

Abstract: In this thesis we study quantitative weak compactness in spaces $(C(K), \tau_p)$ and later in Banach spaces. In the first chapter we introduce several quantities, which in different manners measure τ_p -noncompactness of a given uniformly bounded set $H \subset \mathbb{R}^K$. We apply the results in Banach spaces in chapter 2, where we prove (among others) a quantitative version of the Eberlein-Smulyan theorem. In the third chapter we focus on convex closures and how they affect measures of noncompactness. We prove a quantitative version of the Krein-Smulyan theorem. The first three chapters show that measuring noncompactness is intimately related to measuring distances from function spaces. We follow this idea in chapters 4 and 5, where we measure distances from Baire one functions first in \mathbb{R}^K and later also in Banach spaces.