

Notation

$(V, (\cdot, \cdot))$	an inner product space, vector space V and inner product (\cdot, \cdot)
$\mathcal{L}(V, W)$	the vector space of linear transformations on V to W
$Gl(V)$	the group of nonsingular linear transformations on V to V
$\mathcal{O}(V)$	the orthogonal group of the inner product space $(V, (\cdot, \cdot))$
R^n	Euclidean coordinate space of all n -dimensional column vectors
$\mathcal{L}_{p,n}$	the linear space of all $n \times p$ real matrices
Gl_n	the group of $n \times n$ nonsingular matrices
\mathcal{O}_n	the group of $n \times n$ orthogonal matrices
$\mathcal{F}_{p,n}$	the space of $n \times p$ real matrices whose p columns form an orthonormal set in R^n
G_T^+	the group of lower triangular matrices with positive diagonal elements—dimension implied by context
G_U^+	the group of upper triangular matrices with positive diagonal elements—dimension implied by context
\mathcal{S}_p^+	the set of $p \times p$ real symmetric positive definite matrices
$A > 0$	the matrix or linear transformation A is positive definite
$A \geq 0$	A is positive semidefinite (non-negative definite)
det	determinant
tr	trace
$x \square y$	the outer product of the vectors x and y
$A \otimes B$	the Kronecker product of the linear transformations A and B
Δ_r	the right-hand modulus of a locally compact topological group
$\mathcal{L}(\cdot)$	the distributional law of “.”
$N(\mu, \Sigma)$	the normal distribution with mean μ and covariance Σ on an inner product space
$W(\Sigma, p, n)$	the Wishart distribution with n degrees of freedom and $p \times p$ parameter matrix Σ