Malaysia); Sakinah Anisah Khairulannuar (Universiti Teknologi MARA, Selangor, Malaysia) | **An Innovative Humanitarian Activities Mapping in Malaysia**

Many people register to be a volunteer in many non-governmental organizations. However, the data are not fully utilized especially when there are events that require the volunteer immediately. This is due to the data that are not adequately managed. Therefore, this study is to develop a web-based multimedia mapping system for decision tool making and sharing geo-information on the volunteer program in Malaysia. This study has been conducted by using a standard development process that is known as Agile Models which has less strict guidelines and adjust according to needs in Standard Development Life Cycle (SDLC). The proposed volunteer management system can be accessed through https://volunteer-management-learngis2.hub.arcgis.com/. This exciting system provides a basic information system such as database, query, mapping, measurement, buffering, and others related to the humanitarian program. Beta testing has been conducted for a user's satisfaction. The proposed volunteer management system should be able to increase the efficiency and effectiveness of an organization in handling the volunteer's database and humanitarian program in Malaysia

7 | **43** | Nur Humairah Aini Mohd Fidzal (Universiti Teknologi MARA, Malaysia); Sharifalillah Nordin (Universiti Teknologi MARA, Malaysia); Norshahida Shaadan (Universiti Teknologi MARA, Malaysia); Nor Fazlin Mohd Ramli (Universiti Teknologi MARA, Malaysia) | **Empirical Study on Game Design for Reducing Smartphone Usage Among Young Children**

Young children and teenagers are the internet generation that is called generation Z. They are more exposed to and keen to use digital devices especially smartphone. However, most of them tend to be addicted to these devices, which can adversely affect their mental health and well-being. An integrated approach should be of concern and vitally in needs to some extent at least reduce the negative impact of this smartphone addiction. Fortunately, this study is purposely conducted with the aim to identify suitable feature in developing a software as a medium that can reduce smartphone usage and thus prevent smartphone addiction. An empirical research was done through an online survey to identify the features of a game design to develop a computer application that can reduce smartphone usage. The study focuses on parents with children under 7 years of age and has a total of 253 respondents. Based on the findings, the main features that can be implemented to design the game for reducing smartphone usage among young children are strategy game and building block.

8 | **44** | Nur Syaliza Hanim Che Yusof (Universiti Teknologi MARA, Kelantan, Malaysia); Nor Fatihah Abd Razak (Universiti Teknologi MARA, Kelantan, Malaysia); Siti Nurani Zulkifli (Universiti Teknologi MARA, Kelantan, Malaysia); Noor Ilanie Nordin (Universiti Teknologi MARA, Kelantan, Malaysia) | **Self-Efficacy, Motivation, Learning Strategy and Their Impacts on Academic Performance**

Psychological factors are widely being study as one of prominent factor in academic performance. The present study aims to focus on exploring self-efficacy, motivation and learning strategy in determining the academic performance of Malaysian undergraduate students. A set of structured questionnaires has been distributed to undergraduate students from a public university located in East Coast of Malaysia which was selected through stratified sampling technique. Data were then analyzed by using SPSS software. Pearson Correlation Coefficient was used to determine the association between age, self-efficacy score, motivation and learning strategy with academic performance. The findings show that academic performance has the highest correlation with age and learning strategy but lowest correlation with self-efficacy score. Moreover, motivation and learning strategy are significantly positive correlation while age is significantly negative correlation with academic performance. Based on multiple linear regression analysis, this study identified that age and learning strategy have significant effect in predicting academic performance. This study contributes to the awareness of knowledge in learning strategy for lecturers and students in adapting proper learning method to maximize learning outcomes.

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	ID	AUTHORS	TITLE
9	46	Wan Rosalili Wan Rosli (Universiti Teknologi MARA, Shah Alam, Malaysia); Zaiton Hamin (Faculty of Law, Universiti Teknologi MARA, Malaysia); Ahmad Ridhwan Abd Rani (Universiti Teknology MARA, Malaysia); Saslina Kamaruddin (Universiti Pendidikan Sultan Idris, Malaysia); Rafizah Abu Hassan (Universiti Teknologi MARA, Malaysia)	Non-Criminalisation of Cyberstalking and Its Impact on Justice for Victims: Some Evidence from Malaysia

In the digital era, some real-world crimes have now transcended into cyberspace. Cybercrime such as cyberstalking is one of them and is considered as an emerging threat in Malaysia. Its prevalence in the reported statistics is merely a tip of an iceberg as many cases may not be reported. Cyberstalking may lead to a chain of psychological trauma and more severe crimes such as identity theft, rape, and even murder. However, despite its serious ramifications, the absence of any specific law to curb such criminality is regrettable and glaring in the Malaysian legal landscape. Hence, this paper aims at examining the technological and social factors contributing to such illegality, the rationales for the non-criminalisation and its implication for the victim's sense of justice. This paper adopts a qualitative methodology, of which the primary data is generated from semi-structured interviews with relevant respondents. The data triangulation is obtained from experts at two relevant ministries. The secondary data are the relevant cyber law, the Penal Code, books, academic journals, online databases and library-based sources. The findings revealed that the catalysts for cyberstalking are varied and that such crime has not been specifically criminalised in the Malaysian cyber laws or traditional legal framework. Such a legal lacuna calls into question not only the adequacy of the current law in dealing with such crime but also the availability of legal protection and non-denial of justice for cyberstalking victims as envisaged by the National Cyber Security Policy 2006 and the Sustainable Development Goals No.16.

