Quadrature Formula on compact spaces with kernel functions

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Quadrature (discretisation) methods are very important for theoretical and practical purposes, for example for numerical approximations of the integrals that turn up in Volterra and Fredholm integral equations of the first and second kinds.

In this talk, we shall present a general approach to giving error estimates for large classes of kernels, distance functions and integrals with weights and measures.

Some of these methods improve upon known results. We shall give many examples of kernels and applications for illustration and explain some details about the proofs of the results. Most of the theorems hold for very general cases of domains and types of integrals used in theory and applications.