

FRÉCHET VALUED REAL ANALYTIC FUNCTIONS

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Abstract

We characterize those Fréchet spaces E for which $\text{Proj}^1 A(\Omega, E) = 0$, where $A(\Omega, E)$ is the (PLB)-space of E -valued real analytic functions on the open set $\Omega \subset \mathbb{R}^d$. This has various consequences, among those a characterization of all (LB)-spaces X for which $\text{Ext}^1(X, A(\Omega)) = 0$ in the category of (PLB)-spaces, which means that every exact sequence

$$0 \longrightarrow A(\Omega) \xrightarrow{i} Y \xrightarrow{q} X \longrightarrow 0$$

where Y is of type (PLB) splits.