PRESIDENT'S SCIENCE & TECHNOLOGY MEDAL 2024

Richard Parker
Chairman,
Singapore Aerospace Programme
Agency for Science, Technology and Research

"For his outstanding contributions in stimulating the establishment of corporate R&D capabilities in Singapore, leadership in bringing companies and research institutions together for the benefit of Singapore, and for promoting international collaboration in research and technology."

Professor Richard Parker has, throughout his long industrial career, been passionate about developing effective collaborations between research practitioners and industry. Professor Parker is currently a Special Advisor to A*STAR: a post he has held since 2016. He holds several other roles in Singapore including Chairman of the Singapore Aerospace Programme; Chairman of the National Low Carbon Energy Research Programme, Technical Committee and Chairman of the Technology Centre for Offshore and Marine, Singapore, Scientific Advisory Board. He holds, or has held advisory positions with NRF (CRP IAB), NTU, MTI, SUTD and SMI.

From 2001 to 2016 he was Director of Research and Technology for the Rolls-Royce Group, visiting Singapore several times each year over that period. He established his first joint lab with the A*STAR Institute of High Performance Computing in 2002. He created the Rolls-Royce Advanced Technology Centre, subsequently on the Company's Seletar Campus in 2007. He soon realised that Singapore was very fertile ground for the models of Industry-Academic collaboration that he was successfully developing in the UK and elsewhere. Singapore has strong universities, with a keen focus on industry collaboration; a national research organisation, A*STAR that sees translation of research as a key part of its mission; and a government with coherent, long-term strategies for R&T as expressed through the RIE.

Professor Parker was responsible for Rolls-Royce's many collaborative research relationships worldwide. Rolls-Royce did not have a large, central research centre, unlike its competitors. Professor Parker inherited 19 University Technology Centres (UTCs), all in the UK. He went on to expand this network by a further 12 Centres, with the majority of these outside the UK. Most notably, he worked with NTU and NRF to develop the Rolls-Royce@NTU Corporate Lab, which opened in 2013. Several other companies have now opened similar Corporate Labs in Singapore.

In 2003, Professor Parker was instrumental in developing the first Advanced Manufacturing Research Centre (AMRC) at Sheffield in the UK. There are now six similar UK centres. The model was successfully exported to Singapore leading to the establishment of the A*STAR Advanced Remanufacturing and Technology Centre in 2012.

Initially focused on aerospace, and supporting MRO (Maintenance, Repair and Overhaul), the centre has broadened considerably to include several industrial sectors, now with over 95 industrial partners, and many different manufacturing technologies.

Rolls-Royce, under Professor Parker's guidance, was a founder member of the Singapore Aerospace Programme (SAP) in 2007. This programme is hosted by A*STAR and co-funded by a consortium of major aerospace industrial players from Singapore and overseas: e.g. Rolls-Royce, Boeing, Thales, SIAEC, ST Engineering. In 2018, Professor Parker took over as Chairman of the programme. One of its major events is the Singapore Technology Leadership Forum, which SAP hosts every two years at the beginning of the Singapore Airshow. Professor Parker brings together all the major thought leaders from the industry, worldwide, to share their vision and technology needs for the future.

In 2021, Singapore launched the National Low Carbon Energy Research programme (LCER), and Professor Parker was asked to chair its Technical Committee. This is an initiative to support research, development and demonstration projects, conducted by Singapore researchers and supported by their industry partners, to advance low-carbon technologies, and to enable decarbonisation of the power and industry sectors.

Another excellent example is the Technology Centre for Offshore and Marine (TCOMS), Singapore. Professor Parker has been involved since its inception. It is a world-class maritime simulation facility, supported by a strong academic team, which can support the local maritime industry, but also attract partners from overseas. It was opened in 2022. Professor Parker is now the Chairman of its Scientific Advisory Panel.

Professor Parker has also been instrumental in encouraging international collaboration on research with Singapore. This year, an MoU was signed between the UK National Physical Laboratory (NPL) and TCOMS to establish a joint research programme supporting the future of autonomous shipping.

Professor Parker has been awarded honorary doctorates by seven universities worldwide, most notably, his Honorary Doctor of Science from NTU, presented by President Tony Tan, in 2013. He was made a Commander of the British Empire (CBE) in 2013 for services to engineering and awarded the Singapore Public Service Medal (PBM) in 2021.

Through his various industry/academic collaborations Professor Parker estimates that he has been responsible for creating and sponsoring up to 2,500 PhDs: a source of great personal satisfaction.