

science@iium

IIUM Quality Day 2018: Well done KOS!

Get Fit with KOS-FIT

Faces of KOS

Kulliyyah of Science

The Kulliyyah has spared no effort to assure that we provide the best tertiary education possible in pure and applied science. Our programmes are unique which include islamisation of knowledge that unifies science with religion.

We are committed to providing our graduates with well-rooted knowledge, professional skills, qualities and attitudes that employers value most including logical and analytical thinking; and problem-solving. The moment students stepped in Kulliyyah of Science, is the beginning of a lifetime journey of learning exploration. Undoubtedly, this is the place where the great leaders of the future are nurtured.



Imam Ali (as) – “Everything diminishes when it is used except knowledge”

Contents

SPOTLIGHT

Meet The Scholar	6
IIUM Quality Award 2018	8

NEWS

MoA: IIUM-MTBE	10
SKAM 31	12
IPOD	14
SOLPINAR	15
BUDI Programme	16
Islam & Science Forum	17
Get fit with KOS-FIT	18
Team building	20
Scuba diving	22

FACES OF KOS

Man on a Mission	24
CEO @ Faculty	26



RESEARCH

Research Units	28
INOCEM Research Station	30
CREAM	31
Research Facilities	32

ACHIEVEMENTS

Researchers success stories	33
-----------------------------	----

OUR STUDENTS

Undergraduate	35
Postgraduate	36

ALUMNI

KOS alumni	37
------------	----

NOTICE BOARD

Check out our upcoming events in 2019	39
---------------------------------------	----



Cover page: A Scientist profile sketched using Voronoi pattern and scientific ideas shown by molecules while the background colours are the whimsical life as a Researcher -AR

Dean's Foreword

السلام عليكم

Alhamdulillah. I am proud to welcome you to our first issue of science@iium magazine 2018. Over the past few months we have assembled a team of talented people to initiate the Kulliyah of Science magazine. This is Version 1.0 of our efforts. science@iium is a new communication piece for us, with a goal of sharing our stories with our stakeholders and all readers.

Indeed, 2018 has been an exciting year for us, filled with many notable and vibrant activities. For a start, Kulliyah of Science (KOS) had won the Best Kulliyah Award (Research and Innovation) for Science and Technology category and second place in the Agency Award (Academic) at IIUM Quality day 2018. We are also proud of the achievements of our staff and students in the areas of research and other activities. These accomplishments show our commitment to excellence and can only be materialised with continuous support from our dedicated staff and students.

KOS has held many programmes and activities, which you may also find inside. I am happy that our staff are concern in keeping healthy lifestyle and have initiated the Kulliyah of Science Fitness Programme (KOS-FIT). We hope that the programme will improve the health, fitness and wellbeing of KOS community.

I would like to take this opportunity to congratulate the science@iium team for their hard work and dedication. I view the creation of science@iium as the beginning of an ongoing process, so I hope the readers, especially our alumni can connect and engage with us for many years to come.

Have a pleasant reading!
Best,



Assoc. Prof Dr Shafida Abd Hamid
Dean, Kulliyah of Science



Kulliyah of Science
International Islamic University Malaysia
Bandar Indera Mahkota
25200 Kuantan
Pahang, MALAYSIA

T +609 5705001/5002

E science_kos@iium.edu.my

W www.iium.edu.my/kulliyah/kos

FB facebook.com/kulliyahofscience

Welcome to the first edition of science@iium magazine!

The idea to come out with the science@iium magazine started from the conversation that I had with Dr Shafida earlier this year, and it has finally become a reality when the contents of the magazine were put together as pieces of smart artwork at its best. The vision is to create a great, conscious, stylish and inspiring science magazine. This first edition marks a new beginning of science@iium, and most importantly the amazing work done by the extraordinary editorial team in delivering inspirational and memorable success stories of Kulliyah of Science which is for sure, not a small feat.

In our first edition, we highlight important events in Kulliyah of Science (KOS). Among the stories in this edition are: an interview with KOS professor, awards obtained by KOS members during IIUM Quality Day 2018, news on networking/collaborations with other universities/industries and other events such as KOS-FIT and Team building. The magazine also highlights the achievements of our students and alumni. I am proud to present you the science@iium magazine that is available in print and online by end of 2018.

I would like to acknowledge and extend my heartfelt gratitude to my editorial team who has been working hard to make sure that the magazine becomes a reality. To the team, don't worry, a small celebration party (with food!) is on the way.

To our readers, I hope you enjoy reading science@iium, as much as we enjoyed producing it!

Grazie Mille!



Khartini,
Chief Editor



The Team

Advisor

Assoc. Prof. Dr. Shafida Abd Hamid

Chief Editor

Dr. Wan Khartini Wan Abdul Khodir

Co-editors

Dr. Tamil Chelvan Meenakshi Sundram

Dr. Nurul Farahain Mohammad

Dr. Mimi Hafizah Abdullah

Designers

Dr. Azaima Razali

Dr. Fitri Yusof

Photographers

Dr. Nur Hafizah Azizan

Br. Amar Muhsin Mohd Ikhsan

Meet The Scholar

In May 2018, Professor Dr Muhammad Nor gave a professorial lecture at Kulliyah of Science (KOS) entitled Palm Oil: Rahmatan Lil 'Alamin. He received his PhD in Chemistry from Liverpool John Moores, United Kingdom in 2000 and had 11 years of teaching experience and 30 years working experience in MARDI and MPOB as a senior researcher before joining KOS.



What inspired you to pursue a career in science?

I started learning science when I was in secondary school. Truly, I did not know about science in my early time of schooling, although I was taught with Knowledge of Creation. My science and mathematics teacher, was the person who inspired me to pursue a career in science.

What do you love most about IIUM?

IIUM theme is 'Garden of Knowledge and Virtue' and is related to Rahmatan Lil 'Alamin. The concept of 'Work and Amal' becomes clearer when I joined IIUM and nearly all my tasks are for 'Fii Sabilillah'; the tasks (amal) are continuous reward in the Hereafter. The one point that made me love IIUM is the teaching of 'hablum minaLLah' (when we have the knowledge), 'wa hablum minannas' (when we have the virtue).

Which scientist do you most admire?

Barry Sharpless, Professor of Chemistry at the Scripps Research Institute, USA. He was a Nobel prize winner in Chemistry in 2001 for developing chiral catalysts for an important type of reaction, i.e. oxidation. He was my mentor during my doctoral (PhD) study. Today, results of his basic research are being used in a number of industrial syntheses of pharmaceutical products such as antibiotics, anti-inflammatory drugs and heart medicines. He also advised me to use chiral catalyst to convert palm oil derivative, linoleic acid to various intermediates pharmaceutical purposes.

Your role model?

My role models are the former Prime Minister, Tun Abdul Razak and the current Prime Minister, Tun Dr. Mahathir.

Your hobby apart from research?

Expedition and jungle trekking are my favourite activities. During my active days, once in every six months I would be involved in an expedition and jungle trekking with my undergraduate students. Our favourite places are Cameron Highland and Lojing where you can see all the beautiful flowers such as the Rafflesia, the biggest flower in the world.

What would you have been if you weren't a scientist?

Before I become a scientist, my ambition was to be a pilot or an air force officer.

What's your biggest finding/discovery?

I have developed palm-based spray oil in a pressurised aerosol container and this product is under the process of commercialisation. Palm-based spray oil offers a convenient tool for handling vegetable oils, especially palm oil which solidifies at temperate climate. In cooking, it useful when it create thin layer of oil and the food will not stick to the pan. It is also used for greasing of baking pan so the muffin, cupcake and cakes can slide right out.

How does it feel after giving a professorial lecture?

I am very delighted that the university has given me the opportunity to bring forward my expertise especially in palm oil and its derivatives. As I said in my lecture, 'Palm Oil as a 'Rahmatan Lil Aalamiin' - Mercy to All Mankind.

What do you think of the future of palm oil industry in Malaysia?

