



UMT NEWSLETTER

Volume 2, Issue 7, July 2022

Ocean of Discoveries for Global Sustainability



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The oceans are important to humans. They provide the main source of protein, produce half the world's oxygen, and support 90 percent of the world's trade. However, their ecosystems are increasingly coming under threat, evidenced by ocean pollution, depletion of the fish population, climate change, rising sea levels, and dying coral reefs.



World Oceans Day is observed every 8 June to remind the public of such issues, and befittingly this year's theme was "Revitalization: Collective Action for the Oceans." UMT joins the world in recognizing the World Oceans Day annually by organizing the World Oceans Week (WOW). This year, many activities were conducted to raise the communities' awareness of the importance of safeguarding the oceans. In addition, UMT's Repository and Reference Center (RRC) for marine biodiversity conducted an open day. RRC contains over 50,000 marine specimens, 70 of them unique.

UMT has been championing SDG14: Life Below Water. It has actively been conducting ocean research through its Institute of Oceanography and Environment (INOS) and the Centre for Ocean Governance. In THE Impact Rankings 2022, it was ranked 80. Recently, its students won first place at international competition Ocean Challenge 2022. UMT will continue to campaign for the revitalization of the oceans to ensure their sustainability for future generations.

Professor Dr. Fauziah Hj. Abu Hasan
Executive Editor

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UMT Holds Week-long Campaign in the Spirit of World Oceans Day

As the global community celebrated World Oceans Day last 8 June and engaged in efforts to raise awareness of the oceans' importance, UMT made sure it too joined in such noble endeavours. The university organized a week-long campaign filled with informative and fun ocean-themed activities.

UMT's initiative drew the interest from Malaysian Maritime Enforcement Agency (APMM), which decided to become the event's co-organizer, allowing the campaign to receive wider coverage. The agency could relate to the campaign's objectives that revolved around the oceans and marine lives, UMT Vice Chancellor Professor Dato' Dr. Mazlan Abd Ghaffar said.



World Oceans Day is celebrated across the globe annually every 8 June after the Day was officially declared by the United Nations General Assembly in 2009, a year after it was proposed. Its yearly celebration is to help resolve world's ocean problems. The theme for 2022 was Revitalization: Collective Action for the Ocean.

UMT's active participation in the celebration befits its status as a university that focuses on marine science and aquatic resources, Professor Mazlan said. The university has considered the campaign, known as World Oceans Week (WOW)@UMT, as one of its special annual events. UMT has successfully held WOW@UMT for several years, save for 2020 and 2021 in light of the Covid-19 pandemic.

The objective of the latest campaign, WOW2022@UMT, was to widen the public's understanding of the environment ecosystem including the oceans' sustainability, Professor Mazlan said.

"The effort undertaken by UMT was to raise awareness of the importance of conserving nature's treasures, including the oceans that play an important role in our lives," he said.

He added that it is common to find plastic wastes such as water bottles, straws, and polystyrene containers along the coastal areas. These items will drift into the oceans and be eaten by marine species, causing a disruption of the ecosystem when consumption of these harmful materials leads to their deaths.

WOW2022@UMT chairman Professor Dr. Mohd Fadzil Akhir said more than a thousand people of all ages flocked to Batu Buruk Beach on the campaign's first day. The popular beach, 17 km away from UMT, was the selected location for the opening ceremony and a host of other activities. In addition to an exhibition on ocean and environmental awareness, a beach clean-up, drawing and sandcastle building competitions for children, and a beach soccer tournament for the local community were held.



The rest of the activities, including a seminar, and another beach clean-up and an exhibition, took place throughout the week at UMT and two other beaches. Also taking place was UMT Repository and Reference Centre (RRC) Open Day. RRC contains over 50,000 marine specimens, 70 of them unique.

UMT Collaborates with Two More Overseas Universities



UMT Vice Chancellor recently returned from his official overseas visits, bringing back with him good news. When Professor Mazlan was in Qatar and the United Kingdom, two universities signed documents to become UMT's latest research partners.

Qatar University signed a Memorandum of Understanding (MOU) with UMT to collaborate on three research projects, with funding provided by Qatar National Research Fund (QNRF) and International Research Collaboration Co-fund (IRCC). The projects are valued at RM5.7 million.



The projects involve the aquaculture of giant freshwater prawns and sea prawns using an aquaponic system and water recirculating system at a desert area and are led by UMT's Institute of Tropical Aquaculture and Fisheries (AKUATROP). AKUATROP is recognized by the Ministry of Higher Education as a Higher Institution Centre of Excellence in the field of Future Food.

UMT sent two AKUATROP researchers to Qatar in June to begin preliminary work on the three projects. One of the projects has already started. The project, titled "Giant freshwater prawn and production of aquaculture feed with only Qatar inputs, innovation for freshwater aquaculture, hydroponics and feed production," is scheduled to be completed in 2024.

