

ORBIT STRUCTURE OF INTERVAL EXCHANGE TRANSFORMATIONS WITH
FLIP

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A sharp bound on the number of invariant components of an interval exchange transformation is provided. More precisely, it is proved that the number of periodic components n_{per} and the number of minimal components n_{min} of an interval exchange transformation of n intervals satisfy $n_{\text{per}} + 2n_{\text{min}} \leq n$. Besides, it is shown that almost all interval exchange transformations are typical, that is, have all the periodic components stable and all the minimal components robust (i.e. persistent under almost all small perturbations). Finally, we find all the possible values for the integer vector $(n_{\text{per}}, n_{\text{min}})$ for all typical interval exchange transformation of n intervals.