The Berezin Transform on the Hyperbolic Ball

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In the talk I will introduce the Berezin Transform $B_\alpha$ defined on the space $L^1(B)$. The transform satisfies $B_\alpha f = f$ for every hyperbolic harmonic function in $L^1(B)$. In the talk I will discuss several properties of the operator $B_\alpha$ and provide a new proof of the following result: If $f$ is bounded on $B$ and satisfies $B_\alpha f = f$, then $f$ is hyperbolic harmonic on $B$.

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