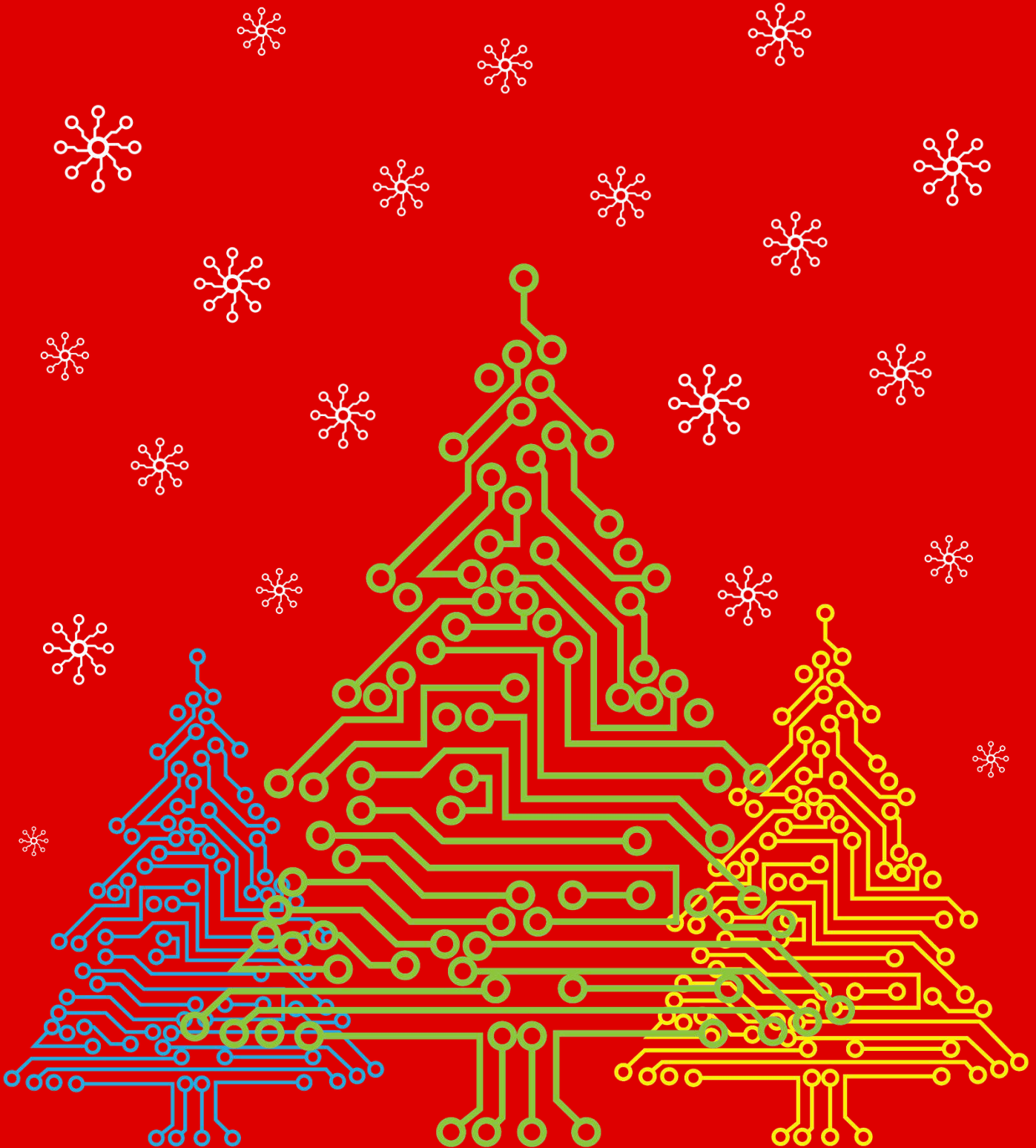


SST *eDigest*

SUNWAY
UNIVERSITY 

A CLASS ABOVE

Issue 02 | December 2019



School of Science and Technology

Preface



Dear Colleagues, Collaborators, Students, Visitors and Guests,

Welcome to the second issue of our School periodic on-line publication – SST eDigest.

