

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

BRUNO BRIVE

*Abstract*

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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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