

TOPOLOGICAL AND ALGEBRAIC PROPERTIES OF THE SPACE OF LORCH ANALYTIC MAPPINGS

LUIZA AMALIA DE MORAES

UNIVERSIDAD FEDERAL DE RÍO DE JANEIRO, BRAZIL

ABSTRACT. If E is a complex Banach algebra, a mapping $f : U \subset E \rightarrow E$ is Lorch analytic if given any $a \in U$ there exists $\rho > 0$ and there exist unique elements $a_n \in E$ such that $f(z) = \sum_{n=0}^{\infty} a_n(z - a)^n$ for all z with $\|z - a\| < \rho$. In this talk we are going to study topological and algebraic properties of the algebra of the mappings from E into E that are analytic in the sense of Lorch (endowed with the the topology τ_b of uniform convergence on the bounded subsets of E), in connection with the topological and algebraic properties of the underlying space E .