Malaysian palm oil is consumed all over the world, spanning from a larger country such as USA to a smaller country like Bukina Faso (Upper Volta) in Africa. Among the OIC Countries, Turkey and Pakistan are the biggest consumers of Malaysian palm oil. I think, palm oil industry must remain viable and sustainable in the long term. With a highly competitive market, it is important the product is rebranded. We should learn from Canada on how they produced Canola oil that has been recognised worldwide.

What type of music do you listen to?

I like to listen to instrumental music during my free time such as the instrumental Malaysian folk music, instrumental music of Tan Sri P. Ramlee's songs, saxophone music by Ahmad Nawab and music played by Hamzah Dolmat on the violin.

What advice would you give to young scientists today?

My advice are: share and collaborate with others to form an interdisciplinary teamwork; discuss and get advice from senior scientists; get in touch with your former supervisor; think critically and look for global issues faced by Muslim ummah; and finally you should become Rahmatan Lil Alamin.

What are the three keywords to describe your career?

Supervision, innovation and commercialisation.



IIUM Quality Award 2018

***Teamwork makes the dream work,
Coming together is a beginning,
Keeping together is a progress,
working together is a success.
- Henry Ford***

Annually, IIUM acknowledges agencies (Kulliyahs/Centres/Divisions/Institutes/Offices) and staff (academic and non-academic) who have contributed quality work to the university. This year Quality Award day was held on the 12th of July 2018 at the IIUM Cultural Activity Centre with the theme “Inspiring Innovation”.

Heartiest congratulations to Kulliyah of Science (KOS) on its historic winning during the IIUM Quality Day 2018. KOS won the Best Kulliyah Award for Research and Innovation (Sciences & Technology). This award was given based on the overall performance in research and innovation in sciences and technology.

KOS also won 2nd place for the Agency Award (Academic Category). The Agency Award was given to recognise the efforts of all academic, research and administration agencies that contribute towards comprehensive excellence. The criteria of the award covers strategic and financial planning; quality assurance management; governance and administration; facilities and equipment; research and publication; and teaching and learning.





Thank you to all members of Kulliyah of Science for their hard work and supports. Once again, congratulations to all winners. Keep doing awesome!

Top 30 MyRA
Contributors 2017



**Prof. Dr. Kamaruzzaman
Yunus**



Dr Mohd. Adli Md Ali

Promising research award
(Overall)

Highest citation in indexed
Journal Award (Sciences &
Technology).

Total Citations: 3421

Highest Number of
publication award
(indexed journal articles)
(Kulliyah level).

Total Articles: 4



**Prof. Dr. Jalal Khan
Chowdhury**



**Assoc. Prof. Dr Muhammad
Mustafizur Rahman**

Highest Number of
publication award
(indexed journal articles)
(Kulliyah level).

Total Articles: 5



MoA between IIUM and Petronas Chemicals MTBE Sdn Bhd

IIUM has established a collaborative work with Petronas Chemicals MTBE Sdn. Bhd, a wholly-owned subsidiary of Petronas Chemicals Group Berhad. A memorandum of agreement (MoA) was signed by Prof. Dr. Kamaruzzaman Yunus, Campus Director, IIUM Kuantan Campus and Tuan Haji Azlimi Mohd. Lazim, Chief executive officer (CEO) of Petronas Chemicals MTBE. The signing ceremony was held at Petronas Chemicals MTBE on the 8th of March 2018.

The five-year MoA includes collaboration and exploration of opportunities to develop and support solutions and contributions towards Health, Safety, and Environment (HSE) for the petrochemical industry and the academic sector, hospitalisation and medical treatment, wastewater treatment, and industrial internship experiences for IIUM students. Indeed, this MoA is a great opportunity to further strengthen the collaboration between universities and industries in line with the vision and mission of Ministry of Education (MOE).

As a first step of the collaboration, Dr Mohd Shukri Mohd Aris and his team had initiated a research project collaboration related to phytoremediation of industrial wastewater. On behalf of Kulliyah of Science, we would like to congratulate Dr Mohd Shukri and his team for this achievement.

KOS Visit to Prince of Songkla University

Established since 1962, Prince of Songkla University (PSU) opened its door to their first students in 1967 and subsequently unfolded to five campuses located in Hat Yai, Pattani, Phuket, Surat Thani and Trang. In 2018, PSU is ranked among the top 5 universities in Thailand and is an excellent research-oriented university.

One of the strategic planning of IIUM, under the Deputy Rector's office (Internationalisation and Global Network) is to promote collaboration between IIUM and other universities. Thus, on 20th March 2018, Kulliyah of Science (KOS) led by Assoc. Prof. Dr. Shafida and her team (Prof. Dr. Ahmed Jalal Khan Chowdhury, Dr. Azzmer Azzar Abdul Hamid, Dr. Deny Susanti Darnis, Dr. Mimi Hafizah Abdullah, Dr. Mohammad Norazmi Ahmad, Dr. Erna Normaya Abdullah and Br. Haris Yunnus) has taken the initiative to visit and hold a discussion on potential collaboration with Prince of Songkla University (PSU).

The meeting sessions took place at Hat Yai and Pattani campuses with the management



team from PSU, led by Asst. Prof. Dr. Nararak Leesakul (Hat Yai campus) and Assoc. Prof. Dr. Sukree Hajisamae (Pattani campus).

The discussion covered potential student exchange, final year project and internship attachments under students mobility programme.

The KOS members toured around the

PSU campuses and visited their research facilities.

Notably, the MoA initiative between KOS and PSU is an important step for promoting collaborative efforts in research and students' academic exchange between the two universities.



The 4th Asian Science Deans' Summit (ASDS) 2018

The 4th Asian Science Deans' Summit (ASDS) 2018 took place from the 5th - 7th of July 2018 at BP Samila Beach Hotel in Songkla, Thailand, hosted by Faculty of Science, Prince of Songkla University and the Council of Science Deans Thailand in conjunction with the 50th Anniversary of the Faculty of Science. The motto for this year's summit was "Reinforce Mobility and Networking Activity on Science Education and Research". The ASDS was founded by Prof. Seung-Han Park in 2015 and is organised yearly to provide attendees with platform to promote their institutions, discuss the possibilities of collaborations in science education and research, and to build networking opportunities throughout the Asian countries.



Visitors from Kagoshima University, Japan

On the 28th of September 2018, Kulliyah of Science received visitors from Kagoshima University, Prof Dr Hiroto Maeda, the Vice President of Kagoshima University and Dr Suguru Okunishi from the Faculty of Fisheries.

Discussion on the MoU and possible collaboration between Kagoshima University and IIUM was led by the Head of the Department of Marine Science, Dr Nur Nazifah Mansor, and a few members of the department, Assoc. Prof. Dr Yukinori Mukai, Assoc. Prof. Dr Shahbudin Saad, Assoc. Prof. Dr Normawaty Mohammad Noor, Dr Asnor Azrin Sabuti and Dr. Muhammad Zahir Ramli. Among the topics discussed were student exchange, postgraduate programme, grant application, transfer of knowledge programme and the upcoming conference collaboration, the International Conference on Oceanography and Sustainable Marine Production (ICOSMAP) 2019.



A Visit to Institut Teknologi Bandung

On the 6th of August 2018, Kulliyah of Science initiated a networking meeting with the members of Faculty of Mathematics and Natural Sciences, Institut Teknologi Bandung (ITB). A delegation from Kulliyah of Science, IIUM, led by the Dean, Assoc. Prof Dr Shafida Abdul Hamid and two members of the delegation, Assoc. Prof Dr Deny Susanti Darnis (Head of Internationalisation and Global Network) and Dr Wan Khartini Wan Abdul Khodir (Editor for KOS Magazine) had a meeting with Dr Indra Noviandri, the Vice Dean (Resources Affairs) and Dr Yudi Soeharyadi (Research manager) from ITB. The IIUM delegates were also shown the research facilities available at ITB.

