

DAGMAR REINHARDT
DESIGN STUDIOS 2004 - 2007

UNIVERSITY OF SYDNEY
MASTER OF ARCHITECTURAL DESIGN

2007/02 'DESIGN MODEL LAB (MARCH)
INVESTIGATION OF DESIGN MODEL STRATEGIES BY CONTEMPORARY
ARCHITECTS, INDIVIDUAL TRANSFORMATIONS AND ARCH APPLICATION

2006/02 'PROSTHETIC SURFACE STUDIO' (MARCH)
RESEARCH OF CRITICAL SURFACE CONDITIONS AND GENERATIVE METHODS IN
FASHION (CHALAYAN, MIYAKE, KAWAKUBO) THROUGH DESIGN MODEL, MEDIA
ROTATION AND ARCHITECTURAL APPLICATION

2005/01 'PRECAST REALITY STUDIO' (MARCH) AND
'REMOTE CONTROL STUDIO' (BARCH)
ANALYSIS OF SCIENCE FICTION MOVIES FOR FUTURE ORGANIZATIONS IN
ARCHITECTURE, SOCIETY, IDENTITY, MEDIA AND REALITY PRODUCTION

**2004/02 'ELASTIC SPACE STUDIO' (MARCH)
RESEARCH ON DYNAMIC METHODS FOR AN RESPONSIVE AND INTERACTIVE
SECOND AND THIRD SKIN IN CONTEMPORARY FASHION AND ARCHITECTURE,
USING PARAMETERS OF PATTERN CHART, INTERSTITIAL SPACE,
PROGRAMMED FIELD**

2004/01 '(IN)FORM RESEARCH STUDIO' (MARCH)
CRITICAL REVIEW OF FORM GENERATING METHODS AND GEOMETRY HISTORY
(PALLADIAN SYMMETRY, CARTESIAN GRID, PLAN LIBRE, GROWTH AND FORM,
MOEBIUS STRIP AND KLEIN BOTTLE), DOM-I-NO HOUSE

2003/02 'SINGLE HOUSE STUDIO' (MARCH)
THE PRIVATE (RESIDENTIAL) HOUSE AS THE ARCHITECTS LABORATORY, BODY
AND COUNTERPART ANALYSIS, DEVELOPING A NOVEL DOMESTIC SPACE

LEHRVERANSTALTUNG MIT EINFUEHRUNGSVORTRAG, WOECHENTLICHEM
GRUPPEN-UND EINZELGESPRACH, INTENSIV-SEMINAREN, ERWEITERETM
SCHWERPUNKT VORTRAG, ZEIFACHER PRAESNTATION (INTERIM AND FINAL)
MIT EINGELADENENE GASTKRITIKERN, DOKUMENTATION/ AUSSTELLUNG

VERÖFFENTLICHT/ DOWNLOAD UNTER:
[HTTP://WWW.ARCH.USYD.EDU.AU/PROGRAMS_OF_STUDY/POSTGRADUATE/MAS
TER_OF_ARCHITECTURE.SHTML](http://www.arch.usyd.edu.au/programs_of_study/postgraduate/master_of_architecture.shtml)



ELASTIC SPACE STUDIO

PATTERN CHART, PROGRAM SURFACE,
INTERSTITIAL SPACE (THIRD SKIN)

2004/ 02 UNIVERSITY OF SYDNEY
MASTER OF ARCHITECTURAL DESIGN
COORDINATION: PROF. TOM HENEGHAN
STUDIO: DAGMAR REINHARDT AND ALEXANDER JUNG

01 -20 06 2005 EXHIBITION AT RAIA/ TUSCULUM

ELASTIC SPACE STUDIO
PATTERN CHART, PROGRAMM SURFACE,
INTERSTITIAL SKIN

SEMESTER 02/ 2004 THE UNIVERSITY OF SYDNEY
MASTER OF ARCHITECTURAL DESIGN

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NP NANDA, PARUL (India)
NNK NGUYEN NGOC, KIM (France)
RS RAJENDIRAN, SATHIYA (India)
RM RATTAZZI, EMANUELE (Italy)
RR ROBERTS, RANJEETA (India)
SR SANE, RAMA (India)
SD SUAREZ, DIANA (Columbia)
ST SUZUKI, TOSHIMUNE (Japan)
VZ VAISHNAV, ZUBIN (India)
YZ YIN, ZHIPENG-ROC (China)

ELASTIC SPACE STUDIO

Space in its morphological form is described by 6 adjacent surfaces, which enclose a volume. In the configuration of a dwelling (four walls, foundation, roof), space separates the vulnerable human body from whatever disturbing influences. Similar to clothing as a second skin, the house has become an extension of man, a skin of larger scale: Architecture can be understood as yet another layer of protective skin: only the distance between the layers defines the distinction between a clothing and a wall. The correspondence to this skin defines the use of habitation. What is the character of this skin? And what is the space it generates? Of which nature is the correspondence between functional and spatial proposals?

