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ADOPTION OF SOCIAL MEDIA MARKETING FOR HOSPITALITY INDUSTRY: WAY FORWARD TO ADDRESS THE IMPACT OF THE COVID-19 PANDEMIC

Assistant Professor Christopher Wan and Assistant Professor Dr Mark Kasa

The COVID-19 pandemic is one of the greatest calamities our world has ever faced, bringing devastation upon the global economy and all aspects of life (Terziyska & Dogramadjieva, 2021). Various industries across the globe felt the pandemic's impact, particularly the tourism and hospitality industry–known to be one largest industries in the world and an industry that is very sensitive to severe shocks such as the Covid-19 pandemic (Perić et al., 2021). Since the pandemic outbreak, the tourism and hospitality industries-segments such as hospitality and hotels, airlines, guide service, and tourism-based entrepreneurship—have been plagued by uncertainties (Gössling et al., 2020; Hao et al., 2020; Nuskiya et al., 2020). Apart from that, the pandemic led to a halt and caused significant losses upon international travel business (Perić et al., 2021). Pre-pandemic, the tourism industry was one of the global primary sectors with an accumulated annual average growth of 8% of the total worldwide GDP and contributed towards 10% of employment (Nuskiya et al., 2020). A recent study reported that more than 60% of travellers cancelled their trips and projected causing an impact, shrinking the global tourism industry in 2020 (Canh & Thanh, 2020). The pandemic has indeed dragged the hospitality industry into a whirlpool of unprecedented challenges (Gursoy & Chi, 2020).

To ensure the pandemic situation is controllable, most affected regions worldwide enforced movement restriction orders, social distancing interventions, and even public lockdown, causing momentary operation cessation of numerous hospitality and tourism businesses, which drastically caused the demand for those businesses allowed to function to decline (Bartik et al., 2020). Furthermore, based on the study by Gursoy and Chi (2020), imposed travel restrictions and stay-at-home orders caused a massive decline in occupants of hotels and income. This measure has contributed to the downfall of international tourists' arrivals worldwide from 20% to 30% in 2020 compared with 2019 (Nuskiya et al., 2020). According to UNWTO, many governments remained cautious and even implemented lockdown during the first half of the year which led to a catastrophic blow to international tourism where the result of a sudden decline in tourist arrivals placed million of business and employment in danger (UNWTO, 2020). Based on the study conducted by UNWTO, the Asia-Pacific region was one to embrace the impact of the pandemic, especially towards their tourism sector, facing a decline in 72% of tourist visits within six months. (UNWTO, 2020). Restrictions began to ease up during the second half of 2020. For instance, restaurants were allowed to receive dine-in customers while adhering to specific guidelines, the rule to travel domestically and internationally slowly reduced, and especially the tourism sector began to receive tourists and became lively once more (UNWTO, 2020). However, even with a tourism boosting initiative, it did not guarantee bringing the customer back immediately (Gursoy & Chi, 2020).

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Therefore, industry players, especially in the hospitality and tourism sectors, need to change their business norms to survive. As most of the community is still at the stage of skepticism towards the safety of their well-being, business operators, especially in the hospitality sector, would need to change the norm of doing their marketing activities and reinforce their strategies to maintain close engagement with the community. By keeping close and constant attention to the community, it will lead to revenue generation. Previously, face-to-face interactive marketing was effective to secure sales for an establishment. However, due to the pandemic, face-to-face marketing is not the prominent option any longer as the community nowadays prefers online interaction to safeguard their well-being. Social media marketing will take place and play its role in maintaining such engagement between both hospitality business operators and the community significantly.

In this digital era, the present community can be categorised as a native digital community. This community is more prompt towards using technology in their daily lives, such as using the social media platform to communicate and share information. Nowadays, social media may be considered a standard tool used in communication activities between one person and another. Without social media, various aspects of life are minimal in effectiveness and efficiency (Al-Mohammadi & Gazzaz, 2020). Millions of people worldwide use social media to share knowledge, information and to connect with people (Sharma et al., 2021). Hence, with just a click, a hotel operator or any business operator would be able to communicate with members of a community to inform, promote, or update about their respective products, promotions, and services anytime. This adds the value of convenience to a business operator to manage their marketing activities. Such a platform could be used as a tool to communicate and share information with their respective consumers (Al-Mohammadi & Gazzaz, 2020). Besides, such platforms availability will help increase engagement with individual consumers through communication and capacity building to promote services and products (Neiger et al., 2012). Furthermore, social media is often seen as an information-sharing activity, often considered an online form of word of mouth in marketing (Al-Mohammadi & Gazzaz, 2020).

