
On Eigenvalues Distribution of Kernel Matrices Related to Radial Basis Functions

Andy Wathen and Shengxin Zhu

University of Oxford, UK

zhus@maths.ox.ac.uk

This talk addresses the problem of estimating the eigenvalues of symmetric positive definite matrices arising in radial basis function approximation. It discusses alternative approaches to prove how the asymptotic behaviour of eigenvalues of a kernel matrix related to the smoothness of the underlying radial basis functions. Also provided is how the eigenvalues' distribution of a radial basis function interpolation matrix relates to the geometric property of the underlying interpolation data set.