Delegation of Asian Science Deans



31st International Conference of Analytical Sciences 2018



“

*Uniting Sciences
Towards Frontier
Innovations*

”

On the 17th until 19th of August 2018, the Department of Chemistry welcomed about 120 scientists to the 31st International Conference of Analytical Sciences (Simposium Kimia Analisis Malaysia yang ke-31 2018 (SKAM 31)) held at Vistana Hotel, Kuantan. Participants from local and international universities as well as industry representatives came together at this annual event aspiring the conference theme “Uniting Sciences Towards Frontier Innovations”. This conference was jointly organised with the Malaysian Analytical Science Society (ANALIS).

Eminent researchers in the field of Analytical Sciences were cordially invited to offer their perspectives and invaluable knowledge. Prof. Dr. Kamaruzzaman Yunus presented his findings on the bio-availability of Rare Earth Elements (REE) in the ecosystem of rocky

shore area along the Peninsular Malaysia coastal waters. Prof. Dr. Bahruddin Saad from Universiti Teknologi PETRONAS (UTP) discussed issues related to the determination of biogenic amines; a compound commonly found in food and a useful indicator of freshness. Due to the compound unique structure, sample preparation methods invoke interests among analytical scientists. The issues related to sample preparations was further discussed by Prof. Dr. Marsin Sanagi of Universiti Teknologi Malaysia (UTM).



The development of green technology in reducing the environmental and radiological impacts of the tin mining industry was presented by Prof. Dr. Amran Ab. Majid from Universiti Kebangsaan Malaysia (UKM). The green approach research will be beneficial to human and the environment.

Before the closing of the 3-day conference, awards to the Best Poster Presenters were given to Olla Sharhan of University of Malaya (UM), Muhammad Farhan Hanafi and Dr. Norzahir Sapawe, both from University of Kuala Lumpur (UniKL). Meanwhile, recipients of the Best Oral Presenter awards were Sophia Saging and Dr. Muggundha Raoov from Universiti Malaya (UM) and Dr. Norli Abdullah of Universiti Pertahanan Nasional Malaysia (UPNM). Alhamdulillah the conference became an opportune-event for networking and idea-sharing to all participants.

Among the top sponsors were Lynas Malaysia Sdn Bhd, Anton Paar Malaysia Sdn Bhd, D. I. Scientific Sdn Bhd and Perkin Elmer Sdn Bhd.



IPOD

IIUM Plant Science Open Day (IPOD) is an annual event organised by the Department of Plant Science

With the theme 'closer to nature', this year's IPOD focused on educating the community towards an eco-friendly lifestyle. Held on the 4th and 5th of March 2018 at the Glasshouse and Nursery Complex (GNC), IPOD was officiated by the Campus Director of IIUM Kuantan, Prof Dr Kamaruzzaman Yunus.

The two-day event was composed of seminars, workshops and exhibitions.



In creating awareness on preserving green environment and eco-friendly lifestyle among the younger generation, a 'brain challenge' quiz competition was organised for secondary school students. Ten secondary schools took part in this competition and Sekolah Menengah Abdul Rahman Talib (SMART) Kuantan, became the overall champion for the third consecutive years. Apart from these educational programmes, fun activities such as veggie picking, farm frenzy, cooking competition, a 'fruit fiesta' and colouring contests attracted many visitors.

A 5km 'Green Run' sponsored by Adham Bike Centre (ABC) and GAU mineral water, was organised. This run saw a participation of 500 individuals of different age group.



Each participant received a mini potted cactus and a medal. The support and participation of more than 1000 people from all walks of life made IPOD a big success. Thank you to all the sponsors, Adabi Sdn Bhd, IKOP IIUM Kuantan, Azam Rooster, Isuzu, Mitsui and Adham Bike Centre for their contributions.

Ibadah Camp

'The role of ibadah in social development'



Ibadah camp was held on the 26th -27th of July 2018 at the Kulliyah of Science and the Sultan Haji Ahmad Shah Mosque, IIUM Kuantan. This year's Ibadah camp focused on the spiritual and physical enhancements. Activities held were congregational prayers, lectures, forums, Ma'thurat recitation, Qiyam Al-Layl, Tadzkirah, Tilawah Al-Qur'an and Tafsir Al-Qur'an. The tadzkirah delivered by Assoc. Prof. Dr. Abdurezak Abdulahi Hashi highlighted the characteristics of a leader, while Ustaz Mohd Zulhisyam Mustapai emphasised on the importance of steadfastness (istiqamah). There was also a forum by speakers from Majlis Ugama Islam Pahang (MUIP) and Lembaga Hasil Dalam Negeri on zakat and tax collections. The camp ended on the second day with Zikir and Qiyamullail sessions followed by a congregational fajr prayer, a recitation of Al-Ma'thurat and a tafsir of Surah Al-Baqarah, verse 177 - 186 by Ustaz Mohd Kamarulzaman Seman.



SOLPINAR

The Department of Biotechnology conducted a Series of Lab Practice on Natural Product (SOLPINAR) workshop from the 13th - 16th of August 2018. This workshop offered a theoretical and hands-on training from basic to advanced levels of extraction of natural products and essential oils.

The workshop started with a public lecture on "Overcoming Commercialisation and Research Challenges of Natural Products in Malaysia" which was delivered by Prof. Dato' Dr. Ibrahim Jantan of Universiti Kebangsaan Malaysia (UKM), who is an expert in medicinal and natural products. Kulliyah of Science lecturers, Prof. Dr. Muhammad Nor Omar and Dr. Tan Teng Ju presented lectures on Distillation and Supercritical Fluid Extraction Methods.

Assoc. Prof. Dr. Deny Susanti Darnis gave introductory lectures on Gravitational Column Chromatography, Thin-Layer Chromatography and Gas Chromatography Mass Spectrometry Analytical Techniques. While, Br. Ahmad Muzammil Zuberdi and Dr. Hassan Sheikh Ibrahim demonstrated how to extract Cinnamaldehyde from cinnamon using Hydro Distillation and Supercritical Fluid Extraction (SFE) method and conducted hands-on sessions on isolation and characterisation of Cinnamaldehyde.

IMC 2018

IIUM Mathematics Competition (IMC) has been conducted since 2005 by the the Department of Computational and Theoretical Sciences. The competition is widely open for secondary schools' students from the eastern part of Malaysia. This year, IMC was held on the 19th of September 2018. After a selection process during preliminary examination, only 32 contestants were selected to be in the final competition.

All contestants went through 2-hour and 1-hour examinations, while the accompanying teachers participated in a discussion and attended a talk by Mr. Suhaimi Ramly, a national trainer for the Malaysian Mathematics

Olympiad team. The Best School award went to SMJK Hwa Lian, Mentakab. The gold medal was won by Jonathan Lee Wei Jin from SMK Sultan Abu Bakar, Kuantan. Silver medals went to Ang Zhen Chen from SMK Sultan Abu Bakar and Tea Yee Lum from SMJK Hwa Lian, while the Bronze medal winners were Lee Yee Xynn from SMK Hamzah, Machang and, Koh Zhi Zhang and Wong Xu Cheng, both from SMJK Hwa Lian.

The IMC 2018 was sponsored by Yayasan Pahang, KotaSAS Sdn Bhd, Ardent Educational Consultants Sdn Bhd, Dumex and Heroes Café.



Budi Programme

The Science Students' Society (SCIENCESS) organised BUDI Sciencess 2018 programme at Kampung Nenasi, Pekan, Pahang on the 20th until 22nd of April 2018. Around 63 students volunteered in this programme and each of them was assigned to foster parents. The goal of this programme is to apply the Islamic moral values in Malaysian society despite the different traditions and to train the students on the importance of serving the community. It was also hoped that this programme contributes in strengthening the communication and social skills of students especially when dealing with community.

There were many engaging activities conducted during this programme. On the first day, the programme started with a taaruf session. During this taaruf, all participants had the chance to get to know their foster families, followed by delivering donation kits to houses. In the evening, the participants conducted a 'gotong royong' activity to clean several areas around the village. After Isya' prayer, participants had a good time bonding with the communities while enjoying a novel-based Indonesian movie, "Tenggelamnya Kapal Van Der Wijck".

On the second day, the participants and the villagers had fun while stretching their muscles in an aerobic exercise, followed by beach cleaning activity at Pantai Nenasi. Explorace competition was held later which involved primary schools students where they need to finish several checkpoints.