The editorial team has kindly agreed with the proposal to change our on-line periodical from the eBulletin format to the eDigest one. The primary differences between these two types of periodicals are their content and their target audience. Here how we could define the “Bulletin” and “Digest”. The former is traditionally a more substantial report providing news, opinions, proposals, discussion articles, and other information about an organisational unit, produced for its members. Essentially, it is an internal publication, to keep members informed. The latter can be defined as short writing providing the most essential parts of a larger piece of information or one containing the most recent news. Due to its compact format and “to the point” nature, the digest presents clear facts in a condensed manner and free of personal or group opinions, it essentially avoids the information duplication or disclosure of potentially sensitive data. Arguably, the digest is also handier to keep and refer to. It is also important that the digest can be distributed externally to colleagues at other units or institutions, supporters, sponsors, communities, event attendees, news media and so on, as it contains just objective facts and other pieces of information.

Since the last year, the Department of Biological Science (DBS) has pioneered the successful introduction of its own monthly bulletin containing an abundance of information on events, achievements, publications, etc., associated with the Department. It could be foreseen that other departments and research centres would choose to follow the same path in the future.

However, at present, the very significant volume of the departments and centres associated news and other information is communicated to the internal University community by means of the Sunway Vine web. Unfortunately, the information on the Vine is not visible to outside readers thus leading to poorer communication of our achievements to the external communities. Besides, the Vine web displays the news and announcements for a limited time only, after which they are no longer visible.

The eDigest format allows combining the essence of the information presented in our department/research centre eBulletins or in other sources with the Vine web-releases associated with the School. As a result, the eDigest would become a kind of on-going database of good results of our work. It could be provided to various internal and external stakeholders. Finally, it would ensure that our achievements are not forgotten or visible once the Vine information on them is moved out of the web circulations.

This issue covers the most valuable and memorable events and achievements of the last quarter of the year 2019. It was, arguably, the most glorious and rewarding period of the year for our School. And I hope you would join me in enjoying to read about and recall all the good things we have done while working together.

I would like to thank the eDigest editorial team for the dedication and hard work of producing it in time and with excellent quality.

Finally, I sincerely wish the most pleasant Festive Season and Happy New Year to you and your families.

Prof. Serge Demidenko

Dean



Contents

Happening @ SST – Page 1 - 4



Awards and Achievements – Page 5 - 11



Winning Research Grants – Page 12 - 17



2020 New Appointment – Page 18



2020 Academic Staff Promotion – Page 19



Welcome New SST Members – Page 20



Upcoming Events – Page 21



The SST eDigest Editorial Team:

Editor and Team Lead: Jacky Tan

Co-Editors: Hani Zalehan, Catherine Chan, Christine Chong and Teo Wei Nie

Happening @ SST

Establishment of Research Centre for Human-Machine Collaboration



Research Centre for Human-Machine Collaboration (HUMAC) is established on 2nd October, 2019 lead by Associate Professor Dr Yap Kian Meng. HUMAC conducts fundamental and applied research which is relevant to ASEAN and internationally recognized. It tackles challenging problems to ensure a more productive way of life. It delivers innovative solutions and breakthroughs in various areas of the technology world and provide top range of facilities and access to relevant experts for students from different fields of study. It aims to be a highly visible National Centre of Excellence that conducts world-class research in Human Machine Collaboration through high socio-economic impact research, novelty & innovation. HUMAC aims to discover, create, develop and apply effective and innovative technologies and solutions that combines and optimises collaboration between humans and machines, addressing and meeting real-world needs within society and the global community. The foci of research areas are of senses: visual, audial, haptics, olfactory, motion; as well as analytics, and robotics through multi-disciplinary approach. This will in turn, provide a plethora of opportunities for the publication of impactful research studies, as well as provide quality training to students in the field of research and development. The main research projects are assisting individuals who are Blind and Visually Impaired (BVI), haptic apps for online shopping, robotic sensing, sensing & tracking using drone technologies.



