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VALUE INNOVATION AND
ENTREPRENEURSHIP

OFFICE OF POSTGRADUATE STUDIES











MESSAGE FROM THE DIRECTOR OF CERVIE



Professor Dr Hoh Boon
Peng
Director
Centre of Excellence for
Research, Value
Innovation and
Entrepreneurship
(CERVIE)

The month of April 2020 marks a remarkable achievement for research at UCSI University. May I congratulate the research achievements of our fellow colleagues, namely Associate Professor Dr Hiram Ting from the Faculty of Hospitality and Tourism Management, UCSI University (Sarawak Campus) who has recently been appointed as the first and only EMERALD Ambassador in East Asia. Associate Professor Dr Nyam Kar Lin had won the Merit Award in the Malaysia Technology Expo 2020 (MTE 2020) in February for her Kenaf Sunscreen Cream SPF 50+. Assistant Professor Ts Dr Lim Wei Hong has been invited as a visiting research scholar at National Taipei University of Technology in Taiwan. Last but not least, Mr Sharizal Jelani has been awarded the "Outstanding Researcher Award" in the 3rd International Conference on Engineering and Computing. I would also like to extend my heartiest congratulations to the conference organising committee from the UCSI University's Faculty of Pharmaceutical Sciences, for their success in organising the International Research Conference on Pharmaceutical and Allied Sciences in March 2020. I wish that all researchers at UCSI University will continue to strive to much greater heights and achievements. Once again, my sincere congratulations on all the success of our fellow colleagues at UCSI University. Let us work harder and strive for excellence in research

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OUR PROMINENT RESEARCHER

Professor Dr Ong Seng Huat

Professor Dr Ong Seng Huat started his research career at the University of Malaya in 1977. His research interest is in statistical modelling and distribution theory with focus on models for physical and biological systems, statistical computation and simulation, special functions, and image analysis. He has published more than one hundred research papers with most of them in Web of Science (SCIE/SCI) indexed journals. He has presented more than a hundred conference papers at local and international conferences.



Professor Dr Ong is currently an Editorial Board member of Journal of Statistical Distributions and Applications. He is also in the Editorial Board of Biomedical Imaging and Intervention Journal. He became an elected member of the International Statistical Institute in 2001 and was admitted as a Fellow of the Academy of Science Malaysia in 2010. For his contributions to statistical modelling and image analysis he received the Malaysian Toray Foundation Science and Technology Award in 2009. Many of his PhD students hold prominent positions as professors and researchers in public and private institutions, as well as industry.

Professor Dr Ong has made contributions in the formulation and theoretical development of stochastic models essential in the study of various natural phenomena in the physical and biological sciences.

For instance, he has studied a generalisation of the negative binomial model (non-central negative binomial), which has been widely used in the study of neural counting for audition and semi-classical formalism of photon counting in optics. He has also introduced numerous new models, and unified many of them as a family of models in the context of a reversible stochastic counters system in electrical engineering. Multivariate extensions of this model as a mixed Poisson distribution have been used in astronomy to model the correlations between adjacent pixels of active and astronomical images to help in the search for extraterrestrial planets. A new statistical model which caters for very long tails in data has found applications in the study of snail parasites in a temperate zone.

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Research Forum organised by UCSI University Faculty of Business and Information Science held on 27 November 2018. Professor Dr Ong Seng Huat (2nd from the right) was one of the invited panel speakers in the research forum.

Another important contribution of Professor Dr Ong is in the area of image analysis by theoretical development of discrete orthogonal moments which are analogues of statistical moments of stochastic models. This is a pioneering piece of work since all studies in this area are based on continuous orthogonal moments which suffer from a number of drawbacks. Numerous papers have published in prestigious journals and refereed international Transactions) conference proceedings. The extent of the impact of this pioneering paper on Tchebichef moments published in 2001 can be gauged by its citations in Web of Science and Scopus and attests to the keen interest of researchers in the new sets of discrete orthogonal moments.

