New criteria for equality of Hausdorff and affinity dimensions, via self-affine measures on positive subsystems

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The dimension theory of non-conformal dynamical systems is notoriously complicated, even in the relatively simple case of planar affine iterated function systems. Recently, substantial progress was obtained in the study of self-affine measures. I will explain how to apply these results to obtain similar results for self-affine sets (despite the close terminology, this is not obvious). In particular, new classes of explicit self-affine sets

for which the Hausdorff dimension takes the "expected" value are obtained.

Joint work with Ian Morris (Surrey).