

Contents

Abstract	i
Resumen	iii
Resum	v
Chapter 1. Introduction	1
Outline of the thesis	3
Notation	5
Chapter 2. Background	7
2.1. Linear notions in the structure of Banach spaces	7
2.2. Basics in Lipschitz maps on metric spaces	10
2.3. Lipschitz-free spaces	13
Chapter 3. Lipschitz retractional structure of metric and Banach spaces	17
3.1. Lipschitz retractional skeletons and the Plichko property	17
3.2. Witnesses of the Plichko property in Lipschitz-free spaces	19
3.3. Lipschitz analogues to Complementation Properties	37
3.4. Open problems	39
Chapter 4. Pathological metric spaces	41
4.1. Failing the Lipschitz SRP: The skein space.	41
4.2. Failing the Lipschitz RP(Λ, Λ)	78
4.3. Open problems	82
Chapter 5. Local complementation in metric spaces	83
5.1. Local complementation and linear extension operators	83
5.2. The local CP(Λ, Λ) in metric spaces	84
5.3. Open problems	89
Bibliography	91