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UNDERWATER TECHNOLOGY ESSENTIAL TO SAFEGUARD SOVEREIGNTY OF THE NATION'S WATERS

NIBONG TEBAL, 10 December 2015 - The tragedy of the missing airliner MH370 has shown that there are still deep sea mysteries which have yet to be solved by man, due to the current inadequate technology and systems which demand necessary enhancements.

Therefore, an underwater technology expert at Universiti Sains Malaysia (USM), Professor Dr. Mohd. Rizal Arshad said that, sooner or later the country should look to the needs and the importance of underwater technology in dealing with future challenges in relation to oceanic issues.

Currently serving as the Deputy Dean at the USM School of Electrical and Electronics Engineering (PPKEE), he said, acquiring underwater technology is essential in ensuring the capability of dealing with issues relating to the sovereignty of the nation's waters, as oceans represent 71 percent of the planet's surface.

"Much have yet to be discovered about the oceans. For instance, the incidence of MH370 which until now remains a question and the difficulties faced in searching for the debris or substantial evidence of remains during the search missions.

"It occurred as the current technology is still inadequate in providing answers to the questions of the deep seas, and the incident probably would have occurred at a location where others have not passed through due to geographical or other unknown factors," he stated.

He elaborated on this in his lecture entitled Robots Conquering the Oceans: Importance of Underwater Technology to Preserve the Sovereignty of Malaysian Waters (Robot Penakluk Lautan: Kepentingan Teknologi Bawah Air Bagi Memelihara Kedaulatan Perairan Malaysia) in conjunction with the Professorial Appointment Public Lecture series here recently.

Others who attended the lecture include the Director of the USM Engineering Campus, Professor Dr. Zainal Arifin Mohd. Ishak; Dean of PPKEE, Professor Dr. Mohd. Zaid Abdullah; Deans and other invited guests.

Mohd. Rizal who has also been the reference point for the media during the tragedy of the missing flight MH370, urged the country to develop underwater robotics technology, acoustic sensing, seabed imaging and the integration of real-time information.

"All the technology involves the development of robotic underwater vehicles for exploratory purposes, sensing systems and the processing of surrounding parameters and for all the data to be processed in determining the subsequent steps to be taken," he said.

Together with his team, they have conducted various studies on equipment such as the Remotely-Operated Vehicle (ROV), Autonomous Underwater Vehicle (AUV), Autonomous Surface Vessel and the Smart Buoy System among others, in developing underwater technology which has the potential for future applications.

“There are many evidences on the race to acquire resources for the future such as food, energy sources and infrastructure, which would occur as a country gains control of the resources from the seas and oceans.

“Therefore, the development of underwater technology is in line with such occurrences and the country needs to put more focus on the development of oceanic technology to continuously safeguard the sovereignty and sustainability of the country’s waters,” he said.

Mohd. Rizal and his research team are also pioneers on the research and development of Underwater Technology systems in the country and he has been involved in various national and international agencies related to oceanic applications.

Translation: Mazlan Hanafi Basharudin

Text: Marziana Mohamed Alias



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Pusat Media dan Perhubungan Awam / Media and Public Relations Centre

Level 1, Building E42, Chancellory II, Universiti Sains Malaysia, 11800 USM, Pulau Pinang Malaysia

Tel : +604-653 3888 | Fax : +604-658 9666 | Email : [pro@usm.my \(mailto:pro@usm.my\)](mailto:pro@usm.my)

Laman Web Rasmi / Official Website : [Universiti Sains Malaysia \(http://www.usm.my\)](http://www.usm.my)

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