

Extensions of flows by continuous cocycles

Matúš Dirbák

Matej Bel University, Banská Bystrica, Slovakia

Let \mathcal{F} be a flow given by a continuous action of a locally compact group Γ on a compact space X . We are interested in the existence of a continuous cocycle \mathcal{C} over \mathcal{F} which takes its values in a given Polish group G and satisfies a given property ((weak) topological ergodicity, weak topological mixing, a prescribed set of essential values etc.). We give sufficient conditions for such a cocycle \mathcal{C} to exist and apply the obtained results to construct minimal fibre-preserving flows on fibre bundles.