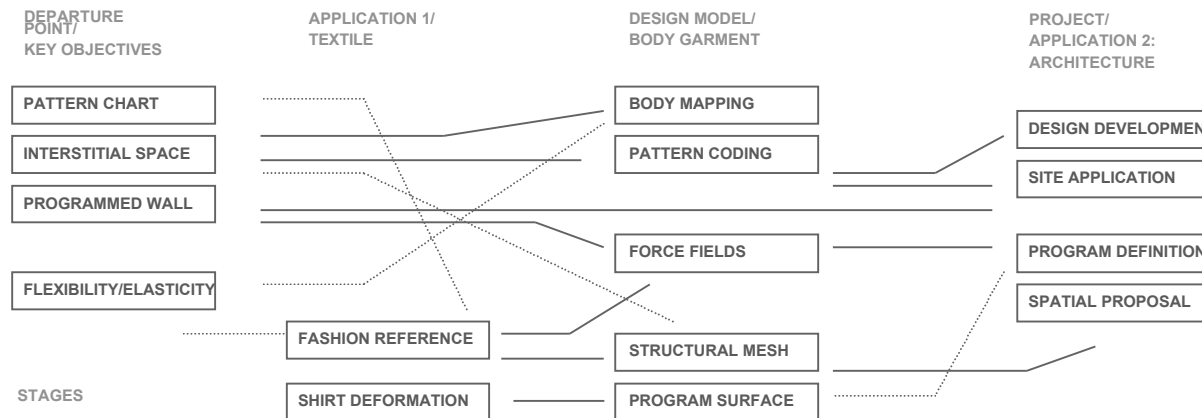
The ELASTIC SPACE STUDIO examines the generative processes of space/volume, and follows the appropriation in contemporary fashion culture, art production and its relatives in architecture, to identify the interdependencies between form, function and potential variables of use.

The researches focuses on this topic through a close examination of two major characteristics, a first which explores the texture and quality of any enveloping surface as an extended skin of man (clothes, wall, space), and a second part which deals with the distance and movement range of any of these skins to the human body. In which way do functional or communicative spatial arrangements generate variables of use? How do both methods answer a potential occupant's requirements and a succession of continuous change? What are the basic limitations of a flexible or an elastic space?

The ELASTIC SPACE STUDIO will review possible conditions, which form the basic methods for an operation of architecture as a third skin: the pattern charts as a planning device of surface, the interstitial space as the distance between body and envelope, the programmed surfaces as an inhabitable space generating environment, dependent on its textures and materials, and the idea of elasticity as discussed for an changing, adapting, flexible, moving, transforming architectural space.

PATTERN CHART

Predominantly used in the field of tailoring, the pattern chart is the planning device for the construction of a volume: the dress. The measurements of a continuous line, for all forming parts are laid out on a surface from which they are to be cut, arranged, and sawn: to form the final volume/space. The shape to be produced is already determined by the first arrangement: when the line is drawn, the final form is defined. The nature of the material, its properties (texture, density, elasticity), the tenseness of the volume in relation to the inhabitant/ user all describe the range of movement and variability of use which the final shape will permit.



PROGRAMMED WALL

The programmed wall is the equivalent of clothes as yet another operative layer: the third skin. In the case of a house, the external wall it is the basic shelter against climatic, social, informative, public influences. Within the house, the internal wall can be a texture which obeys the users demands: separating partitions, build-in storage, information surfaces (TV projections, control panels, etc.) in principle, this third skin can be thought of as a surface much more related to the user's body, once it is dissolved from a structural responsibility. In Baroque, this surface has been programmed with manifold tasks: information (inserted picture frames), aesthetics (ornamented patterns), habitation facilities (alcove for sleeping). The seventies tradition of a total environment has carried these options further, allowing the owner to be fully served by a wall-integrated servant structure (electronics, catering, audio-visuals, flexible adapting furniture).

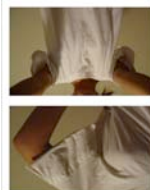
INTERSTITIAL SPACE

The interstitial space is the space between the user's body and the enclosing envelope, it defines the range of movement for the owner, and allows any number of scenarios being carried out. In other cases, it restricts even these actions. The interstitial space works on the grounds of a pattern chart and the screenplay (a set of pre-defined movements, uses, interactions, etc), which can be used to control the purpose of the garment/ envelope. In both cases, the clothes and the surrounding wall of a habitation, the distance to the body defines the interstition. A nomads tent, a survival jacket follow the same purpose. The texture of the surface, its cut, maybe implanted electronic devices all enable the owner to adapt to a specific environment. At the same time, they place the owner within a cultural surrounding: it is a cultural 'furr' he is wearing to communicate his specific attitude (fashion).



