

Positive Semidefinite Cone

Why

The set of positive semidefinite matrices has an attractive geometric structure.

Main Result

Proposition 1. \mathbf{S}_{+}^{d} is a convex, pointed, closed cone with interior \mathbf{S}_{++}^{d} relative to \mathbf{S}^{d} .¹

The cone of positive definite matrices is open.

¹Future editions will contain a proof, which is by first principles.

