On generalized Voronovskaja theorem for Bernstein polynomials

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Abstract.

We establish a new quantitative variant of Floater's theorem dealing with the generalization of Voronovskaja's theorem for Bernstein polynomials. Our estimate improves the recent quantitative version of Floater's theorem proved in [Gonska, H. and Raşa, I., *Asymptotic behaviour of differentiated Bernstein polynomials*, Mat. Vesnik **61** (2009), 53-60]. Moreover, as a particular case, we recover the main result of [Tachev, G. T., *Voronovskaja's theorem revisited*, J. Math. Anal. Appl. **343** (2008), 399-404].

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