

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

1001-65-201 **Tien-Yien Li*** (li@math.msu.edu), Department of Mathematics, Michigan State University, E. Lansing, MI 48824-1027. *Is the attained solution isolated?* Preliminary report.

A numerical solution of a polynomial system is normally classified as an isolated nonsingular solution if its Jacobian does not allow very small singular values. However, when the Jacobian does have very small singular values, the solution could still be isolated with a multiple multiplicity or may belong to a solution component with positive dimension. An algorithm is proposed to differentiate those cases. (Received August 25, 2004)