
Languages of more and more general interval exchanges

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Résumé

The languages generated by interval exchange transformations have been characterized by the authors (2008) and Belov-Cernyatev (2010) under some extra conditions on the system. Lifting these conditions leads us to consider successively natural codings of standard interval exchanges, natural codings of affine interval exchanges, grouped codings of affine interval exchanges, and natural codings of generalized interval exchanges. We show that these four classes of languages are strictly increasing, and give necessary and sufficient (but not all equally explicit) combinatorial criteria to describe each of them. These work also, *mutatis mutandis*, for interval exchanges with flips.

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