Workshop on Strategies to Publish in High Impact Journals and Improving Citation Impact



Research Centre of Nano-Materials and Energy Technology (RCNMET) has successfully organized a workshop on Strategies to Publish in High Impact Journals and Improving Citation Impact, on 27th November, 2019. There are around 60 participants joined the workshop.



SST Year-End Fun Teambuilding 2019

The 2019 SST Year-End Fun Teambuilding was held on 15th November, 2019 with buffet dinner at The Resort Café in Sunway Resort Hotel followed by a bowling session at Sunway Megalanes in Sunway Pyramid. It was a great opportunity for academic and administrative staff from the department and research centres/group to get together for a networking and bonding session.





The launch of CyberSecurity Intelligence (CSI) Lab

As one of the Premier Digital Technology Universities in Malaysia, the CyberSecurity Intelligence (CSI) Lab was officially launched on 25th October, 2019. The CSI Lab will serve as a platform to connect academia with the industry. It aims to be a vendor and technology agnostic platform to encourage exchange and collaboration between all parties.

Attending the launch were Dato' Chew Chee Kin, President of Sunway Group; Dr Elizabeth Lee, CEO of Sunway Education Group; Professor Graeme Wilkinson, Vice-Chancellor of Sunway University and Ms Sumitra Nair, Malaysia Digital Economy Corporation's VP of Talent Development and Digital Entrepreneurship.

Together with our partners, Hitachi Sunway Information Systems, Sunway Group IT and RSA security, we aim to champion and accelerate the development of cybersecurity talents as well as to strengthen cybersecurity expertise.





2019 IEEE International Symposium on Haptic, Audio and Visual Environments and Games (HAVE)

Department of Computing & Information Systems has organised the 17th edition of the IEEE International Symposium on Haptic Audio-Visual Environments and Games (HAVE) on 3rd – 4th October, 2019 in Sunway University. HAVE 2019 is a truly international event bringing together members of the IEEE Instrumentation and Measurement Society (IEEE IMS) and the Haptics community from all over the world. It promises to be an exciting and comprehensive symposium covering aspects of multimodal haptics, audio/visual virtual reality technologies, augmented reality and tele-haptics, distributed collaborative environments and gaming, novel tactile stimulation technologies, and all their related applications.



Awards & Achievements

2019 Highly Cited Researchers

Professor Kheireddine [Associate Dean (Research) and Head, Research Centre for Carbon Dioxide Capture and Utilisation] and Professor Saidur [Head, Research Centre for Nano-Materials and Energy Technology] have been recognized as 2019 Highly Cited Researchers!

Each year, the Web of Science Group identifies the world's most influential researchers. In 2019, only 0.1% of the world's researchers across 21 research fields have earned this exclusive distinction.

Professor Kheireddine and Professor Saidur are among this elite group recognized for their exceptional research influence, demonstrated by the production of multiple highly-cited papers that rank in the top 1% by citations for field and year in Web of Science.



Malaysia's Research Star Award (MRSA) & Pengiktirafan Jurnal Creme 2019

Prof. Mohamed Kheireddine Aroua [Associate Dean (Research) and Head, Research Centre for Carbon Dioxide Capture and Utilisation] is recognized as one of the 2018 Highly Cited Researchers!

The award recognizes world-class researchers selected for their exceptional research performance, demonstrated by production of multiple highly cited papers that rank in the top 1% by citations for field and year in Web of Science. A collaboration of Malaysia's Ministry of Education (MOE) and Clarivate Analytics, the Malaysia's Research Star Award (MRSA) & Pengiktirafan Jurnal Creme 2019 Ceremony was held on 5th November, 2019 at Zenith Hotel Putrajaya. The ceremony was officiated by Dato' Dr Mohd Gazali Bin Abas, the General Secretary of the Ministry of Education.