Hotel operators should take such advantage and fully utilise social media as one of their means for marketing. This will give them the flexibility to conduct their marketing activities in more personalised and convenient ways, where it can be done just through mobile phone, tablets, or their laptops anyway and anytime. This can be in terms of promoting their latest food and beverage promotion, room promotion, or any revenue-generating activity. Apart from that, the operating cost of using social media platforms as a marketing tool is cheaper than the physical marketing activities where the cost of logistics, entertainment, and allowance need to be taken into consideration. The beauty of social media marketing is that hotel operators can capture a more extensive market segmentation beyond their current database. The hotel operator can interact and respond to any client's enquiries within a shorter time frame through social media marketing. Therefore, such an action will uphold the strong engagement between the hotel operators and their respective clients or the community. In any business, engagement with the community is a vital element. It may transmit the perception of that specific establishment's excellent service and quality through positive and robust engagement. Effective social media marketing will significantly help create and promote brand awareness, improving the company's sales performance (Al-Mohammadi & Gazzaz, 2020).

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Assistant Professor Christopher Wan

Assistant Professor Dr Mark Kasa

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FUNDAMENTAL RESEARCH GRANT SCHEME (FRGS) 2020: ROBUST DEEP LEARNING-BASED CALIBRATION FOR DATA-DRIVEN SPECTROSCOPY

Associate Professor Ts Dr Ang Chun Kit

Associate Professor Ts Dr Ang Chun Kit and his team members including Dr Mahmud Iwan, Professor Dr Mohd Rizon, Dr Pui Liew Phing, Dr Lim Wei Hong and Professor Dr Nor Ashidi Mat Isa, were awarded by the Ministry of Higher Education (MOE) for the Fundamental Research Grant Scheme (FRGS) research project entitled, "Robust Deep Learning-based Calibration for Data Driven Spectroscopy" with the total amount allocation of RM67,200 in November 2020.

Spectroscopy techniques are non-destructive and rapid techniques applied increasingly nowadays in food fraud detection, soil analysis, manufacturing, forensic, water quality analysis, etc. The future trend of spectrometer technology is the miniaturisation or implementation of the instruments in gadget-type for rapid in-situ material analysis.

Traditionally, spectra data analysis must be performed by a skillful spectroscopist. Lately, with advancement of computer algorithms and statistical learning, the analysis is assisted by means of algorithms including machine learning and deep learning. This leads to the innovation opportunity in the area so called deep chemometrics or data-driven spectroscopy. Despite recent studies using advanced statistical and machine learning for automated spectra data interpretation, the analysis of spectra data often relies on pre-processing methods involving baseline correction, scatter correction and noise removal, which are applied to the spectra prior to predictive model building. This is because the calibration of the spectrometer changes over time even for the same instrument or the absolute calibration can be different between different instruments.

This research aims to develop a robust deep learning-based technique for data-driven spectroscopy towards building a generalisable and automated method in spectra data pre-processing applicable for Near Infrared Spectroscopy (NIR), Fourier Transform Infrared Spectroscopy (FTIR), Raman spectroscopy, etc. The expected outcome will be a simplified and robust approach in the spectra data pre-processing for data-driven qualitative (classification) and quantitative (regression) analysis. The innovation of this research will have potential for a patented result as deep learning is a relatively fresh algorithm in Artificial Intelligence (AI).

FUNDAMENTAL RESEARCH GRANT SCHEME (FRGS) 2020: EVALUATION OF HETERO-INTERFACIAL INTERACTIONS IN GRAPHENE/CONDUCTIVE POLYMER SYSTEM TOWARDS SENSITIVITY OF A FLEXIBLE SENSOR