ELASTIC SPACE STUDIO 2004
T-SHIRT PROJECT

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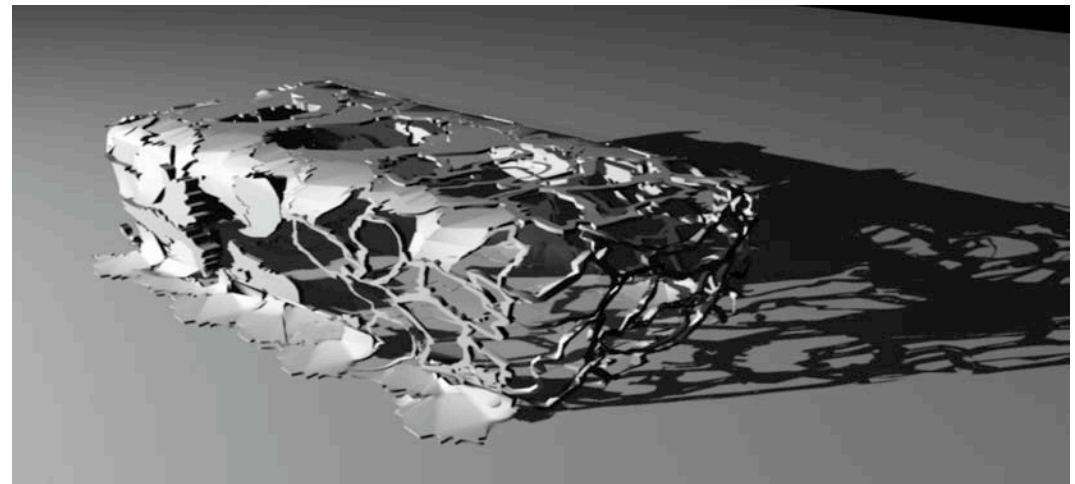
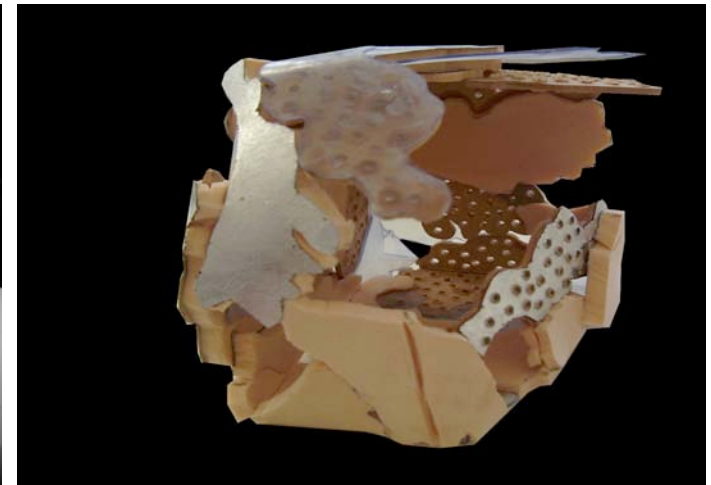
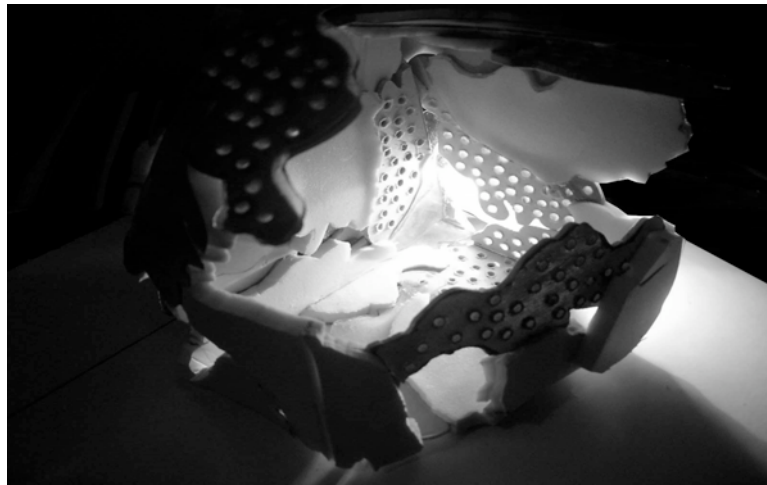
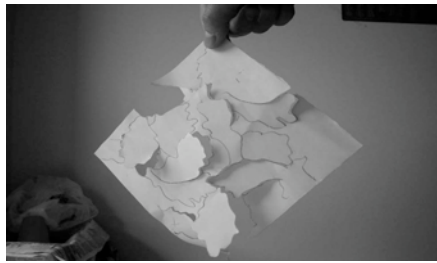
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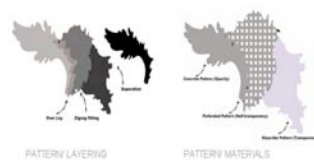
The Pretended Sleeve and the
New Cuff Underneath