"The most beloved of people according to Allah is he who brings most benefit, and the most beloved of deeds according to Allah the Mighty, the Magnificent, is that you bring happiness to a fellow Muslim." Muhammad
PBUH

The games started with the students having to build and fly a paper airplane that can travel the farthest possible, and ended with playing charades using science terms as the secret words. The afternoon activities involved the volunteers sketching and painting murals on the wall of the public hall and a telematch with 100 villagers which include coconut bowling and water bottle filling games.

On the last day, the children had fun participating in colouring contest and painting competition, while the adults were engaged in a 'rewang' activity of cooking lunch for all the participants. Lastly, a prize giving ceremony and a festive lunch among the villagers and volunteers ended the BUDI Sciencess programme.



Islam & Science Forum

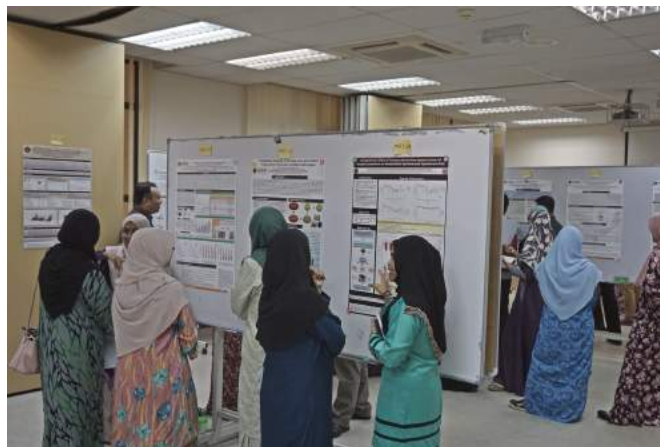


On the 22nd of February 2018, the Department of Physics in collaboration with the IIUM Science Students' Society (SCIENCESS) organised a forum on Islam and Science. The forum took place at the Main Auditorium of Kulliyah of Science and moderated by Dr. Izzat Fahimuddin Mohamed Suffian. The invited three panelists were Assoc. Prof. Dr Jesni Shamsul Shaari, Assoc. Prof. Dr Abdurezak Abdulahi Hashi and Dr Mohd Adli Md Ali.

The aim of the forum was to have a clear demarcation on the relationship between Islam and Science. Apart from that, this programme was to encourage students to relate Islam with science. In addition, the forum attempted to expose the contribution of Quran to science and modern science. Among the questions discussed were "Is it possible to learn about God through science in general?", "How does specific field benefit us in knowing God?", and "As a Muslim scientist, which one should we believe as an absolute truth? Religion or Science?"

The programme received an overwhelming attendance of 312 students and staff from Kulliyah of Science, Kulliyah of Pharmacy, Kulliyah of Nursing, Kulliyah of Medicine, Kulliyah of Allied Health Sciences and Centre for Foundation Studies. It is hoped that more of such programmes will be conducted at our Kulliyah in the future to inculcate the culture of open discussion and deep thinking among members of IIUM Kuantan campus.

Postgraduate Colloquium



Postgraduate (PG) Colloquium is a programme held by Kulliyah of Science (KOS) as an effort to encourage our postgraduates to present their research projects and engage in discussion with peer scientists. The colloquium was held on the 18th of July 2018 and was officiated by our Deputy Dean of Postgraduate and Research, Assoc. Prof. Dr Zaleha Kassim.

The PG Colloquium activities include talks and seminars by experienced researchers of KOS, 3-Minute Thesis Presentation; Poster Presentation; and Research Invention and Innovation competitions.

In the evening, Postgraduate Colloquium Night was held at the banquet hall, Office of Campus Director, IIUM. It was organised by the Postgraduate Kulliyah of Science Students' Society (PGKOSSS), and was attended by KOS PG students and staff. During the dinner, 'Virtuosi', the 1st Edition of PGKOSSS Magazine was officially launched. The magazine provides details of PG students' activities, abstracts of research work presented at the colloquium and other information that could guide the PG students in reaching their goals. The night ended with the prize-giving ceremony to the winners of the Postgraduate Colloquium competitions.

GET FIT WITH KOS-FIT



I DON'T THINK LIMITS

Usain Bolt



At Kulliyah of Science (KOS), we feel that it is a part of our responsibilities, not only to produce knowledgeable scholars but also to generate a healthy generation of scholars. Thus, in order to educate and increase the awareness of a healthy lifestyle among our staff and students, 'Kulliyah of Science Fitness programme (KOS-FIT)' was launched in July 2018. A series of activities were planned by the committee led by Br. Ahmad Muzammil Zuberdi.

On the 21st of July 2018, the committee organised a 5km fun run with the theme 'Towards healthy lifestyle' with participation of around 120 people involving KOS staff, postgraduate students and their family members. On the 11th of August 2018, a small group of 20 KOS staff hiked up Panorama hill, Sungai Lembing. On the 1st of September 2018, the team was motivated to continue to conquer another trekking hill, Pelindung Hill via '3 Beradik Hill'. More activities are being planned by the KOS-FIT committee.



"This programme strengthens the ukhwah among the staff and thanks to all for supporting KOS-FIT programme. Let's have a healthy lifestyle!"
Br. Ahmad Muzammil Zuberdi.

"If you can laugh together,
you can work together"

TEAM BUILDING





On the 29th of September 2018, a team building programme was conducted at Daralockwood Camp, Kuantan with the supervision of the Batalion Kedua Belas Rejimen Askar Melayu Diraja. The programme was not only a fun but more importantly it allows KOS staff to connect with each other in a different setting. The activities held facilitate a better understanding and were seen as a step to guide us to work much better together for future progress of the Kulliyah.

The team building activities included jungle trekking, survival village and IIUM challenge. All of the activities were aimed for effective team management in which members can discover effective ways to accomplish tasks given to them by means of working together in a team. These activities can also provide a venue to discover potential team leaders with effective delegations. Moreover, one of the objectives of these activities is to boost KOS staff morale and in fact that was seen in each of the team members when the challenge and mission given were accomplished.

During the team building programme, sharing session was conducted between academic staff and Head of Research, Dr. Mohd Shukri Mohd Aris and the Deputy Dean of Postgraduate, Assoc. Prof. Dr. Zaleha Kassim on the importance of Jedi-Padawan programme (a mentor-mentee for staff). Meanwhile for the administrative staff, the sharing session was led by Br Haris Yunnus and Br Mohammad Habib Ahmad on the outcome of the team building programme and the lab staff session was led by Dr. Zaima Azira Zainal Abidin on the work schedule.

Overall, the programme has achieved its objectives and hopefully such team building programme can become an annual event for KOS.



"The team building was a good one, we worked together to ensure our group perform."

Assoc. Prof. Dr. Zaleha

"A programme that should be conducted to instill teamwork culture and self-development."

Br. Habib



SCUBA DIVING

Scuba is an acronym for “Self-Contained Underwater Breathing Apparatus”. Scuba was first developed circa 1940s. Since then, Scuba equipment has undergone substantial developments, leading to Scuba diving becoming one of the safest recreation sports. Scuba diving is enjoyed by thousands of people around the world every day and is considered as a low-risk activity compared to many other outdoor and sporting activities, provided the rules and regulations are followed accordingly.

INOCEM Research Station has been providing Basic Scuba training for IIUM staff and public since 2017. The research station can provide up to 20 Scuba sets for training, fun dive and scientific expedition.

The INOCEM “Scuba Discovery” is comprised of the following two sections:

Theoretical understanding:

In this part, participants will learn about the basic operation of diving equipment. How the body reacts to an underwater environment will also be explained. Participants will then understand how to use the various items of diving equipment. This will help the participants enjoy the underwater experience during scuba diving.

Practical skills:

In this part of the course, INOCEM Dive Master will accompany participants when diving in swimming pool or confined water using Scuba equipment and the participants will have the opportunities to experience the underwater world. The participants will undergo the practical session of the knowledge obtained from the theoretical part.

FREQUENTLY ASK QUESTIONS

Is it difficult to learn scuba diving?

