

İSTANBUL ANALYSIS SEMINARS

A NEW CLASS OF REAL ANALYTIC FRÉCHET ALGEBRAS

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Abstract: We show that there are function algebras on \mathbb{C} , closed under the topology of uniform convergence on compacta, containing the entire holomorphic functions as a proper subalgebra, such that every function in the algebra is real analytic, with infinite radius of convergence. This construction lifts to \mathbb{C}^n , to some Stein spaces, and to some CR manifolds, the last if interpreted properly. Generators and ideal structure are examined. We show that functions in these algebras of low order of growth must be holomorphic.

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