

ERROR ESTIMATES FOR LINEAR SYSTEMS

Abstract: Condition numbers are used to determine how accurately one can solve linear systems $Ax = b$ with a computer. This presentation shows the methods of ranking different condition numbers including Matlab's condition number, the traditional condition number, Chandrasekaran & Ipsen's condition number, Skeel's condition number, and Cao & Petzold's condition number and condition number estimate using random vectors.

Numerical results for the condition numbers of linear systems with dense matrices are presented.