SUMS OF AN ENTIRE FUNCTION IN CERTAIN WEIGHTED $L^2$-SPACES

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Abstract
We consider the functional equation $f(z+\sigma) - f(z) = g(z)$ where $\sigma$ is a complex number, $f$ and $g$ are entire functions of a complex variable $z$, with growth conditions. We prove the existence of certain types of solutions of this equation by an $a$ priori estimate method in certain weighted $L^2$-spaces.

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