

Profesor Ulung

Professor Datuk Dr Harith Ahmad FASc — Opening Eyes to Photonics

Professor Datuk Dr Harith Ahmad FASc obtained his first degree in BSc (Physics), with First Class Honours from the University of Malaya, in 1979. Following that, he obtained his MSc and PhD from the University of Wales in 1980 and 1983 respectively. In the earliest years of his career, Professor Datuk Dr Harith began to comprehend the importance that photonics would have to the future well-being of a nation. Upon returning to Malaysia he recognised two facts: 1) he was the first person within Malaysia to have achieved training in the field of photonics; and 2) a national photonics initiative would identify critical technical priorities for



long- term federal R&D funding, yet this crucial development was not currently in place, or even in the making. From these realisations, it later transformed into a personal challenge for the young researcher.

Professor Datuk Dr Harith understood his first step must be capacity-building, to initiate interest in photonics, with a key focal point of increasing the number of highly capable personnel nationally in that field. Working together with several scientific colleagues, he was able to highlight the importance of photonics in Malaysia to the government within the 7th Malaysian Plan. Subsequent support from the government enabled Professor Datuk Dr Harith's team to put together a nationwide research network consisting of seven Malaysian universities and SIRIM. The team then succeeded in assembling a significant pool of manpower of approximately 100 scientists and researchers, with an average of 5 academic staff and 10 PhD students within each university, which Professor Datuk Dr Harith led and mentored as the chairman of the project. This group has since grown considerably in size.

After gaining government recognition as an expert in developing photonics, Professor Datuk Dr Harith identified the next phase as bringing academia and industry together. For this purpose, he initiated collaborations in 1995 with Telekom Malaysia to foster their understanding of the impact that photonics would play in the future of telecommunications. Subsequently, a number of national-level projects resulted from his initial idea of implementing photonics throughout the country. Among them, include deployment of fibre optics as the backbone of national telecommunications, and more recently the roll-out of the High Speed Broadband Initiative (HSBB-Unifi). Apart from that, he assisted in the development of many SMEs in areas such as fabrication of various optical components and technical consultation on network deployments and device development.

The next leap was the establishment of a National Centre of Excellence (HiCoE) as a one-stop centre for referral, advice, support and testing for photonics and photonics-related research and innovation. In 2014, the Ministry of Education (MOE) granted the status of HiCoE for the Photonics Research Centre of University of Malaya. Under Professor Datuk Dr Harith's guidance and direction, the centre has already made significant inroads, with firm collaborations and support programs being established between the centre and other research laboratories from younger universities. The Photonics Research Centre's large number of publications has ensured that most laboratories around the world acknowledge it as a significant player in the global photonics stage.

Besides that, Professor Datuk Dr Harith has supervised until completion more than 35 PhD students – some of whom consequently are directing research in their respective institutions. He has also published more than 520 articles in ISI-indexed journals and holds 10 patents of product innovation. In recognition to his expansive contribution, he has received many awards from Malaysian and international organisations such as Fellow of Akademi Sains Malaysia in 2006, Malaysia-Toray Science Foundation Award in 2007, Merdeka Award for Scholastic Achievement in 2010, Islamic Development Bank Prize for Science and Technology – Photonics Research Centre in 2014, ASEAN Outstanding Scientist and Technology Award in 2014, and Distinguished Professor Award from MOE in 2014.