	ID	AUTHORS	TITLE
10	47	Zaiton Hamin (Faculty of Law, University Teknologi MARA, Malaysia); Saslina Kamaruddin (Universiti Pendidikan Sultan Idris, Malaysia); Ahmad Ridhwan Abd Rani (Universiti Teknologi MARA, Malaysia); Ani Munirah Mohamad (Universiti Utara Malaysia, Malaysia); Nur Ezan Rahmat (Faculty Of Law, Universiti Teknologi MARA, Malaysia); Wan Rosalili Wan Rosli (Universiti Teknologi MARA, Shah Alam, Malaysia)	When Violent Extremism is No Longer a Man's World: Some Evidence from Malaysia

Traditionally, terrorism and violent extremism (VE) are synonymous with male perpetrators, although women are inevitably and adversely affected by such illegalities. Women are increasingly involved as active supporters not only by fundraising terrorist activities but also as lone wolf suicide bombers. Despite the awareness of women's participation, and the detrimental impact of such crimes on women, the lack of understanding of the causes of Malaysian women's radicalisation and their political agency has remained under-researched. The understanding of such rationales and agency is crucial to enable the government to adopt the appropriate PVE/CVE approach. Given the lack of academic research on this issue, this paper aims at examining the understanding of VE, the role and the causal factors of women's radicalisation and their implications on the visibility of women's agency and gender equality in Malaysia. This research employs qualitative methodology, in which the primary data was collected through semi-structured interviews with fifteen respondents. The data triangulation was obtained from focus group discussions with experts from relevant ministries and universities. The data is analysed and interpreted using Atlas.Ti software. The findings revealed that the drivers toward women's radicalisation are varied, and the lack of visibility of women's political agency in the analyses of Malaysian women's participation in VE is unfortunate. Such a situation calls into question not only the future role of women as active actors in PVE/CVE but also the promotion of gender equality as envisaged by the UN Security Council Resolutions 2178 and 2242 and SDG No 5 and 16.

	ID	AUTHORS	TITLE
11	53	Noor Ilanie Nordin (Universiti Teknologi MARA, Kelantan, Malaysia); Norafefah Mohamad Sobri (Universiti Teknologi MARA, Kelantan, Malaysia); Nor Azima Ismail (Universiti Teknologi MARA, Kelantan, Malaysia); Tengku Mardhiah Tengku Jalal (Universiti Teknologi MARA, Kelantan, Malaysia); Syazwani Ibrahim (Universiti Teknologi MARA, Kelantan, Malaysia); Wan Nurwajihah Wan Anuar (Universiti Teknologi MARA, Kelantan, Malaysia); Syafiqah Quraatulaini Ibrahim (Universiti Teknologi MARA, Kelantan, Malaysia)	Modelling Influential Factors to Pursue Master's Degree Under Graduates Students

Nowadays, jobs requiring a master`s degree are rising in today's competitive labor market. In Malaysia, master's holders are still relatively small. Thus, there is a vital need to look into ways to boost up the number of admission and production of master's graduates. This study is aimed to identify the main factors (job, self-motivation, financial aid, family) that significantly influence students` intention to pursue master's degree. The result showed that three variables; job, self-motivation, and family have significant impact on students` intention to pursue a master's degree. Findings of this study will be beneficial in terms of decision making and will contribute to the roles that assist the Ministry of Higher education (MOHE) marketers to plan and improve their marketing strategy for recruiting students.

TRACK 6: SOCIAL CREATIVITY & INNOVATION (SCI)

	ID	AUTHORS	TITLE
12	55	Sian Hoon Teoh (Universiti Teknologi MARA, Malaysia)	A Reflection on the Roles of a Community in Mathematics Education: A Case Study

The purpose of this study is to explore and understand a school-parents community in mathematics education. A school learning environment was selected to understand the roles of the community in mathematics education. Specifically, this study aimed to investigate to what extent the entity of the mathematics community develops mathematics education. This study focuses on a school which is located at a remote area in Pahang Malaysia. The data were collected from mathematics teachers' reflection in the school. The mathematics teachers (two teachers) had been interviewed. The data analysis focuses on teachers', pupils' and parents' roles in mathematics education within the community. The findings of this study show that the pupils were cooperative in all mathematics activities. But they need more attention. The teachers always provided more supports. On the other hand, the parents have shown potential to contribute to the mathematics community for the following reasons. (1) their concerns which is never hampered by the school management since the school always communicate with parents; (2) The parents were very supportive. It is suggested mathematics and parents' partnership is established. Overall, the teachers who teach mathematics have taken full responsibility to focus on the pupils' development of mathematics knowledge and motivation in learning mathematics

	ID	AUTHORS	TITLE
13	56	Hazliza Haron (Universiti Teknologi MARA, Perak & Arsyad Ayub Graduate Business School, Malaysia)	The Influence of Technology, Content, News Credibility and Brand Trust on Readers' News Consumption Behavior

Newspaper industry has been going through massive changes. This is partly due to the technological advances as well as the news consumption pattern by readers. This study examines the Malaysians news consumption of behavior for Malaysian newspapers. It is a quantitative research design that adopts convenience sampling via online survey. A total of 322 samples were collected and data was analysed using SPSS. Results revealed that a large majority of the respondents read online news rather than printed news. More alarming is that there is a small fraction of Malaysians who seldom or never read news at all. Results also show that technology, content and brand trust are significant predictors of Malaysian news consumption whereas news credibility is not.

	ID	AUTHORS	TITLE
14	63	Mohd Halim Bin Mahphoth (Universiti Teknologi MARA, Malaysia); Wei-Loon Koe (Universiti Teknologi MARA, Malaysia); Nur Asyikeen binti Kamarudin (Universiti Teknologi MARA, Malaysia); Puspo Dirgantari (Universitas Pendidikan Indonesia & Faculty of Economic and Business Education, Indonesia)	Psychometric Assessment of Young Visitors at the National Museum of Malaysia

Museums have become an important institution for learning activities especially for young visitors as it provides significant function towards educational benefits and knowledge enrichment. The actual outcomes from learning experience need to be encountered in order to indicate satisfying experience level from museum visiting. However, the assessment of satisfying experience on museum visit is entirely lacking in the existing literatures. Therefore, this study proposes a set of assessment for young visitors in order to evaluate their satisfying experiences in museum. The items were adapted and developed from the concept of satisfying experiences established by museum practitioners. This paper aims to present evidence in order to show the validity of the survey data and the instrument meets the requirements of specific measurements as determined by Rasch model. It is hoped that the assessment of satisfying experience will benefit researchers as well as practitioners and educators in managing the quality of young visitors experience in museum. The literature also intends to add to the body of knowledge in museum context.

