

2011 EDUCATION AWARD RECIPIENT

CHENMING HU

"For distinguished contributions to education and inspiration of students, practicing engineers and future educators in semiconductor devices"



Chenming Hu is the TSMC Distinguished Professor in the Graduate School, University of California, Berkeley. He serves on the boards of SanDisk Corp. and the nonprofit Friends of Children with Special Needs. From 2001 to 2004 he was the Chief Technology Officer of TSMC.

Chenming's first research project as a Berkeley professor, a gas-electric hybrid car built with ME and EE students in 1979, was featured in SF Chronicle, LA Times, etc. In 1983, he wrote his first textbook with Prof. Richard White on solar cells for terrestrial applications. His latest textbook "Modern Semiconductor Devices for Integrated Circuits" appeared in 2010.

He is known for effective classroom teaching and received UC Berkeley's highest honor for teaching, the Berkeley Distinguished Teaching Award, in 1997. Semiconductor Research Corporation recognized him as an influential mentor to many outstanding research students (over one hundred Ph.D. and postdoc researchers) with the Aristotle Award in 2009. From 1985 to 2001, he taught semi-annually, often with Prof. Ping Ko, an extremely well received two-day course "MOSFET Physics, Technology, and Models" for a total of about one thousand practicing engineers. In July 2011 he gave the first ever Electron Device Society Web Seminar, on the new 3D MOSFET-- FinFET.

He likens teaching to starting a fire. The teacher must carefully attend to the flames of curiosity, enthusiasm, and inventiveness, and never smother them in the eagerness to teach. In time, the fires will roar. The teacher motivates, encourages, sets high expectation for individual students, points to good examples and directions, and gives the time and effort that students deserve.

Chenming is also noted for research contributions to MOSFET reliability, the first industry standard model for circuit simulation (BSIM), and the FinFET. From IEEE he has received the Jack Morton Award, the Solid State Circuit Award, and the Jun-Ichi Nishizawa Medal. He has been honored with three national academy memberships -- US National Academy of Engineering, Chinese Academy of Sciences, and Academia Sinica.

He received B.S. degree from National Taiwan University and M.S. and Ph.D. degrees from UC Berkeley. He and his wife, Margaret, met in graduate school at Berkeley. One of their sons, Jason, a Berkeley alumnus and an industrial designer, lives in Brooklyn, NY. Their other son, Raymond, lives near them in the Bay Area. Raymond and Chenming's paintings may be viewed on Chenming's website.