

PORTFOLIO

THOMAS FISCHER AND STUDENTS

This portfolio shows a selection of my students, as well as my own works with a focus on design teaching. The shown projects cover my areas of expertise across industrial design, human-computer interaction and the built environment. Various devices, interfaces and software shown are functional. Several projects have been developed and fabricated in collaboration with industry collaborators and manufacturing partners as indicated.

THOMAS FISCHER



DB303

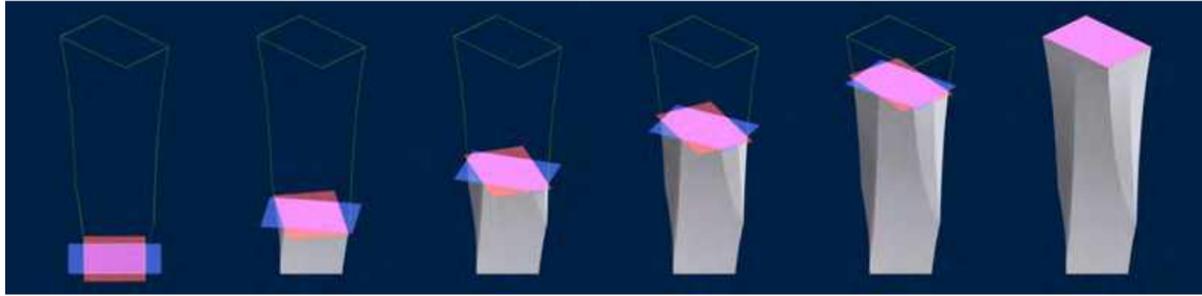
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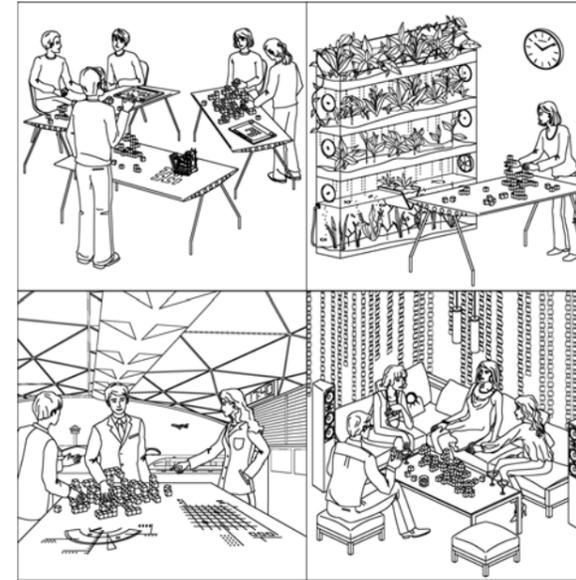
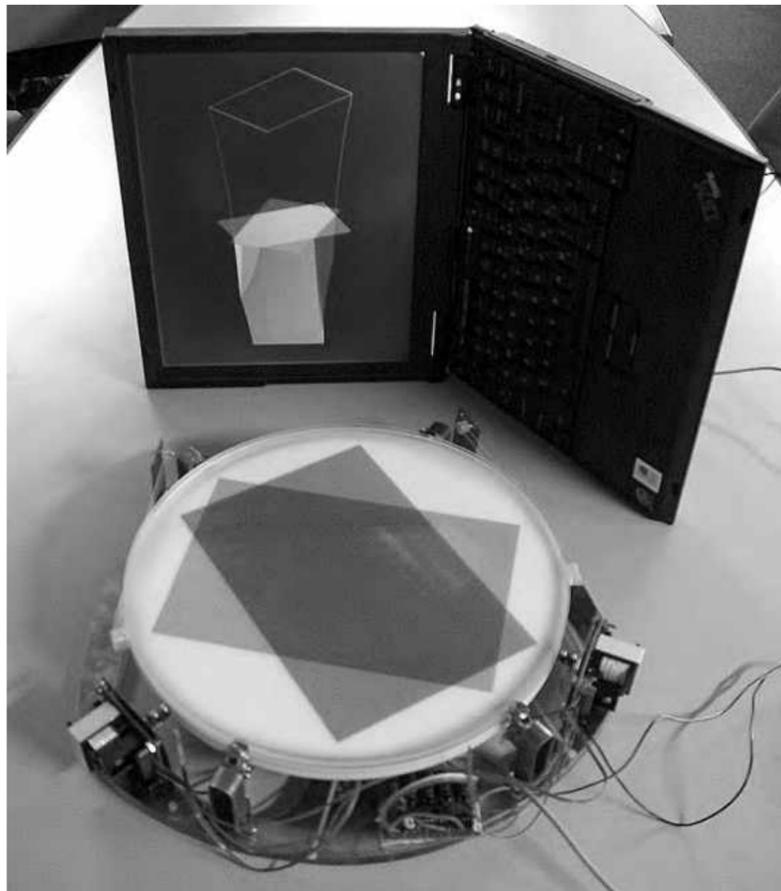


CLIENT
GAUDI MUSEUM BARCELONA

COLLABORATORS
Christiane M. HERR
John H. FRAZER
Mark C. BURRY

YEAR
2002

A series of interactive exhibits to explain Antoni Gaudi's use of ruled-surface geometry in the design of the Sagrada Familia Temple.



