

Biography for Andrew R. Neureuther

Dr. Andrew R. Neureuther was born in Decatur, Illinois on July 30, 1941. He received the B.S., M.S., and Ph.D. degrees in Electrical Engineering from the University of Illinois, Urbana, in 1963, 1964 and 1966, respectively as a member of the Antenna Laboratory.

Dr. Neureuther joined the Department of Electrical Engineering and Computer Sciences, University of California, Berkeley as a faculty member in 1966 where he is the Conexant Systems Distinguished Professor. His initial research was on integral equation methods for analysis of antennas and diffraction gratings. His main area of research has become computer-aided modeling of lithography and semiconductor fabrication processes. The latter began in 1972 through an industrial leave at the IBM T. J. Watson Research Center to work on photoresist modeling with Dr. F.H. Dill. With Professor W.G. Oldham, he then developed the user oriented computer programs for Simulation And Modeling of Profiles in Lithography and Etching (SAMPLE). The need to understand and control processes in the semiconductor industry provided the motivation, relevant applications and financial support to further extend this work through consortia and projects with the Semiconductor Research Corporation and DARPA. Recently, he also served as Associate Chair of his Department (1996-1999) and as Chair of the Applied Science and Technology Graduate Group (2000-2003).

Dr. Neureuther has pioneered modeling and simulation of integrated circuit processing for many physical process effects as well as the use of these tools to explore innovation and manufacturing issues in emerging technologies. His work includes models for chemically amplified imaging materials (STORM), simulation of optical, electron, ion beam and x-ray lithography (SAMPLE), assessment of residual effects of defects and lens aberrations (SPLAT), electromagnetic scattering (TEMPEST), time-evolution of topography (SAMPLE3D), environments for integrating simulators with process flow (SIMPL) and remote web-based simulation (LAVA).

Dr. Neureuther is a Fellow of the IEEE. He has published 250 papers and has advised 35 M.S. and 30 Ph.D. students. He was elected to the National Academy of Engineering (1995) and was selected as a Distinguished Alumni by the Electrical and Computer Engineering Department at Illinois (2001). He recently received the IEEE 2003 Cleo Brunetti field award which is given for contributions to miniaturization in electronics.