	ID	AUTHORS	TITLE
15	65	Puteri Rohani Binti Megat Abdul Rahim (Universiti Teknologi MARA, Malaysia)	Approaching Listening and Speaking Skills Using Online to Facilitate Interactive Learning from Students' Perspectives

The process of teaching and learning is constantly transforming due to the ever increasing globalization. The increasing trend in globalization has caused a huge increase in the use of information and communication technology (ICT) in the educational sector. This in turn has transformed the facet of education in this 21st century. The various use of digital technologies along with other suitable forms of learning materials that have been extensively used have created an interactive, learner centered, open and flexible environment of online learning. However, several studies showed that students prefer traditional classroom more because they would prefer face-to-face communication with their instructor. Thus, this study intends to explore the perspective of learning listening and speaking using online among L2 learners. A total number of 102 university students at UiTM Perak Branch took part in this study. They were instructed to answer a set of questionnaire which was created using google document. From the findings the students reported that they do see the benefits of online learning. In addition, they found learning through this interactive medium as interesting and provide them space to progress at their own pace in learning. However, this does not portray students' eagerness in which may be due to several factors. Thus, it is hoped that this study is able to highlight the positive usefulness of online learning as an effective mode of teaching and learning.

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	ID	AUTHORS	TITLE
16	66	Mohd Isham Bin Abidin (Universiti Teknologi MARA, Malaysia); Mohd Halim Bin Mahphoth (Universiti Teknologi MARA, Malaysia); Zainab Mohd Zain (Universiti Teknologi MARA & Melaka, Malaysia); Farith Mohayyaddin Abdul Kader (Universiti Teknologi MARA, Malaysia); Rohaiza Kamis (Universiti Teknolologi MARA, Malaysia); Mohd Amirul Atan (Universiti Teknulologi MARA, Malaysia)	Celebrity Endorsement on Digital Consumers' Buying Behaviour

The phenomenon of celebrity endorsement towards digital consumers' buying behaviour has become significant in the marketing arena. Endorser's gender, credibility, attractiveness and type were found as among factors contributing in understanding buying behaviour of digital consumer. Thus, this study will investigate the relationship between celebrity endorsement towards digital consumers buying behaviour. Sample was collected from 346 numbers of respondents using survey questionnaire. The instrument consists of 25 items that uses a 5 - points Likert Scale to establishing measurable values from the respondents. The data analysis intends to determine whether there is significant impact between the independent variables (Endorser Gender, Endorser Credibility, Endorser Attractiveness and Endorser Type) with the dependent variable (Digital Consumer Buying Behaviour). In this study it was found that there were only three independent variables (Endorser Gender, Endorser Attractiveness and Endorser Type) has positive effect while one of the independent variables (Endorser Credibility) has negative effect with the dependent variable (Digital consumer Buying Behaviour). Based on the study, some suggestions and recommendations related to the phenomenon are made as a guide for individuals or organizations that are opting for celebrity endorsement for their products or services.

	ID	AUTHORS	TITLE
17	67	Wan Hasmat Binti Wan Hassan (Universiti Teknologi MARA, Malaysia); Nur Hidayah Zaini (Senior Lecturer, Malaysia)	Factors Influencing Work Stress Among Nurses: Women and Baby Centre Ward & General Ward KPJ Johor Specialist Hospital

The researchers conducted a research on the factors influencing work stress among women and baby centre ward as well as general ward nurses at KPJ Johor Specialist Hospital. This study was conducted to investigate if excessive workload factor, poor work environment factor, lack of social support factor and shortage of manpower factor will influence work stress among women and baby centre ward as well as general ward nurses at KPJ Johor Specialist Hospital. Cluster sampling was used to distribute questionnaire survey to respondents. A total of 80 nurses from Women and Baby Centre ward and General Ward were the respondent for the study. For the study questionnaire design, Likert Scale was used as the method is simple to administer. The nurses were asked to rate the questionnaire survey by choosing from four alternatives: strongly agree (4), agree (3), disagree (2) and strongly disagree (1). The instrument used by researchers for data collection is SPSS software. The result shows that excessive workload and shortage of manpower is positively related to work stress among nurses.

	ID	AUTHORS	TITLE
18	69	Norizah Ardi (Akademi Pengajian Bahasa, Malaysia); Mazlina Mohamad Mangsor (Faculty of Law & Universiti Teknologi MARA, Malaysia); Mazlifah Mansoor (Senior Lecturer, Malaysia); Amirah Ahmad (Universiti Teknologi MARA, Malaysia)	Sustainable Tourism Through Implementation of the Language Interactive Skills Module Among Local Entrepreneurs at Tuba Island

Politeness is one of the aspects in pragmatic studies that is still relevant to this day. In court trials, whether involving criminal or civil case trials, the speakers is bound by the court ethics. The legal mechanism includes legislation to guide and promote fairness involving the Evidence Act 1950, Criminal Procedure Code and Advocate (Practice and Etiquette) Rules 1988. It is crucial to utilise positive politeness to ensure justice in criminal trial. The current development raises concern on politeness strategies from the highest hierarchy to the lowest hierarchy in a criminal court trial. This study adopted a qualitative methodology applying the case content analysis approach. Therefore, this paper aimed to study the politeness strategies during the cross-examination in court trials based on the excerpt from the summary of a selected case. This study found that the politeness strategies in criminal trials is crucial in upholding fairness in judicial decisions.

	ID	AUTHORS	TITLE
19	73	Mohd Nor Mamat (Universiti Teknologi MARA Malaysia, Malaysia); Hanifah Musa (Universiti Teknologi MARA, Malaysia); Zulaipa Ruzulan (Universiti Teknologi MARA, Malaysia); Munirah Azrae (Universiti Teknologi MARA, Malaysia); Azlina Kamaruddin (Universiti Utara Malaysia, Malaysia)	Sustainable Tourism Through Implementation of the Language Interactive Skills Module Among Local Entrepreneurs at Tuba Island

This study focuses on sustainable tourism of Pulau Tuba through the aspiration of 3M2U (membangun, memperkaya, memperkasa) with a focus on producing local entrepreneurs with interactive language skills of Malay, Chinese and English for tourist attractions. The concept of 3M2U through this linguitics medium is to meet the current needs of the local youths to attract tourists without neglecting local customs and culture. According to Ahmad, M. I. B., & Jaffar, M. N. B (2017) language skills are considered important because it would help the preparation of an conducive workforce to ensure the best and friendly services can be provided to tourists. The concept 3M2U devote three methods, namely the first, building up Pulau Tuba as a major tourist destination with identity of Malay heritage; second, enriching the local community with the simple communication skill; and third, enhancing the living standards of the locals with the linguistics skills to promote their products through the mastery of good communication. This is a qualitative study in nature by focusing on the basic elements of language skills as a need of the local community. This study focuses on the local community by providing basic language skills guidance as well as increasing confidence in business communication. To achieve this objective, this research is conducted as 2 in 1 project, namely providing skills training module for youth entrepreneurs as well as study on the effects of the training on the socio-economic development of the community at Pulau Tuba. In line with the government's aspirations, few instruments were developed to measure the increase of socio-economic impact as well as the knowledge, skills, attitudes and achievements of the program among the participants.