Scuba diving is one of the easiest sports to learn. One needs three basic skills: floating, kicking and breathing. On top of that, of course the proficiency at using the equipment and developing understanding of scuba concepts and safety procedures, are equally important.

If you have always wondered what it would be like to breathe underwater, then 'INOCEM SCUBA DISCOVERY' can give the answer to you

Doesn't scuba diving hurt your ears?

Yes and no.

Yes if you didn't follow the instruction during scuba diving. You can avoid eardrum pain by consistently equalising your ears during descending. This is done by pinching your nostrils shut, lifting your chin and gently trying to blow out through your nose. You should hear a slight crackling sound – the Eustachian tubes opening. Some experienced divers can equalize the ears by simply moving their jaw or tongue.

Why scuba needs octopus?

Of course! An octopus is not a cephalopod organism; it is a nickname for 'dive regulator'. It delivers air from your tank through your mouth for breathing. A scuba diving regulator is the connector of your dive equipment, and links many pieces of gear – your scuba tank to your buoyancy control device (BCD), submersible pressure gauge (SPG), alternate air source and your lung.

Faces of KOS



Man on a mission



Dr Shahbudin Bin Saad is an Associate Professor at the Department of Marine Science, Kulliyyah of Science. He is also the Principal of Mahallah Khalid Al-Walid. Despite his hectic schedule, he represented the Kulliyyah of Science in the Expedition to Kala Patthar and Everest Base Camp this year.

What path led you to do PhD in Marine Science? How did you become interested in Marine Science?

Since I was little, I love the sea. I did my bachelor degree in Fishery Science at UPM. During that time, I had the opportunity to take Marine Fisheries subject and be the demonstrator involving turtle conservation project. The experience involving with the project inspired me to further a master degree in Oceanography and later a doctoral degree in Ocean and Civil Engineering at Kagoshima University under Monbukagakusho scholarship.

Could you please share about your current research? What excites you about this?

Currently, my research is more towards coral. To me, corals are alluring. Whenever I see them while I did my sampling, their beauty are breathtaking and sort of therapeutic to me. Corals are important in ecosystem. They protect the coastlines from damaging effects and provide shelter for many marine organisms . Many cases of coral degradation happened in Malaysia and I believe something needs to be done.



How was your experience juggling between teaching, research and being the principal of Mahallah Khalid Al-Walid?

I am used to being busy. The most important thing is to arrange your schedule well. For me, I set a fortnight research meeting with my postgraduates where they have to present their research progress to their peers. This is to ensure that they are on track. In the morning, I will be in the mahallah's office and when I have classes, I will be in the Kulliyah. I also set my schedule much ahead for sampling trips to ensure that everything runs smoothly.

What made you want to climb the Everest Base Camp and how do you feel upon reaching there?

I am used to diving that is exploring the lowest point on earth. So I wanted to challenge myself to reach the highest point on earth. I strongly believe that travelling is a way to acknowledge the greatness of Allah. Walking of 6 to 7 hours every day, and experiencing acute mountain sickness (AMS), I felt overjoyed and grateful when I reached the Everest Base Camp.

Any tips that you would like to give to young or fellow academics out there?

To the young researchers, I would like to advise them to focus more on research in the beginning of their careers. Through research, they may strengthen their teaching materials and deliver up-to-date and relevant course contents to students. After several years, they should consider to take up any management responsibilities because this experience will train them to be tough and good at multitasking. To fellow academics, they are indirectly mentors to the young ones. They should share their experiences and knowledge with the young academics, and further produce leaders not just followers.



CEO @ Faculty

Dr Zakuan Azizi Shamsul Harumain is an Assistant Professor at the Department of Biotechnology, Kulliyyah of Science. He has been selected as the CEO @ Faculty 2.0 fellow and currently doing his attachment at NanoMalaysia Berhad.

Recently, he represented the CEO of NanoMalaysia Berhad, Dr Rezal Khairi Ahmad, as an invited speaker for the 10th annual Recent Progress in Graphene and Two Dimensional Materials Research Conference (RPGR2018) in Guilin, China.

Can you briefly tell us about your educational background?

I obtained my Bachelor of Science degree in Biotechnology from IIUM in 2009, Master of Science in Environmental Biotechnology from UPM in 2012 and Doctor of Philosophy in Biology from University of York, UK in 2016.

Can you briefly share with us about your research starting from your PhD until now?

My research background has always been within the scope of environmental biotechnology ever since I started my first research - my undergraduate final year project. I did my PhD project in phytomining, specifically on plant-metal uptake relationship.

My current ongoing research is on phytomining of gold and phytoremediation of arsenic from mine wastes using *Acacia mangium* and *Jatropha curcas*. I also have an on-going consultation project with Petronas MTBE on sulphide removal from industrial wastewater by using aquatic plants.

What excites you about science?

Science has always excite me ever since I was a kid. I guess, it lies on my eagerness to know how, why and to understand something deeper. I still remember I used to catch mosquitoes, leave them in a glass bottle and observed their behaviour.

My father often took me to his orchard during my childhood. I was exposed to science and agriculture at a very young age. I was fortunate enough to further my secondary school education at MRSM. Back then, I was actively involved and represented MRSM in many science competitions. Alhamdulillah, my SPM results were good enough for me to enrol into Biotechnology course at IIUM. Looking back, I feel that I grew up with lots of scientific exposures. I believe that has largely contributed to my achievements.

You have recently been chosen in CEO @ Faculty programme. Can you tell us more about this programme?

The CEO @ Faculty is an initiative by the Industry Relations Division, Ministry of Education, in order to close the gap between academia and industry. This initiative will expose academics with real-life experience as a CEO, so that the knowledge and experience can be transferred into academia. Out of 550 applicants from public universities in Malaysia, only 50 participants were finally selected. I was fortunate enough to be chosen and I am currently doing my attachment at NanoMalaysia Berhad.

What drives you to apply for this position?

It's all about finding the unknown opportunities in life. After completion of my PhD in 2016, I realised, fewer research grants were being offered. The only thing that came into my mind was

to have collaboration between industry and academia. From this collaboration, financial support from the industry could potentially be materialised. Moreover, I have always wanted to learn "how to be a CEO?". I believe it is not that easy reaching that position, as you must possess certain qualities that differ you from the rest. So, when I got to know about this programme, I felt this is a great opportunity, as I will be directly mentored by a CEO.

How do you feel on being selected in the CEO @ Faculty programme?

Obviously, I feel blessed being selected in CEO @ Faculty programme, and I feel lucky to know many other inspired young lecturers. I am also proud to be one of the youngest participants in this programme.

Since being appointed, what has been your duties?

Being with the CEO, Dr. Rezal Khairi Ahmad, is a blessing for me as he himself was an academic prior venturing into entrepreneurship. I am currently being trained to "think like an entrepreneur". It is totally a different environment. everything moves fast and I have to keep up with the pace.

It is challenging yet interesting. As for the duties, basically, I have to accompany him during most of his meetings with clients and nanotechnology policy makers. I also have to do market research which would be helpful for the company if they plan to venture into new business projects.

How do you think this position will be beneficial to your career as a scientist as well as for the progress of the Kulliyyah and IIUM?

As a scientist, definitely it broadens my view in terms of career progress and on the actual demand from the industry. As for the Kulliyyah and IIUM, I can offer help in terms of commercialisation and industrial relations.

What will be your advice to the younger generation?

I believe we have a pool of multi-talented academics. My advice to them is to keep your options open, as we do not know what awaits us in the future. Stay Hungry, Stay Foolish!



Environmental Biology & Biotechnology Research Unit (EBBRU)



EBBRU initiated a research collaboration with Health, Safety and Environment (HSE) Department from MTBE Petronas on possible solution in industrial wastewater treatment. Researchers from KOS came up with a technical proposal that could be applied in the MTBE Petronas plant. In addition, the Kulliyah is also looking forward to any possibilities of student attachment in MTBE Petronas.

This research group has the capacity to provide engineering and scientific solutions through conducting research and provision of consultancy services using experimental, analytical, and computational techniques, that are necessary in dealing with problems involving water supply, waste water treatment, waste management, environmental pollution control (land, air and water), environmental impact assessment of engineering projects, etc.

