İSTANBUL ANALYSIS SEMINARS

WEIGHTED SHIFTS AND DISJOINT HYPERCYCLICITY

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Abstract: A linear continuous operator T on a topological vector space X is hypercyclic if there exists a vector f in X such that the orbit $\{T^n(f) : n > 0\}$ is dense in X. The first example of a hypercyclic operator on a Banach space was given in 1969 by S. Rolewicz, who showed that if B is the backward shift on the space of square summable sequences, then zB is hypercyclic if and only if $|z| > 1$. A natural generalization of these operators are the weighted backward shifts. In 1995, H. Salas characterized the hypercyclic weighted backward shifts completely in terms of their weight sequences.

The aim of this talk is to extend the characterization of Salas to the setting of disjointness introduced by Bernal and, independently, by J. Bes and A. Peris. It turns out that some well known results about a single hypercyclic operator fail to hold true for disjoint hypercyclic operators.

This is a joint work with J. Bes and R. Sanders.

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