TRACK 6: SOCIAL CREATIVITY & INNOVATION (SCI)

	ID	AUTHORS	TITLE
20	80	Sharifah Faigah Syed Alwi (Universiti Teknologi MARA, Malaysia); Fateha Abd Halim (Universiti Teknologi MARA, Malaysia); Tengku Dewi Ahdiyaty Tengku Ahmad Mazlin (AbleAce Raakin, Malaysia); Aizurra Haidah Abdul Kadir (Arsyad Ayub Graduate Business School Universiti Teknologi MARA, Malaysia)	Maqasid Al-Shariah in Islamic Banks: Before and After Value-Based Intermediation (VBI) Implementation

Bank Negara Malaysia (BNM) had introduced Value-based Intermediation (VBI) Implementation in 2017 as a catalyst to further drive the actualization of maqasid al-Shariah (the objectives of Shariah) among Islamic banks. This VBI initiative stemmed from BNM's observation that maqasid al-Shariah was not fully being implemented in Islamic banks since 1983, though some Islamic banks have claimed that even before the idea of VBI was brought forward by BNM, maqasid al-Shariah had already been existent in their banking operations. This study aims to highlight the practice of some Islamic banks in realizing maqasid al-Shariah through their available products and services before and after VBI implementation. This study adopts a qualitative research methodology whereby the information on VBI implementation was gained from semi-structured interviews conducted with bankers from three Islamic banks in Malaysia directly involved with VBI implementation. This study has found that maqasid al-Shariah had indeed been realized by Islamic banks even before the implementation of VBI. However, this VBI initiative was a boost in assisting Islamic banks to structuralize their efforts in achieving maqasid al-Shariah and help strategize their initiatives through practices, business conducts and offerings of their products and services. As a result, Islamic banks are able to generate a positive and sustainable impact on the economy, community and environment, consistent with the shareholders' sustainable returns and long-term interest as well as achieving maqasid al-Shariah.

	ID	AUTHORS	TITLE
21	86	Hanisah Razali (Universiti Teknologi MARA, Malaysia)	The Impact of Corporate Social Responsibility (CSR) on Islamic Banking Performance in Malaysia

Corporate Social Responsibility (CSR) activities can lead company to gain better recognition from citizens and investors. The definition of CSR is adopted from Carroll's definition, which included economic, legal, ethical and philanthropic responsibilities. CSR become one of the added values for a company in increasing competition from global and domestic. However, there are some critics argue that it is too expensive for a company to be socially responsible and argue that the benefits of CSR exceed the actual costs. Therefore, the objectives of this study is to determine the relationship between Corporate Social Responsibility (CSR) impacts on the Islamic Banks financial performance specifically in Malaysia. This study used Fixed Effect Regression Model in order to achieve the objectives of this study. The independent variables used in order to determine CSR comprise of environment, community, and workplace and marketplace expenditure ratio. Meanwhile, in order to measure the financial bank performance that is the dependent variable, Return on Asset (ROA) is used in this study. Based from this model, researcher concluded that CSR's elements which are environment, community, and marketplace have significant impacts on banks financial performance. This is consistent with Stakeholder Theory which state that the firm financial performance is determined by external stakeholders. In order to enhance the study future research may segregate the focus of the study specifically on Islamic Bank or conventional banking. The future research may also conduct the research on the different industry.

	ID	AUTHORS	TITLE
22	88	Mazlina Mohamad Mangsor (Faculty of Law & Universiti Teknologi MARA, Malaysia); Norazlina Abdul Aziz (Universiti Teknologi MARA, Malaysia); Nur Ezan Rahmat (Faculty Of Law, Universiti Teknologi MARA, Malaysia); Ainul Hafiza Zainudin (Universiti Teknologi MARA, Malaysia)	Modelling Lockean Legalism in the Executive Emergency Power on Environment and Climate Change Domain in Malaysia

Human rights activists demanded a stringent action from the Executive due to an annual occurrence of river pollution and a recurring of haze disaster in 2019. The proposed move includes removal of the respective Environment Minister and an emergency declaration by the Yang di-Pertuan Agong (YDPA) to address the above situations. It is under this premise that the Lockean legalism model is explored in relation to the emergency power conferred to the Executive i.e. the YDPA. Modelling John Locke's legalism, namely conditions of political legitimacy meaningfully describe legitimate sovereign approach to laws that are conducive to public good. The primary aim of the research is to examine the legal challenges to model Lockean legalism in examining the extent of the powers conferred to the YDPA and the enumerated function of the Conference of Rulers in the proclamation of emergency in the environment and climate change domain in Malaysia. The research employs a qualitative methodology and adopts a content analysis approach. The outcome of this research is the adoption of the Lockean mechanism in understanding the power to proclaim emergency in the environment crisis. This research is significant as it would contribute to the body of knowledge to enhance the prerogative power of the YDPA in relation to the state of emergency.

TRACK 6: SOCIAL CREATIVITY & INNOVATION (SCI)

	ID	AUTHORS	TITLE
23	89	Mazlina Mohamad Mangsor (Faculty of Law & Universiti Teknologi MARA, Malaysia); Mazlifah Mansoor (Senior Lecturer, Malaysia); Noraiza Abdul Rahman (Universiti Teknologi MARA, Malaysia); Ismah Ismail (Universiti Teknologi MARA, Shah Alam, Malaysia)	Sharing of Children Online Information by Parents: The Legal and Parental Control in Malaysia

Social media content significantly contributed to the infringement of children's online privacy. The images and information about children shared by parents (sharenting) become easy targets to be used for illicit purposes. The primary question centres around the principle that parents are legally responsible for their children. The UN Convention on the Rights of the Child (CRC) 1989 recognises the main responsibility of parents for the upbringing and development of a child including the best interest of the child. Parents ought to protect the privacy of their children by making informed decisions when sharing the information and images of their children online. The research aims to examine the extent of the legal and parental control over the sharing of children information online by parents. The research employs a qualitative method and applies a content analysis approach. The research concludes that there is insufficient legal and parental control to address the above issues and requires statutory amendments and collective efforts to reconcile the matter.

