

# Group actions with discrete spectrum and their amorphic complexity

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Amorphic complexity, originally introduced for integer actions, is a topological invariant which measures the complexity of dynamical systems in the regime of zero entropy. We will introduce its definition for actions by locally compact  $\sigma$ -compact amenable groups on compact metric spaces. Further, we will illustrate some of its basic properties and show why it is tailor-made to study strictly ergodic group actions with discrete spectrum and continuous eigenfunctions. This class of actions includes, in particular, Delone dynamical systems related to regular model sets obtained via cut and project schemes (CPS). Finally, for these kind of Delone dynamical systems we present sharp upper bounds on amorphic complexity utilizing basic properties of the corresponding CPS.

This is joint work with G. Fuhrmann, T. Jäger and D. Kwietniak.