Professor Dr Ong is internationally recognised for his contributions as seen from his role as a very frequent reviewer of many international and prestigious journals (IEEE journals and journals in the statistical science) and as an invited plenary and keynote speaker at international conferences.

Professor Dr Ong's research work has been cited in a number of authoritative books, in particular, Univariate Discrete Distributions by Johnson, Kemp and Kotz, 2005, Wiley, and Bivariate Discrete Distributions by Kocherlakota and Kocherlakota, 1992, Marcel Dekker. The book Character Recognition Systems: A Guide for Students and Practitioners, by Cheriet, Kharma and Liu, 2007, reviewed his research on Tchebichef and other orthogonal moments.

To complement and enhance the usefulness of the stochastic models developed, Professor Dr Ong has contributed to the statistical inference, computation, and simulation of the models he developed. For instance, a general technique for computation of mixed Poisson models and a generating function-based method of inference for count statistical models have been introduced. Currently, Professor Dr Ong's research interest is in count regression modelling, time series of counts, statistical data analytics, especially big data, and directional statistics.



EMERALD AMBASSADOR

Associate Professor Dr Hiram Ting

Dr Hiram Ting is an Associate Professor at Hospitality Faculty of and Tourism Management, UCSI University (Sarawak Campus). He was appointed as the first and only **EMERALD Ambassador** in East Asia (Malaysia, Singapore, Indonesia, the Philippines, Brunei, Japan and Korea) in January 2020 due to his active involvement in various researchrelated activities in Malaysia and East Asian countries. His passion for research, attitude to contribution and commitment to working with others, and making a real impact on the community concerned are what impress the FMFRALD team in Fast Asia

He has been invited to conduct workshops, serve as a conference committee member, give keynote speeches, and supervise research projects in several countries. As an EMERALD ambassador, he is tasked to provide the right information into the hands of authors and users as well as to find new ways to bring research to life in a way that empowers others. In addition to running workshops, facilitating networking opportunities through conferences, and providing guidance about EMERALD content to academics and students, he has been linking EMERALD to various institutions, and research bodies in different countries and working on some programmes with East Asia team to bring about a real impact on the community. More than just a personal recognition, this appointment affirms his works in academia and the industry over the years and confirms his continual endeavors to elevate research culture, make research fun and bridge knowledge to practice everywhere he goes.





Associate Professor Dr Hiram has served/is serving as a Guest Editor of 8 journals published His research involvement by EMERALD. includes being the Vice President of Marketing in Asia Group (MAG) Scholar, Guest Editor of several indexed journals, such as British Food Journal, International Journal of Manpower, Young Consumers and International Journal of Culture, Tourism and Hospitality Research as well as Managing Editor of Asian Journal of Business Research (AJBR), which is one of the few business journals indexed in SCOPUS in East Asia. Since joining UCSI University in 2018, he has published more than 40 papers indexed SCOPUS and/or SSCI/SCIE (including forthcoming papers in 2020).



POTENTIAL OF FUZZY LOGIC ALGEBRAIC IN RESEARCH

Assistant Professor Dr Quek Shio Gai

Assistant Professor Dr Quek Shio Gai is quite well-known as a researcher whose expertise lies in Fuzzy Mathematics. However unknown to many, he is also a special person who was diagnosed with autism when he was young, which explains his interest in the field of Mathematics. He graduated with a Doctor of Philosophy in Mathematics from University of Malaya before joining UCSI College in 2014 as a lecturer. He taught mathematics in preuniversity programmes, including A-levels and Foundation studies. Later, he joined UCSI University's Faculty of Business and Information Science (FoBIS) as a lecturer under the Department of Actuarial Science and Applied Statistics in 2016. He started to venture into fuzzy mathematics and work closely with Associate Professor Dr Selvachandran Ganeshsree his research.