	ID	AUTHORS	TITLE
24	95	Hartini Saripan (Universiti Teknologi MARA, Malaysia)	Liability Framework for Cognitive Computing in Healthcare: Standing at the Crossroad

Digitization across the healthcare industry has witnessed the advent of emerging Cognitive Computing (CC) healthcare technologies that improve diagnostic accuracy and efficiency, predict illnesses, automate routine healthcare tasks, and refine processes and care beyond human capabilities. Increased adoption of this technology can be attributed to its ability of processing enormous amounts of data promptly in addressing specific queries and produces customized intelligent recommendations. While CC's transformative technologies offer profound benefits to the healthcare industry, it also carries an unpredictable burden of risk and mistakes with damaging consequences to patients. At this juncture, CC's legal place in healthcare is largely undefined as the applicable liability framework is ambiguous. CC fits into the traditional liability rules in a piecemeal manner, however a single theory of recovery sufficiently addressing the potential liability questions arising from a computer system capable of practicing medicine and possessing the ability of parsing through enormous data for better patient outcomes is absent. The present research therefore sets out to chart the analysis of cases involving emerging medical technologies comparable to CC, in hope of examining ways in which the traditional theories of liability is projected to develop in adapting to this novel contrivance. A comparative and analogy analysis formed an integrated qualitative approach adopted by this research in opting the deployment of emerging medical technologies akin to CC and the bearing it has on the imposition of liability in the United States. CC's potential contributions to healthcare are revolutionary, however its legal repercussions are just as alarming and therefore demands for more discussion in addressing the concerns.

	ID	AUTHORS	TITLE
25	99	Zaimy Johana Johan (Universiti Teknologi MARA, Malaysia); Nor Intan Hafit (Universiti Teknologi MARA, Malaysia); Tusyanah Tusyanah (Universitas Negeri Semarang, Indonesia)	Technology Addiction Among UiTM Puncak Alam and UNNES Semarang Students

Technology addiction has becoming an alarming disorder that increasingly caught the attention of researchers, mental health counsellors and doctors. Unfortunately, those who are having the disorder do not realize that they are going through the phase of pleasurable experience of appealing themselves by long hours of social networking, gaming, and internet browsing; and affecting their psychological wellbeing. The symptoms of depression, anxiety, loneliness, avoidance of work and procrastination may not being treated. The purpose of this study is to identify the factors contributing to technology addiction among UiTM Puncak Alam and UNNES, Semarang students applying SPSS v. 23. We collected a total of 656 data from undergraduates students of the two universities. 317 and 339 questionanires were collected from UiTM Puncak Alam, Selangor, Malaysia and UNNES, Semarang, Indonesia students respectively. The results show technology usage influenced technology addiction but psychological wellbeing did not effect technology addiction. Additionally, UiTM Puncak Alam students are more technology addicted as compared to UNNES Semarang students. This distressing condition could become worsen during the current crisis of Covid-19 pandemic and prolonged movement control order (MCO) where students are staying at home or on campus. Implications of the findings are further discussed.

	ID	AUTHORS	TITLE
26	102	Fatin Husna Suib (International Islamic University Malaysia & Kulliyyah of Economics and Management Sciences, Malaysia); Suharni Maulan (International Islamic University Malaysia, Malaysia); Amirah Ahmad Suki (International Islamic University Malaysia, Malaysia	Customer Experience Towards COVID-19 Preventive Measures of Malaysian Retailers: A Conceptual Framework

This study develops a framework on customer experience towards COVID-19 preventive measures of Malaysian retailers. Specifically, it proposes a conceptual framework of ISCX and preventive measure within the implementation of the Maslow Hierarchy of Needs concept. Eventually, the upcoming focus is to investigate the ISCX towards the preventive measures in fulfilling the customers' physiological and basic needs through the utilisation of this framework. This study used a qualitative descriptive approach utilising the thematic analysis to identify its customers' experiences on the retailer's preventive measures during COVID-19 pandemic. These measures were collected and analysed through Atlas.ti software. This study will provide insights for future researches to investigate further on how retailers' preventive measures affect ISCX; as the new coronavirus, COVID-19 is not the first threatening disease that's surged worldwide. It also will provide more suggestions to policymakers and businesses on preventive measures deemed to be suitable for future implementation of the guideline. This research will also support Sustainable Development Goal 3 for Good Health and Well-Being which helps end the COVID-19 pandemic as an infectious disease.

TRACK 6: SOCIAL CREATIVITY & INNOVATION (SCI)

	ID	AUTHORS	TITLE
27	103	Chemah Tamby Chik (Universiti Technologi MARA, Malaysia); Nabilah Mardhiah A. Khalek (Universiti Teknologi MARA, Malaysia); Nur Azila Aliasak (Universiti Teknologi MARA, Malaysia); Nadiatul Mohd Shahed (Universiti Teknologi MARA, Malaysia); Aslinda Shahril (Universiti Teknologi MARA, Malaysia); Sabaianah Binti Bachok (Universiti Teknologi MARA, Malaysia); Nur Syahirah Hamal (Universiti Teknologi MARA, Malaysia)	Food Handlers Food Safety Knowledge, Attitudes and Practices in Taman Negara Restaurants, Kuala Tahan, Malaysia

Foodservice businesses play a major part in the quotient of the hospitality and tourism industry. People who travel will usually frequent restaurants as part of their stay in any destination. Thus the safety and wholesomeness of the food prepared and served is important, especially when it was prepared by local food handlers. Taman Negara is one of the Malaysia's gateways to forest reserve which is popular among international visitors. Therefore, the purpose of this study is to determine food handlers' hygiene knowledge, and practices at the restaurants in Taman Negara, Kuala Tahan. Data were analyzed using SPSS IBM version 22. Results showed that knowledge of food hygiene among food handlers at Kuala Tahan restaurants is good with a mean score above 4.50. The respondents showed that they have a strong agreement with food safety knowledge and practices. The food handlers apply Good Hygiene Practices (GHP) and it has a proper handwashing area. There is no sign of pests in the facilities, however, the kitchen floor is not clean. Therefore, there is still an area of improvement for the overall cleanliness of the restaurants in Taman Negara, Kuala Tahan.

