BRITISH EMBASSY
BELGRADE

symmetric

1) $\langle u, v \rangle$ for a p.d matrix P,

$\langle x, y \rangle = x^T P y$ is an inner product.

1) Symmetry $\langle x, y \rangle = x^T P y$

$= y^T P^T x$ ← as in $\mathbb{R}^n$

$= y^T P x = \langle y, x \rangle$.

2) Linearity: clear

3) P.d ness. → admits a square root as is

$\langle x, x \rangle = \| P^{1/2} x \|^2 \geq 0$

$= 0 \Leftrightarrow x = 0.$

$k(x, y) = q(x - y)$

$\Rightarrow 1 - (x-y)^T C (x-y) + u(x-y)^T K u(x-y)$

using Prop 2 MSM

using Prop 2 in SM

ϕ $(x-y)$

$u(t) = t_i t_j$