Abstract

This thesis contains results about the embeddings of Müutz spaces in the Hilbert space scenario and its applications to composition operators on Müntz spaces. In the main, we shall be concerned with the embedding $M^2_\Lambda \subset L^2(\mu)$, where the Hilbert-Müntz space M^2_Λ is the closed linear span of the monomials x^{λ_n} in $L^2([0,1])$ and μ is a finite Borel measure on $[0,1]$.

After gathering together the mathematical preliminaries required for this work in Chapter 1, we shall use the notion of a sublinear measure introduced by I. Chalendar, E. Fricain and D. Timotin [8] to investigate the properties of boundedness, compactness aud belonging to Schatten-von Neumann ideals of these Hilbert space embeddings. This will be the content of Chapters 2 and 3. In Chapter 4, we give examples of sublinear measures for bouuded and compact embeddings with interesting properties. Finally, iu Chapter 5 the general embedding theory is applied to initiate the study of composition operators on M^2_Λ.