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Dana D. Clahane* (dclahane@math.ucr.edu), Department of Mathematics, University of California, Riverside, CA 92521. *Compact weighted compact composition operators and fixed points in convex domains.*

For compact, weighted composition operators on a quite general class of weighted Hardy spaces of the disk, with weight symbol bounded away from 0 toward the boundary, G. Gajath recently proved that the composition symbol has a unique fixed point, and a closed expression of the operator's spectrum, thus directly generalizing the expression obtained by Caughran/Schwartz for unweighted composition operators, was also obtained.

We discuss the problem of generalizing these facts to the multivariable case and obtain in particular the fixed point result for the case of a general class of Hilbert spaces of holomorphic functions on convex domains. If time permits, we will discuss connections with other problems in multivariable function theory. (Received February 07, 2006)