Along with the move of the country towards IR 4.0, the demand for wearable and flexible sensors has increased in recent years. Flexible sensors can be designed by casting nanomaterials that exhibit electronic properties onto a flexible substrate. Graphene and conductive polymers are well-known nanomaterials with intrinsic conducting and semiconducting properties. Numerous works have been done on using the flexible sensor to monitor gas or water pollution in the environment. Nevertheless, existing studies mainly focus on the sensor's efficiency without a clear understanding on how the sensor's sensitivity can be influenced by the hetero-interfacial interaction in the graphene or conductive polymer system. Such knowledge gaps make the design of flexible sensor rely purely on optimisation and the performance reported in previous studies appears to be vastly different from one another. We hypothesised that the intimate interaction between graphene and conductive polymers will decide the availability of delocalised pi-bond where free moving electrons exist. Hence, the core objective of this project is to elucidate the hetero-interfacial interaction of this complex system via fundamental chemistry study. The mentioned interaction will be systematically probed through a series of physicochemical analysis and properties evaluations. It is envisaged that the future design of flexible sensors can be probed based on the underlying interaction mechanism between the graphene and the conductive polymer system.

Assistant Professor Dr Yeap Swee Pin

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FUNDAMENTAL RESEARCH GRANT SCHEME (FRGS) 2020: AN ARTIFICIAL INTELLIGENCE SYSTEM FOR THE AUTOMATED DETECTION OF DIABETIC RETINOPATHY USING MACHINE LEARNING ALGORITHMS AND COMPLEX FUZZY LOGIC

Associate Professor Dr Ganeshree A/P Selvachandran

We have established all the essential features of our AI program. By utilising modern GPU computing that works optimally for image processing, our AI program is already capable of extracting all the basic features of a retinal image within a fraction of a second, like the detection of exudates, haemorrhages, and other retinal conditions of relevence. As a result, we managed to train the AI and validate the results produced against more than 88,000 actual retinal images obtained from international databases. Currently, our AI can detect a given retinal condition with an accuracy above 90%.

Meanwhile, a Singaporean company (Liew Strategics Pte Ltd) has signed a letter of intent with FBM (formerly FoBIS) to collaborate with us in developing and commercialising our AI in February 2020. We also filed the copyright of our AI in February 2020. With all our progress in developing the AI, it was subsequently featured as one of our innovations in all four international exhibitions we partake in in 2020, under the name iScanDiaRet. In particular, our work had secured three gold awards respectively in International Invention, Innovation and Technology Exhibition (ITEX), Seoul International Invention Fair (SIIF) and Kaohsiung International Invention and Design Expo (KIDE) in the year 2020. We planned to further increase our AI algorithm's performance to the level required for real-life medical applications. Such performance increase will be accomplished through a machine learning process run on a full fledged workstation. A rigorous debugging process will then follow, ensuring that our AI algorithm is free of programming errors. Ultimately, we plan to commercialise our AI algorithm for the detection of Diabetic Retinopahy. Our main selling target will be all the medical facilities in Malaysia.

FUNDAMENTAL RESEARCH GRANT SCHEME (FRGS) 2020: A MIXED METHOD INSTRUMENT FOR SUSTAINABLE WATER CONSERVATION EFFORT AMONG GENERATION Y IN MALAYSIA" AN APPROACH OF SOCIAL COGNITIVE THEORY

This research combines qualitative and quantitative methods with an attempt to understand the social and psychological phenomenon in addressing water conservation in Malaysia among generation Y with social cognitive theory.

The concept of sustainable consumption practices has gained immense popularity. We have also identified it as an applicative tool for both households and the industry in water conservation. From this focus, the study will try show with evidence that sustainable water resource management and consumption are possible through effective mechanism of behavioural change among individuals.

Assistant Professor Dr Ganesh AL Ramasamy

The primary focus of the research is to assess the degree of complexity of water management in terms of demand and outcome expectation, resource allocation, control and self-efficacy, environment, and as well as personal factors to overcome the imbalance of water conservation across the country. The study will have a significant contribution to achieve water sustainability. Additionally, it will contribute to avoiding water rationing situations in the future. With these, the qualitative and quantitative concentration will emphasise the importance of adequate measurement for actual behavior and its relative implication on future behavioral outcomes for water conservation.

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FUNDAMENTAL RESEARCH GRANT SCHEME (FRGS) 2020: MEANING IN LIFE AND OPTIMISM AS INTERVENTION FOR HAPPINESS OF ADOLESCENT DELINQUENTS IN JUVENILE DETENTION CENTER

In recent years, suicidal ideation is more common among adolescents who are not living with their family prior to entering detention centers than their counterparts. Up to now, juvenile offenders have been consistently identified as a population that suffers from a markedly elevated prevalence and severity of mental disorder compared with the general population. Due to lack of meaning in life and optimism, these issues are predicted. It is plausible that optimism might lead people to make and experience the meaning in life, and these responses might enhance their happiness. Not many studies have been conducted on adolescents to become a better citizen after release from the detention centre.

