

Construction of smooth GBC and its Applications

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Abstract

GBC are generalized barycentric coordinates defined on polygons. They can be pieced together to form continuous spline functions. In this talk, we shall explain a construction of smooth GBC (sGBC) over quadrilaterals. They are based on Wachspress coordinates together with other functions. When a partition is a collection of parallelograms, our construction reduces to a tensor product of polynomials on each parallelogram. Smooth surfaces based on these sGBC will be demonstrated.

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