

IECON Opening 19 October 2020

Good morning from Singapore and Good Day to you, wherever you are logging in from.

I am Khiang Wee Lim, Honorary General Chair of IECON2020.

It is my pleasure to welcome you to this virtual IECON, organised from Singapore.

This flagship conference of the IEEE Industrial Electronics Society was first held in 1975. It became an annual conference and for its first 9 years, the location of the conference was in the United States.

In 1984, for the first time, it was held outside the United States, in Tokyo.

1984 was also the first time I attended an IECON

As a young, and brash, officer of the IEEE Singapore Section then, and at the suggestion of Dr Victor Huang, who was then a member of the Industrial Electronics Society AdCom, I made a proposal to the Adcom that it should consider holding IECON in Singapore.

To our great delight, and to the AdCom's great credit, that is exactly what the Society's leadership decided to do.

So in 1988, 32 years ago, IECON left the United States for the 2nd time and came to Singapore.

It was a big event for us here in Singapore, a first ever IEEE society flagship conference and the start of many more major IEEE Conferences in Singapore.

IECON has not looked back since. From those early years, IECON has grown steadily bigger into the global conference that it now is, moving around many locations in the world, locations at which industrial electronics is important or has become more important after the event.

That was certainly the case for Singapore. In 1988, when IECON was first held here in Singapore, Singapore was just a 23 year nation, with young institutions making tentative steps in all areas of technology development

Our Universities produced good engineers who went on to work in electronics manufacturing, which accounted for almost half of the manufacturing economy then. But Research and domestic technology development was still to come.

There was actually no institution for public funding of R&D in science and technology. .

The nation had just launched a restructuring of the economy that within 2 years, was to lead to the first National Technology Plan, in 1990.

Over the next 30 years, that plan and its successors have led to a dramatic growth of R&D capability including the formation of a system of national research institutes in Microelectronics (Dr Victor Huang was part of the founding leadership team), Manufacturing Technology, Data Storage, InfoComm technologies etc – all of which were given missions that drew heavily upon industrial electronics

In short, IECON in Singapore in 1988 coincided with the start of a new phase of industrial transformation, in which nearly all the fields of endeavour that we recognise as Industrial Electronics today, was and remains a big part

Today Singapore is a research hub with an internationally diverse community.. Singapore has Universities and research institutions amongst the best in Asia and well placed in the world, supported by a gross expenditure on R&D in Science and Technology that is more than 2% of GDP.

There is knowledge generation and innovation commensurate with the needs of a small global node. Manufacturing remains at almost a fifth of the economy and of this, electronics remains one of the most significant sectors.

In research, we have strong teams in many of the basic sciences that will lead to the industrial electronics of the next generation – 2D materials, quantum

science, Integration of biology and IT etc. The impact of papers published from Singapore is high and comparable to that of other small advanced nations like Switzerland and Israel. Almost 20% of the papers published from Singapore make it into the most highly cited lists in their disciplines

Hence, the Singapore of IECON 2020 is vastly different in technology and R&D capability from the Singapore of IECON 1988. Yet the areas that are important to our society and to our economy remain the areas of interest that IECON covers. A scan of session titles clearly shows that IECON covers the technologies needed to support manufacturing and supply chain transformations, including Industry 4.0 technologies such as industrial informatics and robotics; the technologies that enable a smart nation, particularly one that is highly urbanised, such as the sessions on smart buildings, technologies that are critical to energy management and sustainability .

Hence, from a Singapore perspective, Industrial Electronics and IECON remains as pertinent today as it did 32 years ago.

We were looking forward to welcoming you to Singapore this week. While that is not to be, the organising team has put together a wide-ranging programme that reflects the huge range of topics that industrial electronics now covers.

In this virtual event, I am sure we will all miss the social gatherings and the spontaneous delight of running into an old friend whilst wandering around the conference.

It is perhaps some compensation that a virtual conference will allow us to sample a far wider range of topics than would have been possible at a physical event.

For this I would like to thank the conference organizers: the IEEE Industrial Electronics Society for putting its faith in Singapore again to host its flagship conference, ChangYun and his team at the IEEE Industrial Electronics Chapter of Singapore and the School of Electrical & Electronic Engineering at Nanyang Technological University.

We are looking forward to having you here in 2023 and we are grateful to the the Singapore Exhibition & Convention Bureau, who have promised to shift their support to IECON 2023.

It only leaves me now to wish you a fruitful week ahead and to thank you for your participation in IECON2020.