This study aims to address the gaps by looking at the meaning in life and optimism and how it can contribute to happiness and empowering adolescents to be better citizens. It is expecting to find new findings in the meaning in life and optimism as intervention of happiness for adolescents as the outcome to be a better citizen when they released from the detention centre. The outcomes will be used to propose a new positive psychology intervention programme. Both the findings and intervention program will be useful to enhance the quality and increase positive and better adolescent citizen in Malaysia.

Dr Zhooriyati Binti Sehu Mohamad

FUNDAMENTAL RESEARCH GRANT SCHEME (FRGS) 2020: ESTABLISHING A NOVEL FAMILY-HEALTHCARE STRESS MODEL: DOES STRENGTH-BASED PARENTING MEDIATE BETWEEN CAREGIVER MENTAL HEALTH AND ADOLESCENT PSYCHIATRIC PATIENT OUTCOMES?

There is a rise in the number of adolescents with mental disorders. Globally, an estimated 10% to 20% of adolescents suffer from mental health conditions, and around 50% of mental health conditions have onset at the age of 14. The 2017 National Health and Morbidity Survey indicated 39.7% and 18.3% of Malaysian youths suffered from anxiety and depression. One of the most devastating consequences of psychological morbidity is suicide, which is the third leading cause of death among youths worldwide, accounting for 67,000 deaths in 2015. The consequence of not intervening with adolescents' mental health problems is the hindrance of their full development and rising societal costs resulting from mental health-related disabilities, which is in opposition to the 11th Malaysian Plan vision to produce youth who are competent and progressive.

Ho Meng Chuan

To establish a novel Family-Healthcare Stress Model which is fundamental to understanding the mental health of parental caregivers of adolescent psychiatric patients, and the mediating effect of Strength-Based Parenting on caregiver mental health and patient treatment adherence and outcomes.

This study will provide insight into the possibility of improving the mental health of caregivers in Malaysia by providing insight into their mental state and modelling various aspects that contribute to their stress. By understanding the impact of Strength-Based Parenting (SBP) on adolescent mental health outcomes, the Ministry of Health could implement trainings and therapeutic protocols. Thus, this study will achieve the two-pronged purpose of building a better family and creating Malaysian youths who are resilient and productive.

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FUNDAMENTAL RESEARCH GRANT SCHEME (FRGS) 2020: ELUCIDATION OF THE INHIBITION MECHANISM AND RELEASE KINETICS OF NANO EMULSIFIED POLYGONUM MINUS HUDS. ESSENTIAL OIL FOR FUNCTIONAL FOOD PACKAGING

Assistant Professor Dr Pui Liew Phing

Foodborne illness in Malaysia reached 13683 cases (incidence rate of 42.45 per 100,000 population) in the year 2017 (Department of Statistics Malaysia, 2018). According to the US Department of Agriculture, global foodborne illnesses cost more than US$15.6 billion each year. One of the solutions to this food safety issue would be to incorporate antimicrobial compounds into edible film to inhibit foodborne pathogens and decrease the use of plastic.

Herb oils are natural antibacterial agents with antioxidant properties, and it is commonly applied as additives in edible films. Although there are many reported studies on the incorporation of essential oils extracted from herbs into edible films, information on its release mechanism and kinetics remains unknown. In this study, the antibacterial mechanism and release kinetics of Polygonum minus Huds. oil nanoemulsion in an edible film will be optimized and elucidated.

The study hopes to provide a better understanding of the reaction mechanisms of the antibacterial and antioxidant properties of the Polygonum minus Huds nano emulsified oil in inhibiting foodborne pathogens. This study will ultimately see a potentially green, sustainable, and biodegradable edible film in the food industry. The information obtained is beneficial for application in the meat and poultry industry, where it is possible to extend the shelf life of meat products by incorporating edible film with oil nanoemulsion.