Fuzzy mathematics is a branch of mathematics, which is related to fuzzy set theory and fuzzy logic. It encompasses a broad spectrum of mathematics, including statistics, finance, computing, artificial intelligence, and others. Assistant Professor Dr Quek is actively involved in many research studies where his expertise and knowledge in fuzzy mathematics and fuzzy computing have been applied.

Assistant Professor Dr Quek had collaborated with colleagues from FoBIS and Faculty of Social Sciences and Liberal Arts (FOSSLA) on a project entitled "A Novel Software for Movement-Based Early Simulation to Enhance Language Acquisition of Children with Autism Spectrum Disorder".



Assistant Professor Dr Quek (middle) and his team won a Silver Medal award during MIIEx 2019

His research team had won the Silver Medal Award under the Innovation category at the Melaka International Intellectual Exposition 2019 (MIIEx 2019). Assistant Professor Dr Quek and his team will be developing the theoretical framework, modules and software for movement-based early simulation to enhance cognitive and psychomotor skills of children with autism spectrum disorder. This software could promote inclusive education for children of such condition.

This year, Assistant Professor Dr Quek and his team had won two awards in the Invention & Innovation Awards (IIA) at the Malaysia Technology Expo 2020 (MTE). His team had applied the complex fuzzy logic in developing an artificial intelligence system for the automated detection of diabetic retinopathy which won his team the Silver Award. Another invention where a Muslim-friendly homestay layout is developed using artificial intelligence techniques had won them the Merit Award.



INTERNATIONAL RESEARCH CONFERENCE ON PHARMACEUTICAL AND ALLIED SCIENCES

21st Century Frontiers: Synergising the Research



UCSI University top management with the invited speakers at the conference launching ceremony. (From left) Associate Professor Dr Mogana Sundari Rajagopal, Professor Dr Phang Siew Moi, Professor Dr Shamsul Azhar Syah, Associate Professor Dr Mohd Makmor Bakry, Professor Dr Mohamed Azmi Ahmad Hassali, Professor Dr V Gopal, Academician Senior Professor Dato Dr Khalid Yusoff, Professor Dr Joseph T DiPiro, Dato' Peter Ng, Associate Professor Jimmy Mok Vee Hong, Professor Dr Wong Tin Woi, Professor Dr Chung Lip Yong and Dr Didik Setiawan.

The International Research Conference on Pharmaceutical and Allied Sciences (IRCPAS 2020) was organised by the Faculty of Pharmaceutical Sciences, UCSI University in collaboration with Universitas Muhammadiyah Purwokerto, Indonesia on 7 to 8, March, 2020 at Le Quadri Hotel, UCSI University with the theme **21st Century Frontiers: Synergising the Research**. This conference was supported by Universiti Kebangsaan Malaysia, Advanced Medical and Dental Institute (IPPT), Universiti Sains Malaysia, and Malaysian Pharmaceutical Society. The conference aimed to provide a potential platform to exchange and update the knowledge in pharmaceutical and health sciences research and innovation. This event also served as a discussion platform amongst selected academic and industry delegates, researchers, and other potential resource personnel to enable networking opportunities.

UCSI University's Faculty of Pharmaceutical Sciences was honoured to have Yang Berbahagia Dato' Peter Ng, Group Founder and Group Chief Executive Officer, UCSI Group; Yang Berbahagia Academician Senior Professor Dato Dr Khalid Yusoff, Vice Chancellor and President of UCSI University; Professor Dr Phang Siew Moi, Deputy Vice-Chancellor, Research and Postgraduate; Associate Professor Ir Dr Jimmy Mok Vee Hong, Deputy Vice Chancellor, Academic, Students and Alumni Affairs; and Associate Professor Dr Mogana Sundari Rajagopal, Dean of Faculty of Pharmaceutical Sciences to the IRCPAS 2020 launching and cake-cutting ceremony.



