New Interpolation features in Maple 2018

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Abstract

Maple 2018 contains a new package for interpolating structured and unstructured data in any dimension. The supported methods include Kriging, inverse distance weighted, lowest / nearest / natural neighbor, radial basis functions, and more. The Interpolate command provides an interface to all interpolation methods. It directly returns objects that behave like normal mathematical functions. Previous versions of Maple already included interpolation methods for 1-dimensional data and data given for a grid of points. In Maple 2018, it is possible to interpolate data given for points in arbitrary, unstructured locations. The kriging interpolation method supports some extra functionality backed by statistical theory. In particular, it allows one to generate random data that is spatially correlated according to a so-called variogram. We will demonstrate interactive examples of all new interpolation methods in Maple 2018.

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