	ID	AUTHORS	TITLE
28	108	Fauziah Ahmad (Universiti Teknologi MARA, Malaysia); Nurul Naabihah Ahmad Fadhilah (Shopee Malaysia, Malaysia); Norjansalika Janom (Universiti Technologi MARA, Malaysia); Syaripah Ruzaini Syed Aris (Universiti Teknologi MARA Malaysia); Kalsom Nasir (Universiti Teknologi MARA, Malaysia)	The Influence of E-Commerce Law and Regulations Awareness Towards the Adoption of E-Commerce Innovation: Perspective of Malaysia E-Preneurs

This paper provides findings of research that investigated the awareness of the e-preneurs on the EC law and regulations and whether the awareness has influenced the adoption of EC innovations by the same e-preneurs. This research used the Situational Awareness Model in determining the level of awareness among the online sellers and employed the Diffusion of Innovation model to interpret the adoption of EC by them. A qualitative method of research was applied as this study used interview method in collecting the data. The respondents were twelve e-preneurs that used either websites and/or social media to promote and sell their products to the customers. The collected data was analyzed using the content analysis method and guided by a decision tree technique in obtaining the level of awareness and descriptive analysis in determining the adoption level. The analysis of the interviewed data showed that the awareness level among the e-preneurs is at perception level. However, based on the assessment, they are among the early adopters to embrace EC innovation. The finding denies the belief of a positive relationship between the EC law and regulation awareness influences on the adoption level of an EC innovation.

	ID	AUTHORS	TITLE
29	115	Saw Imm Song (Universiti Teknologi MARA, Malaysia); Santhanamery Thominathan (Universiti Teknologi MARA, Pulau Pinang, Malaysia); Nor Aminin Khalid (Universiti Teknologi MARA, Pulau Pinang, Malaysia)	Entrepreneurial Intention and the Mediating Role of Entrepreneurship Education

The emphasis on entrepreneurship by the Malaysian government clearly displays their effort in strengthening the entrepreneurial development in the country which is expected to strengthen the economy by creating more jobs and generating new incomes. The main idea is to nurture and to sustain entrepreneurial engagement among the students which was instigated through the a formal entrepreneurial education at the local higher education institutions. The outcomes are expected to help in reducing graduate unemployment levels in the country. Despite all the effort taken by government, the uptake of the entrepreneurship among young minds is still low while there is a growing number of unemployment in the country. Thus, this study aims to determine the factors that affect entrepreneurial intentions among UiTM graduating students and also the mediating effect of entrepreneurship education towards entrepreneurial intention, through attitude, perceived behaviour control and self-efficacy. The sample consists of 429 UiTM students who have taken the entrepreneurship course. Factor analysis and Partial Least Squares methods were used to analyse the data. The findings reveal a significant relationship of attitude, perceived behaviour control and entrepreneurship education towards entrepreneurial intention, while self-efficacy was insignificantly related. However, the study found that the entrepreneurship education partially mediates the relationship among attitude and perceived behaviour control towards entrepreneurship intention and a full mediation on self-efficacy. The findings will help the policy makers or the higher education institutes in developing a suitable policy and program in promoting entrepreneurship to the university graduates at the national level.

TRACK 6: SOCIAL CREATIVITY & INNOVATION (SCI)

	ID	AUTHORS	TITLE
30	116	Isra Mahmud Aljarah, IsA (Universiti Teknologi MARA, Malaysia); Rafeah Legino (Universiti Teknologi MARA, Malaysia); Rusmadiah Anwar (Universiti Teknologi MARA, Malaysia)	A Multimodal Analysis of Cartoon in Jordan

A cartoon is a kind of two-dimensional painting which could be also animated. The definition has changed in the recent years and these days the utilization of cartoon is referred to be normally non-realistic or could be semi-realistic artistic style of drawing or painting, a picture or an arrangement of pictures expected for parody, or humor, or could be a movie that depends on a succession of paintings for its liveliness. Any artist whose makes the cartoons is called a cartoonist. Base from the current and previous studies, the issue had discovered a different type of areas and scenario.

	ID	AUTHORS	TITLE
31	119	Dinah Rakhim (Universiti Teknologi MARA & Dinah Kitchen Design & Decor Enterprise, Malaysia); Verly Vermol (Universiti Teknologi MARA, Malaysia); Mohammad Azroll Ahmad (Universiti Teknologi MARA & Faculty of Art & Design, Malaysia)	Kitchen Solution for Temporary Dwellers

The need for a kitchen goes back to earliest times reflecting our enjoyment of eating, love of company and family. It is what makes a house complete due to the activity performed in the kitchen is higher compared to other areas in the house. Throughout the years we can see how the kitchen evolves in part of our life, making it more sociable and being centric of the house. Kitchen cabinets in Malaysia is known for the abundance of choices of local manufacturers as well as imported selections. Since the kitchen industry has been dominated as a built-in type since the 90s, the choice of a solution to own a kitchen is only selected to permanent residents of the house. However, there is a niche market in this industry where temporary dwellers who are either renting or staying in a certain area for a temporary time which are not permanent residence. In 2010, a report of the housing census was made and 19.7% of households in Malaysia do not own a house. Up till 2014, an estimate to a number of 1.33 million families are still renting and do not own a house, according to the urban well being, housing and local government ministry, from the Statistics Department. Furthermore, since the average rental property in Malaysia does not come with a fully-furnished concept, the renters are bound to certain limitations when having a kitchen solution for their temporary solution. This paper examines the possible solution for this group in owning a kitchen.

	ID	AUTHORS	TITLE
32	132	KusfaizlulHakim Bin Kusmawi (Universiti Teknologi MARA, Malaysia); Wan Samiati Andriana Wan Mohamad Daud (Universiti Teknologi MARA, Malaysia)	Clay as an Alternative Matrix for Printmaking

This paper will present and discuss creative practice-base; the alternative approach using clay as a matrix for printmaking. The study replicated Lyon's framework of clay matrix. This research shows the sample of an experiment using multiple combinations of mediums that is suitable for this type of printmaking. The experiment concludes non-woven paper is the best use for clay print. It also opens the possibility of the idea non-woven materials can be also clay print such as kitchen towels, polypropylene and table linen. Clay print is full of surprised and charms, it is also an example of how this technology will integrate and benefit both Fine Arts and Ceramic field.

