Properties of quasi-Assouad dimension

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Quasi-Assouad dimension is a variant of (the more familiar) Assouad dimension, introduced recently as an invariant under quasi-Lipschitz mappings. This dimension lies between the Assouad dimension and the Assouad spectrum, recently introduced to study homogeneity properties of metric spaces, which relates the quasi-Assouad dimension to concepts which are currently generating interest.

The aim of the poster is to present some results which clarify and extend the theory of quasi-Assouad dimension. Precisely:

- the quasi-Assouad dimension of a self-similar set in $\mathbb{R}$ coincides with its Hausdorff dimension;

- weak tangents of a set are useful to give lower bounds for the quasi-Assouad dimension of the set whenever the convergence to the tangent is fast enough;

- quasi-Assouad dimension can increase under orthogonal projections.

Joint work with Kathryn Hare (University of Waterloo).