

Generators, Multiquadric Generator, Quasi-interpolation and Multiquadric Quasi-interpolation

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Abstract

This talk introduces a concept of “generator”, which is a single function that can generate the basis as well as the whole function space. Furthermore, a special generator named multiquadric function is introduced and based on the multiquadric generator, the quasi-interpolation scheme is constructed. At the end of this paper, the properties of this multiquadric quasi-interpolation is discussed to show the scheme possesses better capacity and stability for the approximation of the high order derivatives.