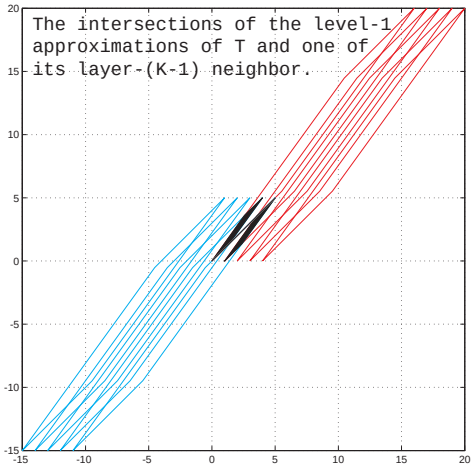
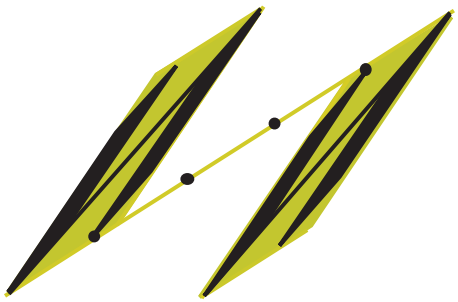


(a)



(b)

FIGURE 1. (a) A magnified picture of the bounding and level-1 polygons indicating that the $\tau(K-1)$ intersection is composed of miniature $\tau(K)$ and $\tau(K-1)$ intersections. Here $A = [0, 1; -5, 5]$, $p = -5$, $q = 5$ and $K = 4$. Drawn here is the magnified level-1 parallelograms of T and one of its neighbors in $\mathcal{L}(3)(= \mathcal{L}(K-1))$. Apply A^{-1} to the picture in (a) and translate to get the detail in level-2 in (b). Repeat this to see that the $\tau(K-1)$ intersection is a Cantor set union countably many points.

REFERENCES

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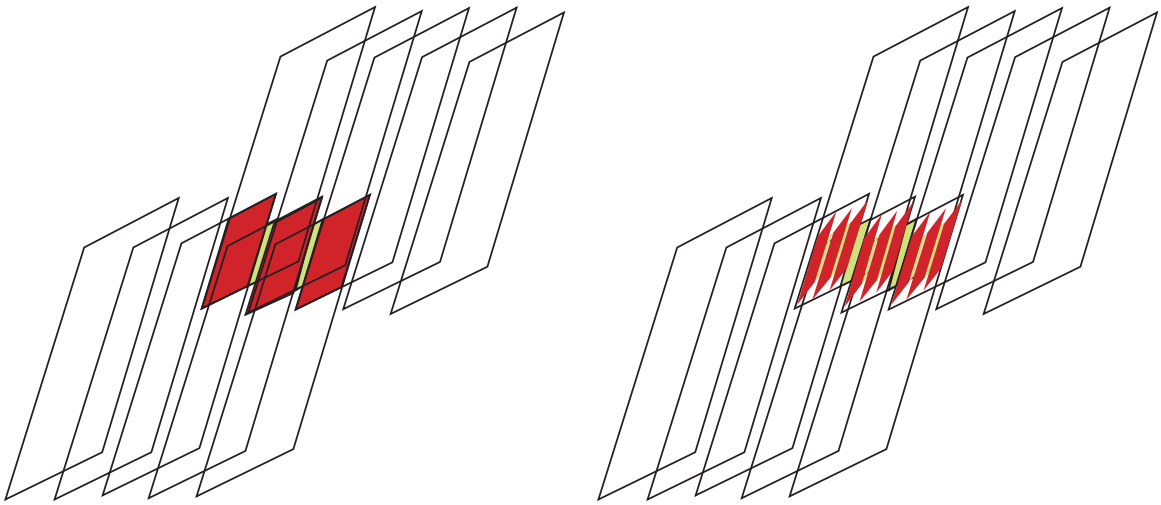

(a) (b)

FIGURE 2. (a) The intersections of (magnified) level-1 approximations of T and its neighbors in $\mathcal{L}(k)$, $k = 2, \ldots, K-2$. The picture is modeled after the case $A = [0, 1; -5, 5]$, and $k = 2$ (the exact picture is visually confusing). The light parallelograms contain only (miniature) $\tau(k+1)$ intersection of the neighbors, and the dark parallelograms contain (miniature) $\tau(k)$ and $\tau(k+1)$ intersections. (b) The dark parallelograms in (a) are detailed into intersections of level-2 approximations. Again, the (expanded) lightly shaded region contains only $\tau(k+1)$ intersections.

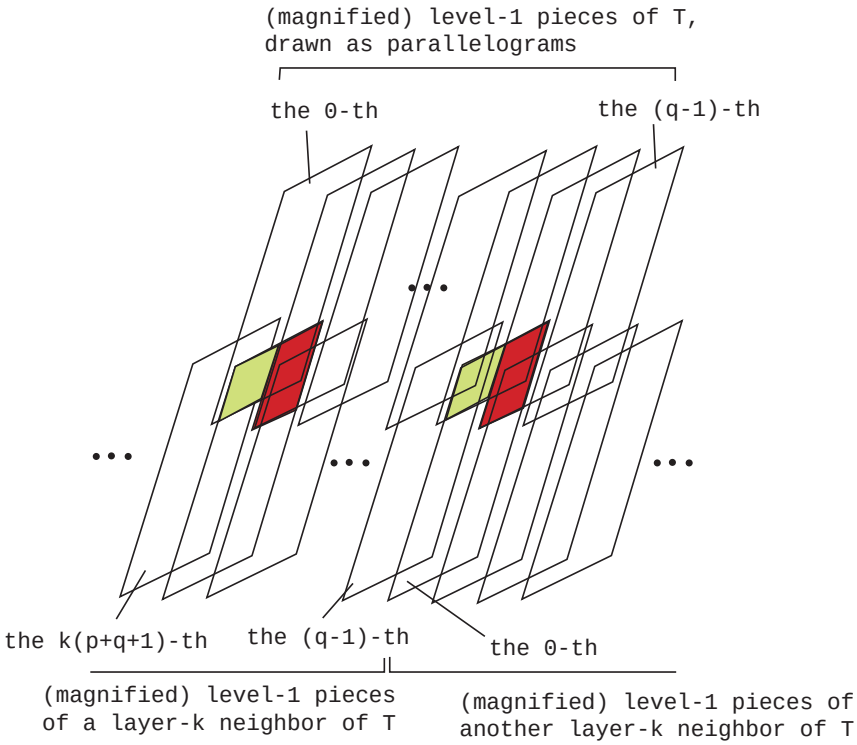

FIGURE 3. A magnified picture showing the intersections of the level-1 pieces (drawn as parallelograms) of T with those of its two layer-k neighbors, $k = 2, \ldots, K-1$ (the picture is slightly different for $k = 0, 1, K$). The intersection of T with each of its neighbors is essentially a repetition of one shaded part indicated, and hence has the same topological property (finite, Cantor, etc) as one shaded part. Hence the topological properties of the intersections of T with its two layer-k neighbors are the same. The two colors of a shaded piece represents the intersections of a level-1 piece of a neighbor with two different level-1 pieces of T. The two colors should overlap in this picture (and is drawn as dark), but the overlap is only in the boundary on the attractor level.