MDEC Premier Pride Challenge 2019

Department of Computing and Information Systems received three awards at MDEC Premier Pride Challenge 2019.

- Most Engaged University Award by SAS Institute worth RM10,000
- Consolation Prize for Premier Digital Tech Institution worth RM5,000
- Assoc. Prof. Dr Angela Lee for Outstanding Achievement Award for Best Paper in Data Science Research worth RM3,000



Sunway University Vice-Chancellor's Research Award 2019

Sunway University Vice-Chancellor's Research Award 2019 aims to recognise exceptional performance from our Sunway academicians who demonstrate outstanding achievements in their field of research. The award ceremony was held on 4th December, 2019 at Gallery, Sunway University.

Recipients of the Vice-Chancellor's Research Award 2019:

- Award for Achievement in Research: Professor Saidur Rahman (Research Centre for Nano-Materials and Energy Technology)
- Special Research Award: Dr Yong Min Hooi (Department of Psychology)
- Award for Achievement in Research for Early Career Researcher: Dr Ayaz Anwar (Department of Biological Sciences)

The Award for Achievement in Research winner, Professor Saidur (Head, Research Centre for Nano-Materials and Energy Technology), who has made notable contributions for the Sunway University since he joined in November, 2016. He with his team has built an impressive lab with state of art equipment. MIT, Harvard and other local and international collaborators visited the lab and impressed with the facilities we built at Sunway University. It is extensively used by students and local and international collaborators. Professor Saidur with his team successfully developed emerging Nano-Materials, MXene first time in Malaysia. This material is highly useful for energy storage, heat transfer, fuel cell, solar cell, thermoelectric, electrical and electronics, biological, cancer research area.

Currently he is supervising almost 25 master, PhD, Postdoctoral Research Fellows. Therefore, he has developed a strong team for long term sustainable research at Sunway University.

Professor Saidur published almost 80 journal papers since joining Sunway University. Majority of them are in top ranking journals. He is ranked #1 in nanofluids related area according to Web of Science. He won highly cited researcher award 6 times since 2014. He has more than 29,000 citations with an h-index of 85. He has established number of local and international collaborations for the sustainable research at Sunway University. He has managed more than 15 million Malaysian Ringgit as a PI and Col.



Prof Kheireddine won 2 awards at Selangor R&D and Innovation Expo 2019

Associate Dean (Research) and Head of Research Centre for Carbon Dioxide Capture and Utilisation, Professor Mohamed Kheireddine Aroua is one of the team members who won 2 awards as Overall Winner for Food and Beverages Category with RM50,000 Grand Prize and First place for Food and Beverages – University category with RM10,000 cash prize at the Selangor R&D and Innovation Expo 2019 organised by The Human Resource Management Department, Selangor State Secretary Office. The expo was held on 10th to 13th October, 2019 at MITEC, Kuala Lumpur.

The winning project is Automated self-cleaning mobile ultrafiltration system for clean water supply. The project is led by Prof Ir Dr Mohd Azlan Hussain from Department of Chemical Engineering, Faculty of Engineering, University of Malaya and other team members include Prof Kheireddine, Dr Mohd Usman Mohd Junaidi and Encik Rustam Ramlan.





Outstanding Abstract Award – Dr Babu Ramanathan

Dr Babu Ramanathan from the Department of Biological Sciences received the 2019 Outstanding Abstract Award at the 4th International Interscience Conference on Infection and Chemotherapy & the 12th International Symposium on Antimicrobial Agents and Resistance (ICIC & ISAAR 2019) for his work entitled “Antiviral Activity of Small Molecules Against Dengue Virus”. The Conference was held from the 26th to 28th of September, 2019 in Gyeongju, Korea.



