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On the Exact Convex Hull of IFS Fractals

Fuglede's Conjecture relates spectral sets to tiles of positive Lebesgue measure, such as connected self-affine tiles, further underlining their relevance. The characterization of connected self-affine tiles has evoked plenty of recent interest, as well as that of IFS fractals in general. Connectedness is hinted to be related to the convex hull problem through self-contacting binary fractal trees. This talk surveys the current state of the convex hull problem, and introduces novel results and approaches. The objective is to determine the exact convex hull, not mere approximations, in order to potentially aid the resolution of other theoretical problems.