

Complex symmetric weighted shifts

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Complex symmetric operators have attracted quite an interest since the seminal works of Garcia, Putinar, and Wogen. Among the many papers devoted to the topic was the one by Zhu and Li characterizing all the classical bounded (unilateral and bilateral) weighted shifts that are complex symmetric as the orthogonal sums of particular truncated weighted shifts.

Motivated by the result of Zhu and Li we study complex symmetry of weighted shifts in a more general setting. First, we concentrate on unbounded yet still classical unilateral weighted shifts. We show that a similar characterization to the one obtained by Zhu and Li holds whenever an additional condition concerning analytic vectors of the weighted shift in question is satisfied. Second, we address the question of complex symmetry in the context of weighted shifts on assorted directed trees.

The talk is based on a joint work with C. Benhida

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