



Ching On LO (colo@graduate.hku.hk), Department of Mathematics, University of Hong Kong, Hong Kong, *Weighted composition operators between L^p -spaces.*

ABSTRACT. Let (X, Σ, μ) and (Y, Γ, ν) be two σ -finite and complete measure spaces. For a Γ -measurable function $u : Y \rightarrow \mathbb{C}$ and a non-singular measurable transformation $\varphi : Y \rightarrow X$, we define a linear map uC_φ from $L^p(\mu)$ ($1 \leq p \leq \infty$) into the linear space of all Γ -measurable functions on Y by $uC_\varphi f := u \cdot (f \circ \varphi)$. This map is known as the weighted composition operator.

Such kind of operators appears in various contexts in the literature. However, there are relatively few results about the properties of these operators between two distinct L^p -spaces. In this talk, we characterize the boundedness and compactness of these operators between L^p -spaces.