TRACES OF HÖRMANDER ALGEBRAS ON DISCRETE VARIETIES AND APPLICATION TO CONVOLUTION EQUATIONS

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Let $A_p(\mathbb{C})$ be the space of entire functions such that for all $z \in \mathbb{C}$, $|f(z)| \leq Ae^{\alpha p(z)}$ for some constants $A, \alpha > 0$ and let V be a discrete variety which is not a uniqueness set for $A_p(\mathbb{C})$. We use L^2-estimates to characterize the trace of $A_p(\mathbb{C})$ on V. Then, we apply our results to give an explicit representation of mean-periodic functions, that is, solutions of some homogeneous convolution equations, in series of exponential polynomials.