VCU Discrete Mathematics Seminar
SSOR Seminar Series

Is There Further Evidence of Moore's Law for Algorithms/Software?

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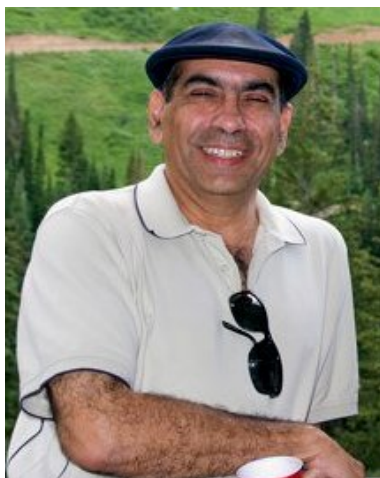## University of Southern California

Monday, Dec. 9

11:30-12:30

4153 Harris Hall

Roughly stated, the famous law suggests that the density of transistors in integrated circuits doubles every one to two years. Is there a version of Moore's Law for numerical algorithms? While the analog for algorithms/software is not immediate, a linear programming (LP) instance which might have taken 82 years to solve using LP solvers of 1988 required roughly 1 minute with LP solvers of 2003. In this talk, we will examine further evidence of speed-ups in the context of stochastic linear programming (SLP), which George Dantzig referred to as the "real" problem. We show that by combining numerical optimization tools with statistical computing tools, we can provide high quality solutions to practical SLP models using run-of-the-mill machines such as desktops and laptops.

This talk is dedicated to the memory of Ranjit Sen, a long-time resident of Richmond, VA, and an ardent supporter of VCU.