

LIST OF ILLUSTRATIONS	3-4
PREDSLOV	5-6
PREFACE	7-8
INTRODUCTION	9-10
GOAL	10
1.0 LIGHTWEIGHT STRUCTURES	11-12
1.1 TENSEGRITY STRUCTURES	13-26
1.2 ANTI-GRAVITY TENSEGRITY STRUCTURES	27-29
2.0 MEMBRANE STRUCTURES	30-36
2.1 GEOMETRIC SHAPES OF MEMBRANES	36
2.2 TYPES OF MATERIAL OF MEMBRANE STRUCTURES	37
2.2.1 PTFE (Polytetrafluoroethylene)	37
2.2.2 ETFE (Ethylene Tetrafluoroethylene)	38
2.2.3 PVC (Polyvinylchloride)	38
2.3 FORM FINDING	39
2.3.1 THE FORCE DENSITY METHOD	39-47
2.3.2 ADVANTAGES AND DISADVANTAGES OF	48
MEMBRANE STRUCTURES	
3.0 FREE-FORM IN ARCHITECTURE	49-50
3.1 GRID SHELLS IN ARCHITECTURE	50-54
3.2 BIOMIMICRY DESIGN IN ARCHITECTURE	55-56
3.3 TOPOLOGY IN ARCHITECTURE	57-59
3.4 TESSELLATION DESIGN IN ARCHITECTURE	60-62
3.5 VORONOI DESIGN IN ARCHITECTURE	63-65
4.0 CONCLUSION	66-67
5.0 REFERENCES	68