

Contents

Preface	iii
Chapter I. Overview	1
1. Introduction	1
1.a. Zariski-decomposition	1
1.b. Numerical D -dimension	5
1.c. Canonical divisor	6
1.d. Addition theorem	8
1.e. Invariance of plurigenera	8
1.f. Log-terminal singularities	9
2. History	10
3. Notation	11
Chapter II. Preliminaries	13
1. Complex analytic varieties	13
1.a. General theory	13
1.b. Spec and Proj	15
1.c. Ample line bundles	23
1.d. Bimeromorphic geometry	27
2. Divisors	29
2.a. Weil and Cartier divisors	29
2.b. Reflexive sheaves of rank one	30
2.c. Intersection numbers	33
2.d. \mathbb{Q} -divisors and \mathbb{R} -divisors	35
2.e. Pullback and push-forward	38
3. D -dimension	42
3.a. Linear systems of \mathbb{R} -divisors	42
3.b. D -dimensions of \mathbb{R} -divisors	45
3.c. Relative D -dimension	50
3.d. Big divisors	52
4. Canonical divisor	54
4.a. Kodaira dimension	54
4.b. Logarithmic ramification formula	55
4.c. Terminal, canonical, and log-terminal singularities	59