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HISHAM Z. MASSOUD, PROFESSOR OF ELECTRICAL & COMPUTER ENGINEERING AND BIOMEDICAL ENGINEERING

Contact Info:

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**Teaching (Spring 2010):**

- ECE 51L.001, *MICROELECT DEVICES & CIRCUITS*
- ECE 51L.01L, *MICROELECT DEVICES & CIRCUITS*
Teer 212, W 04: 25 PM-06: 55 PM
- ECE 51L.02L, *MICROELECT DEVICES & CIRCUITS*
Teer 212, Th 02: 50 PM-05: 20 PM
- ECE 51L.03L, *MICROELECT DEVICES & CIRCUITS*
- ECE 51L.04L, *MICROELECT DEVICES & CIRCUITS*
Teer 212, F 01: 15 PM-03: 45 PM
- ECE 219.01, *DIGITAL INTEGRATED CIR*

Education:

- PhD, Stanford University, 1983
- MS, Stanford, 1976
- M.Sc., Cairo University, 1975
- B.Sc., Cairo University, 1974

Specialties:

- Nanoscale/microscale computing systems
- Photonics

Research Interests:

MOS Dielectrics: Technology, Physics, Modeling and Simulation. Ultrathin Oxide Growth Kinetics. Electrical Properties Of Ultrathin Oxides. Tunneling in Ultrathin Dielectrics (TUNNEL PISCES). Effects of Gate Tunneling Currents on the Performance of Future Generations of Static and Dynamic MOS Integrated Circuits. Nanoscale Device Physics, Modeling, Simulation, and Technology (with applications in biology, photonics, NEMS).

Awards, Honors, and Distinctions

- Electronics & Photonics Division Award, Electrochemical Society, 2006
- Eta Kappa Nu
- Fellow, IEEE
- Fellow, Electrochemical Society
- Rotary Foundation Graduate Fellowship
- Sigma Xi
- Tau Beta Pi

Recent Publications (More Publications)

- Massoud, Hisham Z., *Growth kinetics and electrical properties of ultrathin silicon-dioxide layers*, ECS Transactions, vol. 2 no. 2 (2006), pp. 189 - 203 [abs].
- Oliver, Lara D. and Chakrabarty, Krishnendu and Massoud, Hisham Z., *An evaluation of the*

impact of gate oxide tunneling on dual-V_t-based leakage reduction techniques, Proceedings of the ACM Great Lakes Symposium on VLSI, GLSVLSI, vol. 2006 (2006), pp. 105 - 110 [abs].
Physics and Chemistry of SiO₂ and the Si-SiO₂ Interface-5, edited by Massoud, H.Z.; Stathis, J.H.; Hattori, T.; Misra, D.; Baumvol, I.; ECS Transactions, vol. 1 no. 1 (2005), pp. 310 - [abs].
Shen, M. and Jopling, J. and Massoud, H.Z., *On the effects of carrier tunneling on the capacitance-voltage characteristics of ultrathin-oxide MOSFETs*, Meeting Abstracts, vol. MA 2005-02 (2005), pp. 1474 - [abs].
Shen, M.Y.C. and Jopling, J. and Massoud, H.Z., *On the effects of carrier tunneling on the capacitance-voltage characteristics of ultrathin-oxide MOSFETs*, ECS Transactions, vol. 1 no. 1 (2005), pp. 283 - 294 [abs].

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