

Meeting: 1111, Porto, Portugal, SS 21A, Special Session on Fractional and Time-scale Analysis

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68114. *Monotonicity and Convexity for Discrete Fractional Difference Operators.*

We will discuss some recent discoveries regarding the fractional difference operator and its relationship to the monotonicity or convexity of functions. In particular, it will be shown how these properties are affected by the nonlocal character of the discrete fractional difference. Some applications of these results to boundary and initial value problems will be explained. (Received December 29, 2014)