	ID	AUTHORS	TITLE
33	82	Azhana Binti Othman (Universiti Teknologi MARA, Malaysia); Abd Halim Mohd Noor (Universiti Teknologi MARA, Malaysia); Khalilah Ibrahim (Universiti Teknologi MARA, Malaysia); A Janjang Warya (Universitas Pendidikan Indonesia); Suci Aprilliani Utami Utami (Universitas Pendidikan Indonesia); Rida Rosida (Universitas Pendidikan Indonesia)	Identifying Determinants of Subjective Poverty Among Zakat Applicants (B40 Households) During MCO and the COVID19 Pandemic

Studies into the relation between subjective perceptions of individuals and objective economic conditions have usually resulted in ambiguous empirical findings. Whilst most studies perceive subjective welfare as being operationalized by indicators of happiness or life satisfaction, this study narrows the approach to an economic domain of subjective well-being, that is perceptions of poverty. Reducing poverty is one of the main transformation agenda of Malaysian government in National Key Result Area (NKRA) as it endeavors to aid the government to achieve a fully developed nation status by 2020. Nevertheless, the implementation of the Movement Control Order (MCO) and the COVID-19 pandemic have affected the financial 'immunity' of households, traders and employers to survive this critical period. This made many feels poorer. Recently, economist adding the subjective poverty approach in understanding the poor. Poor people have their own understanding and interpretation of their social certainty, and this is often different to an outsider's perspective. Islam has its own special way to combat the problem of poverty. Muslims take care of the financial needs through internal safeguards to prevent spread of poverty in the form of zakat, sadaqat and waqaf. Thus, this study intends to investigate the perception of subjective poverty among zakat applicants (B40 Households). The main objective of this study is to determine the characteristics of the poor based on subjective poverty. This study will utilize PPA (poverty participant assessment) approach. The findings will provide a better understanding of the phenomenon of incidence of poverty in Malaysia.

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	ID	AUTHORS	TITLE
34	64	Rozaimah Rashidin (Akademi Pengajian Bahasa, Universiti Teknologi MARA, Malaysia); Diyana Saupi and Nurrissammimayantie Ismail (Akademi Pengajian Bahasa, Universiti Teknologi MARA)	Pedophilia Metaphor in Malay Newspaper

The implicit meaning in metaphor has always raised comprehension problems for newspaper readers. This misunderstanding can cause the information or message to be conveyed in a news story to be misunderstood by readers. Due to that, the issues raised do not get the attention of the community due to the difficulties in comprehending information. Therefore, public awareness on issues such as pedophilia crime is increasing in Malaysia and still lacking. Recognizing the importance of accuracy in the use of metaphors conceptualizing the crime of pedophilia, this study was conducted to identify and analyze the forms of metaphor, and thus produce conceptual metaphors that conceptualize criminal pedophilia crimes evident in the Malay newspapers published by NSTP. News in Berita Harian, Berita Minggu, Harian Metro, and Metro Ahad newspapers was used as study data. Study data were obtained from 42 pedophilia crime news articles involving 663 sentences. A total of 96 metaphorical data were analyzed using the Hybrid theory. Data analysis was conducted using content analysis methods. The results of the study found that the conceptual metaphors that are often used to conceptualize the crime of pedophilia are PEDOPHILIA IS A DESTROYING BUSINESS, PEDOPHILIA IS A VIRUS, PEDOPHILIA IS A DANGEROUS SOCIAL RELATIONSHIP, PEDOPHILIA IS A CHEATING, PEDOPHILIA IS A CUNNING ANIMAL CHARACTER, PEDOPHILIA IS A WAR, PEDOPHILIA IS A SLAVERY, PEDOPHILIA IS A SECRET ENTITY, and PEDOPHILIA IS A CRUEL MONSTER BEHAVIOR.

	ID	AUTHORS	TITLE
35	70	Nadia Hanim Mohd Wasilan (Universiti Teknologi Mara, Malaysia)	The Role of Social Media as Marketing Strategies for Tourism Destination During Covid19 Outbreak

Recently, the pandemic of Covid19 has created unprecedented and unpredictable change that cause new challenges to the tourism industry. As the tourism industry is working hard to pull through from the impact of the pandemic, the tourism marketers should play a part in initiating the suitable marketing strategy to ensure their destination remains competitive. The industry key players also need to adopt the appropriate approaches and techniques in order to improve effectiveness and efficiency of destination marketing. Hence, the social media has seen as one of the tools to assist in achieving this objectively which has been used most freely as a medium for travel businesses and organizations to retain communication with customers around the world-to create wanderlust and look to recovery when travel is feasible. This paper combines theoretical background of social media and destination marketing which provides a descriptive cumulative review of the literature obtained in tourism and hospitality journals. The studies reviewed on the basis of how Social Media tools used in tourism marketing and does it have role in promoting tourism destination. The sample was selected through a comprehensive search of website through Google, Google Scholar, a search engine that is known for viewing high relevant results. The search was conducted by using help words "social media", "tourism marketing", "destination", "digital marketing" and "Covid-19". The interpretation of the findings that relates to social media, the research methods along with the theories and conclusions presented in the studies and literature have been summarized in the Literature Review. However, because social media use is continually evolving, the analysis of literature may not be exhaustive. Therefore, there is a proposal for future researches to focus on developing working social media marketing post Covid-19 that can determine its influence on the various tourism marketing strategies.

	ID	AUTHORS	TITLE
36	101	Norashikin Hussein, Muhamad Khalil Omar and Ehsan Fansuree Surin (Universiti Teknologi MARA, Malaysia)	Handicraft Industry Entrepreneurial Eco-System (HIEE): An Empirical Evidence of Malaysian Handicraft Micro and Small Industry Entrepreneurs

Handicraft industries continue to play an important role in the economies of all Asian countries including Malaysia. They not only constitute small business activities in themselves but are also often the only available means to provide additional employment and raise the level of living for rural populations. Despite government's several institutional and policies support for enhancing the capacity of micro and small-scale enterprises, the results have fallen short of expectations. In view of the growing world market for products of traditional Asian handicraft industries, having a relevant entrepreneurial ecosystem model specific to handicraft micro and small industry in Malaysia is imperative. Thus, this study attempts to: (1) identify the components of entrepreneurial ecosystem of handicraft micro and small industries in Malaysia; (2) determine the relationship between components of entrepreneurial ecosystem and business performance. SEM-PLS approach has been employed as a statistical method to analyze the research model. Data were collected from 50 handicraft micro and small entrepreneurs using personally administered questionnaire survey. The findings indicate that only talent was found to have significant relationship with business performance. This study is significant to the investors, the ministry, the government, academics and even business owners in providing a comprehensive model in understanding the handicraft industry entrepreneurial processes through which the ecosystems emerge, change, and influence the activities of the entrepreneurs.

