

Preduals of Q_p -spaces

Anna-Maria Simbotin

May 6, 2004

The Q_p -spaces are a recently introduced class of Möbius invariant spaces of analytic functions in the unit disc, closely related to some of the most classical examples of Möbius invariant spaces of analytic functions, like the Bloch space B ($= Q_p$, $p > 1$), $BMOA$ ($= Q_1$), or the Dirichlet space D ($= Q_0$). This talk concerns an acknowledged open problem about these spaces, namely to describe the preduals of Q_p for $0 < p < 1$. The famous theorem of Fefferman identifies $BMOA$ with the dual of the Hardy space H^1 , and by a result of Axler, the Bloch space is at its turn identified with the dual of the Bergman space L_a^1 of analytic functions on the unit disc. Inspired by the representation of functions in H^1 as sums of products of functions in H^2 , we present a similar description of the preduals of Q_p which involves known spaces of analytic functions.