Chaotic shift operators on trees

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An operator is called chaotic if it admits a dense orbit (i.e. it is hypercyclic) and it has a dense set of periodic points. Shift operators play an important role in linear dynamics. Jabłoński, Jung and Stochel have introduced shift operators on trees. In recent work with Papathanasiou we have characterized when such operators are hypercyclic. We propose here to study when they are chaotic. The results have surprising connections with potential theory on trees.

This is joint work with Dimitris Papathanasiou.