FUNDAMENTAL RESEARCH GRANT SCHEME (FRGS) 2020: FOOD SECURITY, MALNUTRITION AND CLIMATE/WEATHER VARIABILITY AMONG URBAN POOR ADOLESCENTS LIVING IN KUALA LUMPUR, MALAYSIA

According to the Global Nutrition Report (2020), Malaysia is one of the very few Asian countries facing three types of malnutrition. These types of malnutrition are overweight, wasting and anaemia. Additionally, the report by UNICEF (2018), a study on urban poverty and deprivation in Kuala Lumpur, Malaysia, revealed that more than 1 in 10 children aged 5 to 17 years have less than three meals a day. The same study also shows 1 in 2 households do not have enough money to buy food in recent months. Living in urban areas put the poor at a disadvantage due to fewer resources for coping. The poor are likely to face some of the immediate dangers of climate change and food security. With the growth of the urban population in Malaysia, it is relevant to study the possible effects of climate change on health and food security in the cities in order to mitigate its effect. As malnutrition is viewed as one of the largest adverse health consequences of climate change, there is a need to understand how climate change is related to food security and malnutrition especially among the deprived. To date, there is no known information to predict the possible long-term consequences of climate change on food security and nutritional status of adolescents in Malaysia.

Assistant Professor Dr Serene Tung En Hui

This study aims to determine the changes in food security and nutritional status in relation to climate/weather variability of adolescents living in urban poor communities in Kuala Lumpur, Malaysia. The outcome of the study is to identify key priorities to mitigate the effects of climate change among the deprived urban poor population.

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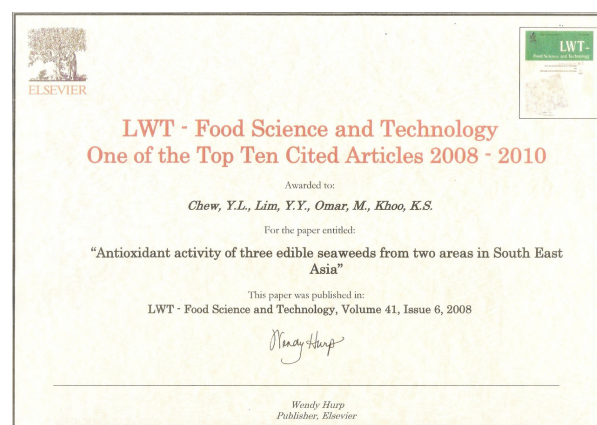# PLANTS FROM FOOD TO MEDICINE: EXPLORATION OF BOUNDARY BETWEEN FOOD AND MEDICINE

Assistant Professor Dr Chew Yik Ling

Plants have been recognised as a food source for human and animals. They could furnish the nutrition and energy requirement for human and livestock for survival. However, plants also possess medicinal values and they are used as complementary and alternative remedies to treat diseases and illnesses. Some population in Asian countries still use herbal medicines as remedies for various diseases. Phytotherapy has been one of the leading research areas in Asian countries in the last few decades, including Malaysia. This area has attracted Assistant Professor Dr Chew Yik Ling's research interest in investigating the bioactives of plants, and elucidating the mechanisms of the bioactives impart their physiological benefits. The medicinally important bioactives origin from plant sources and the biological or pharmaceutical activities are depicting the recent global market demand and prospects in the fast growing phytotherapeutic industry.

*Assistant Professor Dr Chew Yik Ling*

Dr Chew Yik Ling acquired her research interest in medicinal herbs during the final year project of her bachelor degree. She analysed on antioxidant activities of Malaysia medicinal plant under the supervision of Associate Professor Dr Lim Yau Yan. After completing her bachelor degree, she worked as Dr Lim's research assistant. She studied the biological properties of the seaweeds in the South-East Asia region, which was supported by the Monash University research grant. Her research paper on this research was touted as one of the top ten cited articles by Elsevier Scientific Database. She was also allowed to research the antioxidant properties of Malaysian herbs which are used in diabetes treatment.

Dr Chew realiased that she has strong passion and interest in research and therefore she had decided to continue with her honours degree and Doctor of Philosophy (PhD). She received the Monash University honours and PhD scholarship to further her studies under Associate Professor Dr Lim and Associate Professor Dr Emily Goh Joo Kheng's supervision on phytotherapy research. She had researched numerous medicinal plants from the Garcinia and Leguminosae families. She was co-supervised by Professor Dr Johnson Stanslas (Faculty of Medicine, Universiti Putra Malaysia) and Professor Dr Gwendoline Ee Cheng Lian Ee (Faculty of Science, Universiti Putra Malaysia) in her PhD research.