The other two projects are expected to begin soon. These projects, titled "Developing a zero-discharge biorefinery pilot plant" and "Automated Recirculating Marine System for high-quality Aquaculture production environment," are currently at the end of the evaluation stage.

While Professor Mazlan was in the United Kingdom, Grantham Institute – Climate Change and the Environment at Imperial College London signed a Letter of Intent (LOI) with UMT to collaborate on research projects especially on climate change.



AKUATROP and the Institute of Marine Biotechnology will be the two institutes to be working most frequently with Grantham Institute to study the impact of climate change on aquatic lives.

Further discussions will be held to discuss other fields for the joint research projects. This includes forest ecology, which is currently being investigated by UMT's Institute of Tropical Biodiversity and Sustainable Development. Several related studies have been carried out at Kenyir Lake Nature Research Station.

Also to be considered are geochemistry and beach pollution, two areas of research frequently focused on by UMT's Institute of Oceanography and Environment (INOS).

The LOI was signed following Professor Mazlan's visit to the Institute where a discussion was held with Professor Dr. Martin John Siebert on possible research collaborations on climate change, particularly as it relates to UMT's niche area of marine and aquatic resources. Also discussed were possible researcher and student exchanges and joint grant applications.

UMT and Grantham Institute have previously collaborated on a research project in Antarctica. An article titled "A 400 km Antarctic subglacial river system impacts ice dynamics and grounding zone processes" written based on the project has been published in high-impact journal Nature Geoscience.

UMT Students Win First Place at International Competition

A team of UMT students was all smiles at the recent Ocean Challenge 2022 competition. The six-member squad won first place at the event organized by the Ocean Affairs Council and the American Institute in Taiwan Kaohsiung Branch Office.



The team that went by the name Serpihan was the only representative from Malaysia to make it to the event's final, team advisor Dr. Maizah M. Abdullah said.

The Ocean Challenge is a programme that engages students and young generations worldwide on ocean crisis and encourages them to become active in the fight against ocean challenges. Launched in 2019, the programme aims to promote young adult's awareness of ocean situation, mobilize them to take actions, and ensure that the leaders of tomorrow are well-informed about the intricacies of the oceans.

The 2022 edition of Ocean Challenge provided a forum for young people to address pressing ocean issues through scientific approaches. Applicants between the ages of 15 and 35 were invited to propose creative solutions that use marine science as the key element.

In addition to certificates of participation, Serpihan also received cash prizes for the victory.

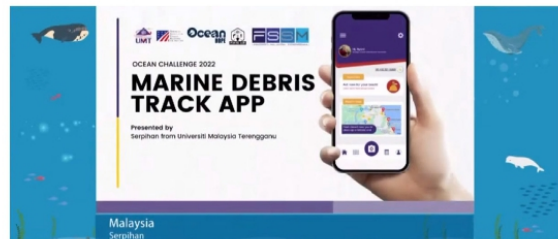
Team leader Nadia Umar Ridzuan said the victory was a meaningful gift to all members who are in their final semester and to UMT. The win was great evidence of how committed UMT is towards empowering its students to become future ocean leaders, she said.

Other Serpihan members included Brendon Vun Man Fook, Muhammad Faris Hadi Zulkifli, Aizatul Jasmine Azizan, Jennifer Janani A/P Sathiaselalan, and Amanda Fika Kanchan. All are from the Faculty of Science and Marine Environment, taking Bachelor of Science in Marine Biology.



UMT has proven that it is at the forefront of marine studies not only nationally but also internationally, Dr. Maizah said. The senior lecturer at the Faculty of Science and Marine Environment added she often reminds her students that the size and location of a university are not important, but the quality of the knowledge gained at the place is.

She also relates to her students the success story of Mogesh Sababathy, UMT alumnus who graduated in Marine Biology and was an internationally renowned leader of the Ocean Hope Project, hoping they will become inspired to achieve similar feats.



The Ocean Challenge 2022 was in alignment with the core of the Ocean Decade, Dr. Maizah said. The UMT Ocean Hope Project advisor added that the United Nations on 5 December 2017 declared 2021-2030 as Decade of Ocean Science for Sustainable Development with the objective of establishing a common framework to ensure that ocean science can fully support countries to achieve the 2030 Agenda for Sustainable Development.

RRC@INOS Open Day Takes Visitors to Underwater World

A unique and internationally recognized centre at UMT has been playing an important role in marine research, but many among the public were not aware of the centre's existence.

That changed recently. More than 3,000 visitors flocked to the South China Sea Repository and Reference Centre (RRC) in June when UMT conducted RRC@INOS Open Day.

RRC was set up as a biodiversity museum in 2004, Vice Chancellor Professor Dato' Dr. Mazlan Abd Ghaffar said.