Best Paper Award – Dr Michelle Lee

BSc (Hons) Psychology graduate, Ms Tan Chooi Leng's final research project supervised by Dr Michelle Lee of the Department of Psychology, bagged the Best Paper Award for the "Organisational Behaviour and Human Resource Management" category. The paper entitled "Transformational Leadership on Organisational Citizenship Behaviour and its Mediation Pathway" looked at how transformational leadership in Malaysia leads to higher trust in leader and a higher level of self-efficacy, in turn, leads to higher affective commitment to the organizational and higher organisational citizenship behaviour. The award recognition came with RM1,000 and a certificate.



Best Oral Presentation Award (2nd Place) – Ms Sha Hongxi

MSc in Life Sciences student, Sha Hongxi won the Best Oral Presentation Award (2nd place) at the 4th International Conference on Molecular Diagnostics & Biomarker Discovery 2019 which was organised by Institute for Research in Molecular Medicine and Universiti Sains Malaysia in Penang, Malaysia on 25th – 26th September, 2019.

The award is based on Hongxi's Master's study with the title "Association of Methotrexate Pathway Gene Polymorphisms with Methotrexate Efficacy and Toxicity in Malaysian Patients with Rheumatoid Arthritis". The study is also a collaborative project initiated by School of Healthcare and Medical Sciences and Sunway Medical Centre, focusing on the genetic variations of rheumatoid arthritis patients in response to methotrexate effectiveness and side effects.

IET Top 10 Paper Awards – Prof Saidur & Prof Khalid

Professor Saidur (Head, Research Centre for Nano-Materials and Energy Technology) and his co-supervised postgraduate student from Taylors University, Malaysia received the IET Top 10 Paper Award at the 13th EURECA 2019 Conference on 27th November, 2019. Their paper titled “Fatty Acid/Metal Ion Composite as Thermal Energy Storage Materials”.

The paper is about Energy storage materials play a vital role in efficient, clean and convenient use of energy. Sporadic nature of solar energy has a demand for energy storage and efficient storage materials and devices. Therefore, energy storage materials are gaining wide range of attentions from research fraternity. In the current research work, a novel fatty acid metal ion composite has been synthesized and obtained as shape stabilized PCM composite, which will address the issue of leakage and volume change during the phase change of conventional PCM. A single-step synthesis of the composite is followed, without any complex materials or methods. The aim of this research work is development of fatty acid metal ion composite by incorporating sodium ions into the lauric acid to enhance its thermo-physical properties like enthalpy of phase change and reduce the melting point. Fabrication of the composite without any complex methods or materials is the advantage of the present work.

Professor Mohammad Khalid (Head, Graphene & Advanced 2D Materials Research Group) and his co-supervised postgraduate student from Taylors University, Malaysia also received the IET Top 10 Paper Award during the 13th EURECA 2019 Conference. Their paper titled “Thermal Conductivity, Viscosity and Thermal Degradation of Naphthenic/POME Transformer Oil”.



Best Presenter Award – Dr Adarsh Kumar

Dr. Adarsh Kumar Pandey of Research Centre for Nano-Materials and Energy Technology (RCNMET) received Best Presenter award in an international conference “International Scientific Forum (ISF) 2019” on 16th December, 2019. The Conference was organised by UM Power Energy Dedicated Advanced Centre (UMPEDAC), University of Malaya at Melaka.

