

CONTROLLED TOPOLOGY I & II

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One principle in basic analysis is the following:

$$\forall x \in \mathbb{R}_{\geq 0} : [\forall \varepsilon > 0 : x < \varepsilon] \Rightarrow x = 0.$$

In some sense there is a K -theoretic analogue which can be used to show that an element in K -theory is trivial. To do so, we will introduce the notion of ε -controlled additive categories. The conclusion will then be that a morphism that is ε -controlled for all $\varepsilon > 0$ represents the trivial element in K -theory.