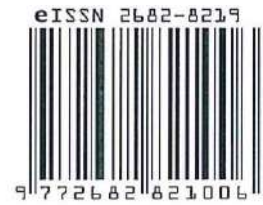


IOES Bulletin

Institute of Ocean and Earth Sciences,
University of Malaya



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Directors' corner: Welcome on board the second issue of IOES bulletin



Assalamualaikum w.b.t and warm greetings.

Welcome to the 2nd Issue of IOES Bulletin.

In this edition, we would like to share our latest research activities and achievements by IOES from the month of May to August 2019.

This issue will cover both activities conducted at IOES Main Office in Universiti Malaya Kuala Lumpur and our Bachok Marine Research Station located in Kelantan; East coast of Peninsular Malaysia. Several workshops and conferences were successfully carried out which includes 'Grand Challenge Technology Transfer Workshop' to promote seaweed cultivation, 'Global Coral Reef Monitoring Network East Asia Regional Workshop on Regional Data Analysis of Coral Reef Monitoring in East Asia Region' which witnessed the gathering of researchers from 16 countries, and our '3rd South China Sea Conference' that serves as an international platform to provide opportunities for scientists and policy-makers to be involved with research activities within South China Sea while establishing strategic research networks collaboration in the region.

It is also our pleasure to share with you on the following news. In August 2019, IOES members were invited to visit 2 research vessels INS Sagardhwani by Naval Physical and Oceanographic Laboratory, India and Research Vessel 'Tan Kah Kee' from China. This opportunity provides mutual exposure to both research vessels and IOES which also serves as a golden opportunity to respective IOES researchers and students to explore scientific equipment and state-of-the-art laboratory facilities while moving forward to venture for partnership on marine research.

Throughout these spectacular months, we are very honored to be visited by numerous visitors and collaborators from distinguished universities and institutions especially from this region. Finally, I would like to take this opportunity to welcome everyone especially our future collaborators to be continuously engaged and embarked on an interesting scientific journey with IOES; one of the Higher Institution Centres of Excellence (HICoE) in Malaysia.

Professor Dr. Sumiani Yusoff

Director

Grand Challenge Technology Transfer Workshop

Date : 5 May 2019

Venue: Bachok Marine Research Station

Objectives:

- ❖ bringing together the researchers, potential seaweed farmers, local/ coastal communities and government officers in Kelantan
- ❖ to demonstrate on-shore and off-shore seaweed cultivation techniques.

4 lectures delivered in the training workshop :

- *Pengenalan, Pengkulturan dan Produk Rumpai Laut* by Professor Dr Phang Siew Moi
- *Produk Bernilai Tinggi daripada Rumpai Laut* by Assoc. Professor Dr Juan Joon Ching
- *Rumpai Laut dan Penduduk Persisiran Pantai* by Assoc. Professor Dr Hanafi Hussin
- *Industri Rumpai Laut di Malaysia* by Dr Adibi Rahiman Md Nor



3 demonstration sessions :

- How to prepare food from Malaysia seaweeds
- Offshore and Onshore Seaweed Cultivation Systems and Techniques
- Eco-friendly seaweed pulp battery, seaweed products and uses.



Malaysia's Mangrove Blue Carbon Research: Knowledge Gaps and The Way Forward

Date : 16 May 2019

Venue : Auditorium, Institute of Advanced Studies Building, University of Malaya

MyMangrove (The Malaysian Mangrove Research Alliance and Network Monthly) is a network to bring all Malaysian mangrove experts and researcher at one place that is led by Dr. A Aldrie Amir, Senior lecturer, LESTARI, UKM, Malaysia. MyMangrove monthly disclosure is an event where a seminar delivered at different Universities every month by mangrove experts around Peninsular Malaysia. A total of 11 experts were chosen for MyMangrove disclosure and one of them was at IOES, UM. Dr. Sahadev delivered talk on "Malaysia's Mangrove Blue Carbon Research: Knowledge Gaps and The way Forward" on 16th May 2019 at Institute of Graduate studies. Dr Sharma discussed about role of mangroves in combating climate change through storing high amount of organic carbon in belowground at global and regional scale. He also discussed about current blue carbon research is Malaysia and what are the gaps and how can we move forwarding to understand the role of Malaysian mangroves in mitigating climate change.