Emphasis will be on applying biotechnology principles and environmentally friendly technologies/techniques to solve diverse environmental problems. We are also involved in multidisciplinary integration of sciences and engineering which applies in utilising huge biochemical potential of microorganisms, plants and parts thereof for the restoration and preservation of the environment and for the sustainable use of resources.

Filling the gap: PDH Wastewater Plant project based

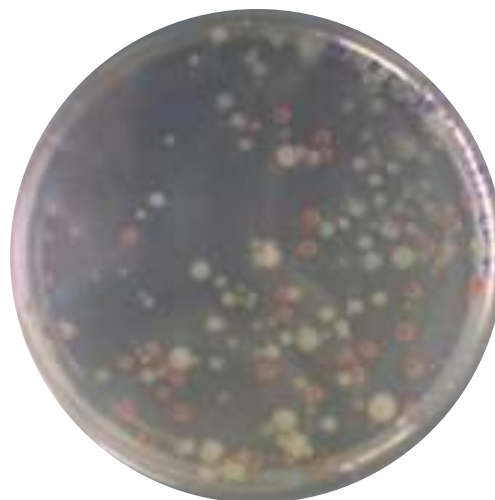
Industrial wastewater remains as the major contributor for surface water contamination in Malaysia. Recent report showed that the intensive industrial activities in Gebeng industrial areas has been the major cause for surface water contamination in Kuantan (Islam Mir Sujaul et al 2013). Many companies have to adopt the chemical and physical treatment approaches, which are costly, and non-environmental friendly.

The application of biological approach, eg. phytoremediation, is not fully utilised probably due to lack of expertise and research optimisation studies when grown in situ. Petronas's Propane Dehydrogenation (PDH) - MTBE Petronas Sdn Bhd plant located at Gebeng industrial area is one of the companies which is facing similar issue of treating certain compounds from their wastewater treatment plant.

One of the compounds found in the wastewater effluent from the process of propane production is sulfur (in the form of sodium sulphide) which needs to be treated for environmental protection. Following to the Standard A and B of the Environmental Quality Act (Industrial Effluent) 2009, the concentration of sulphide should be lower than 0.5 mg/L.

Due to unsolved issue by such industry, EBBRU came in contact and proposed several research initiatives involving the "phytoremediation of industrial wastewater by aquatic plants, microbiological remediation and bioinformatics modelling: removal of sulphide from industrial wastewater taken from propane dehydrogenation processes".

The outcome from these projects can be used to develop and design a suitable experimental plan and device for field trial studies conducted on-site. The expected outcome from this work will provide researchers and industries with suitable biological methods for its application in Malaysia.



Co-culture of bacteria isolated from oily sludge.

Units

Dynamical Systems and Their Applications Research Unit



A dynamical system is a concept in mathematics where a fixed rule describes the time dependence of a point in a geometric space. Dynamical systems describe the time evolution of systems which arise from physics, biology, chemistry and other areas.

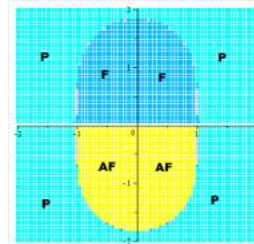
Established on the 13th of June 2013, the Dynamical Systems and their Applications research unit has contributed significantly to the advancement of knowledge in the field of dynamical systems, ergodic theory, statistical mechanics, p-adic analysis, tree enumeration in lattice models, and nonlinear quadratic stochastic operator.

The research unit is led by Prof. Dr. Nasir Ganikhodjaev who is a 71-year-old renowned mathematician especially in the field of ergodic theory. The research unit consists of 12 full members from the Department of Computational and Theoretical Sciences, and the Department of Physics. Meanwhile, its 7 associate members are from Universiti Kebangsaan Malaysia, Universiti Malaysia Terengganu, Turin Polytechnic University of Uzbekistan, The United Arab Emirates University, and the American University of the Middle East.

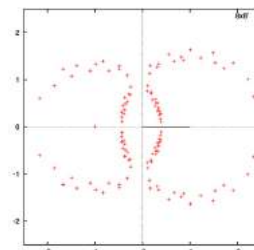
About 31 research projects have been completed and funded by Fundamental Research Grant Scheme (FRGS) and Exploratory Research Grant Scheme (ERGS), IIUM under Endowment Type A and B, Research Cluster and Research Initiative Grant Scheme, by Universiti Malaya as a joint project.

At present, this research has published more than 35 articles in indexed and non-indexed journals and 6 books published by Springer and IIUM Publisher. There are also continuous and serious efforts on training the next generation of pure mathematicians under this research unit. More than 5 PhD holders and 11 Master degree holders had graduated under the supervision of the group members.

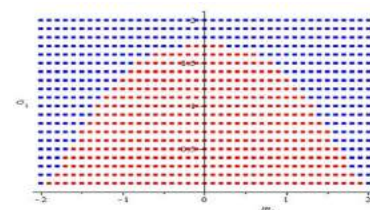
Apart from its commitment in building human capital at IIUM, this research group had organised scientific events: 1) A 1-day workshop on Dynamical Systems and their Applications in Mathematical Physics, Engineering and Economics, conducted at the Kulliyah of Engineering, IIUM Gombak campus on the 15th of May 2017; and 2) The 37th International Conference on Quantum Probability and Related topics, conducted at the Kulliyah of Science on the 22nd - 26th August 2016.



Phase diagram of Ising model with competing "Uncle-Nephew" interactions.



The zeros distribution of partition function for 2-state Potts model on 8 by 8 square lattice.



Regularity of Gaussian quadratic stochastic operator on 2D simplex.

INOCEM Research Station

INOCEM is an abbreviation for Institute of Oceanography and Maritime Studies. The research station functions to support and promote high quality research, training and outreach in oceanography and maritime studies.

Located at the seashore, INOCEM has equipment for research in oceanography and marine organisms. High technology equipment including DJI Inspire II drone is available to assist in the study of island habitat and the monitoring of coastal area. The station imparts a great deal in underwater studies by supplying Scuba diving gear, underwater camera, boat and specialist (Dive Master).

Apart from research, INOCEM also plays a role in establishing network with the local community. English camp and plogging were conducted to educate the local community about the importance of sustainable marine resources. Currently, INOCEM adopts two local schools and collaborates with the community with regards to knowledge transfer.

The services offered by INOCEM are scuba diving, Benthos sample analysis, aquaculture training, plankton sample analysis, boat rental, field sampling services and oceanography training.

Services available in INOCEM



• Scuba diving



• Benthos, plankton & field sampling



• Geographic information system mapping



• Boat rental

Activities 2018



Central Research & Animal Facility (CREAM)

Originally established as Integrated Centre for Research Animal, Care and Use (ICRACU), the facility was later rebranded to Central Research and Animal Facility (CREAM).

Historically, ICRACU was established by IIUM in May 2011 to cater for the entire research activities in Kuantan Campus that are mainly involved with Biomedical Science and Medical research.

The vision and mission of CREAM department, as a whole, are to become a world class research and animal facility for fundamental, multidisciplinary and translational research in human and animal health. CREAM is committed in providing cutting edge research and animal facility with Collaborative partnership and open Accessibility to enhance the Reliability and quality of fundamental, multidisciplinary and animal research through enculturation of Islamic and Ethical values in Modern research.

In line with the demand and requirement for research and animal facility, CREAM is equipped with state of the art instruments which enable CREAM to perform scientific testing on animals in order to produce the highest quality laboratory animals and supplying them to the market and research community for the purpose of high impact research and publication.

Research Facilities

Kulliyah of Science housed several modern and well-equipped facilities for our staff, students and collaborators to conduct their research activities. The facilities range from High Pressure Liquid Chromatography (HPLC), Gas Chromatography Mass Spectrometry (GC-MS), Fourier Transform Infrared Spectroscopy (FTIR), Atomic Absorption Spectrometry (AAS), and almost everything in between. Our Plant Tissue Culture laboratory and Inductively Coupled Plasma Mass Spectrometry (ICP-MS) equipment have been accredited by SIRIM. The high-specification, state-of-the-art facilities are technically supported and are also available for use by external researchers and industries.