COLLABORATORS
LAU Wing Chuen
John H. FRAZER

YEARS
2001-2004



Tangible Interfaces

Mark III of John H. Frazer's seminal Universal Constructor is an interactive, USB-based machine-readable modelling kit with applications in design, architecture, group collaboration, scheduling and entertainment.



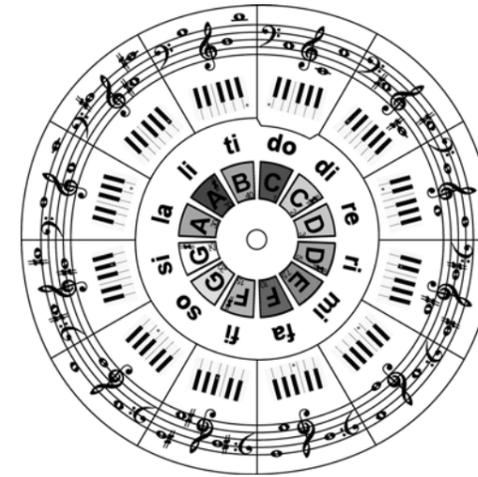
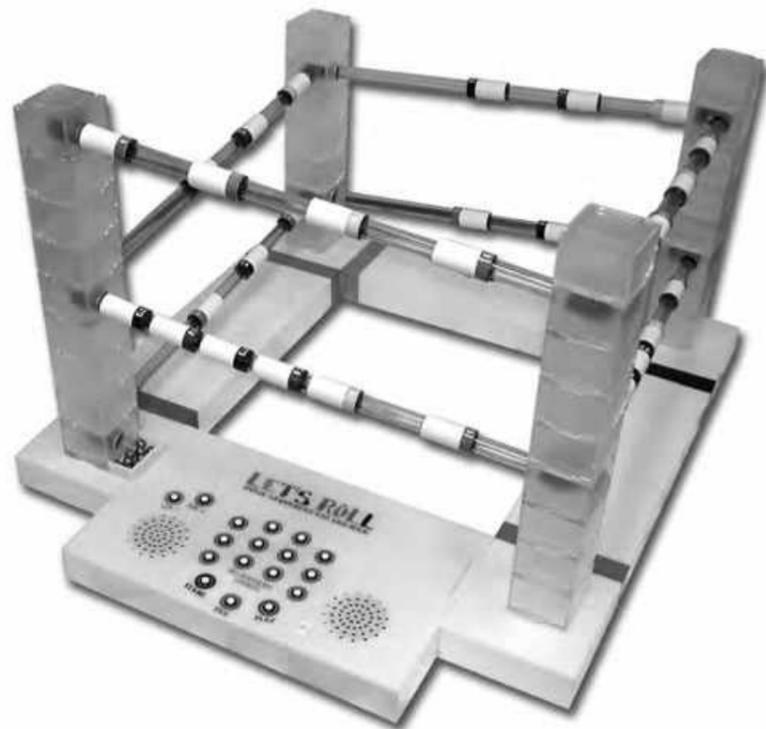
STUDENT
Miki LAU

YEAR
2004



Marble Track Music Sequencers

This is a series of different student projects looking at play sets that act as music sequencers for music education of young children. In Let's Roll marbles rolling along the tracks trigger sound events to produce the playback of musical notes and songs. Re-arrangeable tangible elements correspond to timing, durations and pitches of notes and thus allow electronic music sequencing by means of haptic programming.



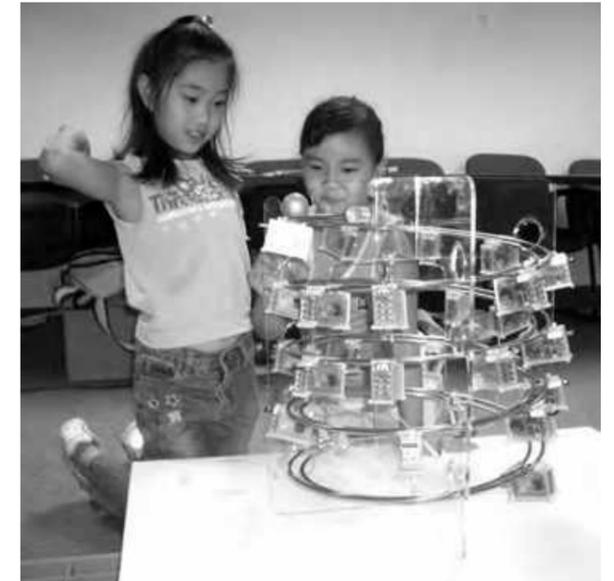
In a further development of this toy, Let's Roll's centralised architecture was de-centralised with autonomous, detachable synthesizer units that allow for more timing flexibility and polyphony.

