

## Biography



**Ming-Dou Ker** received the Ph. D. degree from the Institute of Electronics, National Chiao Tung University (NCTU), Hsinchu, Taiwan, in 1993. He ever worked as the Department Manager with the VLSI Design Division, Industrial Technology Research Institute (ITRI), Hsinchu, Taiwan. During 2012~2015, he was the Dean of the College of Photonics, National Chiao-Tung University (NCTU), Taiwan. He ever served as the Director of the Institute of Pioneer Semiconductor Innovation, Industry Academia Innovation School, National Yang Ming Chiao Tung University (NYCU), Hsinchu, Taiwan, in 2022 ~ 2023. Now, he has been a Chair Professor in the Institute of Electronics, National Yang Ming Chiao Tung University (NYCU), Hsinchu, Taiwan. Currently, he is also serving as (1) Director of Biomedical Electronics Translational Research Center, (2) Associate Dean of College of Electrical and Computer Engineering, and (3) Chairman of Department of Microelectronics, in NYCU. In the technical field of reliability and quality design for microelectronic circuits and systems, he has authored/co-authored over 630 technical papers in international journals and conferences. He has proposed many solutions to improve the reliability and quality of integrated circuits, which have been granted with hundreds of U.S. patents. He had been invited to teach and/or to consult the reliability and quality design by hundreds of design houses and semiconductor companies in the worldwide IC industry. Some of his inventions or designs had been widely used in the modern IC products and the microelectronic systems. His current research interests include the circuits and systems for biomedical applications, as well as the reliability design for nanoelectronics and gigascale systems.

Prof. Ker had ever served as member of the Technical Program Committee and the Session Chair of numerous international conferences for many years, including *IEEE International Symp. on VLSI Technology & Circuits*, *IEEE International Solid-State Circuits Conference (ISSCC)*, *IEEE International Symp. on Circuits and Systems (ISCAS)*, and *IEEE International Reliability Physic Symp. (IRPS)*. He ever served as the Distinguished Lecturer in the IEEE Circuits and Systems Society (2006–2007) and in the IEEE Electron Devices Society (2008–2020). He ever served as Associate Editor of *IEEE Transactions on VLSI Systems*, Associate Editor of *IEEE Transactions on Biomedical Circuits and Systems*, a Guest Editor for *Frontiers in Neuroscience* on the research topic of microelectronic implants for central and peripheral nervous system, and a Guest Editor for *IEEE Trans. on Electromagnetic Compatibility* on the special issue of “Electrostatic Discharge and Immunity – from IC to System”. He was the Founding President of Taiwan ESD Association, the 3<sup>rd</sup> President of Taiwan Engineering Medicine Biology Association, and the 21th Vice-President of *IEEE Taipei Section*. Currently, he is serving as the Editor of *IEEE Trans. on Device and Materials Reliability*, and the Editor of *IEEE Journal of the Electron Devices Society*.

Prof. Ker has been a *Fellow of the IEEE* (since 2008), and a *Fellow of the CIEE* (Chinese Institute of Electrical Engineering).