

# FIBRATION SEQUENCES IN COBORDISM CATEGORIES

WOLFGANG STEIMLE

In these lectures we show that certain interesting functors between cobordism-like categories induce fibration sequences on classifying spaces, hence, long exact sequences on homotopy groups. The method is purely combinatorial and should be seen as an analogue of Waldhausen's additivity theorem in the context of cobordism categories. As a sample application, we give a new proof of a theorem due to Genauer.