

TABLE OF CONTENTS

0.	NOTATION AND CONVENTIONS	1
1.	ABSTRACT STRATIFICATIONS	2
1.1.	Tubes	2
1.2.	Definition and elementary properties of abstract stratifications	4
1.3.	Existence of partitions of unity	8
1.4.	The sheaf $C_{\underline{A}}^{\infty}$ is fine	9
	Notes	9
2.	CONTROLLED VECTOR FIELDS	9
2.1.	Definition and elementary properties	9
2.2.	Flows	11
2.3.	Existence of flows	12
2.4.	Lifting of vector fields	14
2.5.	Locally trivial controlled maps	16
2.6.	First isotopy lemma	16
2.7.	The local structure of abstract stratifications	17
2.8.	Saturated subsets	17
2.9-2.10.	Preimage of saturated subsets	17
2.11.	Fibre products	19
2.12.	The abstract stratification $\underline{A} S_{\chi}^E$	19
	Notes	20
3.	ABSTRACT THOM MAPPINGS	20
3.1.	Regular squares	20
3.2.	Definition and elementary properties of abstract Thom mappings	21
3.3.	Examples	22
3.4.	The sheaf $\chi_{\underline{B}}^f$	23
3.5-3.6.	Lifting of controlled vector fields	24
3.7.	The second isotopy lemma	27
	Notes	28

4.	MANIFOLDS WITH FACES	29
4.1.	Definition and elementary properties	29
4.2.	Maps compatible with the faces	31
4.3.	Examples and remarks	32
4.4-4.5.	Vector fields parallel to the faces	36
5.	ABSTRACT STRATIFICATIONS (WITH FACES)	37
5.1.	Definition and elementary properties	37
5.2.	Maps compatible with the faces	39
5.3.	Examples, remarks and constructions	40
5.4.	Controlled vector fields	48
5.5.	Abstract Thom mappings	49
5.6.	Lifting of controlled vector fields	50
5.7.	Second isotopy lemma	51
5.8.	First isotopy lemma	51
5.9.	More examples and remarks	51
5.10-5.11.	Applications of the isotopy lemmas	54
5.12.	On the controlability of the ρ functions	56
6.	THE STRUCTURE OF ABSTRACT THOM MAPPINGS	57
6.1.	Decompositions of abstract stratifications	57
6.2.	Existence of decompositions of abstract stratifications	65
6.3.	Total decompositions of abstract stratifications	69
6.4.	Restriction of decompositions	70
6.5.	Existence of total decompositions of abstract stratifications	71
6.6.	The core of an abstract stratification	71
6.7.	Admissible squares	72
6.8.	Decompositions of abstract Thom mappings	83
6.9-6.10.	Existence of decompositions of abstract Thom mappings	96
6.11.	Total decompositions of abstract Thom mappings	111
6.12.	Existence of total decompositions of abstract Thom mappings	117
6.13-6.15.	More cores	119

7.	TRIANGULATION OF ABSTRACT STRATIFICATIONS	120
7.1.	Triangulation of relative manifolds	120
7.2-7.5.	Good triangulations of cores	121
7.6.	Smooth triangulations of abstract stratifications (definition)	126
7.7.	Extending a good triangulation of the core to a smooth triangulation of the corresponding abstract stratification	126
7.8.	Existence of smooth triangulations of abstract stratifications	127
7.9.	Triangulation of subanalytic sets	127
7.10.	Triangulation of orbit spaces	128
	Notes	128
8.	TRIANGULATION OF NICE ABSTRACT THOM MAPPINGS	129
8.1.	Notation	129
8.2.	Remarks on good triangulations of $c(f)$	129
8.3.	Regular triangulations of $c(f)$	130
8.4.	Nice abstract Thom mappings	131
8.5-8.7.	Properties of regular triangulations of $c(f)$	133
8.8.	The canonical extension of a regular triangulation of $c(f)$	135
8.9.	Triangulation of proper nice abstract Thom mappings	138
8.10.	Topologically stable mappings	138
8.11.	Triangulation of proper topologically stable mappings	139
8.12.	Triangulable smooth mappings are generic	140
8.13.	Triangulation of proper light subanalytic mappings	140
8.14.	A remark of Hironaka	140
8.15.	A possible generalisation	140
9.	APPENDIX	141
9.1.	Simplicial complexes and triangulations	143
9.2.	Product of triangulations	143
9.3.	Fibre product of triangulations	145
9.4.	Mapping cylinders	146
9.5.	Two lemmas	151
9.6.	Piecewise linear maps	152
	REFERENCES	153
	SUBJECT INDEX	156
	SYMBOL INDEX	158