06

DOCUMENTATION BOOKLET

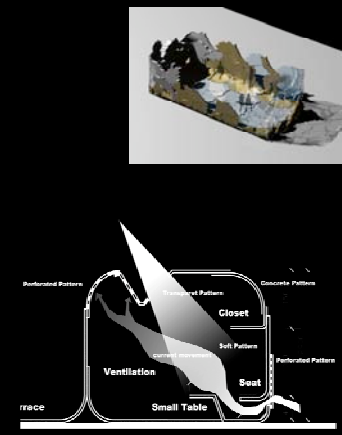
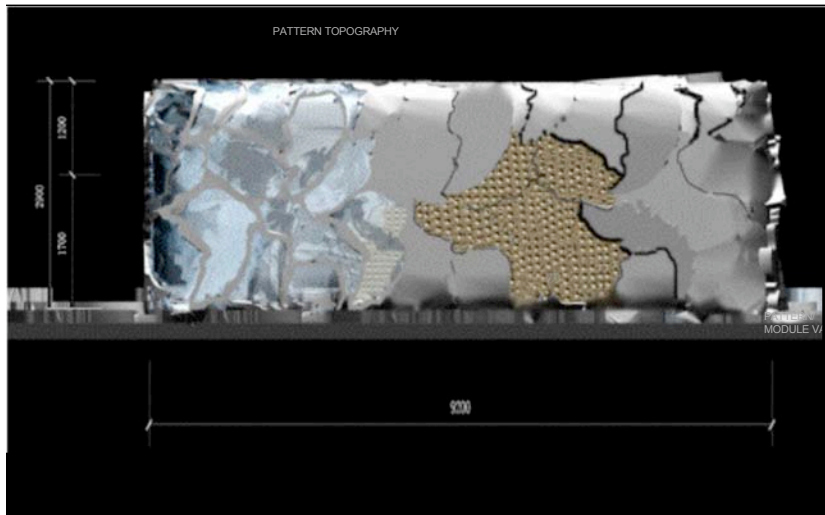
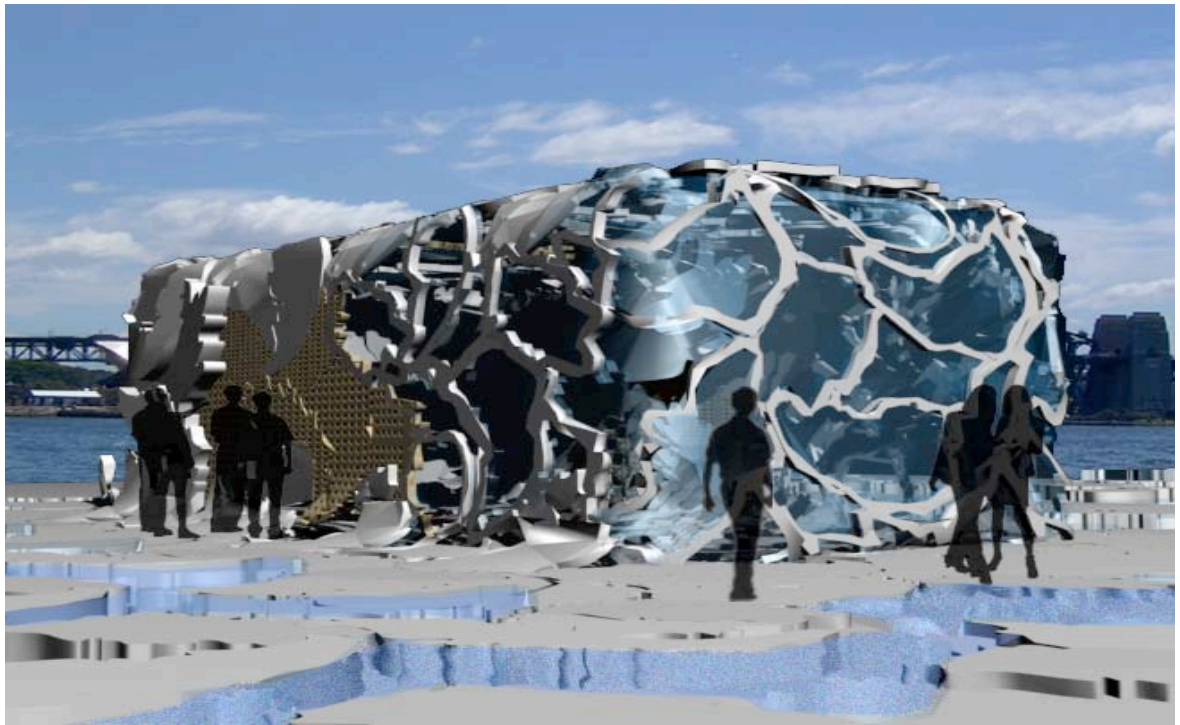
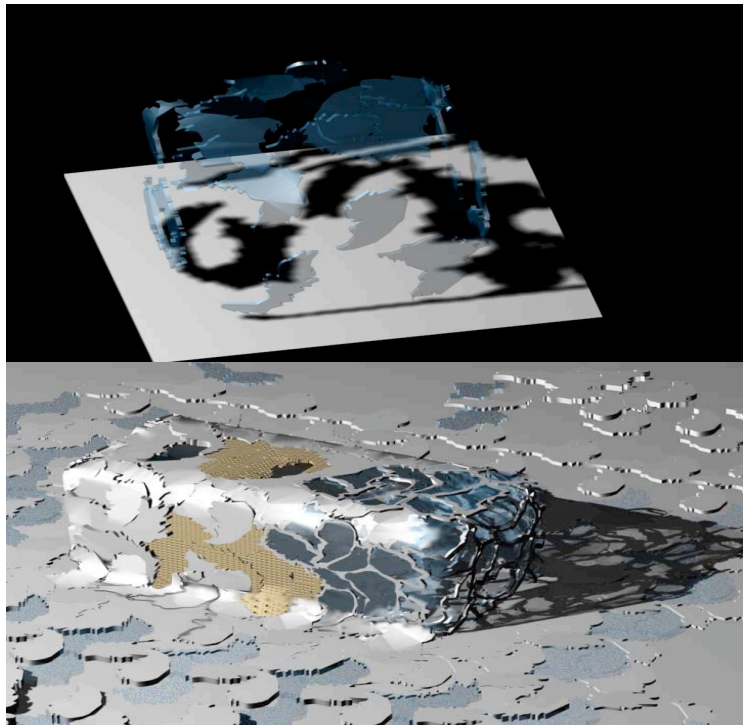


