

Center for Applied Mathematical Sciences Distinguished Lecture



Speaker:
Margaret H. Wright
Courant Institute of
Mathematical Sciences
New York University

Optimization Without Derivatives: Consensus and Controversies

Abstract: Non-derivative methods for optimization have had a sometimes rocky relationship for more than 50 years with applied mathematicians who specialize in optimization. Although practitioners have never wavered in their fondness for non-derivative methods, their mathematical foundations were mostly lacking until the late 1980s. Since then, significant progress has been made concerning theoretical underpinnings, but several perplexing mysteries remain. In addition, there has been continuing and lively controversy about which methods are “most effective” on real-world applications, with disagreements about both the selection of test problems and the choice of criteria for assessing computational results. This talk will briefly survey the current state of the art, trying along the way to highlight a few of the interesting open questions.

Margaret H. Wright is Silver Professor of Computer Science and Mathematics in the Courant Institute of Mathematical Sciences, New York University. She received her B.S. (Mathematics) and M.S. and Ph.D. (Computer Science) from Stanford University. Her research interests include optimization, scientific computing, and optimization in real-world applications. Prior to joining NYU, she worked at Bell Laboratories (Lucent Technologies), where she was named as a Bell Labs Fellow. She was elected to the National Academy of Engineering (1997), the American Academy of Arts and Sciences (2001), and the National Academy of Sciences (2005). During 1995-1996 she served as president of the Society for Industrial and Applied Mathematics (SIAM), and she has chaired advisory committees for several mathematical sciences institutes and government agencies. In 2000, she received an honorary doctorate in Mathematics from the University of Waterloo, and she was named as an honorary doctor of technology by the Swedish Royal Institute of Technology in 2008.

Friday October 9, 2009
University of Southern California
Ethel Percy Andrus Gerontology Center
Leonard Davis Auditorium

Reception: 3:00 p.m. - 3:30 p.m.

Lecture: 3:30 p.m. - 4:30 p.m.

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Co-sponsored by the WISE program

