**Title:**
Optimal Stopping with Memory and Random Coefficients: Recent Results and Open Problems

**Speaker:**
Dr. Mou-Hsiung (Harry) Chang
Mathematical Sciences Division
U.S. Army Research Office

**Abstract:**
We will discuss recent results on optimal stopping problems in which the state processes are governed by stochastic functional differential equations as well as stochastic differential equations with random coefficients. In particular, the existence and uniqueness for the viscosity solution of the Hamilton-Jacobi Bellman variational inequality (HJBVI) in a Banach space and the adapted solution for the backward stochastic partial differential variational inequality (BSPDVI) will be examined. In addition, some challenging open problems will be discussed in this talk.

**Biographical Sketch:**
Dr. Chang received his B.S. in Applied Mathematics from National Chung-Hsing University (Taiwan) and his M.S. and Ph.D. in Mathematics from the University of Rhode Island. Prior to joining ARO, Dr. Chang served as a tenured Professor of Mathematical Sciences at the University of Alabama in Huntsville (UAH) for twenty-eight years, where he served as Department Chair for eight years and Graduate Program Director for five years. He co-founded the joint Applied Mathematics Ph.D. Program for the University of Alabama System, and served as Visiting Scientist at the Laboratory for Information and Decision Systems of Massachusetts Institute of Technology. Dr. Chang has published extensively in both stochastic analysis and control and in quantum stochastics and control, with more than 60 referred journal articles, 31 conference papers and non-refereed technical reports, and more than 80 invited technical presentations at professional conferences and universities. Dr. Chang is the author of a widely referenced research monograph “Stochastic Control of Hereditary Systems and Applications”, Volume 59 of the Stochastic Modeling and Applied Probability Series, Springer-New York, 2008, and has authored a 500-page research monograph “Theory of Quantum Markov Processes” (to be published by the American Mathematical Society). Dr. Chang referees for numerous mathematics and applied mathematics journals and is currently Associate Editor for three prestigious journals in stochastic analysis. Since joining ARO in 2002, Dr. Chang has managed the ARO Probability and Statistics Program with an $8M extramural basic research portfolio.

**Time & Place:**
Wednesday, April 17, 2013
Room 140 Bardeen
4:00-5:00p

Cookies & Coffee @ 3:30 in Rm 1210 MSC