

Eigenvalues and Linear Dynamics of Weighted Backward Shifts on Spaces of Real Analytic Functions

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In this joint work with late Paweł Domański, we give certain conditions on linear dynamical properties of the weighted backward shift operators

$$B_w : A(\Omega) \rightarrow A(\Omega),$$

with weight sequences $w = (w_n)_{n \in \mathbb{N}}$, acting on the spaces of real analytic functions $A(\Omega)$ on open subsets Ω of \mathbb{R} containing zero, that send the monomials x^n to $w_n x^{n-1}$ for all $n \in \mathbb{N}$ and the unit function to the zero function. A useful tool for these characterizations is the description of the point spectra and the eigenspaces of weighted backward shifts on $A(\Omega)$.