LWT - Food Science and Technology
One of the Top Ten Cited Articles 2008 - 2010

Awarded to:

Chew, Y.L., Lim, Y.Y., Omar, M., Khoo, K.S.

For the paper entitled:

"Antioxidant activity of three edible seaweeds from two areas in South East Asia"

This paper was published in:
LWT - Food Science and Technology, Volume 41, Issue 6, 2008

Wendy Hurp
Publisher, Elsevier

Top ten cited articles awarded by Elsevier Scientific Database to Dr Chew's research team

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Dr Chew is currently interested to explore the potential of medicinal plants in Asia for dermatology therapeutic, and cosmeceuticals purposes. She is currently involved in industry-linked research project on the development of series of cosmeceutical products using mangosteen and seaweed. Based on her previous experience in mangosteen and seaweed research, she believed that these plants have promising potential for skincare applications. Dr Chew is also interested to explore on the application of medicinal plants in Malaysia for management of skin disorders such as allergy, eczema, psoriasis, and acne. She is working hard in the development of her own cosmeceutical and dermatological products. She is actively collaborating with researchers from various national and international universities. Dr Chew has published more than ten research and review articles, as well as book chapters related to phytotherapy and pharmaceutical sciences in high impact journals such as Food Chemistry, LWT - Food Science and Technology, BMC Complementary and Alternative Medicine, Dermatitis, etc. She has also presented her research and debated among experts at international conferences.
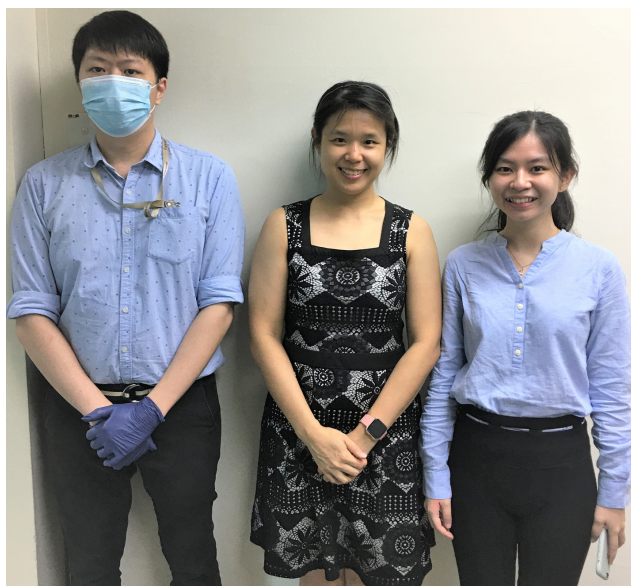
Dr Chew (centre) and her research students, Lee Hon Kent (left) and Khor Mei Ann (right) who developed the stability indicating method and studied the stability of flibanserin

Dr Chew is currently supervising several PhD and Master students. One of her graduated postgraduate students, Lee Hon Kent successfully developed the stability indicating method for flibanserin active pharmaceutical ingredient in his research project and his work was published in a SCOPUS indexed journal. He also studied on the stability of flibanserin under various stress conditions and its degradation kinetics with Dr Chew's final year project student, Khor Mei Ann. Their research paper is currently being reviewed.

Dr Chew has also been appointed as editorial board member and reviewer for numerous journals. She is an editorial board member for Free Radical and Antioxidants, a journal indexed in Excellence in Research for Australia (ERA). She is also the reviewer for several top journals such as BioMed Research International, Journal of Traditional and Complementary Medicine, Pharmacognosy Magazines, Heliyon, Biomedicine & Pharmacotherapy, Archives of Microbiology, among others. She was awarded with the Certificate of Outstanding Contribution in Reviewing by Elsevier Science publishing company for her contribution to the quality of the Journal of Traditional and Complementary Medicine. She was appointed as one of the editorial board members for UCSI University research newsletters, Research@UCSI and the Pharmaceutical Sciences Research Report.

Besides research, Dr Chew also excelled in teaching and learning activities. She was the chairperson of Faculty Teaching and Learning (2014 - 2017). She was also awarded the Teaching Excellence Award for academic session 2017/2018 and 2018/2019. Dr Chew's passion and dedication in research and academia has put her on the right track to her dream of becoming a researcher and academician.