ELASTIC SPACE STUDIO 2004
YI ZHANG-DENNIS LIANG



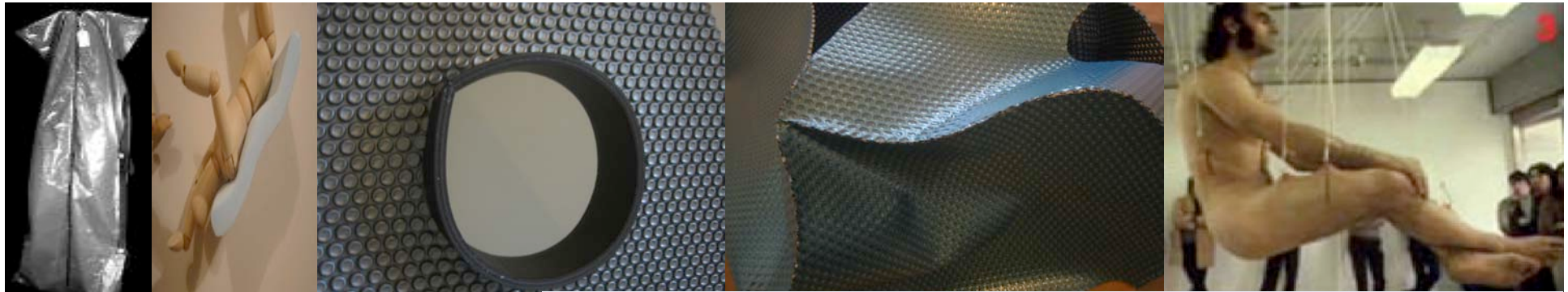
A MAJOR DRIVE OF THE PROJECT ORIGINATES FROM CODING AND PATTERNING OF THE ORNAMENT AS A THREE-DIMENSIONAL ELEMENT. THE PROJECT PROPOSAL USES THIS METHOD TO TRANSLATE A SURFACE PATTERN INTO A SPACE, FORMING AN OVERALL SPATIAL ENVELOPE THAT IS PARTIALLY INTEGRATED INTO THE SURROUNDING LANDSCAPE, AND EXTENDS INTO THE INTERIOR AS AN INHABITABLE TERRITORY OF ASSEMBLED SURFACE PLANES WITH FUNCTIONAL CODING. EACH PATTERN ELEMENT HAS DIFFERENT MATERIAL PROPERTIES (GLASS, METAL, CONCRETE, TEXTILE), DEPENDING ON THE RELATIVE POSITION ON THE SPATIAL ENVELOPE (EXTERIOR-INTERIOR LAYER, VERTICAL-HORIZONTAL).

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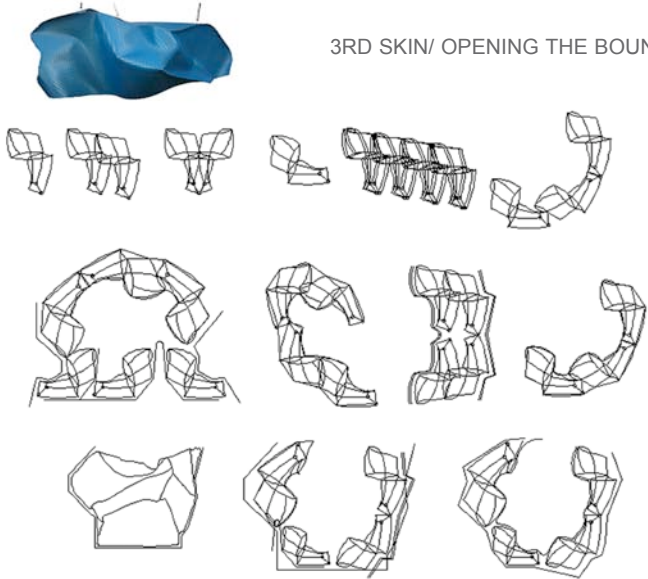
ELASTIC SPACE STUDIO 2004
YI ZHANG-DENNIS LIANG