The total ecosystem carbon (TEC) stocks of mangroves vary substantially across the world's regions and within countries. For instance, TEC stocks range from 442 to 1267 Mg C/ha² across Southeast Asian mangroves, and from 154 to 1484 Mg C/ha² in the West to Central African mangroves. Mangrove TEC stocks within Indonesia vary from 553 to 1397 Mg C/ha². This wide range of TEC stocks being reported across the globe is partly due to some countries having a very small sample size consisting of only a few study plots or transects. The Intergovernmental Panel on Climate Change (IPCC) good practice guidelines, and the United Nations Framework Convention on Climate Change (UNFCCC) reporting guidelines emphasize the need to ensure that TEC stock assessments are complete, consistent, comparable, accurate, and transparent. Thus, to better understand the potential values of these ecosystems in mitigating climate change, a standard method must be used to quantify TEC stocks for Malaysian mangroves. The results from the TEC stocks study should be included in Malaysia's nationally determined contributions (NDCs) to the UNFCCC, and use as a basis to formulate the mechanism for payments for ecosystem services (PES) that financially incentivize our efforts in the conservation and protection of mangrove forests.



Visit from the Deputy Vice-Chancellor (Student Affairs & Alumni), Prof. Ir. Dr. Abdul Aziz Bin Abdul Raman

Date : 18 June 2019

Venue : Bachok Marine Research Station

Deputy Vice-Chancellor (Student Affairs & Alumni), Prof Ir. Dr. Abdul Aziz Bin Abdul Raman and his staff has visited Bachok Marine Research Station on 18 June 2019. During the visit, Prof. Ir. Dr. Abdul Aziz have given opportunities to expose with all the scientific oceanography sampling instruments (e.g: plankton net, van-dorn water samples, core sampler, Ekman grab, hydralab multi-parameter, scuba diving equipment and etc) and oceanography analysis instruments (e.g: PCR, flow-cytometer, microscope, CHN Elementar Analyzer, Real-Time PCR System, TOC-TN analyzer, CO Analyzer, Optical Particle Counter, Ozone(O₃) Analyzer and etc). Besides that, they also visited all the laboratories in BMRS (e.g. biological oceanography lab, physical oceanography lab, molecular lab, cultures room, hatchery and nursery) and exposed to different research activity in BMRS (e.g: Harmful algae blooms (HABs) research, atmospheric research, seaweed research and prawn breeding research).



Global Coral Reef Monitoring Network East Asia Regional Workshop on Regional Data Analysis of Coral Reef Monitoring in East Asia Region

Date: 19 -21 June 2019

Venue: Bachok Marine Research Station

This workshop is jointly rganized by Ministry of the Environment, Japan, Japan Wildlife Research Center, Institute of Ocean and Earth Sciences (IOES), University of Malaya and Malaysian Society of Marine Sciences (MSMS). In partner with National Oceanic and Atmospheric Administration (NOAA) for NOAA Coral Reef Watch Outreach Training.

Objectives:

- i) Review the preliminary results of East Asia regional analysis
- ii) Discuss data sharing process for global analysis

This workshop is participated by 46 experts from 16 countries including GCRMN Northeast Asian and Southeast Asian countries, Regional experts and invited guests from CRIOBE, NOAA, UMT, Marine Park and Resource Management Division, Department of National Coordinators from East and Fisheries, Malaysia.

GCRMN national coordinators and their younger successors were invited from 14 countries and states in the East Asia Region to update the status of coral monitoring in their respective countries and shared major coral conservation issues. Most importantly, to review preliminary result of regional analysis of coral monitoring data for the Regional Report to be launched in 2020.



