

Jabbarzadeh, M. R.

A note on weighted composition operators on measurable function spaces. (English)

Zbl 1060.47032

J. Korean Math. Soc. 41, No. 1, 95-105 (2004).

The author considers the weighted composition operators $W = uC_\tau$ between $L^p(X, \Sigma, \mu)$ spaces and Orlicz spaces $L^\varphi(X, \Sigma, \mu)$, generated by measurable and non-singular transformations τ from X into itself and measurable functions u on X . He characterizes the functions u and transformations τ that induce weighted composition operators between L^p -space by using some properties of the conditional expectation operator, the pair (u, τ) and the measure space (X, Σ, μ) . Some other properties of these operators are also investigated in this paper.

Reviewer: Zehua Zhou (Tianjin)

MSC:

- 47B33 Linear composition operators
- 47B20 Subnormal operators, hyponormal operators, etc.
- 47B38 Linear operators on function spaces (general)
- 46E30 Spaces of measurable functions (L^p -spaces, Orlicz spaces, Köthe function spaces, Lorentz spaces, rearrangement invariant spaces, ideal spaces, etc.)

Cited in 2 Documents

Keywords:

weighted composition operator; conditional expectation; Fredholm operator; Orlicz space

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