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**Laetitia Huang**, Smith College, **Valeri Jean-Pierre\*** (vjeanpierre@smith.edu), Department of Mathematics and Statistics, Smith College, Northampton, MA 01060, **Karen Reed**, Smith College, and **Isabella Zhu**, Smith College. *Dimensions of generalized spline spaces.*

Suppose you have an edge-labeled graph. A spline is a way of labeling the vertices so that each pair of adjacent vertices differ by a multiple of the corresponding edge. Splines come up naturally in many different applications, including numerical analysis, data interpolation, computer graphics, and engineering; the edge-labels roughly correspond to the slopes between two observed points. We describe computational and theoretical results about dimensions of spline spaces research in cases that relate to the longstanding upper bound conjecture. (Received September 17, 2019)