XIAO PING LIU, Department of Mathematics and Statistics, University of Regina, Regina, SK S4S 0A2
Determinantal inequalities for certain classes of totally nonnegative matrices

An n-by-n matrix A is called totally nonnegative, TN (totally positive, TP) if the determinant of every square submatrix (*i.e.*, minor) of A is nonnegative (positive). A collection S of bounded ratios are said to be generators for all such bounded ratios if any bounded ratios can be written as a product ratios from this collection S. We define a particular class of totally nonnegative matrices, called STEP1, and establish all the generators for STEP1 matrices. All such generators have been shown to be bounded ratios for general TN matrices.