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DIGITAL INNOVATION AND TRANSFORMATION

Assistant Professor Dr Chloe Thong Chee Ling

Assistant Professor Dr Chloe Thong Chee Ling

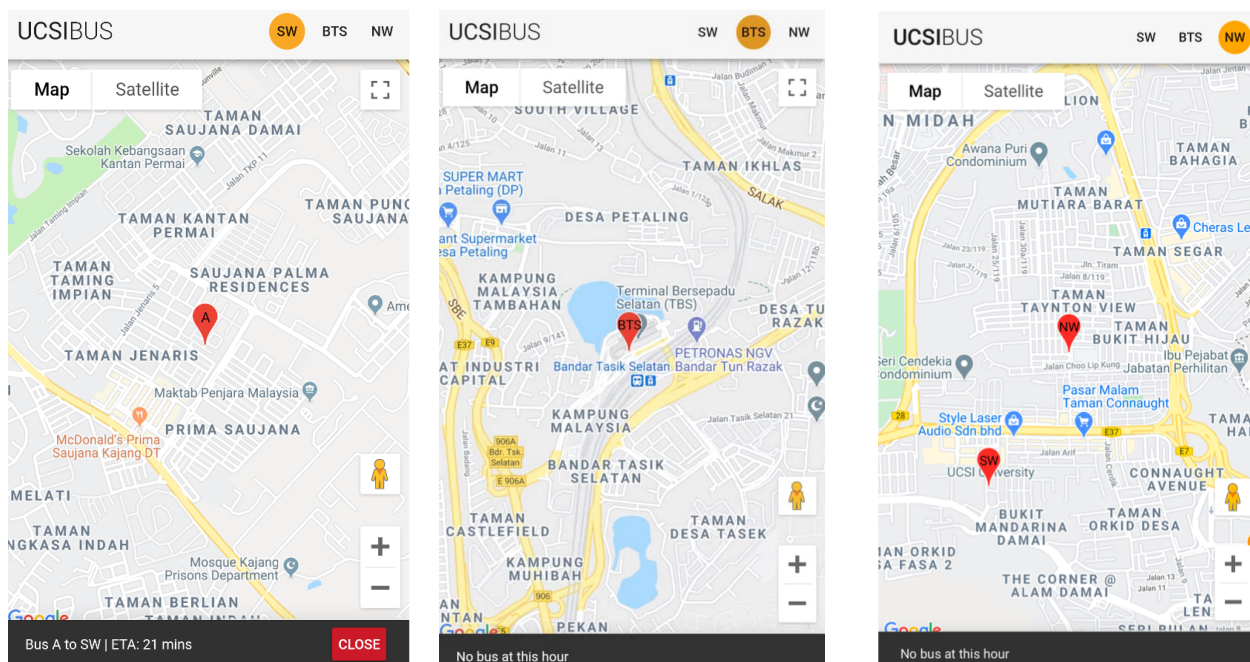*Dr Chloe and her team's invention: MYUCSIBUS mobile app*

Assistant Professor Dr Chloe Thong Chee Ling has always aspired to be an excellent researcher. However, striving to be one is a challenging process. Along this journey, she noticed that her dream would not have come true without the support of various parties. After completing her PhD in 2015 at Universiti Putra Malaysia (UPM), she started to work on digital innovation projects. During the course of her PhD, she had the opportunities to participate in a number of international research conferences in countries such as United Kingdom and Singapore.

During the COVID-19 pandemic, digital transformation is important to help many industries improve existing business processes and increase workforce efficiency. Mobile application (app) has become a must-have tool for all industries. For example, MySejahtera is a mobile application which was implemented in Malaysia during the first Movement Control Order (MCO 1.0) in 2020. It has included many functionalities which enable users (Malaysian and non-Malaysian) to check-in using QR code when they move around in the country or visit any shops. The Malaysian government was able to do contact tracing if there are any COVID-19 infected cases within the country. Another newly introduced function was the vaccination registration. This can be done on your own as well as on behalf of other aging family members by using the app. The functionality of the app evolves according to the needs of the market or users. Constant innovation of new digital products has become a trend not to be neglected.

