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Dr. Nishi is a professor of electrical engineering, Stanford University, with his research and teaching interests in the area of resistance change memory, nanoscale CMOS device physics and technology including metal work function, 3D structures and nanowires/nanotubes. Lately his interest has extended to bio-FETs and dye sensitized solar cells. His other responsibilities at Stanford include Director of Stanford nanofabrication Facility of NNIN, and Director of Research of Center for Integrated Systems. He received BE degree in material science from Waseda Univ, and PhD degree in electronics engineering from Univ. Tokyo.

He joined Toshiba R&D working mainly on Si based CMOS devices and technology until the mid 80's, including developments of the world first 1MCMOS DRAM, 16 bit SOS processor technology, MNOS nonvolatile memory. His early discovery of electron spin resonance Center, P_B , from silicon-silicon dioxide has been recognized as the origin of the fast interface states. In 1986 he became Director of Silicon Process Lab at Hewlett-Packard, Palo Alto, CA, and led CMOS R&D for HP-PARISC processors, followed by the founding director of HP ULSI Research Laboratory. In 1995, he moved to Texas Instruments Inc, Dallas, TX, as Senior VP and Director of semiconductor R&D, and established Kilby Center for TI's leading edge integrated circuits technology R&D. In 2002 he switched from industry to academia as a faculty member of Stanford. He is IEEE Fellow, and received numerous awards, including 1995 Jack Morton Award, 2002 Robert Noyce Medal, 2006 PICMET Technology Mnagement Leadership Award, 2008 SEMI North America Lifetime Achievements Award . He is one of the founding members of VLSI Symposia, and have more than 220 publications and over 50 patents. He serves as visiting professor of Waseda University, Tsinghua University, Peking University, International Advisory Committee member of Solid-State Devices and Materials Conference, Executive Committee member of IEEE VLSI Symposium, and also technical advisory board of several companies.