



شبكة المعلومات الجامعية
التوثيق الإلكتروني والميكرو فيلم

بسم الله الرحمن الرحيم



HANAA ALY



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التوثيق الإلكتروني والميكروفيلم



شبكة المعلومات الجامعية التوثيق الإلكتروني والميكروفيلم



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جامعة عين شمس

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RE-VISITING CATENARY STRUCTURES; TOWARDS NEW SPATIAL PROPERTIES

By

Eslam Abdelkhalek Metwally Sayed Metwally

A Thesis Submitted to the
Faculty of Engineering at Cairo University
in Partial Fulfillment of the
Requirements for the Degree of
MASTER OF SCIENCE
in
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Re-Visiting Catenary Structures; Towards New Spatial Properties

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Shell Structures ; Grid Shells; Form Finding; Material Manipulation; Transparent Shells;

Summary: (not more than 150 word and the summary must be in the same page)

Nowadays due to the variety of materials in the construction market, new materials could be used in shell construction; such as resin with clear crystal effect, which can give a new spatial property to such structures. The research aim is to develop a prototype for a grid shell structure made of transparent polymer. Research objective was set to facilities the achievement of its aim, by firstly building a background about shells and form find a catenary grid. As, it will be the simplified example for shells in order to experiment new material and spatial property. Moreover, identifying the local materials to be used.

Disclaimer

I hereby declare that this thesis is my own original work and that no part of it has been submitted for a degree qualification at any other university or institute.

I further declare that I have appropriately acknowledged all sources used and have cited them in the references section.

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Table of Contents

DISCLAIMER.....	I
ACKNOWLEDGMENTS	II
TABLE OF CONTENTS.....	III
LIST OF TABLES	V
TABLE OF FIGURES	VI
NOMENCLATURE.....	IX
ABSTRACT	X
CHAPTER 1 : INTRODUCTION	1
1.1. RESEARCH BACKGROUND	1
1.2. RESIN	3
1.3. RESEARCH PROBLEM.....	3
1.4. RESEARCH HYPOTHESIS.	3
1.5. RESEARCH AIM	4
1.6. RESEARCH OBJECTIVES.	4
1.7. RESEARCH QUESTIONS.	4
1.8. RESEARCH METHODOLOGY.	5
.....	5
1.9. ORGANIZATION OF THE THESIS	6
CHAPTER 2 : INTRODUCTION TO SHELLS IN ARCHITECTURE	7
2.1. BIRTH OF SHELLS IN ARCHITECTURE.....	8
2.1.1. Robert Hooke.....	9
2.2. THE DEVELOPMENT OF SHELL STRUCTURES.	11
2.2.1. Antoni Gaudi.....	13
2.2.2. Heinz Isler.....	16
2.3. SHELLS MORPHOLOGICAL CLASSIFICATION.	20
2.3.1. Analytical Morphologies (Geometrical):	21
2.3.2. Experimental Morphologies (Structural):.....	22
2.3.3. Digital Morphologies (Sculptural):	23
2.4. CONCLUSION.	24
CHAPTER 3 : GRID SHELL STRUCTURES.	25
3.1. IDEA OF GRID SHELLS.	26
3.2. FORM FINDING.	29
3.2.1. Physical Form Finding (Hanging Model).....	29
3.2.1.1. Scale dependent Hanging Models.	30
3.2.1.2. Scale Independent Hanging Models.	31
3.2.2. Digital Form Finding.	34
3.2.2.1. Force Density Method.	34

3.2.2.2.	Dynamic Relaxation Method.....	35
3.3.	CONCLUSION.	39
CHAPTER 4 : FORM FINDING OF A TRANSPARENT GRID SHELL		40
4.1.	METHODOLOGY DIA GRAM.	41
4.2.	FORM FINDING INPUTS CLARIFICATION.	42
4.2.1.	Experiment Materials.	43
4.2.1.1.	Clear Epoxy Resin	44
4.2.1.2.	Hoses.....	45
4.2.2.	Material Behavior.	46
4.3.	DIGITAL FORM FINDING.	49
4.3.1.	Digital Form Finding Workflow.	50
4.4.	GEOMETRY OPTIMIZATION.....	56
CHAPTER 5 : TRANSPARENT GRID SHELL; RESULTS AND ANALYSIS... 57		
5.1.	GRID SHELL FABRICATION.....	58
5.1.1.	Form Work Fabrication.	58
5.1.2.	Formwork Assembly.....	61
5.1.3.	Grid shell Members setup and Assembly	62
5.2.	GRID SHELL CASTING.....	66
5.3.	RESULTS OBSERVATION.	71
5.4.	PROTOTYPE ANALYSIS.	73
5.5.	SPATIAL PROPERTIES OF TRANSPARENT GRID SHELL.....	85
CHAPTER 6 CONCLUSION AND RECOMMENDATIONS.....		87
6.1.	THESIS FINDINGS AND CONTRIBUTION.	88
6.1.1.	Theoretical Contribution.	90
6.1.2.	Methodological Contribution.	92
6.1.3.	Final Results Contribution.	94
6.2.	RECOMMENDATIONS.	95
.....		98
REFERENCES		99

