

Strengthened Chernoff-type variance bounds

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Let X be an absolutely continuous random variable from the integrated Pearson family and assume that X has finite moments of any order. Equivalently, X is a linear (non-constant) transformation of Y where Y follows a Normal, a Beta or a Gamma density. Using some properties of the associated orthonormal polynomial system we provide a class of strengthened Chernoff-type variance bounds.

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