Splines on Meshes with Irregularities

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Splines form an elegant bridge between the continuous real world and the discrete computational world. Their tensor-product form lifts many univariate properties effortlessly to the surfaces, volumes and beyond. Irregularities, where the tensor-structure breaks down, therefore deserve our attention – and provide a rich source of mathematical insights.

This talk categorizes and reviews techniques for extending B-splines across irregularities: constructing surfaces from quad meshes, computing on such surfaces and obtaining m-dimensional splines.

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