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	ID	AUTHORS	TITLE
37	131	S Martono, Arief Yulianto and Siti Ridloah (Universitas Negeri Semarang, Indonesia); Sharifah Annuar (Universiti Teknologi MARA, Malaysia); Lennora Putit (UiTM, Malaysia); Muhammad Iskandar Iskandar Hamzah (Universiti Teknologi MARA, Malaysia)	Risk-Shifting in Anticipation of the Trade Liberalization Effect of MSMEs

The focus of MSME studies during the 1998 crisis in Indonesia was on resilience. Now, MSMEs are using debt higher as financing for business development to face the trade liberalization effect. Their behavior is based on the risk-shifting hypothesis (Jensen & Meckling, 1976), which will transfer risk to debtholders, in the event of financial difficulties. This high debt does not reduce investment for business development (under-investment) (Myers, 1977), but vice versa.

	ID	AUTHORS	TITLE
38	133	Andryan Setyadharma, Muhamad Burhanudin and Girindra Putri Dewi Saraswati (Universitas Negeri Semarang, Indonesia); Melina Mahpuz and Baby Anusha Nur Mohamed Thaheer (Universiti Teknologi MARA, Indonesia); Tengku Elena Tengku Mahamad (Universiti Teknologi MARA, Malaysia)	Can Social Media Successfully Play Its Role in Promoting University as International Education Institution?

The globalization has changed the way of universities in Indonesia to communicate universities position. The social media has been widely used by Universitas Negeri Semarang (UNNES) to spread their achievements, excellent programs and performance in academic as well as non-academic fields. In order to enhance UNNES' vision in becoming a conservation university with international reputation, UNNES' social media is playing its part to influence international students' decision-making processes, attract top professor to join the universities and international research collaboration opportunities. This research is trying to understand the role of UNNES social media to strengthen UNNES position in international reputation. This study uses qualitative approach and some international students in UNNES were interviewed to get their perspective about the usefulness of UNNES Social Media to attract new international students. The results suggest that almost all international students in UNNES who became the respondents in this research did not use UNNES social media as their sources to make decision to join UNNES. Surprisingly, most of the current UNNES international students' respondents never knew and looked at UNNES social media, while some of them know UNNES social media but they cannot read the information provided because the social media is in Indonesia. Based on the results of this research, we will provide some strategies to strengthen the role of social media in UNNES.

	ID	AUTHORS	TITLE
39	134	Rodiyah Rodiyah, Ridwan Arifin, Ratih Damayanti, Indah Sri Utari and Waspiah Waspiah (Universitas Negeri Semarang, Indonesia); Sheela Jayabalan (Universiti Teknologi Mara, Malaysia)	Child Food Security Policy: How Government Combating Hunger? (Comparing Indonesia and Malaysia)

Children's food insecurity is a serious threat to the healthy development of children around the world, such as developmental delay, poor cognitive ability, stress, disease and many other negative effects, which further lead to social, emotional and behavioral consequences. A new study released by UNICEF shows that compared with the national average and certain cities in Indonesia, the poverty and malnutrition levels of children in cheap housing in Kuala Lumpur are higher. If children from the urban poor suffer from food insecurity, children living in rural areas may also suffer the same. This is why Sen's theory of rights attributes food insecurity to poverty, which prevents people from affording and obtaining food. Political and other practical interventions should be taken to solve the problem of food insecurity, not only to promote the healthy growth of children in Indonesia and Malaysia, but also as a preventive measure to ensure the sustainability of food security. The starting point for ensuring food security for children should be schools where children spend most of their day in school.

	ID	AUTHORS	TITLE
40	135	Suwito Eko Pramono, Atika Wijaya and Inaya Sari Melati (Universitas Negeri Semarang, Indonesia); Zahariah Sahudin (Universiti Teknologi MARA, Malaysia); Hasni Abdullah (Universiti Teknologi MARA Pahang, Malaysia)	COVID-Driven Innovation in Higher Education: Analyzing the Collaboration of Leadership and Digital Technology During the Pandemic

This study aims to analyze the way leadership and digital technology usage affect faculty members' performance in surviving higher education sustainability during the COVID-19 pandemic. A breakthrough innovation is needed to design a fast-track online work management system and it demands a loyal contribution from all the faculty members to support this system. This quantitative study conducted in Indonesia and Malaysia, including as many as 100 faculty members from various field study. Using the online questionnaire tracing, it shows that leadership and technology usage plays an important role to maintain faculty members' performance during the pandemic. However, it has a slight difference result between Indonesia and Malaysia in terms of the portion of leadership and digital technology affect the working performance. The Indonesian higher education leaders play stronger role in affecting faculty members' working performance, while Malaysian faculty members are influenced more by digital technology usage than by their leader. Each of them has a significant implication in designing the effective institution policies in optimizing faculty members' working performance.

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ID	AUTHORS	TITLE
137	**Atika Wijaya, Suwito Eko Pramono and Inaya Sari Melati (Universitas Negeri Semarang, Indonesia); Norol Hamiza Zamzuri and Mohd Hafiz Hanafiah (Universiti Teknologi MARA, Malaysia); Ayu Rohaidah Ghazali (UiTM, Malaysia)**	**Toward the Community-Based Sustainable Marine Tourism: Identifying the Impact of Tourism Development in Karimunjawa Island**

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This paper aims to assess the impact of conventional tourism development in Karimunjawa Island in Indonesia. This paper considers the impact from the perspective of local people in three sustainable tourism development aspects: economic, environmental, and socio-cultural. In addition, this paper explores the perspective of the local people to support the initiation of community-based sustainable marine tourism in Karimunjawa Island, Indonesia. This paper employed mixed methods, and the data were collected through a survey, interview, observation, and desktop analysis. This paper found that tourism has brought positive economic impact while in other aspects, it produces negative impacts such as environmental damage to marine biodiversity and unsuitable tourist behavior that clashes with the local norms and values. Therefore, this paper proposes the application of Penta helix policy and collaborative strategy between community, local government, academics, media, and tourism business actors in order to develop community-based sustainable marine tourism in Karimunjawa island.

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