For further information please feel free to contact our Head of Laboratory, Asst. Prof. Dr. Zaima Azira Zainal Abidin or visit our website <http://www.iium.edu.my/kulliyah/kos/laboratory-management-and-health-safety>



ICPMS



GC-FID



FT-IR



GC-MS



HPLC

Get details on KOS
equipment by scanning
here



Associate Professor Dr. Yukinori Mukai

Associate Professor Dr. Yukinori Mukai is one of the Gold medal recipients of the 28th International Invention, Innovation and Technology Exhibition (ITEX) 2017. He has authored more than 50 papers, and presented at 28 conferences and workshops.



Originally from Japan, Dr. Mukai is no stranger to the multicultural and multiracial academics in IIUM since he has spent few years in University Malaysia Sabah (UMS) as a lecturer. His research interest in improving fish seed production methods was cultivated during his PhD years when studying the development of sensory organs and behaviour changes of fish.

Aimed at solving the problems faced in fish farms, Dr. Mukai is currently working on three projects in relation to these issues. In one of his projects, Dr. Mukai investigates suitable protozoa size and the best protozoa culture method.

In addition, concomitant with fish wastes and uneaten food, harmful algae blooms in aquaculture sites has caused several billions worth of damages in some places. In 2010 at Yatsushiro Bay, Japan, hyper nutrition had caused significant damage that costed a large sum of Japanese yen. Dr Mukai's research work aims to overcome these problems in the future. He encourages young scientists not to be too focused on the end results but rather, one should gather knowledge along the process.

"There is only one thing that makes a dream impossible to achieve: the fear of failure." - Paulo Coelho

Dr. Zahir Ramli

Assistant Professor Dr Muhammad Zahir Ramli from the Department of Marine Science, won a silver medal at International Research Innovation, Invention and Solution Exposition 2018 (IRiISE UM 2018), under the category 'Anugerah Khas Professional'.



The award was presented for his success in developing a new technique of meshes method for simulating hydrodynamic and hydroelasticity of ship in a severe weather condition. Recently, the project has been nominated for the best innovation award in the MTCP Conference in Newcastle, UK. This project is important as it involves knowledge transfer of eco-friendly techniques in eradicating our coastal issues, particularly on coastal management.

Dr Zahir is an engineer, a researcher and an activist in the field of climate change, environmental and oceanography. He holds a Ph.D. in Engineering and Environment from the University of Southampton, UK, and obtained a Master degree in Ocean Engineering from Yokohama National University, Japan. His research focuses on improving the understanding of coastal and physical oceanography through numerical modelling techniques. In 2017, Dr Zahir received FRGS research grant for a project entitled 'Identification of rip current hazards'. This research is particularly beneficial to people staying along the coastline, especially in Pahang. He is also an active member of National Oceanography Association and Research and Education Network on coastal ecosystems in South East Asia (RENSEA).



Dr. Nurul Farahain Mohammad

Dr. Farahain is an Assistant Professor at the Department of Computational and Theoretical Sciences, and the Deputy Head of Student Smart Learning and Research Training (SMART) Unit.

She is the recipient of Hadiah Sanjungan Kategori Makalah Ilmiah, a prize that is awarded by the Malaysian Mathematical Sciences Society (PERSAMA). This prize is given to Malaysian mathematicians whose work has pushed the boundaries of a research area in mathematics and their findings are published in a local journal. She co-authored the winning article "Separation time analysis of transient magnetohydrodynamic mixed convection flow of nanofluid at lower stagnation point past a sphere" that is published in the Malaysian Journal of Fundamental and Applied Sciences.

The work involved performing separation times analysis in order to understand when a laminar flow starts to behave as a turbulent flow.

Dr Farahain received her BSc and PhD from Universiti Teknologi Malaysia. Her research areas are mathematical modelling and numerical solutions, industrial mathematics, fluid mechanics and heat transfer. In her free time, she loves reading fiction books, poems and enjoys trying new recipes at home.



Dr. Mohd. Adli Md Ali

Stunned!! that was how the IIUM Promising Researcher Award winner, Dr. Mohd. Adli b. MD. Ali felt at the University's Quality Day 2018. "I did not expect to win anything", he said humbly. Dr. Adli is currently working on three research projects which revolve around using machine learning technique for abnormality analysis in particle physics and medical imaging. He is also embarking on the use of the internet of things (IoT) devices for environmental monitoring purposes.

His scientific interests are greatly inspired by his late father, Prof. Madya MD. Ali (UKM). "He used to bring home lots of chocolates from all parts of the world!", Dr. Adli reminisced fondly. "His research focuses on chocolates and he managed to make science fun, cool and delicious all at the same time", Dr. Adli recalled.

"Like all researchers, our great ideas are greatly hindered by the system and financial aspects", he said when asked about the challenges in his research work. According to him, the former promotes quick and instant researches while the latter is due to lack of support according to him. However, despite these challenges, Dr. Adli finds satisfaction from his research by realising that his findings directly help the community. He hopes that his research would one day reach and help thousands of people. And we pray that may Allah make it easy for him. Allahumma amin.

Nurul Fatimah Takril

4th year student, Bachelor of Mathematical Sciences (Honours)

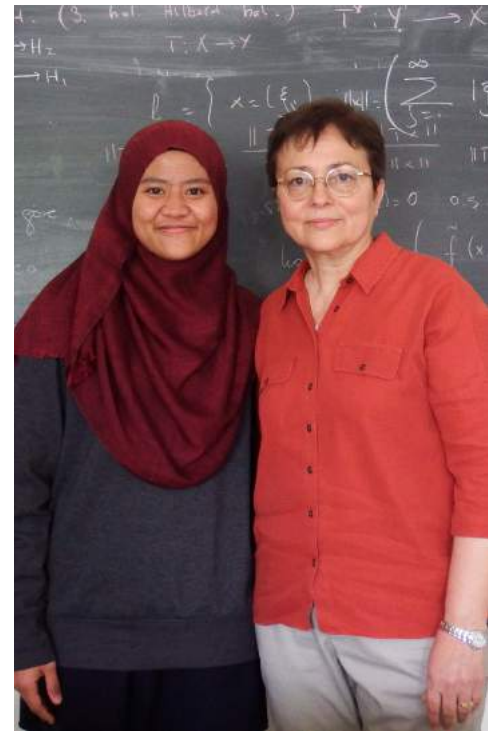
IIUM is not only a good place for studying but it offers the best place and opportunity to make new connections. Meeting new friends in IIUM allows me to have international network of acquaintances.

Studying and socialising in IIUM are the platforms in developing social skill as I met new friends from all walks of life. I got the chance to exchange ideas, skills and values with them. During weekends, IIUM is another place for every student to fulfil their valuable times with good social activities and lively events like IIUM Kuantan Open Day, IIUM Kuantan Charity run, Kulliyah festival etc. As for the quality of service, the administrators and lecturers are amazingly helpful as they can address the student's individual needs very well. I have the best classmates who are willing to help me in my studies and during my tough times.

The fun adventure in my study life is when I went to Turkey under the Mevlana

Exchange Program (spring semester 2017/2018) during my third year of study. It was a wonderful journey to experience this once-in-a-lifetime chance to study in Turkey under the IIUM exchange programme. Although I was only an exchange student, I was selected as one of the committees for the annual grand meeting under Thailand Student Association in Turkey (TSAT) and participated in an International Day event organised by International Office of Suleyman Demiral University (SDU), Isparta. I attended the Official Major International Students Gathering held in Istanbul which was organised by the Federation of International Student Association (UDEF) and met the President of Turkey, Recep Tayyip Erdogan. I also participated in the university sports day, playing volleyball. It was really a great opportunity to team up with other international students.

Overall, in my humble point of view,



studying and living in IIUM Kuantan Campus has been a great experience as I get to study in the Islamic circle of social environment and not to forget that I get the chance to do an exchange programme to Turkey.