REFERENCE: STELARC



3RD SKIN/ OPENING THE BOUNDARY



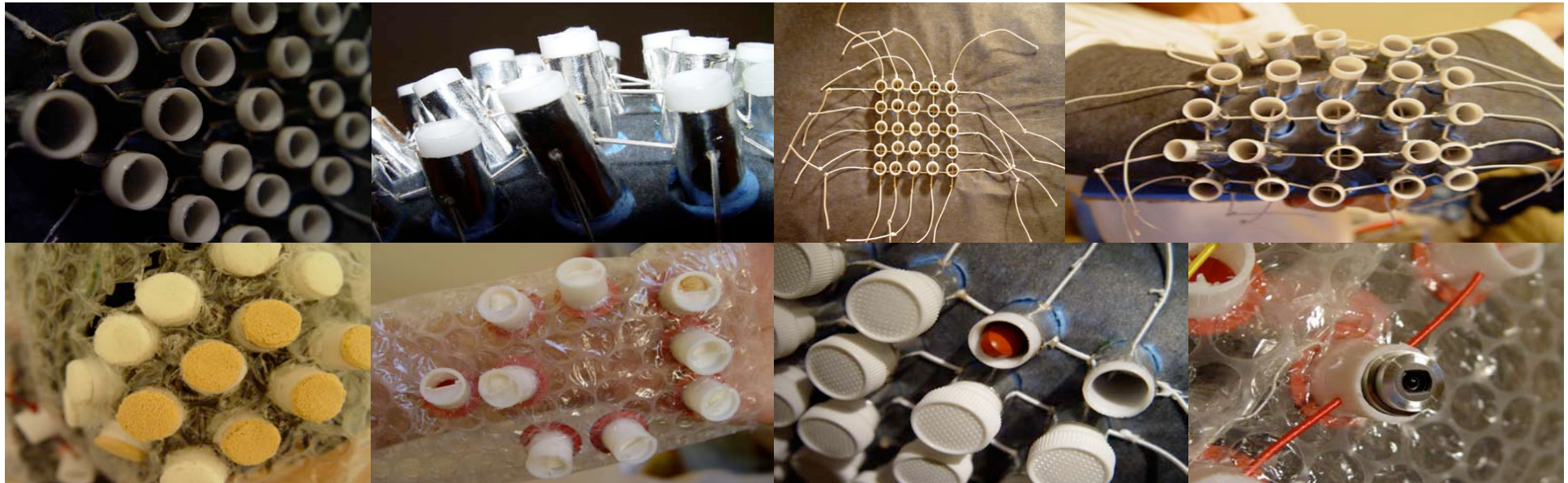
PROGRAM WALL



THESE SPACES OR BODY PLACES CAN BE ENTERED, PENETRATED, PROTRUDED, FLEXED, OR MERGE WITH ONE ANOTHER. THEY ENVELOPE THE BODY AND CREATE A SECOND WEARABLE SKIN, AN ENVELOPING SPACE FOR RELAXATION AND MEDITATION FOR ONE PERSON, A SAFE SHELL FOR THE BODY WHICH ALLOWS THE MIND TO ESCAPE AND TRAVEL.

A SKIN THAT ENVELOPS - A PERSONAL SPACE
EXPLORE ITS ELASTICITY - DEPART FROM THE OUTSIDE
EXPLORE THE INSIDE IMAGINE A SPACE, A PLACE
TOUCH THE SKIN WITH YOUR SKIN

ELASTIC SPACE STUDIO 2004
DIANA SUAREZ

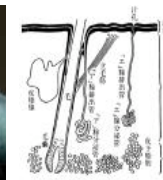
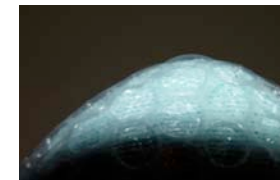


4 ELASTICITY: DETERMINING DIRECTIONALITY AND RANGE OF MOVEMENT
 5 PERMEABILITY: DENSITY OF MATERIAL AND INSERTIONS
 6 INSULATION/ BLACK MATERIAL & REFLECTION
 7 EXCHANGE: VENTILATION BETWEEN OUTSIDE AND INSIDE.
 8 DEPTH: SIGNAL AND INTERMEDIARY POSITIONING BETWEEN ZONES

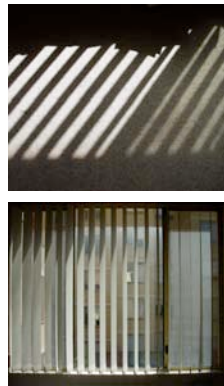


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PROPERTIES OF TUBES



DETAIL/ MOVING WALL MODULES

REFERENCE: SLIING SHADOW

DYNAMIC LANDSCAPE

ELASTIC SPACE STUDIO 2004
LI HUO

THE ELASTICITY OF A GIVEN MATERIAL DEPENDS ON THE MATERIAL PROPERTIES, AND A STRUCTURING OF ELEMENTS. THE RELATION BETWEEN MATERIAL AND THE STRUCTURED ELEMENTS IS SIMILAR TO THAT BETWEEN ARCHITECTURE AND MATERIAL. FROM A DIFFERENT VIEW, A HUMAN BEING INVARIABLY MEDIATES A NEGOTIATION BETWEEN THE TWO. THEREFORE, THE PROJECT ATTEMPTS TO DESIGN AN 'ELASTIC SPACE' WITH THE MANIPULATION OF A MATERIAL ELEMENT IN RESPECT TO HUMAN ACTIVITIES.