Winning Research Grants

Grant	Programme Leader & Title	Project Leader / Project Team	Project	Amount
Long Term Research Grant Scheme (LRGS)	Dr Yong Min Hooi (Department of Psychology, Sunway University) Successful ageing: Evidence-based interventions to delay ageing-related decline	Yong Min Hooi (Department of Psychology, Sunway University)	Social cognition and executive function aspects for social interaction and emotional well-being	RM2,473,400
		Lim Wei Ling, Audrey (Department of Biological Sciences, Sunway University)	Salivary bio-markers in executive control and well-being in ageing population: A longitudinal study	
		Nur Ain Shahrier (Sunway University)	Cost-benefit analysis on interventions targeted for the elderly	
		Alexandre Schaefer (Monash University Malaysia)	Modulating neural markers of age-related decline in cognitive function: A longitudinal approach.	
		Rozainee Khairudin (Universiti Kebangsaan Malaysia)	Risks and challenges in making decisions	
Finnish National Agency for Education Asia program		Professor Jari Porras (Lappeenranta-Lahti University of Technology (LUT)) Assoc. Prof. Dr. Lau Sian Lun (Department of Computing and Information Systems, Sunway University)	SustHack - Synchronizing sustainable development actions between Finland and Malaysia - the Hackathon approach	RM147,430 (32,000 €)





Grant	Project Leader / Project Team	Project	Amount
Young Researchers Grant Scheme (MY-RGS)	Dr Michelle Lee Chin Chin (Department of Psychology, Sunway University)	Infection Control Management through the Integration of Conventional Antimicrobial Resistance Surveillance, Advance Biopsychosocial Assessment, and Machine Learning Approach	RM250,000
	Dr Cindy Teh Shuan Ju (University of Malaya)		
	Dr Unaizah Hanum Obaidellah (University of Malaya)		
	Dr Chong Chun Wie (Monash University Malaysia)		
British Council UK-China-BRI Countries Education Partnership Initiative	Prof. Mohammad Khalid (Graphene and 2D Advanced Materials Research Group, Sunway University)	Advanced manufacturing of biochar in UK / China / Malaysia / Nigeria / Hungary	RM375,888 (£70,000)
	Institution Collaborators: Teesside University, UK (Main Lead), North China University of Water Resources and Electric Power (NCWU), China, Sunway University, Malaysia, Curtin University, Malaysia, Federal University of Agriculture (Funaab), Nigeria Institute for Soil Sciences and Agricultural Chemistry, Hungary		
Industry Grants via Sunway R&D Sdn Bhd	Prof. Mohammad Khalid (Graphene and 2D Advanced Materials Research Group, Sunway University)		RM200,000





Sunway University receives RM2,473,400.00 for LRGS 1/2019

Dr Yong Min Hooi and her team had successfully secured a Long-term Research Grant Scheme (LRGS) from the Ministry of Education, amounting to RM 2.473 million, the largest government grant in Sunway history so far. Dr Yong Min Hooi with the outstanding success – the huge LRGS grant award awarded to the programme “Successful ageing: Evidence-based interventions to delay ageing-related decline”. scheme.



Prof. Mohammad Khalid and team awarded by British Council with grant worth £70,000

Professor Mohammad Khalid (Head, Graphene and Advanced 2D Materials Research Group) and his team is awarded by the British Council UK-China-BRI Countries Education Partnership Initiative with a grant of £70,000. The project is titled “Advanced manufacturing of biochar in UK / China / Malaysia / Nigeria / Hungary”.

The project collaborators are from Teesside University, UK (Main Lead), North China University of Water Resources and Electric Power (NCWU), China, Sunway University, Malaysia, Curtin University, Malaysia, Federal University of Agriculture (Funaab), Nigeria and Institute for Soil Sciences and Agricultural Chemistry, Hungary. The focus of this collaborative project between UK, China, Hungary, Malaysia and Nigeria is on advancing biochar manufacturing, by developing skills and examining a range of production techniques (different scales/conditions) to optimise the pyrolysis process specifically for biomass with abundance in the participating countries.





Dr Michelle Lee and team wins MY-RGS grant worth RM250,000



Department of Psychology Senior Lecturer, Dr Michelle Lee is part of the winning team who recently won the very competitive funding from the Malaysian Research University Network (MRUN) on 27th November, 2019 at the Asia-Europe Institute Auditorium, University of Malaya.