Revinta Afriany

Indonesia

4th year, Bachelor of Biotechnology (Honours)

My decision to enrol in IIUM has been one of the defining moments in my life. The university places great value on multi-ethnic and diverse communities. I have met friends from all around the world with different ethnics and cultures. IIUM teaches me vast knowledge of now and hereafter alongside curricular skills. I learnt about Islamic knowledge via formal and informal learning which is hard to find in other institutions.

In Kulliyah, I began to be active in the Science Students' Society (SCIENCESS) as a chairperson for the International Student Affairs Bureau. I have learnt leadership skills as well as organising cultural programmes from different countries. I also joined the basketball team in Kuantan. The adrenaline rush together with the fighting spirit shown by teammates makes us train harder and improve ourselves.

When I first enrolled in Bachelor of Biotechnology programme, I found myself hard to adapt in a new environment, but with the help of the lecturers and friends, finally I was able to adjust. I admitted that in IIUM I learn how to appreciate differences as I live with friends of different backgrounds and cultures.

If my life in the university is a movie, it would be filled with various genres; suspense, thriller, adventure, joy and various other feelings. These memories will make me smile and I pray that all my friends will be successful in life. Surviving abroad is not an easy task. However, at the end of the day, studying abroad has made me grow into a more independent person. It made me more open-minded and has completely changed my perspective of life.



Mohd Razali bin Md Razak

2nd year, Master of Science (Biosciences) (IIUM)

Being one of IIUM students is one of my dreams since I was young. The inculcation of Islamic values by IIUM in various disciplines has attracted me to know more about this “Garden of Knowledge and Virtue”. In 2015, I was offered to be a research assistant in IIUM under the supervision of Assoc Prof. Dr. Zaleha Kassim and was assigned to do a research on “Adult Asian Horseshoe Crabs Feeding Behaviour” at INOCEM Research Station for two years. After three months as a research assistant, I enrolled as IIUM postgraduate student in February 2016 in Master of Science (Biosciences) programme. Throughout my postgraduate journey, there are a lot of memories and invaluable experiences that cannot be forgotten such as sampling activities. Study that is related to the environment is challenging as timing is crucial in which high tide, full moon and

monsoon have to be considered. Sometimes the sampling activities need to be done from 10 pm to 4 am. For example, sampling in the harsh mangrove during night time and high tide challenged my focus, strength and mental.

Being a postgraduate student requires us to think critically to the answers of research questions. Moreover, being around with other PG students, has improved my soft skills as we need to deliver and share our knowledge with each other. I also have the opportunity to be involved in the university society’s activities such as seminars, trainings, exhibitions, sports and recreation activities that help to build my self-confidence.

I would like to acknowledge my supervisor and postgraduate friends who have helped me in many ways throughout my postgraduate journey. To be a champion, it is not about winning or losing; it is all about hard work and thriving on a challenge. You have to embrace the pain that you experience during the race and grab the trophy at the finish line.



Mohd Ali Khameini Ahmad

2nd year student, Doctor of Philosophy (Computational and Theoretical Sciences), International Islamic University Malaysia and Doctor of Philosophy (Mathematics), Université Paris-Est France

Université Paris-Est Créteil (UPEC). I met him in August 2014 when he was a visiting researcher at IIUM. Other than Dr Mansoor, Dr Lingmin was one of the vital people in helping me to secure a sponsorship for my tuition fees in France.

At the Department of Computational and Theoretical Sciences, I have a study space in the postgraduate room where I normally work day and night along with my friends from Malaysia and Algeria who are very hardworking and diligent. Currently, I am a research assistant under my supervisor, Assoc. Prof Dr Pah Chin Hee and co-supervise by Dr. Mansoor Saburov and Prof. Dr Farrukh Mukhamedov. They invited several visiting researchers, mostly from outside Malaysia, i.e. Turkey, Tunisia, Uzbekistan and South Korea.

I had the opportunities to discuss with my supervisors not only about our research interests but also exchanged stories about family, culture and others. I got the chance to attend several conferences in Kuantan, Kuala Lumpur and Langkawi. It was a good experience to meet people and discuss our work. In France, I did my study under the supervision of Assoc. Prof. Dr. Lingmin Liao from October 2016 until March 2018 at the

In Paris, seminar on mathematics was held every week. It was a good opportunity to meet and chat with a few well-known mathematicians and learn about their research. There, I was attached to a department, Laboratoire d’Analyse et de Mathématiques Appliquées (LAMA). LAMA actively holds and organises one-day seminar or workshop every month. Doctoral students have to participate in a one-day doctoral seminar every two months in which I had presented twice in 2017 and 2018. I had very nice colleagues in France and we always have research discussions. Sometimes, we had get-together activities such as having lunch outside university, walking around the city or potluck gatherings celebrating some events.

I have learnt a lot about other cultures and tasted varieties of food from friends who are from France, Romania, China, Syria, and Lebanon. Overall, IIUM has provided me with an international exposure from experienced faculty members and visiting researchers. Undoubtedly, being a postgraduate student here has helped me a lot in improving my knowledge and research skills.

The success of a university rests upon the success of its graduates. They are the ambassadors who, through their professional and personal achievements, bring honour to their alma mater.

Kulliyyah of Science's first graduation ceremony was in the year 2006 in which the Kulliyyah had only three departments, Department of Biotechnology, Department of Biomedical Science and Department of Computational and Theoretical Sciences. Since then, Kulliyyah of Science has produced 2714 graduates.

The Kulliyyah greatly honours and recognises the achievements of all our alumni. In this first edition of science@iium magazine, we proudly present the biodata and accomplishments of four of our alumni.



Dr. Fatimah Abdul Razak
2008 KOS Graduate

Education:

- Bachelor of Mathematical Sciences (Hons), IIUM, 2006
- Master of Science (Computational and Theoretical Sciences), IIUM, 2008
- Master of Advanced Studies in Mathematics (Part III of the Mathematical Tripos), University of Cambridge, 2009
- Doctor of Philosophy (Mathematics), Imperial College, 2013

Designation:

- Senior Lecturer @ Universiti Kebangsaan Malaysia

Achievements:

- Cambridge Commonwealth Scholarship for Master of Advanced studies in Mathematics.
- Yang Di-Pertuan Agong Scholarship for PhD



Hafiz Ambar
2007 KOS Graduate

Education:

- Bachelor of Biotechnology (Hons), IIUM, 2007

Designation:

- Executive of Communication and Funding @ Sultan Mizan Antarctic Research Foundation

Achievements:

- Runner-up, Password Challenge, OIC-CERT Annual Conference 2014, Brunei Darussalam



Nurliyana Ruzlan
2008 KOS Graduate

Education:

- Bachelor of Biotechnology (Hons), IIUM, 2008

Designation:

- Manager of Technology and Innovation Management Unit @ Sime Darby Plantation

Achievements:

- 3 patents and 7 publications (with a paper in Scientific Reports, Nature)

"Make your passion your profession and work will become a game"



Muhammad Nasir Mohamed
2013 KOS Graduate

Education:

- Bachelor of Mathematical Sciences (Hons), IIUM, 2013

Designation:

- Executive Market Surveillance @Bursa Malaysia

Achievement:

- Member of MENSA since 2017, pursuing Chartered Financial Analyst (CFA) certificate.

All are welcome to contribute to IIUM Alumni Fund @
<https://epayment.iium.edu.my/alumni/>

Notice Board

Dec 2018 - CREAM Open Day

Feb 2019 - Postgraduate Development Programme: Session 1

Feb 2019 - Series of Western Blot Workshops

Apr 2019 - Postgraduate Development Programme: Session 2

Jun 2019 - KOSFIT Hiking Mount Kinabalu

Jul 2019 - Postgraduate Colloquium

Jul 2019 - Postgraduate Development Programme: Session 3

Jul 2019 - Zebra Fish Husbandry Workshop

Aug 2019 -Workshop on Dynamical Systems and Its Application

Sep 2019 -IIUM Mathematics Competition

**Oct 2019 -International Conference on Oceanography and
Sustainable Marine Production (ICOSMAP)**