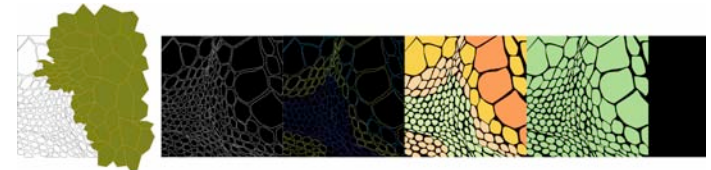
BODY MAPPING

ELASTIC SPACE STUDIO 2004
TOSHIMUNE SUZUKI

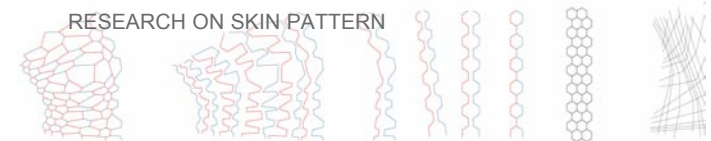


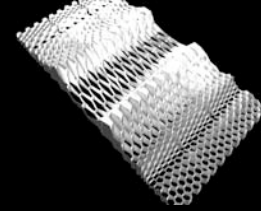
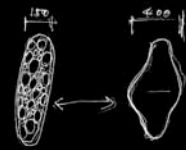
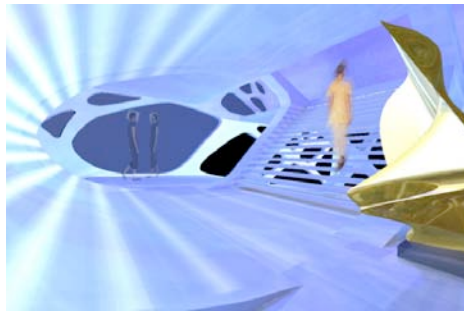
STRUCTURAL MESH

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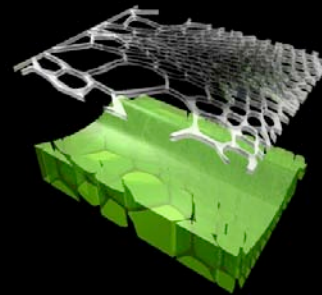
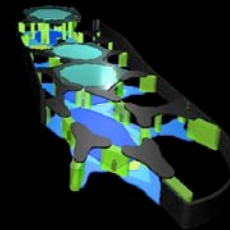
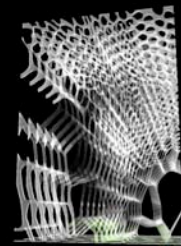
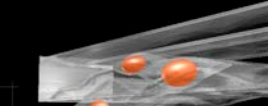
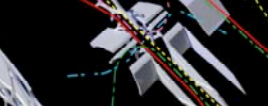
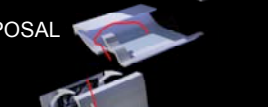


RESEARCH ON SKIN PATTERN

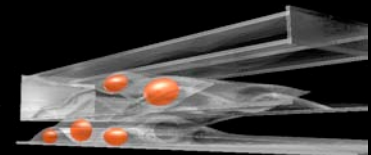
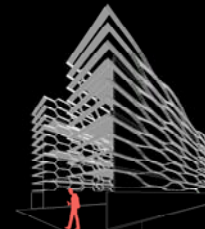
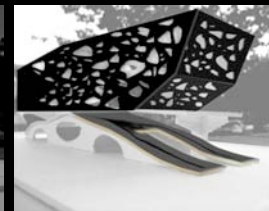
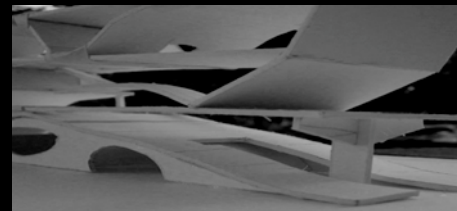




DESIGN PROPOSAL



STRUCTURAL MESH



THE PLACEMENT OF THESE PROGRAMS IS INTERRELATED WITH THREE ARCHITECTURAL FACTORS OF IT: THE INTERNAL CONDITION, THE EXTERNAL FORM AND THE STRUCTURAL PRINCIPLE. ADDITIONALLY EACH SPACE LINKING THE PROGRAMS IS FLEXIBLE TO ACCOMMODATE HUMAN ACTIVITIES. THE ARCHITECTURE IS THUS ENABLED TO ACCOMMODATE A WIDE VARIETY OF HUMAN ACTIVITIES AND TO COMMUNICATE WITH THE SURROUNDINGS.

