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Joshua Zahl* (jzahl@math.ubc.ca). *Dimension-expanding polynomials and the discretized Elekes-Ronyai theorem.*

I will discuss a discretized version of the Elekes-Ronyai theorem from additive combinatorics, which is closely related to the sum-product problem. The Elekes-Ronyai theorem has recently had applications to combinatorial geometry, including variants of the Erdos distinct distances problem. The discretized version of the Elekes-Ronyai theorem has similar applications, and in particular I will discuss some new results on a pinned version of the Falconer distance problem. This is joint work with Orit Raz (Received March 07, 2021)