

---

# Contents

<b>1</b>	<b>Cobordism and oriented cohomology</b> .....	1
1.1	Oriented cohomology theories .....	1
1.2	Algebraic cobordism .....	6
1.3	Relations with complex cobordism .....	13
<b>2</b>	<b>The definition of algebraic cobordism</b> .....	17
2.1	Oriented Borel-Moore functors .....	17
2.2	Oriented functors of geometric type .....	26
2.3	Some elementary properties .....	29
2.4	The construction of algebraic cobordism .....	35
2.5	Some computations in algebraic cobordism .....	40
<b>3</b>	<b>Fundamental properties of algebraic cobordism</b> .....	51
3.1	Divisor classes .....	51
3.2	Localization .....	55
3.3	Transversality .....	66
3.4	Homotopy invariance .....	75
3.5	The projective bundle formula .....	77
3.6	The extended homotopy property .....	80
<b>4</b>	<b>Algebraic cobordism and the Lazard ring</b> .....	83
4.1	Weak homology and Chern classes .....	83
4.2	Algebraic cobordism and $K$ -theory .....	105
4.3	The cobordism ring of a point .....	116
4.4	Degree formulas .....	122
4.5	Comparison with the Chow groups .....	136
<b>5</b>	<b>Oriented Borel-Moore homology</b> .....	141
5.1	Oriented Borel-Moore homology theories .....	141
5.2	Other oriented theories .....	149

- 6 Functoriality** ..... 159
  - 6.1 Refined cobordism ..... 159
  - 6.2 Intersection with a pseudo-divisor ..... 169
  - 6.3 Intersection with a pseudo-divisor II ..... 178
  - 6.4 A moving lemma ..... 184
  - 6.5 Pull-back for l.c.i. morphisms ..... 192
  - 6.6 Refined pull-back and refined intersections ..... 201
  
- 7 The universality of algebraic cobordism** ..... 215
  - 7.1 Statement of results ..... 215
  - 7.2 Pull-back in Borel-Moore homology theories ..... 217
  - 7.3 Universality ..... 221
  - 7.4 Some applications ..... 225
  
- A Resolution of singularities** ..... 233
  
- References** ..... 237
  
- Index** ..... 239
  
- Glossary of Notation** ..... 243



<http://www.springer.com/978-3-540-36822-9>

Algebraic Cobordism

Levine, M.; Morel, F.

2007, XII, 246 p., Hardcover

ISBN: 978-3-540-36822-9