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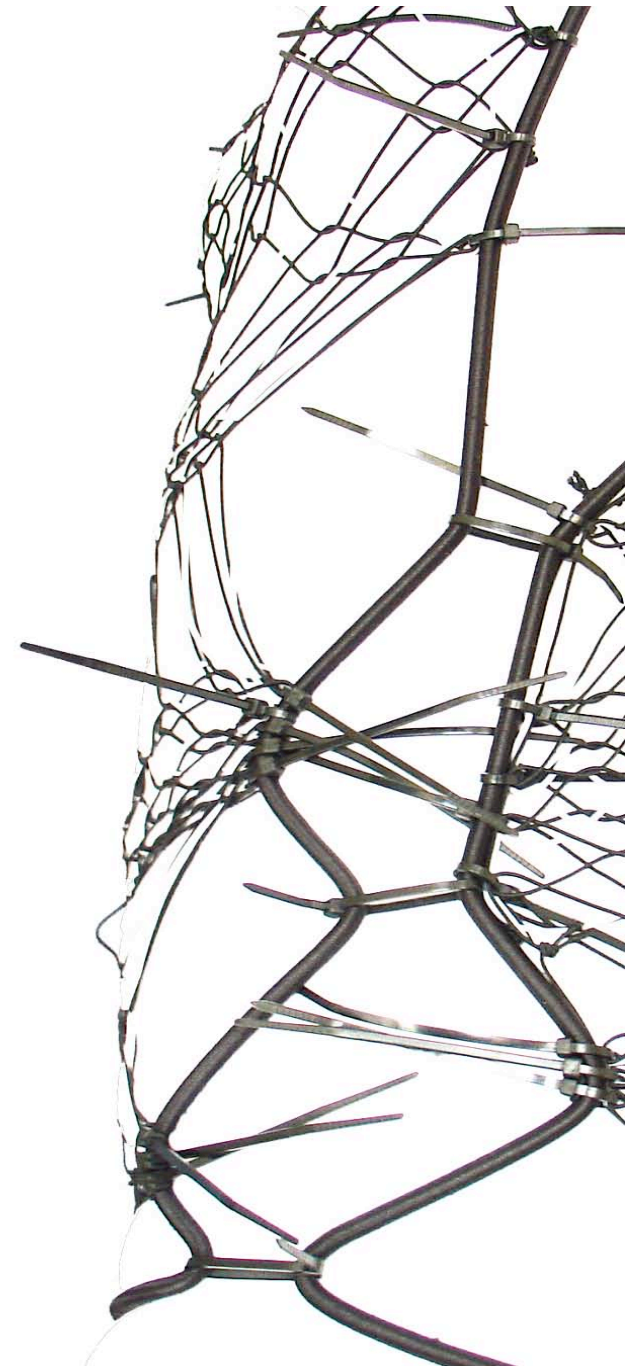


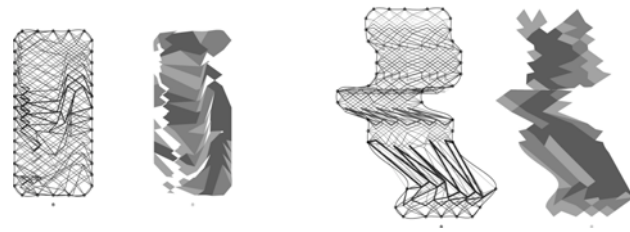
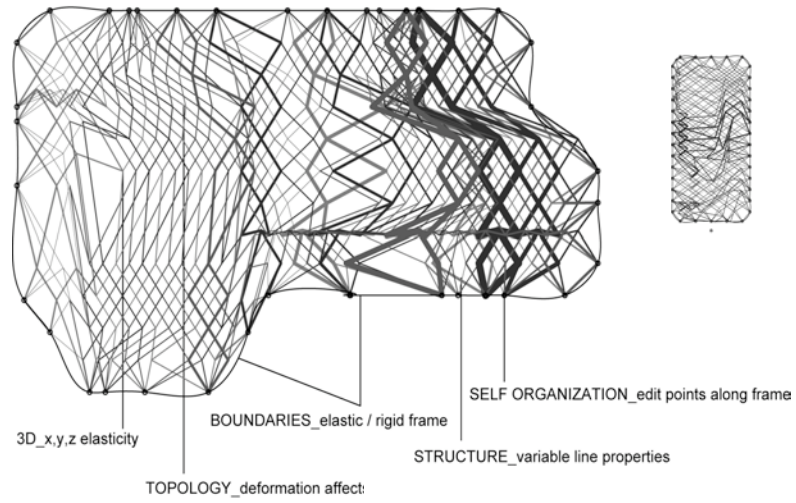
THE INTERSTITIAL FAT PROJECT USED AS POINT OF DEPARTURE THE POTENTIAL OF THE BODY TO NEGOTIATE ITS OWN PHYSICAL BOUNDARIES. AS A RESULT OF THIS POINT OF DEPARTURE THE PROJECT LOOKED AT THE CONSTRUCTION OF THE SKIN SURFACE AND ITS DEPTH. THE SKIN IS CATEGORIZED IN THREE COMPONENTS; DERMIS, EPIDERMIS AND HYPODERMIS, EACH PERFORMING AT DIFFERENT SCALES AND DEPTHS. THE NEXT STEP WAS TO FIND GEOMETRIES, DEVICES AND MATERIALS THAT COULD BOTH NEGOTIATE THEIR BOUNDARIES WHILE PERFORMING AT DIFFERENT SCALES AND DEPTHS.



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MESH CHARACTERISTICS



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