The 3rd South China Sea Conference 2019 (SCS2019): Sea, Science & Societies: Forging Alliances in Facing Global Environmental Change



Date : 24-28 June 2019

Venue : Eastin Hotel, Kuala Lumpur

SCS2019 is jointly organised by Institute of Ocean and Earth Sciences (IOES), University of Malaya together with the Ministry of Energy, Science, Technology, Environment and Climate Change (MESTECC), College of Marines Sciences of Xiamen University Malaysia and the First Institute of Oceanography, China.

The conference is important and relevant to the success of Sustainable Development Goals through information sharing, experience, technology and innovation in besides establishing a closer maritime relationship in the South China Sea region.

The opening ceremony was officiated by Mdm Norsham Abdul Latip, Senior Under-secretary, Pollution Control Division representing Minister of Energy, Science, Technology, Environment & Climate Change (MESTECC), Malaysia.

Objective:

- as international platform to provide opportunities for scientists and policy makers involved in research activities within the South China Sea to meet, share opinions, and establish collaborative relationships in developing joint research in the region.



SCS 2019
The 3rd South China Sea

The South China Sea Conference
Sea, Science & Societies: Forging Alliances In Facing Global Environmental Change

June 24-28, 2019
Kuala Lumpur, Malaysia

Keynote Title:
Global Patterns of Biodiversity and Biogeography

Mark John Costello, The University of Auckland New Zealand

The SCS 2019 is intended to serve as a platform for the exchange of information related to research activities in the South China Seas and to promote international cooperation among marine scientists of the world. The conference facilitates the exchange of current research and enables development of new collaborative relationships and research partnerships.

The scientific sessions will deliberate on the following broad issues:

- ✓ Marine Biodiversity Conservation and Management
- ✓ Anthropogenic Impacts on Coastal Processes
- ✓ Ocean Accounts and Maritime Communities
- ✓ Science, Technology and Innovation for Sustainable Growth of Blue Economy
- ✓ Sensing and Monitoring of the Ocean and Atmosphere

Abstract Submission: **Opened**

Acceptance Notification from: **5th April 2019**

Early Bird Registration by: **20th April 2019**

Selected articles will be published in **Journal of Oceanology and Limnology**

Sign up now

scs2019@um.edu.my

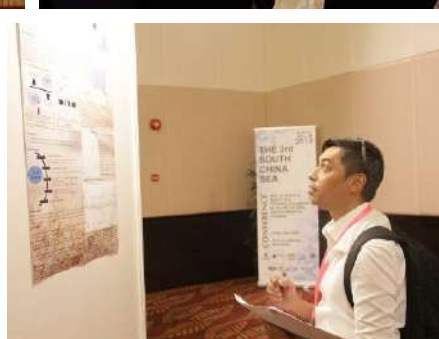
<http://umconference.um.edu.my/SCS2019>

Eastin Hotel, Kuala Lumpur



SCS2019 Highlights:

- ❖ 120 participants from universities, research agencies, government departments and NGOs
- ❖ 1 keynote lecture
- ❖ 6 plenary lectures
- ❖ 55 oral presentations
- ❖ 27 poster presentations
- ❖ 5 scientific sessions
 - i. Marine Biodiversity, Conservation & Management
 - ii. Science, Technology and Innovation for Sustainable Growth of Blue Economy
 - iii. Ocean Thermal Energy Conversion
 - iv. Anthropogenic Impacts on Coast
 - v. Sensing and Monitoring of the Ocean and Atmosphere



Visit and research collaboration

Date: 28 June 2019

Venue: Anggerik Room, Institute of Advanced Studies, University of Malaya

Prof Douglas Cato (University of Sydney, Australia); Prof Senjie Lin & his team (Xiamen University China) and Prof Qiufeng Zhang & his team (Fourth Institute of Oceanography, China) visited IOES right after The 3rd South China Sea Conference. The main objective of their visit is to promote academic exchange and discuss cooperation in technology and innovation. The researchers also visited Algae Research Laboratory and National Antarctic Research Centre.



