APPENDIX C: References

[1] G.S. Gildenblat, **VLSI Electronics: Microstructure Scienc**e, p.11, vol. 18, 1989.

[2] Muller and Kamins, **Devices Electronics for Integrated Circuits**, Second Edition.

[3] J. H. Huang, Z. H. Liu, M. C. Jeng, K. Hui, M. Chan, P. K. Ko and C. Hu., BSIM3 Version 2.0 User's Manual, March 1994.

[4] J.A. Greenfield and R.W. Dutton, "Nonplanar VLSI Device Analysis Using the Solution of Poisson's Equation," *IEEE Trans. Electron Devices*, vol. ED-27, p.1520, 1980.

[5] H.S. Lee. "An Analysis of the Threshold Voltage for Short-Channel IGFET's," *Solid-State Electronics*, vol.16, p.1407, 1973.

[6] G.W. Taylor, "Subthreshold Conduction in MOSFET's," *IEEE Trans. Electron Devices*, vol. ED-25, p.337, 1978.

[7] T. Toyabe and S. Asai, "Analytical Models of Threshold Voltage and Breakdown Voltage of Short-Channel MOSFET's Derived from Two-Dimensional Analysis," *IEEE J. Solid-State Circuits*, vol. SC-14, p.375, 1979.

[8] D.R. Poole and D.L. Kwong, "Two-Dimensional Analysis Modeling of Threshold Voltage of Short-Channel MOSFET's," *IEEE Electron Device Letter*, vol. ED-5, p.443, 1984.

[9] J.D. Kendall and A.R. Boothroyd, "A Two-Dimensional Analytical Threshold Voltage Model for MOSFET's with Arbitrarily Doped Substrate," *IEEE Electron Device Letter*, vol. EDL-7, p.407, 1986.

[10] Z.H. Liu, C. Hu, J.H. Huang, T.Y. Chan, M.C. Jeng, P.K. Ko, and Y.C. Cheng, "Threshold Voltage Model For Deep-Submicrometer MOSFETs," *IEEE Tran. Electron Devices*, vol. 40, pp. 86-95, Jan., 1993.

[11] Y.C. Cheng and E.A. Sullivan, "Effect of Coulombic Scattering on Silicon Surface Mobility," *J. Appl. Phys.* 45, 187 (1974).

[12] Y.C. Cheng and E.A. Sullivan, *Surf. Sci*. 34, 717 (1973).

[13] A.G. Sabnis and J.T. Clemens, "Characterization of Electron Velocity in the Inverted <100> Si Surface," *Tech. Dig.- Int. Electron Devices Meet.,* pp. 18-21 (1979).

[14] G.S. Gildenblat, **VLSI Electronics: Microstructure Science**, p. 11, vol. 18, 1989.

[15] M.S. Liang, J.Y. Choi, P.K. Ko, and C. Hu, "Inversion-Layer Capacitance and Mobility of Very Thin Gate-Oxide MOSFET's," *IEEE Trans. Electron Devices*, ED-33, 409, 1986.

[16] F. Fang and X. Fowler, "Hot-electron Effects and Saturation velocity in Silicon Inversion Layer," *J. Appl. Phys.*, 41, 1825, 1969.

[17] E. A. Talkhan, I. R. Manour and A. I. Barboor, "Investigation of the Effect of Drift-Field-Dependent Mobility on MOSFET Characteristics," Parts I and II. *IEEE Trans. on Electron Devices*, ED-19(8), 899-916, 1972.

[18] M.C. Jeng, "Design and Modeling of Deep-Submicrometer MOSFETs," Ph. D. Dissertation, University of California.

[19] K.Y. Toh, P.K. Ko and R.G. Meyer, "An Engineering Model for Short-channel MOS Devices," *IEEE Jour. of Solid-State Circuits*, vol. 23, No. 4, Aug. 1988.

[20] C. Hu, S. Tam, F.C. Hsu, P.K. Ko, T.Y. Chan and K.W. Kyle, "Hot-Electron Induced MOSFET Degradation - Model, Monitor, Improvement," *IEEE Tran. on Electron Devices*, Vol. 32, pp. 375-385, Feb. 1985.

[21] F.C. Hsu, P.K. Ko, S. Tam, C. Hu and R.S. Muller, "An Analytical Breakdown Model for Short-Channel MOSFET's," *IEEE Trans. on Electron Devices*, Vol.ED-29, pp. 1735, Nov. 1982

[22] H. J. Parke, P. K. Ko, and C. Hu, " A Measurement-based Charge Sheet Capacitance Model of Short-Channel MOSFET's for SPICE," in *IEEE IEDM 86, Tech. Dig.*, pp. 485-488, Dec. 1986.

[23] M. Shur, T.A. Fjeldly, T. Ytterdal, and K. Lee, " A Unified MOSFET Model," *Solid-State Electron.*, 35, pp. 1795-1802, 1992.

[24] MOS9 Documentation.

[25] C. F. Machala, P. C. Pattnaik and P. Yang, "An Efficient Algorithms for the Extraction of Parameters with High Confidence from Nonlinear Models," *IEEE Electron Device Letters*, Vol. EDL-7, no. 4, pp. 214-218, 1986.

[26] Y. Tsividis and K. Suyama, "MOSFET Modeling for Analog Circuit CAD: Problems and Prospects," *Tech. Dig.* vol. CICC-93, pp. 14.1.1-14.1.6, 1993.

[27] C. L. Huang and G. Sh. Gildenblat, "Measurements and Modeling of the n-channel MOSFET Inversion Layer Mobility and Device Characteristics in the Temperature Range 60-300 K," *IEEE Tran. on Electron Devices*, vol. ED-37, no.5, pp. 1289-1300, 1990.

[28] D. S. Jeon, et al, *IEEE Tran. on Electron Devices*, vol. ED-36, no. 8, pp1456-1463, 1989.

[29] S. M. Sze, **Physics of Semiconductor Devices**, 2nd Edition.

[30] P. Gray and R. Meyer, **Analysis and Design of Analog Integrated Circuits**, Second Edition.

[31] Mansun Chan, et al, "A Relaxation time Approach to Model the Non-Quasi-Static Transient Effects in MOSFETs," IEDM, 1994 Technical Digest, pp. 169-172, Dec. 1994.

[32] P. K. Ko, “Hot-electron Effects in MOSFET’s”, Ph. D Dissertation, University of California, Berkeley, 1982

[33] K.K. Hung et al, “A Physics-Based MOSFET Noise Model for Circuit Simulators,” IEEE Transactions on Electron Devices, vol. 37, no. 5, May 1990.

[34] K.K. Hung et al, “A Unified Model for the Flicker Noise in Metal-Oxide Semiconductor Field-Effect Transistors,” IEEE Transactions on Electron Devices, vol. 37, no. 3, March 1990.

[35] T.P. Tsividis, **Operation and Modeling of the MOS Transistor**, McGraw-Hill, New York, 1987.