List of Tables

Table 1: Shell structures pioneers, by Author, 2019	11
Table 2: Specifications of the Epoxy that will be used in the experiment	44
Table 3 Research Achieved Process and Outcome	88

Table of Figures

Figure 1: a - Hooke's Hanged Catenary and its inverted arch, b , the analysis had been done by Giovanni Poleni [4].	1
Figure 2: Suspended model of IL and, by inversion, the corresponding Catenary Grid Shell [6]	2
Figure 3: on the left snail shell, in the middle turtle back shell, on the right egg shell	8
Figure 4: Pantheon Interior shell	8
Figure 5: on the right side the catenary arch on the left side the funicular arch	9
Figure 6: Section of the Dome of St.Paul's Cathedral (www.mediastorehouse.com), edited by author illustrating the inclination of the dome base	10
Figure 7: A sketch shows the vertical and horizontal forces acting on the arch profile (www.bristol.ac.uk)	10
Figure 8: the Analysis by Giovanni Poleni on the St. Peter's Dome (Huerta, 2006)	10
Figure 9: on the left the entrance of Palacio Guell (www.barcelona-museum.com), on the right the corridor in the School of the Teresina (www.pintrist.com)	14
Figure 10: Hanging model of a gothic cross vault [11]	14
Figure 11: Model for The Church of Colònia Güell (unfinished) Santa Coloma de Cervelló, (near Barcelona) Spain. Construction started: 1898. Antoni Gaudi (ar.pinterest.com)	15
Figure 12: On the left Torroja's Algeciras Market Hall (cehopu.cedex.es), in the middle Nervi's Palazzetto dello Sport (Architetto.info), on the right Candela's Los Manantiales Restaurant (lapinterest.eu)	16
Figure 13: Shells diagrams by Heinz Isler [15]	17
Figure 14: Free Hanging Models by Heinz Isler (http://www.buildllc.com/)	18
Figure 15: on the Left Isler's Grid points on the model, on the right models by him for the same project [10]	18
Figure 16: on the upper part Isler's model, on the lower oart the site photo for The Flieger Flab air museum [10]	19
Figure 17: Gaussian curvature, a- clastic, b - anti-clastic, c – cylindrical [17]	20
Figure 18: Heinz Isler shell structures classification, by author, 2019	20
Figure 19: Les Manantiales Restaurant in Xochimilco Mexico City by Felix Candela [17]	21
Figure 20: a - Translation Surface, b - Revolution Surface, c - Ruled Surface [18]	21
Figure 21: Heinz Isler experimental forms, on the left the air pressure, in the middle the gravity based hanging model, and on the right the material flow model [19]	22
Figure 22: Heinz Isler's formwork for concrete shell structures [17]	22
Figure 23: Example of Digital shells, Crematorium in Kakamigahara by Toyo Ito & Associates, Architects	23
Figure 24: Chart for shell structures, classification vs. timeline [17]	23
Figure 26 V. Shukhov	26
Figure 25: the grid shell of Mannheim and the hanging model [19]	26
Figure 27: Toledo grid shell 2.0. Construction process: (a - c) The central nodes are pulled up by means of cables; (d) Additional horizontal trust is added to the corner nodes in order to reach the final shape [23].	27
Figure 28: The Grid Shell of The British Museum Courtyard (www.fosterandpartners.com/projects)	28

