Recurrence Relations for Strongly $q$-Log-Convex Polynomials

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Abstract. We consider a class of strongly $q$-log-convex polynomials based on a triangular recurrence relation with linear coefficients, and we show that the Bell polynomials, the Bessel polynomials, the Ramanujan polynomials and the Dowling polynomials are strongly $q$-log-convex. We also prove that the Bessel transformation preserves log-convexity.

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