Arthur Imperatore School of Sciences and Arts

Department of Mathematical Sciences

Seminar in Stochastic Systems

Prof. Adi Ben-Israel

Rutgers Center for Operations Research and MSIS Department
Rutgers Business School, Rutgers University

The Newton method: Geometry, Applications and New Tricks

Tuesday, October 14, 2003
4:00 pm
Pierce 218

Abstract: The following topics will be discussed, the first two very briefly.

1. The geometry of the complex Newton method, [1].

2. A directional Newton method for finding a zero of a real valued function of n variables, [2].

3. The Newton bracketing (NB) method for convex optimization, and its application to location problems, [3].

The material is elementary and geometric in nature.
Work done jointly with Yuri Levin and Lily Yau.

References:
[1] Amer. Math. Monthly 105(1998), 806-818.
[2] Math. of Computation 71(2002), 237-250.
[3] Comput. Optimiz. & Appl. 21(2002), 213-229.

Professor Adi-Ben-Israel is born in Rio de Janeiro , Brazil, and grew up in Israel. He obtained his M. Sc. Degree in the area of Operations Research and Statistics at the Technion - Israel Institute of Technology. He holds a Ph.D. degree in Engineering Science: Applied Mathematics conferred by Northwestern University. Professor Ben-Israel was a faculty member at the University of Delaware, Technion-Israel Institute of Technology, and Northwestern University. He joined the faculty at Rutgers University in 1988.
His research interests are in the area of Matrix Theory, Optimization, Convexity Numerical Analysis, Decisions under Uncertainty, and Symbolic Computation. Professor Ben-Israel is the author of more than 120 scientific publications, among which several research monographs.

Refreshments will be served at 3:50 pm.
For more information contact Prof. Darinka Dentcheva at ddentche@stevens-tech.edu or call 201-216-5449.