

Meeting: 1001, Evanston, Illinois, SS 9A, Special Session on Solving Polynomial Systems

1001-68-243 **Daniel J Bates*** (dbates1@nd.edu), 255 Hurley Hall, University of Notre Dame, Notre Dame, IN 46545. *Advantages of Parsing Polynomials into Straight-line Programs*. Preliminary report.

The internal representation of polynomials is basic to any implementation of any algorithm concerned with numerically identifying solution sets of polynomial systems. Most such algorithms also require some form of differentiation. In this talk, I will discuss the advantages of using tools such as yacc and lex to parse polynomials into straight-line programs for function evaluation and automatic differentiation. (Received August 27, 2004)