Figure 29: Dutch Maritime Museum Grid Shell, and its form finding by Dynamic Relaxion method from a Planar Surface to a double cureved Form [27]	28
Figure 30: Illustration for the form finding classifications for shell structures, by author in 2019.	29
Figure 31: Experiments on hanging models by Frei Otto, on the left side shows how the geometry allow for a clear deformation, on the right side shows how when the forces reactions are not considered it result in wrinkles	31
Figure 32 Illustrative figure by author, 2019 using Rhinoceros CAD. For the scissor motion.	32
Figure 33: Toledo gridshell 2.0. Construction process: (a - c) The central nodes are pulled up by means of cables; (d) Additional horizontal trust is added to the corner nodes in order to reach the final shape [23].	32
Figure 34 : A Detailed connection for Mannheim wooden grid shell by Frei Otto [37].	33
Figure 35 illustrations for pin connection to transform the square grids to a rhombo, also represents the axial forces that happens when the planar lines transfer to curved lines [27].	33
Figure 36: on the right side example for non-continuous straight grid shell and on the left side an example for the continuous grid shell (http://digitalstructures.mit.edu).....	34
Figure 37 example of bending stress / strain behavior, (www.finehomebuilding.com)	35
Figure 38 example on kinetic damping behavior from initial state to final geometry ...	36
Figure 39 Example on strained grid shell prototype [54]	36
Figure 40 Diagram for the PSS simulation elements [57].....	38
Figure 41: Methodology Diagram by researcher, 2020.....	41
Figure 42: example on timber grid shell construction on the left side (https://taubmancollege.umich.edu). Illustration on the right side by author, 2020	42
Figure 43 : Illustration for the materials that will be used in the experimental prototype. Author, 2020	43
Figure 44: on the left; an image for the hose, in the middle; its outer diameter, on the right; its inner diameter. Author, 2020	45
Figure 45 . A photo shows the PVC hoses curly shape when it hanged between two points. Author, 2020.	46
Figure 46: Graph for the PVC hoses illustrating the elasticity and plasticity behavior of the material when it subjected to heat. Author, 2020.	47
Figure 47: the boiling water experiment setup to get the catenary deformation for the PVC hose. Author, 2020.....	48
Figure 48: before and after image for the PVC hose catenary deformation using boiling water. Author, 2020.	48
Figure 49 : Example on Kangaroo Plugin simulation of shell structure [67].....	49
Figure 50 kangaroo workflow by Arturo Tedeski [57] edited by Author, 2020	50
Figure 51: Research Experiment Grid using Rhinoceros. Author, 2021	50
Figure 52: Dividing the Grid into points and segments to be ready for the simulation using Rhinoceros. Author, 2010.	51
Figure 53: illustration shows the forces applied on each node of the grid shell using Rhinoceros. Author, 2021.....	52
Figure 54: Illustration, Shows the half distance between each node and its surrounding using Rhinoceros. Author, 2021	52
Figure 55 the weight of 20.2 cm long of the experiment grid shell members. Author, 2021	53
Figure 56 Illustration showing the stipulate points in hatched red colour using Rhinoceros. Author, 2021	54

Figure 57: 55 Illustration showing the stipulate points in hatched red colour using Rhinoceros. Author, 2021	54
Figure 58: Illustration for the simulation code using Grasshopper Plugin. Author, 2021	55
Figure 59: Illustration for two different stipulating modes for the experiment. Author, 2021	55
Figure 60: Illustration for the development of the simulation outcome for fabrication and physical execution using Rhinoceros. Author, 2021	56
Figure 61 CNC Router Machine. Author, 2021.	58
Figure 62 Diagram for the fabrication files for CNC router machine using Rhinoceros and Photoshop. Author, 2021	59
Figure 63: Platform illustration for the formwork and grid shell. Author, 2021	60
Figure 64: formwork and platform after cut using CNC router machine. Author 2021.	60
Figure 65 : Joints Explanation for the Form work. Author, 2021	61
Figure 66: Formwork side physical assembly, Author, 2021	61
Figure 67. Illustration for stretching and elimination of the wrinkles for the PVC hoses. Author, 2021	62
Figure 68: Grid printout. Author, 2021	63
Figure 69: Illustration for the grid making and cross joint fixation. Author, 2021.	64
Figure 70: Image for the Grid shell mounted to the formwork. Author, 2021.	65
Figure 71; water head theory simplified illustration, on the left the first condition, in the middle the second condition, on the right the third condition (Boundless.com). Edited by Author, 2021.	66
Figure 72: Illustration for the experiment fluid leveling. Author, 2021.	67
Figure 73: Illustration for the experiment fluid flow. Author, 2021.	68
Figure 74: Real Photo for the Flasks at point A and cap at point B. Author, 2021.	69
Figure 75: Illustration for the epoxy resin casting steps. Author, 2021.	70
Figure 76: Photo for the final model after seven days from casting the epoxy resin. Author, 2021.	71
Figure 77: Illustration for inverting upright the model. Author, 2021	72
Figure 78: formwork assembly analysis 1. Author, 2021.	73
Figure 79: formwork assembly analysis 2. Author, 2021.	74
Figure 80: formwork assembly analysis 3. Author, 2021.	74
Figure 81: Grid preparation analysis 1. Author, 2021.	75
Figure 82: Grid Preparation analysis 2. Author, 2021.	75
Figure 83: Grid Preparation analysis 2. Author, 2021.	76
Figure 84: Grid and platform assembly analysis 1. Author, 2021.	77
Figure 85: Grid and platform assembly analysis 2. Author, 2021.	78
Figure 86: Casting epoxy and curing analysis 1. Author, 2021.	79
Figure 87: Casting epoxy and curing analysis 2. Author, 2021.	80
Figure 88: Prototype final result analysis 1. Author, 2021.	81
Figure 89: Two photos for the final prototype and effect of its transparency in diffusing light. Author, 2021	82
Figure 90: Another photo for the final prototype and effect of its transparency in diffusing light. Author, 2021	83
Figure 91: Photo for the final model showing its details. Author, 2021	84
Figure 92; Pantheon Dome Interior.	85
Figure 93: Dutch Maritime Museum Grid Shell	86
Figure 94: Key Findings Diagram. Author, 2021	89