IOES Seminar Series: Professor Dr. Ching - Nen Nathan Chen (Dept. of Oceanography, College of Marine Sciences, National Sun Yat-Sen University Taiwan) entitle “from Terrestrial Plants to Microalgae: What a Biochemist has Found”

Date : 8 July 2019

Venue: Anggerik Room, Institute of Advanced Studies

Professor Dr. Ching - Nen Nathan Chen from Department of Oceanography, College of Marine Sciences, National Sun Yat-Sen University Taiwan visited IOES on Monday, 8 July 2019. The main objective of his visit is to promote academic exchange and discuss research collaboration. The topic of interest are:

- i) Biochemistry, genetics and ecology in algae, seagrasses or land plants
- ii) Isolation, cultivation and applications of microalgae
- iii) Metabolomics in starch and lipid biosynthesis
- iv) Biosynthesis of carotenoids in microalgae



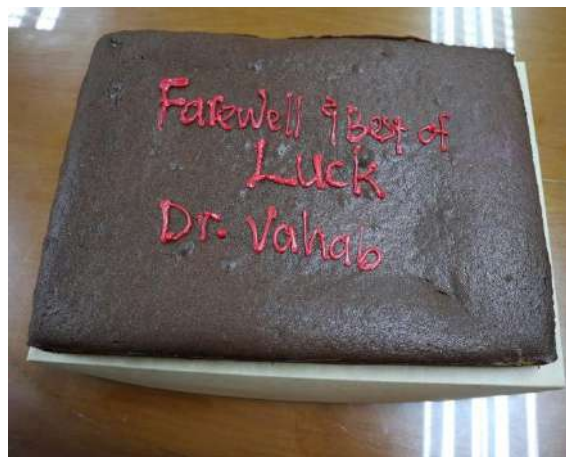
Farewell party

Date : 12 July 2019

Venue: IOES Office, Institute of Advanced Studies

Dr Vahab Vaezzadeh joined IOES on 17 June 2019 as Postdoctoral Research Fellow. His expertise are environmental analytical chemistry and bioaccumulation and bioavailability of organic pollution. After 3 years of service, he will expand his career to Guangzhou Institute of Geochemistry, Chinese Academy of Sciences (GIGCAS), China.

Best of luck Dr Vahab!



IOES Scientific Seminar Series by Dr Gill Malin (Center for Ocean and Atmospheric Studies, School of Environmental Sciences, University of East Anglia, United Kingdom) entitle “Dimethyl Sulphide (DMS): connecting algae with the global sulphur cycle and climate”

Date : 25 July 2019

Venue: IOES Office, Institute of Advanced Studies

Professor Dr Gill Malin was appointed as Visiting Professor under Academic Icon Programme at Institute of Ocean and Earth Sciences on 22 July 2019. She is currently is a Reader Biological Oceanography at the University of East Anglia, United Kingdom. She works on various aspects of biological oceanography and biogeochemistry, as well as the exploitation of microalgae for biofuels and other high-value products. A scientific seminar series was conducted to share her knowledge and provide valuable input to related researchers and students.

Date: 25 July 2019 (Thursday)
Time: 2.30 – 4.00 PM
Venue: Anggerik Room, IAS Building,
University of Malaya

IOES Scientific Seminar Series

Dimethyl Sulphide (DMS): connecting algae with the global sulphur cycle and climate

Visiting Academic Icon, University of Malaya



Prof Dr Gill Malin
Center for Ocean and Atmospheric Studies,
School of Environmental Sciences,
University of East Anglia, United Kingdom
Email: g.malin@uea.ac.uk

Abstract:

With more than 3 decades of research activity, dimethyl sulphide (DMS) is perhaps the best known of all the so-called biogenic trace gases. DMS is an important transferring compound in the global biogeochemical sulphur cycle moving sulphur from the S-rich oceanic realm to relatively S-poor land surfaces via the atmosphere. This brings the potential to enhance crop growth in some areas, particularly those remote from anthropogenic sulphur sources. Furthermore, the sea-to-air flux process brings DMS into the atmosphere where it undergoes a series of oxidation processes leading to production of sulphate aerosol particles that reflect energy from the Sun back into space directly, and indirectly after acting as cloud-condensation nuclei (CCN) and forming or brightening clouds. Both pathways may cool the Earth's climate. Thus DMS can affect climate and the production of its cellular precursor DMSP can be affected by climate. Considering the mostly algal origins of the compatible solute dimethylsulphonioacetate (DMSP), it is perhaps the only biogenic trace gas precursor that is quite well understood. In the last decade or so our knowledge of this compound in the various phytoplankton functional groups has deepened significantly. Less research attention has been paid to seaweeds. Recent years have witnessed the discovery of genes responsible for DMSP synthesis and breakdown in algae and bacteria, and the development of techniques for assessing the rates of key reactions related to DMS and DMSP production and turnover. In this short talk I will review understanding of DMS and DMSP through aspects of the multi-faceted research already published and consider what the open questions are.

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UNIVERSITY OF MALAYA



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Marine Debris Assessment

Date : 26 July 2019

Venue: Pantai Melawi, Bachok, Kelantan

Beach clean-up was conducted by IOES staffs, students and internship students at Pantai Melawi, Bachok, Kelantan. Assoc Prof Dr Leaw Chui Pin gave short briefing on Marine Debris Assessment's evaluation method before start the beach clean-up. From the assessment, the awareness on the importance of protecting the environment can be improved. The waste collected is segregated by category before sent to recycling centre.



**Together we keep our beach
clean!!!**



IOES Eidil Fitri Gathering Potluck

Date : 26 July 2019

Venue: IOES Office, Institute of Advanced Studies

The main objective of IOES Eid Fitri gathering is to strengthen bonding between IOES management, researchers, staff and students. A lot of dishes like ketupat, chicken rendang, laksa johor, nasi minyak, soup, cakes, ice-cream, fruits were served. Thank you to all IOES Heads, lecturers, fellows, postdoctoral research fellows, staff and students for attending!



Meet the Expert: Professor Dr Gill Malin, Visiting Academic Icon University of Malaya

Date : 5-6 August 2019

Venue: IOES Office, Institute of Advanced Studies

Professor Dr Gill Malin is an expert on Biological Oceanography and Environmental Research. She is currently a Reader in Biological Oceanography, University of East Anglia.

For Meet the Expert programme, researchers and students are invited to have research discussion with Prof Dr Gill Malin. IOES researchers discussed on possible research activity related to the DMS since since IOES has an active ecological (coral reef, seagrass and mangrove) and microbial team. They also had short discussion on the role of DMS in the coral reef with corals being prolific producers of this substance and it being an attractant to reef fishes.

Meet the Expert:

Professor Dr Gill Malin,

Visiting Academic Icon University of Malaya &

Reader in Biological Oceanography, University of East Anglia



The Institute of Ocean and Earth Sciences (IOES) is happy to **invite you to meet and to have some research discussion with Professor Dr Gill Malin**, Visiting Academic Icon University of Malaya and Reader in Biological Oceanography at the University of East Anglia on 5th – 6th August 2019 at Institute of Ocean and Earth Sciences (IOES) and details as follows:

Date: 5th and 6th August 2019

Time: 10 am – 12:30 pm; 14:30 pm – 16:30pm

Venue: Institute of Ocean and Earth Sciences (IOES),

C308, Block C, Level 3, Institute for Advanced Studies, University of Malaya

Professor Dr Gill Malin is an outstanding scientist in the field of Biological Oceanography and Environmental Research with focus on Biogeochemistry and Biogenic trace gases. She have published more than 100 ISI paper and her H-index is 35.