This fund, called the Young Researchers Grant Scheme (MY-RGS) provides financial assistance to teams of researchers below age 40, from research universities in Malaysia. The areas of research funded are food safety and security, water security, renewable energy, health and wellbeing, agriculture, and environment. Out of 238 teams, only six were selected, including the team that Dr Lee belongs to.

Dr Lee's winning team comprise of Dr Cindy Teh Shuan Ju from the Department of Medical Microbiology, University of Malaysia, Dr Unaizah Hanum Obaidellah from the Department of Artificial Intelligence, University of Malaya, Dr Chong Chun Wie from the School of Pharmacy, Monash University Malaysia, and Dr Azmiza Syazwani Jasni from the Department of Medical Microbiology and Parasitology, Universiti Putra Malaysia. Their project entitled "Infection Control Management through the Integration of Conventional Antimicrobial Resistance Surveillance, Advance Biopsychosocial Assessment, and Machine Learning Approach" was found to be a very relevant and practical study that would have strong implications for the public healthcare system.





Graphene and Advanced 2D Materials Research Group (GAMRG) receives RM200,000 Industry Grants for Graphene Based Technology Development.

After the successful launch of Malaysia's first dedicated Graphene & Advanced 2D Materials Research Lab at Sunway University in July 2019, GAMRG received industry grants worth of RM200,000 from two local companies, via Sunway R&D Sdn. Bhd., a company of Sunway University that facilitates contract research and consultancy with the industries.

This collaboration will put Sunway University at the forefront of innovative research in graphene-based technologies, leading to the development of new products in the automotive and energy industry.

With the state-of-the-art Graphene & Advanced 2D Materials Research Lab, the Research Group's vision is to be a "Centre of Excellence" in Graphene and Advanced 2D Materials technology that addresses the grand challenges of our society, industries and the global community through innovation and high impact research.





Finnish National Agency for Education Asia Program Project Funding worth 32 000 €

Assoc. Prof. Dr Lau Sian Lun has received a Finnish National Agency for Education Asia program project funding worth 32 000 €.

The project is titled "SustHack - Synchronizing sustainable development actions between Finland and Malaysia - the Hackathon approach". This project is a collaboration between Sunway University and Lappeenranta-Lahti University of Technology (LUT), and the project leader is Professor Jari Porras from LUT.



2020 New Appointment



Professor Abhi Veerakumarasivam

Head

Department of Biological Sciences



Associate Professor Dr Yap Kian Meng

Head

Research Centre for Human-Machine Collaboration

2020 Academic Staff Promotion

Staff Name	Promoted Position
Assoc. Prof. Dr Alvin Ng Lai Oon	Professorial Teaching Fellow
Dr Adarsh Kumar Pandey	Associate Professor
Dr Annie Lee See Mun	Associate Professor
Dr Chandrajit Lahiri	Associate Professor
Dr Yong Min Hooi	Associate Professor
Dr Alan Tan Sang Loon	Senior Research Fellow
Dr Ayaz Anwar	Senior Lecturer
Dr Chen Jit Ern	Senior Lecturer
Dr Kavita Reginald	Senior Lecturer
Dr Low Yeh Ching	Senior Lecturer
Dr Mohsen Kakavand	Senior Lecturer



Welcome New SST Members



Prof. Angela Amphawan
Professor
Department of Computing
& Information Systems



Dr. Steven Eu Kok Seng
Senior Lecturer
Department of Computing
& Information Systems



**Dr. Arulraj
Arunachalam**
Research Fellow
Graphene and Advanced 2D
Materials Research Group



**Dr. Syam Gopala
Krishnan**
Research Fellow
Graphene and Advanced 2D
Materials Research Group

Upcoming Events

Dates	Event
14 th January, 2020	Dean's Communication Session (January 2020 Semester)
3 rd February, 2020	"Boot Camp" in Wildlife Study Design and Data Analysis

