

Inequalities: some probabilistic, some matrix, and some both

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Abstract

It is interesting that a theory of equations has been developed, for example, differential equations, functional equations, and so on, but not for inequations (inequalities). This is partially borne out by the large number of books on the theory of equations versus the few books on inequalities. Indeed, there are only a few general methods for obtaining inequalities. In this survey we touch on the connection between probabilistic or statistical inequalities and matrix inequalities, and also discuss some new matrix inequalities.