**Title:** Common dynamics of two Pisot substitutions with the same incidence matrix

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The matrix of a substitution is not sufficient to completely determine the dynamics associated with it, even in the simplest cases since there are many words with the same abelianization. In this paper we study the common points of the canonical broken lines associated with two different irreducible Pisot unimodular substitutions $\sigma_1$ and $\sigma_2$ having the same incidence matrix. We prove that if 0 is an inner point to the Rauzy fractal associated with the substitution $\sigma_1$ and $\sigma_1$ verifies the Pisot conjecture then these common points can be generated with a substitution on an alphabet of so-called balanced pairs, and we obtain in this way the intersection of the interior of two Rauzy fractals.

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