ToppleTrack is a further development that involves no electronics. It uses the principle of falling dominoes. The elements carry mallets and exchangeable Glockenspiel keys and allow for compositions of unlimited lengths.

STUDENT: WONG Hang Yue Dawn

COLLABORATOR
LAU Wing Chuen

YEAR
2004/2005





Epicore

Your mp3 player has an interface to your ears.
How about to your SOUL? In live music performances people experience music not only by hearing with their ears but also by feeling the bass sound waves with their bodies, in particular with their chests.
Epicore delivers the sensation of music to both the listeners ears and body, re-creating the intensity of live music.

STUDENT
YIU Kei Chan

YEAR
2007



CONCEPT

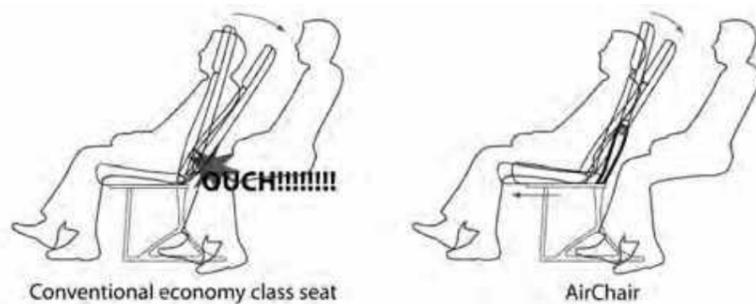
Physical bass vibrations are transmitted to the users body along with the audible sound signals presented to the users ears. Epicore offers a portable version of the experience of listening to live concerts or high-powered Hi-Fi systems.

Enjoying music becomes more intense even when volume levels at the ears are decreased. This offers a healthier and more social portable music experience.



AirChair

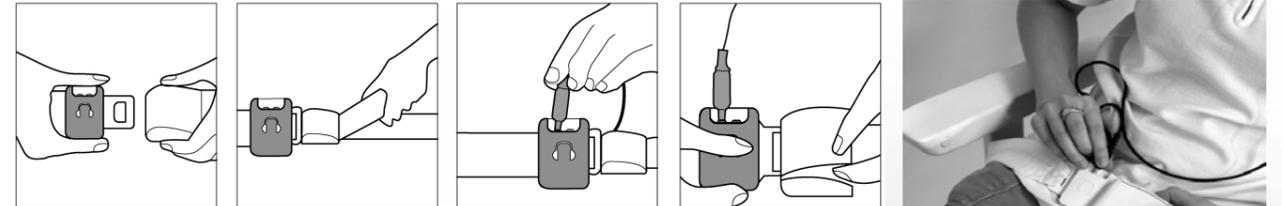
Design for Comfort and Safety Above the Clouds:
 On medium and long haul flights passengers' economy class experience can be physically uncomfortable and psychologically straining. Speaking the form language of a conventional economy class aircraft passenger seat, AirChair addresses a range of apparently small necessities in innovative ways.



FEATURES

Amongst various innovations it offers ergonomically sound and safe access to facilities such as a seat-belt integrated headphone outlet, in-seat Internet and email, an eye ware holder and a reclining function that offers the aft passenger more leg space instead of occupying it.

STUDENT: LEUNG Po Ki



Human Touch Diagnosis



Much contemporary design with its emphasis on rationality and effectiveness has shaped virtually every part of our lives. This includes medical equipment, which often ignores the impact of product semantics. Amongst hospital patients, children are affected most severely by strange-looking machines, frightening devices and emotionally cold environments. As a human-oriented approach to design calls for the re-introduction of emotional values into our lives, Human Touch Diagnosis offers a series of pediatric care products that offer young hospital patients a positive and emotionally warm daily health monitoring experience.



