ECE594A Assignment #1 Spring 2005
Prof. S. Long Due: Mon, 4/11 @ 5pm

Research Assignment:

Find either of the following references on IEEE Explore:

T. Slotnicky et al., "The End of CMOS Scaling," IEEE Circuits and Devices Magazine, Jan-Feb 2005
P. M. Zeitzoff and J. Chung, "A Perspective from the 2003 ITRS: MOSFET Scaling Trends, Challenges, and Potential Solutions," IEEE Circuits and Devices Magazine, Jan-Feb 2005.

Starting from thess papers, locate at least one other paper that describes an approach toward solving one of the difficult CMOS scaling problems. You may use the reference lists from the papesr, or search on IEEE explore under appropriate subject words.

The scaling problems and potential solutions might include, but are not limited to:

- Gate dielectrics
- Deep submicron lithography
- Leakage currents
- Proposed new devices such as FD-SOI, FINFET, vertical gate transistors

Fully specify the reference(s). Write a one page summary of the article describing the problem, the approach, and the degree of success or expected degree of success in solving the problem(s) as discussed by the authors. Send the one page summary by email to long@ece.ucsb.edu by 5 pm on April 11.