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Tatyana Sorokina* (tsorokina@towson.edu). *Continuous piecewise divergence-free spline vector fields on Alfeld refinement of simplicial partitions.*

Dimension and a minimal determining set for continuous piecewise divergence-free spline fields on the Alfeld split of a simplex in \mathbb{R}^n are obtained using new Bernstein-Bézier techniques, as well as the dimension formula for continuous piecewise divergence-free splines on the Alfeld refinement of an arbitrary simplicial partition in \mathbb{R}^n . (Received March 20, 2017)