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The IRCPAS 2020 had successfully attracted more than 250 national and international participants and delegates from numerous countries including the United States of America, Japan, India, Indonesia, Malaysia, Nigeria, Bangladesh, Pakistan, Sudan, Iran, Iraq, Syria, Yemen, and others. Several internationally renowned and distinguished professors were invited, such as Professor Dr Joseph T DiPiro, Professor Dr Wong Tin Woi, Professor Dr Chung Lip Yong, Professor Dr Mohamed Azmi Ahmad Hassali, Professor Dr V Gopal, Professor Dr Shamsul Azhar Syah, Associate Professor Dr Mohd Makmor Bakry, and Dr Didik Setiawan to deliver their keynote sessions. 250 scientific abstracts for oral and poster presentations had been received.

One of the highlights of the conference was the discussion forum on the 'Breaking Down the Status Quo: Transformation of Pharmacy Practice', which was held among the active team players in pharmacy practice. This forum discussed the nationwide and global challenges in current pharmacy practice and the potential of future transformation from the perspectives of academia, professional body, practitioners, and entrepreneurs.







Discussion forum on the 'Breaking Down the Status Quo: Transformation of Pharmacy Practice' among the active team players in pharmacy practice, including (From left) Assistant Professor Fazlollah Keshavarzi, Professor Dr Joseph T Dipiro, Mr Rommel Irwan, Mr Amrahi Buang, and Professor Dr Mohamed Azmi Ahmad Hassali.



A conference gala dinner themed **The Cultural Melting Pot** was held in the evening. The invited speakers, conference delegates, and the IRCPAS organising committees attended with their best traditional costumes. The gala dinner provided a good platform for all attendees to experience the cultural exchange among each other in a casual and relaxing mode. All attendees were extremely happy and had a very enjoyable evening.

The organising committee received positive feedback from the invited speakers, delegates, presenters and participants. The international conference would not have been made possible without the strong support from UCSI University, organising committee, the national and international research collaborators, industrial and supporting partners, and all participants from near and far. UCSI University's Faculty of Pharmaceutical Sciences would like to express its deepest gratitude to all the sponsors including Analisa Resources (M) Sdn Bhd, Sinar Scientific Sdn Bhd, Agape, Superior Living Sdn Bhd, Esco Micro (M) Sdn Bhd, Spiral Science Sdn Bhd, IT TECH Sdn Bhd, Pilot Pen (M) Sdn Bhd, Citychemo Manufacturing Sdn Bhd, Upper Room Board Game Café, Nuevue Sdn Bhd, My Viet Café, Good Virtues, Momawater Sdn Bhd, MM cosmetic Sdn Bhd, Biotek Abadi Sdn Bhd, AHS Lab Supplies Sdn Bhd, and SLA Engineering Sdn Bhd for their support in making IRCPAS 2020 a great success.



MALAYSIA TECHNOLOGY EXPO MERIT AWARD 2020

Kenaf Sunscreen Cream SPF 50+ Associate Professor Dr Nyam Kar Lin Faculty of Applied Sciences



Associate Professor Dr Nyam Kar Lin (middle) and her team are receiving the merit award at the Malaysia Expo 2020

Kenaf Sunscreen Cream SPF invention is part of the research project of Associate Professor Dr Nyam Kar Lin's PhD students, Ms Chu Chee Chin, and Ms Sim Yan Yi. This invention won the Merit Award for the Invention, Innovation and Design under Individual Category. members include Dr Zafarizal Aldrin bin Azizul Hasan from Malaysian Palm Oil Board and Professor Dr Tan Chin Ping from Universiti Putra Malaysia (UPM). presence of high amount of synthetic UV in sunscreen, which phototoxicity and photoallergic reactions through skin absorption resulting consequences has motivated Associate Professor Dr Nyam and her team conduct research and develop photoprotective prototype that ensures safe use of synthetic UV filters.