The centre's establishment was for the purpose of learning more about the marine environment, whereby the centre manages marine specimens studied by researchers, Professor Mazlan said. Aquatic environment and ecosystem are closely connected to UMT, as the university's niche area is marine science and aquatic resources, he added.

RRC, located at the Institute of Oceanography and Environment (INOS), manages marine specimens deposited by researchers after they have studied the samples. The centre ensures that the specimens are well-kept and available for reference or future studies.

By acting as a library that keeps physical evidence of Malaysia's diverse nature, RRC is providing an important contribution to the country, Professor Mazlan said.



According to Professor Ts. Dr. Mohd Fadzil Mohd Akhir, INOS Director, presently there are close to 50,000 specimens at the centre, classified under four categories, zoology, botany, geology, and genomic. Seventy of these specimens are classified as type specimens, which are used to name new species in science. The value of all the specimens is close to RM7.5 million.

Specimen and data management at RRC adhere to the international practice based on the National Park Service (USA) format, Professor Mohd Fadzil said. This format is being used by many nature museums in various countries. RRC has also upgraded its database and is currently using Proficio software, the same software used by the Smithsonian Institution, USA.



With the theme "A World under the Sea: Stories from the South China Sea," RRC@INOS Open Day was intended to provide visitors with the opportunity to explore the underwater world.

In addition to visits to the gallery and ten marine exhibition booths and talks by experts, the five-day event was filled with other activities, including a lucky draw, quizzes, games, and a treasure hunt, which offered prizes to winners.



The open day was held in collaboration with Sustainable Ocean Alliance (SOA), a global community working together to solve ocean-related issues, and Uniqlo, a Japanese clothing company. SOA lent its experts for the talks while Uniqlo sponsored the event.

The 3,000 visitors were mostly students and teachers from 21 schools around Terengganu. Also, there were more than 400 people, including some from other countries, who attended talks by experts online. Held in a hybrid manner, the talks took place physically as well as virtually via an online platform.

UMT Organizes Seven Outreach Programmes in Partnership with Ministry

UMT and the Ministry of Higher Education (MOHE) worked together and organized several programmes for the local communities recently when the government's country-wide Malaysian Family Aspirations (AKM) Tour made its stop in Terengganu.

Collaborating with the Policy Planning and Research Division at MOHE, UMT conducted seven community outreach programmes for communities around Kuala Nerus during the three days the AKM Tour took place, from 2 to 4 June.

The programmes, mostly involving knowledge transfer, were intended to equip participants with beneficial and practical knowledge. The Division provided funding while UMT planned the programmes and lent its expertise in various fields including stingless bees, mushrooms, aquaculture, sailing, scuba diving, engineering, and mathematics.

Here are the seven programmes:

"Beach Cleanup & Recycling," which took place at a beach near KTCC Mall and received cooperation from KTCC Mall, NGOs, and Kuala Terengganu City Council (MBKT), drew 100 volunteers. During the three-hour event, plastic waste weighing 475 kilograms was collected and then handed to MBKT for disposal or recycling.



"Introduction to Sailing Sport," a programme organized by UMT Sailing Training Centre at Duyong Marina Resort, was attended by 50 selected students from schools around Kuala Nerus and Kuala Terengganu and ten disabled youths.

"Discover Scuba," a programme teaching the fundamentals of scuba diving, was held at UMT swimming pool. A total of 50 selected participants learned how to use diving equipment from certified trainers from UMT Dive Centre.



"Stingless Bee Entrepreneurship Programme," held at Kampung Gemuruh, Kuala Nerus, was attended by 40 low-income individuals from the area. They learned about the business opportunities involving stingless bees and then were shown how to produce honey and honey-based products. At the programme's completion, UMT researchers placed 30 stingless bee colonies at several areas around the village mosque. More training sessions will be conducted at later dates.

"Catfish Farming in Polyethylene Tank Project" was attended by 20 participants. They were trained by UMT aquaculture experts on how to rear catfish in polyethylene tanks for additional income. The team will continue to monitor the project to ensure its success.

"Oyster Mushroom Entrepreneurship Workshop," held at Darul Akhyar, an orphanage in Kuala Nerus, was attended by the orphanage's residents. They were taught how to grow, care for, and harvest oyster mushrooms. UMT will monitor the project for three months until the mushrooms are ready to be harvested.

"STEM Exploration Project," held at UMT and three schools concurrently, was attended by 436 school students. Using an interactive module, the project aimed to increase students' interest in Science, Technology, Engineering, and Mathematics. The participants were given the opportunity to conduct simple scientific experiments under the guidance of the lecturers and students of UMT STEM Foundation Centre.



