

## Convergence of dimension elevation in Chebyshev spaces versus approximation by Chebyshevian Bernstein operators

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**Abstract.** *A nested sequence of extended Chebyshev spaces possessing Bernstein bases generates an infinite dimension elevation algorithm transforming control polygons of any given level into control polygons of the next level. In this talk, we present our recent results on the convergence of dimension elevation to the underlying Chebyshev-Bézier curve for the case of Müntz spaces [1] and rational function spaces [2]. Moreover, we reveal an equivalence between the convergence of dimension elevation to the underlying curve and the convergence of the corresponding Chebyshevian Bernstein operators to the identity [4, 3]. Applications to Pólya type theorems on positive polynomials will be presented.*

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