All academic staff/ researchers/ postgraduate students are welcome to meet the Dr Gill Malin at the IOES to have some discussion with her



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E-mail: admin.ioes@um.edu.my



Visit to INS Sagardhwani

Date : 10 August 2019

Venue: Port Klang, Selangor

INS Sagardhwani (A74) is a marine acoustic research ship owned by the Naval Physical and Oceanographic Laboratory, a DRDO laboratory and is maintained and operated by the Indian Navy, and based at Southern Naval Command, Kochi.



INS Sagardhwani conducts ocean research experiments in the Indian waters and spearheads NPOL's at-sea data collection activities

Objective:

- ❑ promote closer cooperation in socio-economic aspects as well as greater scientific interaction, especially in ocean research among Indian Ocean Rim (IOR) countries



IOES was very honoured for being invited to visit INS Sagardhwani. Thank you for the valuable opportunity!

Visit by Dr KV Sanil Kumar from Naval Physical and Oceanology Laboratory, India

Date : 12 August 2019

Venue: IOES Meeting Room, Institute of Advanced Studies

Dr KV Sanil Kumar is Group Director (Ocean Sciences) from Naval Physical and Oceanography Laboratory, Defence Research and Development Organisation, Ministry of Defence, Government of India. His current research interests are Indian Ocean circulation, Upper Ocean processes/modelling and Satellite Oceanography. The objective of his visit is to discuss potential research collaboration with IOES researchers especially with Air-Ocean-Land Interaction & Climate Change Research Unit members.



Visit to Research Vessel “Tan Kah Kee”

Date : 17 August 2019

Venue: Boustead Cruise Center, Port Klang, Selangor

Open Ship Days on board the research vessel “Tan Kah Kee” (R/V TTK) was held from 17-18 August 2019 at Port Klang.

During the Open Ship Days, IOES members were able to explore the cutting-edge research ship along with a suit of exciting exhibitions on how the ocean and ocean ecosystems are functioning.



Named in honour of Xiamen University’s founder, Mr. Tan Kah Kee, the R/V TTK is an advanced general-purpose research vessel equipped with state-of-the-art scientific instruments dedicated to ocean exploration, research and education. Described as “clean, quiet, multidisciplinary and green”, this 77-meter vessel has carried out over 20 scientific cruises to different parts of the ocean since it was officially put into service in April 2017.



Congratulations!!!

Wong Hao Jie - won First Place for Oral Presentation in the category of Biology on his project entitle “UVB-Induced DNA damage and repair in *Pseudogymnoascus* spp. isolated from Arctic and Antarctic regions” at the 8th Malaysian International Seminar on Antarctica (MISA8), 18-19 June 2019, Universiti Putra Malaysia.



Tan Yong Hao - won Best Oral Presentation Award on his project entitle “Investigating the Response of Polar Marine Phytoplankton *Chlorella* sp. Towards Elevated Oceanic CO₂ Using a Metabolomics Approach” at The 3rd South China Sea Conference (SCS2019), 24-28 June 2019, Eastin Hotel.

Margaret A/P William Thomes - won Best Poster Presentation Award on her project entitle “Use of Faecal Sterols as Molecular Markers of Sewage Pollution in Surface Sediments of Kelantan River and Coasts, East Coast of Peninsular Malaysia” at The 3rd South China Sea Conference (SCS2019) , 24-28 June 2019, Eastin Hotel.



Media Coverage

A WOMEN scientist group, LadyMINDS which is part of the Malaysian Invention and Design Society (MINDS), took the opportunity to recognise prominent Malaysian female scientists who have made great strides in the scientific fields by organising the National Conference on Scientific Research Achievements by Malaysian Women.

The conference was to inspire, encourage and entice younger students to pursue their passion in science.

