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Laminations of coexisting attractors

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Abstract. In the space of polynomial maps of $\mathbb{R}^2$ of degree at least two, there are codimension-3 laminations of maps with at least 3 period doubling Cantor attractors. The leafs of the laminations are real-analytic and they have uniform diameter. The closure of each lamination contains the codimension-one tangency locus of a saddle point. Asymptotically, the leafs of each lamination align with the leafs of the eigenvalue foliation. This is an example of general coexistence theorems valid for higher dimensional real-analytic unfoldings of homoclinic tangencies. This reveals further universal and global aspects of the bifurcation pattern.

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