

Substitution Delone Sets with Pure Point Spectrum are Model Sets

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Abstract

It has been known that regular model sets are pure point diffractive. But the converse has been not known. We introduce a notion of inter model set which has less constraint than regular model set and show here that for a primitive substitution point set being a pure point diffractive set is equivalent to being an inter model set. We introduce a new notion of coincidence in substitutions which connects inter model sets and pure point diffractive sets.