Deputy Energy, Science, Technology, Environment and Climate Change Minister Isnaraissah Munirah Majlis opened the conference held at Rumah Universiti at Universiti Malaysia (UM).

The broad and spectacular line-up of topics were delivered by eminent women scientists from Medicine (Prof Datuk Dr Looi Lai Meng, Senior Consultant Histopathologist, Universiti Malaya Medical Centre) to Chemistry (Prof Dr Goh Lai Young, Fellow, Academy of Sciences Malaysia), Physics (Prof Dr Wan Haliza Abd Majid, Head of Low Dimensional Materials Research Centre, UM), Engineering (Prof Dr Leong Wai Yie, IET Malaysia Chairperson), Mathematics (Prof Dr Maslina Zarus, professor of Mathematics, Universiti Kebangsaan Malaysia), Biology (Prof Dr Phang Siew Moi, director, Ocean & Earth Sciences and Institute of Biology, UM) and Biotechnology (Dr Ravigadevi

Celebrating women in science



(From fifth left) MINDS founding president and academican Emeritus Prof Tan Sri Dr Augustine S.H. Ong, Isnaraissah, Prof Khatijah and Dr Omar at the conference.

Sambanthamurthi, honorary professor of Biotechnology, University of Nottingham Malaysia Campus).

Academican Emeritus Prof Tan Sri Dr Omar Abdul Rahman joined the morning sessions and Catholic Archbishop of Kuala Lumpur Rev Julian Leow attended part of the afternoon session.

About 120 participants ranging from academics, professors, professionals to students attended the conference.

Students came from Kuantan, Pahang and within Kuala Lumpur from three different schools, SM Teknik Kuantan, SMK Abdul

Rahman Talib and King Henry VIII College respectively.

The Institution of Engineering and Technology Malaysia Network also sent 20 members from their OnCampus chapters to join. Eleven universities attended the conference. These included HELP University, University of Nottingham Malaysia Campus, Universiti Teknologi Mara, UM, Universiti Putra Malaysia, Xiamen University Malaysia, International Medical University, Universiti Kebangsaan Malaysia, Monash University, MAHSA University and Sunway University.

Representatives from Institut Kimia Malaysia and the Malaysian Palm Oil Board also attended the conference.

At the end of each module, there were lively and interactive Q&A discussions between the module presenters and the audience chaired by Datuk Dr Choo Yuen May, the chairperson of the conference organising committee.

The highlight of the celebration was the conferment of the Inaugural Lifetime Scientific Research Achievements Women's Award on Prof Datin Paduka Dr Khatijah Yusoff, for her outstanding scientific

research in the field of microbiology, and her inspiring contributions to science and the nation.

She is currently Unesco World Academy of Sciences for East and South East Asia vice president, Islamic World Academy of Sciences vice president and a member of the United Nations' Council of Scientific Advisers for the International Centre for Genetic Engineering and Biotechnology.

Apart from the talks, an exhibition showcasing the research of Prof Goh, Prof Wan Haliza, Prof Leong, Prof Phang and Dr Ravigadevi was also held.

“嘉庚”号科考船开放参观

由厦门大学、厦门大学马来西亚分校、中国—东盟海洋学院主办的“嘉庚”号科考船开放日，在巴生港莫实得邮轮中心顺利举行，吸引逾千名公众报名参加！

该活动是从昨日起至今日（18日）连续两天举行，这是中国科考船首次在我国免费开放予公众参观，吸引了各界人士参加。

图为来访者正拍摄厦门大学创办人陈嘉庚的照片，以“嘉庚”号命名，主要是为了缅怀厦门大学校主、著名爱国侨领陈嘉庚，他是在1921年创办厦门大学，并主张“力挽海权，培育专才”为宗旨发展海洋科学。

报道 ▶ A23

GRA Vacancies

VACANCY : Graduate Research Assistant (GRA) - Master Programme

Project Title:
Evaluation of Microalgae for Microbially Induced Precipitation (MICP) for Sustainable Biocement Production

