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GENERALIZED INTERPOLATION IN THE UNIT BALL

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Abstract

We study a generalized interpolation problem for the space $H^\infty(\mathbb{B}^2)$ of bounded homomorphic functions in the ball $\mathbb{B}^2$. A sequence $Z = \{z_n\}$ of $\mathbb{B}^2$ is an interpolating sequence of order 1 if for all sequence of values w_n satisfying conditions of order 1 (that is discrete derivatives in the pseudohyperbolic metric are bounded) there exists a function $f \in H^\infty(\mathbb{B}^2)$ such that $f(z_n) = w_n$. These sequences are characterized as unions of 3 free interpolating sequences for $H^\infty(\mathbb{B}^2)$ such that all triplets of Z made of 3 nearby points have to define an angle uniformly bounded below (in an appropriate sense). Also, we give a multiple interpolation result (interpolation of values and derivatives).

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