1027-90-22   **Shafiu Jibrin*** (`Shafiu.Jibrin@nau.edu`), Math & Stat Dept, Box 5717, Flagstaff, AZ 86011, and **Jackie Van Ryzin**. *Semidefinite Diagonal Directions Algorithm for Detecting Necessary Linear Matrix Inequality Constraints in Semidefinite Programming.* Preliminary report.

This talk presents a new hit-and-run algorithm called the Semidefinite Diagonal Directions (SDD) algorithm for the identification of linear matrix inequality constraints as necessary or redundant in positive semidefinite programming. It is a modification of the so-called Semidefinite Coordinate Directions (SCD) algorithm. SDD uses diagonal directions instead of coordinate directions in SCD. We analyze the benefits and costs of this change in comparison with SCD. (Received January 03, 2007)