A-hypercyclicity

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Abstract

Since the introduction of the frequent hypercyclicity in 2004 by Bayart and Grivaux, the researchers in linear dynamics are keen to better understand the possible frequencies of visits in any non-empty open set. In addition to the lower density considered in the notion of frequent hypercyclicity, one can be interested in the upper density, the upper Banach density and many other densities. The interest of all these notions of hypercyclicity, grouped together under the name of *A*-hypercyclicity, lies in their differences. Indeed one of the major motivations is to better understand the differences between hypercyclic and frequently hypercyclic operators through the study of the *A*-hypercyclicity.

After a general presentation of *A*-hypercyclicity, we will see together what we know and what remains to be discovered concerning these different notions of hypercyclicity.