Dedication

To my parent,

Brothers,

And

Sisters

Acknowledgments

Thank to ALLAH who gave me patience to conduct this study. I would like to thank my supervisor prof. Shawgy Hussein Abdalla for his advices discussions during the preparation of this dissertation, I would also like to thank my husband and my family for the great support and for their patience before getting this work done. Finally I would like to thank my friends for their moral support and continuous encouragements.

Abstract

We study complex symmetric weighted composition operators on the Hardy space .We provide some characterizations when a weighted composition operators is complex symmetric. We investigate which combinations of weights and maps of the open unit disk give rise to complex symmetric weighted composition operators with a special conjugation .We also investigate the topological structure of the space of weighted composition operators boundely acting between two Hilbert spaces of analytic functions on the open unit disk, satisfying some natural hypotheses. We study composition operators, acting on the Hardy spaces that have symbol and a universal covering map of the disk onto a finitely connected domain with distinct points in the interior of simply connected.

الخلاصة

تمت دراسة مؤثرات التركيب المرجحة المتماثلة المركبة علي فضاء هاردي. اشترطنا بعض التشخيصات عندما مؤثرات التركيب المرجحة هي متماثلة مركبة. ناقشنا اي التوفيقات للمرجحات والرواسم لقرص الوحدة المفتوح يعطي ارتفاعا" الي مؤثرات التركيب المرجحة المتماثلة المركبة مع مرافقة خاصة. ايضا ناقشنا البناء التبولوجي لفضاء مؤثرات التركيب المرجحة المحدودة الفاعلة بين فضائي هلبرت للدوال التحليلية علي قرص الوحدة المفتوح والمحقق لبعض الفروضات الطبيعية. درسنا مؤثرات التركيب الفاعلة علي فضاءات هاردي التي لها رمز وراسم غطاء عالمي للقرص الشامل علي المجال المتصل المنتهي مع نقاط منعزلة في داخل متصل بسيط.

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