Compactness and analyticity of fragmentation semigroups

We consider discrete fragmentation models and present recent results on analyticity and compactness of the fragmentation semigroup. These results allow for proving a number of properties concerned with the long term behaviour of such semigroups, such as the asynchronous growth (decay) property and also some asymptotic properties. We also provide a number of counterexamples, showing that not all fragmentation semigroups are analytic and compact.

References