There is a high demand in utilising natural remedies for health benefits that lead to the growing of green cosmetics. Associate Professor Dr Nyam would also like to utilise kenaf seed oil (KSO) and palmbased vitamin E as natural sources of emollients and antioxidants for cosmetic formulations development. This is promote the usage of our kenaf seed oil (KSO) and palm-based vitamin E in the cosmetic industry. The invention highlights production of new photoprotective formulation bν the utilisation nanostructure lipid carriers technology as the model to use kenaf seed oil to encapsulate the lipophilic drugs (Uvinul® A Plus Granular and Uvinul® T150). The kenaf seed oil-NLCs are nanocarrier for the UV filters to ensure safe use of the synthetic chemical UVabsorbing active compounds. The spherical amorphous kenaf seed oil-NLCs excellent entrapment efficiency (≥ 95%) for UV filters and high UV protection show physical stability and sustainable antioxidant activities. The application of kenaf seed oil-NLCs into palm-based vitamin E cream allows the production of antioxidant and UV high protective advanced cosmetic prototype. They can disperse in aqueous solutions and be easily incorporated into the end-product of safe and effective suncare. An adjustable amount of kenaf seed oil-NLCs can be incorporated into a wide variety cosmetic formulations (gel, lotion, cream, and others) in order to achieve desirable UV protection.

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This new prototype represents the next step in developing advanced human friendly multi-function suncare products, which contribute to the growing demand for green cosmetics.

of the Αs the Head Research and Postgraduate Studies for Faculty of Applied Nyam is a respected Sciences, Dr researcher in her own right. She was awarded the Fundamental Research Grant (FRGS) by the Ministry Education (MoE) for her research nanotechnology. In the future, Dr Nyam has planned to collaborate with the School of Healthy Aging, Medical Aesthetics and Regenerative Medicine, Faculty of Medicine and Health Sciences, UCSI University and Oleochemical Technology Division, Malaysian Palm Oil Board to further develop the invention. studies are being considered to evaluate the effectiveness of the invention to protect the skin against harmful radiations as well as other beneficial properties. Also, varieties of cosmetic formulations with kenaf seed oil-NLCs may developed tο introduce customised cosmetic products the market.



Kenaf Sunscreen Cream SPF 50+.

For Dr Nyam, receiving the award was very special as it was a way of contributing back to society as the invention was designed to promote the usage of our local industrial crops, kenaf seed oil and to boost our local cosmetic industry. Dr Nyam noted that this is another step forward in conducting interdisciplinary research and forging close collaborative partnerships with researchers from other faculties, such School of Healthy Aging, Aesthetics and Regenerative Medicine, Faculty of Medicine and Health Sciences, UCSI University. Her success in this competition also shows that kenaf seed oil could not only be used as edible oil, but it also has a great potential to be used in the cosmetic industry. Overall, the research project contributes to the ongoing effort in promoting R&D in the faculties and the university as a whole.



MTE Merit Award Certificate for Kenaf Sunscreen
Cream SPF 50+.



OUR ACHIEVERS

Invitation of Visiting Research Scholar to National Taipei University of Technology, Taiwan



Assistant Professor Ts Dr Lim Wei Hong from the Faculty of Engineering, Technology and Built Environment (FETBE) was invited to conduct a one-month visiting research on Electric Vehicle (EV) at the Intelligent Control Laboratory, National Taipei University of Technology, Taiwan from the 1st to the 31st of December 2019. EV is envisioned as an emerging technology in the transportation sector to replace conventional vehicles with internal combustion engine due to its more economic and environmental-friendly nature. Currently, the power infrastructure of most countries is not well-established to embrace this technology and the simultaneous charging of large EV fleet tends to degrade the stability of power grid. There is a need to develop optimal charging schemes that aim to coordinate the charging sequences of all EVs so that the charging demands of all EV owners are satisfied with the minimum cost incurred without having to overload the power grid.