Criteria:

- ☐ Bachelor of Science in Microbiology, Biochemistry or other related fields and have experience in Phycology or Botany
- ☐ Good command of English (spoken and written)
- ☐ Selected candidate MUST register to pursue MPhil (by research) at the University of Malaya.
- ☐ Strong reporting and documentation skills
- ☐ Able to work independently and/ or in a diverse group of scientists

Interested candidates should forward a cover letter (including description of current research and accomplishments) and complete curriculum vitae containing academic qualifications, research experience, transcripts etc. to **Professor Dr Phang Siew Moi** (phang@um.edu.my) / **Dr Vejeysri Vello** (vejeysri@um.edu.my)

VACANCY : Graduate Research Assistant (GRA) - PhD Programme

Research Topic:
Aquatic microbial ecology (marine and riverine systems). Microbial adaptation and fitness due to environmental change will be determined through microbiological and molecular methods

Criteria:

- ☐ Fresh graduate with CGPA > 3.70 or with a M.Sc degree. Preferably with microbiology or marine science background.
- ☐ Must have commitment and passion in research.
- ☐ Good communication skills in both spoken and written English.
- ☐ Pleasant personality, independent, hardworking and self-motivating

Candidates will be required to complete a two-month probationary period where their commitment and laboratory skills will be assessed. After a successful probation, the candidate is required to register for post-graduate studies at the Institute of Ocean and Earth Sciences, University of Malaya.

E-mail your CV (with photograph) to: lee@um.edu.my or cwbong@um.edu.my

*you may be asked to attend an interview at the University of Malaya.

VACANCY : Graduate Research Assistant (GRA) - PhD and Master Programme

Projects Title:
Spatial Distribution of PAHs in Coastal Soil and Air around a Landfill and Determination of Their Health Impact

Full-time master/PhD student is required:
Project duration: 24 months (fully funded)
Monthly Salary: RM 2,000 (inclusive of and EPF)

Benefits:

- Student has the opportunity to operate air quality samplers, learn air pollution and environmental risk modelling.
- Student is able to access well-equipped analytical chemistry laboratory which has GCMS, ICP-MS, Solid Phase Extraction (SPE) system and microwave digestion to determine the chemical substances from air, water and soils.

Criteria:

- ☐ Bachelor/Master degree in Chemistry/ Applied Chemistry/ Biochemistry / Chemical Engineering with a minimum CGPA of at least 3.0 or equivalent.
- ☐ Good command of English (Spoken and Written).
- ☐ Good knowledge in chemical analysis would be an added advantage.
- ☐ Good command in data processing and mathematical modelling.
- ☐ Strong teamwork and reporting skills.

Career prospect:

1. Analytical chemistry
2. Geoscience
3. Environmental and civil engineering
4. Chemical and process engineering
5. Petrochemical industry

Interested candidates should forward a cover letter and complete curriculum vitae containing academic qualifications, research experience, transcripts etc. to **Dr Ng Chee Guan** (cheeguan.ng@um.edu.my)

VACANCY : Graduate Research Assistant (GRA) - Master & PhD

Research Topic:
Effects of Variability in Arctic and Antarctic on the Tropical Maritime Continent Weather and Climate under the Influence of Climate Change

Criteria:

- ☐ Bachelor/ Master's degree in Engineering, Physics, Mathematics or other related field
- ☐ Good command of English and Bahasa (spoken and written)
- ☐ Strong reporting and documentation skills
- ☐ Able to work independently and/ or in a diverse group of scientists
- ☐ Selected candidate MUST register to pursue Master or PhD at University of Malaya.

E-mail your cover letter including description of current research and accomplishments) and complete curriculum vitae containing academic qualifications, research experience, transcripts, etc. to **Professor Dato' Dr Azizan Abu Samah** (azizans@um.edu.my)