Triangular Shepard interpolants computed via fast searching routines*

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We present a fast algorithm for computing triangular Shepard interpolants. From [3] we know that the triangular Shepard method reaches an approximation order better than the Shepard one, but it needs to identify any useful triangulation of the node set. Here we propose a searching technique used to detect and select the nearest neighbor points in the interpolation scheme [2]. It consists in finding the closest points belonging to the different neighborhoods and then applies to the triangulation-based approach. Numerical experiments and applications show the performance of the interpolation procedure [1].

References

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