In this project, Dr Lim and his collaborator have successfully developed a mathematical model using artificial intelligence approach to predict the charging and discharging priorities of each EV during the scheduling process. A research paper has been produced in this project and submitted for journal publication. According to Dr Lim, this is a fruitful visiting research and he is glad to have achieved some meaningful outcome with his NTUT mentor despite of the short period of time. From his point of view, it is not only crucial for young researchers to expand their research networks, but it is also equally important for them to know how to maintain the existing ones. It is necessary to invest time and effort in developing meaningful collaborative partnerships between both parties in order to achieve something greater.

Outstanding Research Award at 3rd International Conference on Engineering and Computing (IEEEComp2020)

On the 14th and 15th of March 2020, **Shahrizal Jelani**, under the collaborative support of Universiti Teknologi MARA (UiTM), and Universiti Tenaga Nasional (UNITEN) has submitted four research papers to the 3rd International Conference on Engineering and Computing (ICEEComp2020), which was held in Malacca. The organiser for ICEEComp2020 awarded him the "Outstanding Researcher Award". He hopes that his contribution in terms of paper publications in Scopus indexed journals will help to uphold the reputation of UCSI and increase the MyRA Score of UCSI in the publication section. Finally, he also hopes to extend his research collaboration with the industry and work as a team to minimise the various complex power system problems towards a more reliable and sustainable electrical system in the coming future.





LISTING OF NATIONAL & INTERNATIONAL GRANTS

N o	Grant Name	Eligibility	Max amount	Dates		
				Opening	Closing	Link
1	Malaysia Toray Science Foundation	Open to Malaysians below 40	RM 60,000	1 Jan 2020	31 May 2020	https://www.mtsf.org/programs/science-and-technology- research-grant.html#/
2	MAKNA Cancer Research Fund	Open to Malaysians below 40	RM 30,000	Open	15 May 2020	https://www.mytopscientists.org/v3/info/MAKNA.aspx
3	Novel NCI-Supported Technology to Accelerate Cancer Research	Open to international applicants	USD 150,000	Open	28 May 2020;	https://grants.nih.gov/grants/guide/rfa-files/RFA-CA-20-021.html
4	Horizon 2020	Open to Malaysians	N/A	Open	April to June 2020	https://ec.europa.eu/research/participants/docs/h2020- funding-guide/grants/applying-for-funding/find-a- call_en.htm
5	AACR NextGen Grants for Transformative Cancer Research	Open to Malaysians, AACR Member	USD 450,000	Open	5 May 2020	https://www.aacr.org/grants/aacr-nextgen-grants-for-transformative-cancer-research/
6	Crohn's & Colitis Foundation's Senior Research Awards	Open to Malaysians	USD 115,830	Open	5 May 2020	https://www.crohnscolitisfoundation.org/research/grants-fellowships/senior-research-awards
7	The Toyota Foundation	Open to Malaysians	JPY 10,000,000	1 April 2020	6 June 2020	https://www.toyotafound.or.jp/english/international/2020/
8	ISIF Asia: 2020 Internet Operations Research Grants	Open to Malaysians	USD 30,000	2 April 2020	21 June 2020	https://isif.asia/2020-netops/
9	ICGEB CRP – Research Grants	Open to Malaysians	EUR 25,000	Open	15 May 2020	https://www.icgeb.org/activities/grants/
10	American Psychological Association Research Seed Grant	Open to Malaysians	USD 1,000 per award	Open	10 June 2020	https://www.apadivisions.org/division- 36/awards/research?tab=1
11	Nippon Sheet Glass Foundation for Materials Science and Engineering	Open to Malaysians	USD 6,000	1 September 2020	31 October 2020	http://nsg-zaidan.or.jp/oversea/index_en.html
12	Newton Fund	Open to Malaysians	N/A	04-Mar-20	06 May 2020	https://www.newtonfund.ac.uk/funding/funding- opportunities/

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