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**Arcadii Z. Grinshpan\*** ([agrinshp@usf.edu](mailto:agrinshp@usf.edu)). *Extremal properties of weighted convolutions.*

Sharp inequalities for weighted convolutions [1] can be presented and used in various equivalent forms. The most elegant of them are the semi-norm inequality for power series and inequality for expectations of interrelated random variables. The analysis of their extreme cases which employs the convolution properties of Bernstein polynomials will be discussed. Some examples and applications involving special functions, differential operators, integral equations, and a probabilistic interpretation will be given.

[1] A.Z. Grinshpan, Weighted inequalities and negative binomials, *Advances in Applied Mathematics* 45 (2010), 564-606. (Received August 23, 2014)