Despite the spread of COVID-19, mobile technology plays a key role in overcoming the crisis in the short term. It is a known fact that healthcare researchers or scholars are able to contribute directly to fighting COVID-19 virus by introducing vaccines. However, this pandemic has also accelerated the use of mobile technologies in many industries including tourism.

Dr Chloe and her team invented the Time Tracker for UCSI Bus (MYUCSIBUS) which addressed the long waiting time and bus delay faced by UCSI students while waiting for campus shuttle bus. The mobile app is able to track the location of the UCSI shuttle buses around (from left) UCSI University at Taman Connaught (SW), Bandar Tasik Selatan bus terminal (BTS), and UCSI college at Taman Tayton (NW).

In 2016, Dr Chloe continued her research journey by working with a group of colleagues and students at UCSI University on mobile technologies related project to solve real-life problems faced by users or organisation. The research project titled Android-based Time Tracker for UCSI Bus (MYUCSIBUS) addressed issues such as long waiting time and bus delay faced by UCSI students while waiting for the campus shuttle bus. The project was supported by the Centre of Excellence for Research, Value Innovation and Entrepreneurship (CERVIE) which provided essential funding. MYUCSIBUS was eventually copyrighted and is now being used at UCSI University. iOS version is now available on App Store.

With the current pandemic, mobile technologies are essential to help recover badly affected industries such as tourism, aviation and hotel industries. Dr Chloe's on-going research project is titled Mobile Car App for Travel Agency which is also funded by CERVIE and supported by NCR Travel Agency. The purpose of this study is to design a city trip management application (app) inspired by e-hailing services. This provides a successful mobile platform that caters for trip planning managers to obtain real-time trip information of any registered car driver. The app allows managers to publish a request consisting multiple trip plans. The app also enables manager to manage and edit the trip information such as destination and trip status including drivers' 'start and end time' of the trip. The manager can make use of the app to read remote data in a synchronous way from central storage. Car drivers who are engaged in providing transportation service to the travel agency are allowed to use the app to activate the trip by clicking the "GO" button when they are ready and system will record date, time and current location. When they arrived at the destination, they can click the "ARRIVE" button and the system will record the date and also the time. These information of the trips are then reflected and shown in the app of the manager and they are able to track the trips of multiple destinations with different car drivers who are engaged in providing transportation services. This app contributes to reducing physical contact while monitoring car drivers and current trip status. At the same time, it provides job opportunities for tourism by allowing multiple trips or destinations in the city of Kuala Lumpur without violating tourism regulations in each trip during the pandemic.

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CURRENT RESEARCH GRANT CALL

No.	Funding Scheme	Endorsement by CERVIE	Submission Closing Date
1	Malaysia-France-Bilateral Research Collaboration 2021 (MATCH 2021)	12 April 2021	15 April 2021
2	Tech Planter ASEAN 2021	23 April 2021	30 April 2021
3	Merdeka Award Grant for International Attachment	27 April 2021	3 May 2021
4	Malaysia Toray Science Foundation 2021	24 May 2021	31 May 2021
5	NIHR Global Health Research Units – 2nd Call	11 May 2021	1.00pm UK time on 18 May 2021
6	NIHR Global Health Research Groups – 3rd Call	11 May 2021	1.00pm UK time on 18 May 2021
7	Malaysia Grand Challenge, MOSTI • Applied Innovation Fund (AIF) • Technology Development 1 Fund (TeD 1) • Bridging Fund (BGF)	Open, no closing date as for now	Open, no closing date as for now
8	Collaborative Research Programme (CRP)-International Centre for Genetic Engineering and Biotechnology (ICGEB)	23 April 2021	30 April 2021
9	Malaysia Laboratories for Academia-Business Collaboration (MyLAB)	24 May 2021	31 May 2021
10	Research Excellence Consortium (KKP)	Opening soon	Opening soon

Please refer to your respective Head of Research for more information.

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Professor Dr Phang Siew Moi

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CONTACT

Centre of Excellence for Research, Value Innovation and Entrepreneurship (CERVIE)
10th Floor, Block G, UCSI University, No. 1, Jalan Menara Gading, UCSI Heights (Taman Connaught)
56000 Cheras, Kuala Lumpur, Malaysia

Tel: +603-9101 8880 (ext: 2256)
Website:
https://www.ucsiuniversity.edu.my/research

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