THE 3rd SEA-STEM INTERNATIONAL CONFERENCE & WORKSHOP
24-25 NOVEMBER 2022 HYBRID
SHAPING CREATIVE AND INNOVATIVE FUTURE IN STEM

The IMT-GT Uninet network, established in 1996 by several universities from Indonesia, Malaysia and Thailand with agendas to develop STEM in these countries through various activities including the annual SEA-STEM International Conference (SEA-STEM). This conference provides an opportunity for educators, academics, scientists, researchers, engineers, teachers and those related to share knowledge and experiences in the learning and teaching of Science, Technology, Engineering, and Mathematics (STEM) to empower the quality of education around the world. This year, Universiti Malaysia Terengganu, Malaysia (UMT) through the STEM Foundation Center (PASTEM) has been selected to host the 3rd Southeast Asian Science, Technology, Engineering and Mathematics International Conference & Workshop (SEA-STEM2022) with the trending theme " Shaping Creative and Innovative Futures in STEM"



FULL SCOPE

Technology-Enhanced STEM Teaching and Learning

- Internet of Things (IoT)
- Artificial Intelligence (AI) in Education
- Computer-Based Learning and Courseware Technologies
- Educational Digital Games, Simulation and Animations
- Smart Classroom and Learning Environment
- Social Media and Learning Network

Curriculum Studies and Development Focused STEM Education

- Assessment and Evaluation
- Curriculum Design and Development
- Outcome-Based Education
- Education Policy, Leadership, and Administration
- STEM for Digital Natives
- STEM for TVET
- Interdisciplinary Curriculum Development

Pedagogical Modes and Applications of STEM Education

- 21st Century Skills
- Soft Skills (eg. Communications, Teamwork, etc.)
- Laboratory Experience (On-Campus and Remote)
- Lifelong Learning / Education
- Research Training (Undergraduate and Undergraduate)
- Instructional Kits for 21st Century Skills Development

Women and Girls in STEM

- Policies and Practice for Women in STEM
- Engineering and Computing
- Enhancing Women's STEM Talent and Workforce
- Information and Communication Technologies Studies
- Enhancing Awareness on STEM Education

Workshop Scope

- Internet of Thing (IoT)
- Build Mobile Apps with App Inventor 2
- How to Create Video Messages by Canva
- Metaverse



For more information
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KEYNOTE SPEAKERS



FEES

	Virtual		Face to Face	
	Local	International	Local	International
Student	RM100	50 USD	RM150	80 USD
Presenter	RM 350	180 USD	RM 450	230 USD
Participant	RM150	80 USD	RM 250	130 USD

Workshop	Face to Face	
	Local	International
Participant	RM250	130 USD

PAPER PUBLICATION

Accepted full paper will be published in Scopus index conference proceeding/journal

Important Dates

Submission Abstract/ Due registration	30 Julai 2022
Notification of Abstract Submission	15 August 2022
Camera Ready Abstract	15 September 2022
Registration Payment Due	30 September 2022
Deadline for Full Paper	30 October 2022

REGISTRATION

seastem.umt.edu.my



24-25 NOVEMBER 2022
Workshop

In conjunction with :



A face-to-face workshop will be held at Universiti Malaysia Terengganu in conjunction with the 3rd SEA-STEM International Conference & Workshop.

The goal of this workshop is to provide cutting-edge technology in the areas of Internet of Things (IoT), App Inventor, Canva, and Metaverse through a series of lectures given by specialists in each discipline.

During the two-day course, participants will choose two of four areas to learn about.



Assoc. Prof. Ts. Dr. Nik Zulkarnaen bin Khidzir
Universiti Malaysia Kelantan

Internet of Things (IoT): Design and Innovation Application

Learn how to derive data-driven insights from IoT data to improve business management, increase productivity and efficiency of business operations, and create new business models and more innovative revenue streams.



Assoc. Prof. Ts. Dr. Tan Tse Guan
Universiti Malaysia Kelantan

Build Mobile Apps with App Inventor 2

Learn how to design and develop mobile apps with MIT App Inventor 2, a block-based programming language for creating fully functional mobile apps. This hands-on workshop enables participants to learn through creating a real-world mobile app that may be used as the basis for future Android projects.



Mr. Mohd Hakimi bin Awang Su,
Terengganu Science & Creativity Center

How to Create Video Messages by Canva

Learn how to create engaging videos on the go using Canva's easy-to-use video editor and thousands of fully customizable templates, no software installation required.



Mr. Mohammed Ariffin bin Zainal Abidin
AR Edutech

Metaverse

Learn how to simulate our real world to a digital twin that can be integrated using augmented reality (AR), virtual reality (VR) and blockchain technology, along with concepts from social media to enhance digital education in Malaysia

Fees

Local : RM250
International : 130 USD

Venue

Universiti Malaysia Terengganu

In collaboration with :



Important Dates : (1st Announcement)

Registration Due Date : 30 July 2022
Registration Payment Due Date : 30 September 2022

Meals will be provided



Scan to register

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