

ANNEX 2: BIOGRAPHY OF PROFESSOR AARON THEAN



(Photo Credit: National University of Singapore)

Professor Aaron Thean Dean, Faculty of Engineering National University of Singapore

Professor Aaron Thean joined the Department of Electrical and Computer Engineering at the National University of Singapore (NUS) in May 2016. He currently holds several technical leadership responsibilities at the University, which includes Director of the NUS Hybrid Integrated Flexible Electronic Systems (HiFES) programme, A*STAR SIMTech-NUS Joint Laboratory for Large-Area Flexible Hybrid Electronics, Co-Director of Applied Materials–NUS Advanced Materials Corporate Lab, and Director of NUS Engineering’s micro-nanofabrication research centre, E6Nanofab. From 2016 to 2018, he was also the Director of Industry Engagement & Partnerships in the Office of the Deputy President (Research and Technology).

Prior to NUS, Prof Thean was Vice President of Logic Technologies at IMEC. Working with leaders in the semiconductor industry like Intel, TSMC, Samsung, Globalfoundries, Apple, and Sony, he directed the research and development of next-generation semiconductor technologies and emerging nano-device architectures. There, he managed a US\$50 million annual R&D operations that included material research, process technology, and system-technology co-design. He had also brought in new consortium partners like SKHynix, Apple, and Huawei to IMEC.

Prior to joining IMEC in 2011, Prof Thean was with Qualcomm’s CDMA technologies in San Diego, California. There, he was leading the Strategic Silicon Technologies Group. He and his group worked on Qualcomm’s 20nm and 16nm mobile System-On-Chip technologies.

From 2007 to 2009, Prof Thean was Device Manager at IBM, where he led an eight-company process technology team to develop the 28-nm and 32-nm low-power bulk CMOS technology at IBM East Fishkill, New York, from research to risk production. The technology was transferred successfully to several foundry partners, and became the industry’s first foundry-compatible Gate-First High-k Metal-Gate with novel SiGe channel Low-Power bulk CMOS technologies. It successfully enabled some of today’s most successful mobile devices by Samsung and Apple. Before IBM, Prof Thean was a senior scientist at Freescale Semiconductor (and Motorola) where he performed research on many novel devices.

Prof Thean graduated from University of Illinois at Champaign-Urbana, USA, where he received his B.Sc. (Highest Honours), M.Sc., and Ph.D. in Electrical Engineering (Edmund J. James Scholar). He has published over 300 technical papers and holds more than 50 US patents. Among his notable recognitions, he and his IMEC team received the 2014 Compound Semiconductor Industry Innovation award for their III-V Nanodevice work. He received the

2013 Samsung Collaboration Award from the Samsung LSI EVP in recognition of his research contribution to Samsung.

Prof Thean was also given the 2010 Young Alumni Achievement Award from his alma mater, University of Illinois, for his contribution to advanced transistor R&D. More recently, Prof Thean was recognised as Singapore National Research Foundation's Returning Singaporean Scientist. Active in local and international advanced electronics communities, Prof Thean is an Editor of the IEEE Electron Device Letters and he serves on several Scientific Advisory Boards that include Singapore-MIT Alliance (SMART-LEES), A*STAR Institute of Microelectronics (IME), Huawei Singapore Research Centre, and he is Consulting Fellow to IMEC CEO.