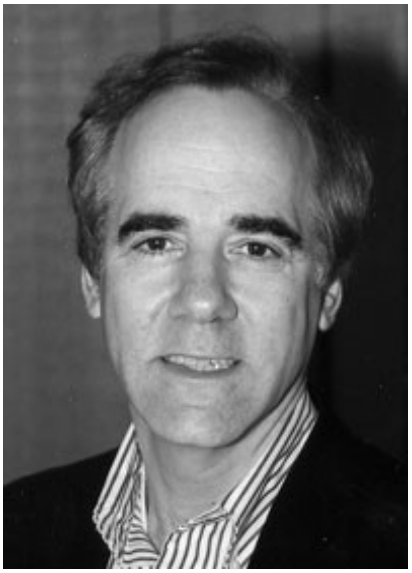

The Volgenau School of Information Technology and Engineering invites you to a lecture by

Jeffrey P. Buzen

Modeling Variability and Uncertainty in Real World Systems

September 21, 2010
2:30pm
Johnson Center, Dewberry Hall North

Abstract:

The performance of computer systems and communication networks depends on the speed of individual hardware components and the processing demands of user workloads. Most user workloads fluctuate unpredictably. These fluctuations are traditionally characterized by random variables, which leads to the formulation of stochastic models of system performance. This talk presents an alternative characterization of uncertainty that provides new insights into the nature of randomness and a new approach for improving the efficiency of Monte Carlo simulation. All points are illustrated through simple examples that can be can be described and analyzed with straightforward, easy to follow arguments. Some open research problems are considered at the end of the talk.

Bio:

Dr. Buzen has been actively involved in the analysis of computer performance for the past four decades. His development of the convolution algorithm and the central server model in the early 1970s provided the impetus for an explosion of interest in queuing network models. In 1975, he co-founded a software company, BGS Systems, which became the leading provider of tools for performance modeling and capacity planning at major data centers worldwide. With Dr. Buzen as Chief Scientist, BGS Systems operated as an independent corporation for 23 years. More recently, he has been a consultant, researcher, author and lecturer, and has served a term as President of the Computer Measurement Group.

Dr. Buzen holds three degrees in Applied Mathematics: an Sc.B. from Brown, and an M.S and Ph.D. from Harvard. He has been elected to the National Academy of Engineering and is a recipient of the A.A. Michelson award and the ACM Sigmetrics Achievement Award. Prior to co-founding BGS Systems, he was a member of the Harvard faculty where he supervised the Ph.D. dissertations of Ethernet inventor Bob Metcalfe and Internet pioneer John M. McQuillan. He also co-taught a popular course on Operating Systems and Computer Performance attended by several students who have had a profound impact on the field of computing: most notably, Microsoft co-founder Bill Gates.

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