STUDENT	YEAR
NGAN Chung Yee Amber	2007



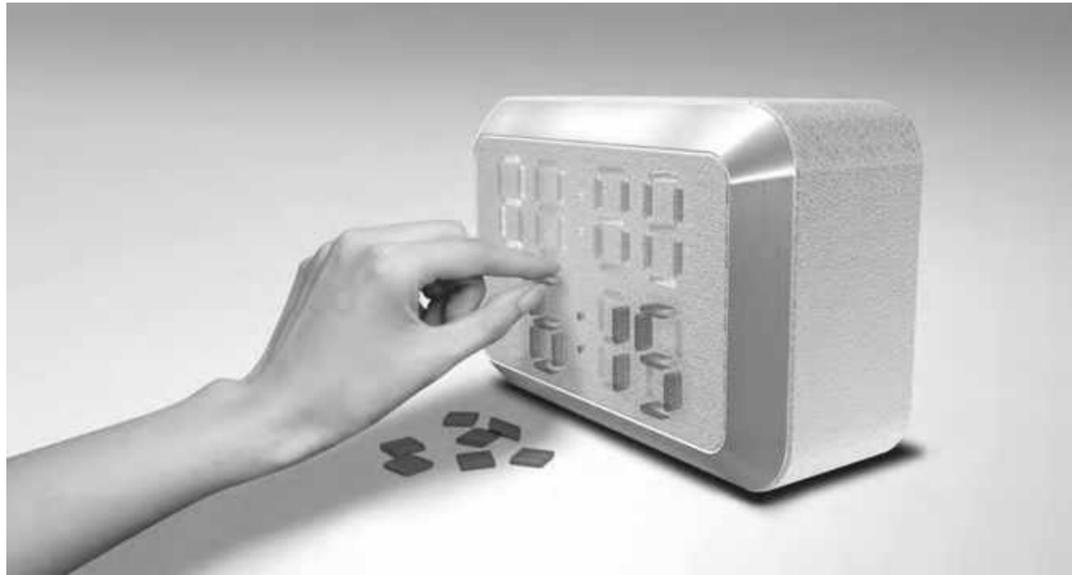
IMPLEMENTATION
2000-2002
OPERATION
2002-2007

Digital Media Access Network

DMAN was an innovative, custom-designed and custom-built in-house cloud data storage and exchange solution at the School of Design at The Hong Kong Polytechnic University. It was funded out of the university president's Fund for Special Purposes, designed and implemented between 2000 and 2002, and operated within the School until 2007 when it was upgraded to a then-available off-the-shelf solution. The project budget was HKD 7.2 million, including HKD 1 million for server room construction, plus ITS contributions, plus annual service and maintenance fees. I have overlooked the design, implementation, budget and operation of this project.

INDUSTRY PARTNERS

UNISYS Hong Kong
Veritas



TANGO

tango [latin "tangere": to touch]

tango is friendly and sophisticated
 tango stands on desks and hangs on walls
 tango has no buttons - tango is simple
 tango alerts people with a nice little melody
 alarm times are assembled on tango's display using movable tokens
 tokens are stored in tango's side compartments

you like tango
 tango likes you



COLLABORATOR
 LAU Wing

YEAR
 2006



ROGO

rogo [latin rogare: to question, to ask]

rogo questions a world of buttons
 you experience the flow of time by tilting rogo
 tilt rogo clockwise to scroll ahead through time
 tilt rogo counter-clockwise to scroll back through time.
 scroll faster or slower by altering the tilting angle

you understand rogo
 rogo understands you



PATENTS
 ALARM CLOCKS TANGO & ROGO
 have been patented in Hong Kong.
 Patent number HK1084827
 Patent number HK1083431



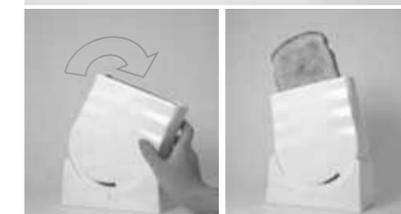
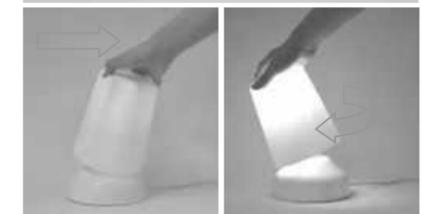
ButtonFree

In a context of intense competition and rapid technological development, new products are designed to offer more and more functions. To access the increasing number of functions, more and more buttons are typically added to products.

STUDENT
MAK Wing Shan Angel

YEAR
2007

Multiple buttons on a product result in a complicated and confusing interface. Users who appreciate simplicity and convenience find it challenging and a waste of time to learn the different functions of different buttons.



CONCEPT

This project focuses on simple and convenient interaction between users and products. The appliances have no buttons. Users activate the products and control their functions by intuitive and natural manual interaction with the entire artifacts. All products in this series produce warmth, adding to the manual interaction a sensation of liveliness and closeness.

RotoRoast was commercialised through Technical (HK) Mfg Ltd.



Com&puter

If a slick Apple Mac is like an olympic ice skater, then what kind of computer would be like Captain Jack Sparrow? Com&puter is a concept study of an extravagant, over-the-top and challenging-to-work-with human computer interface. Consisting almost entirely of re-appropriated objects that are usually not related to computers, Com&puter is fully functional.

STUDENT
PANG Kuen Yee

YEAR
2007

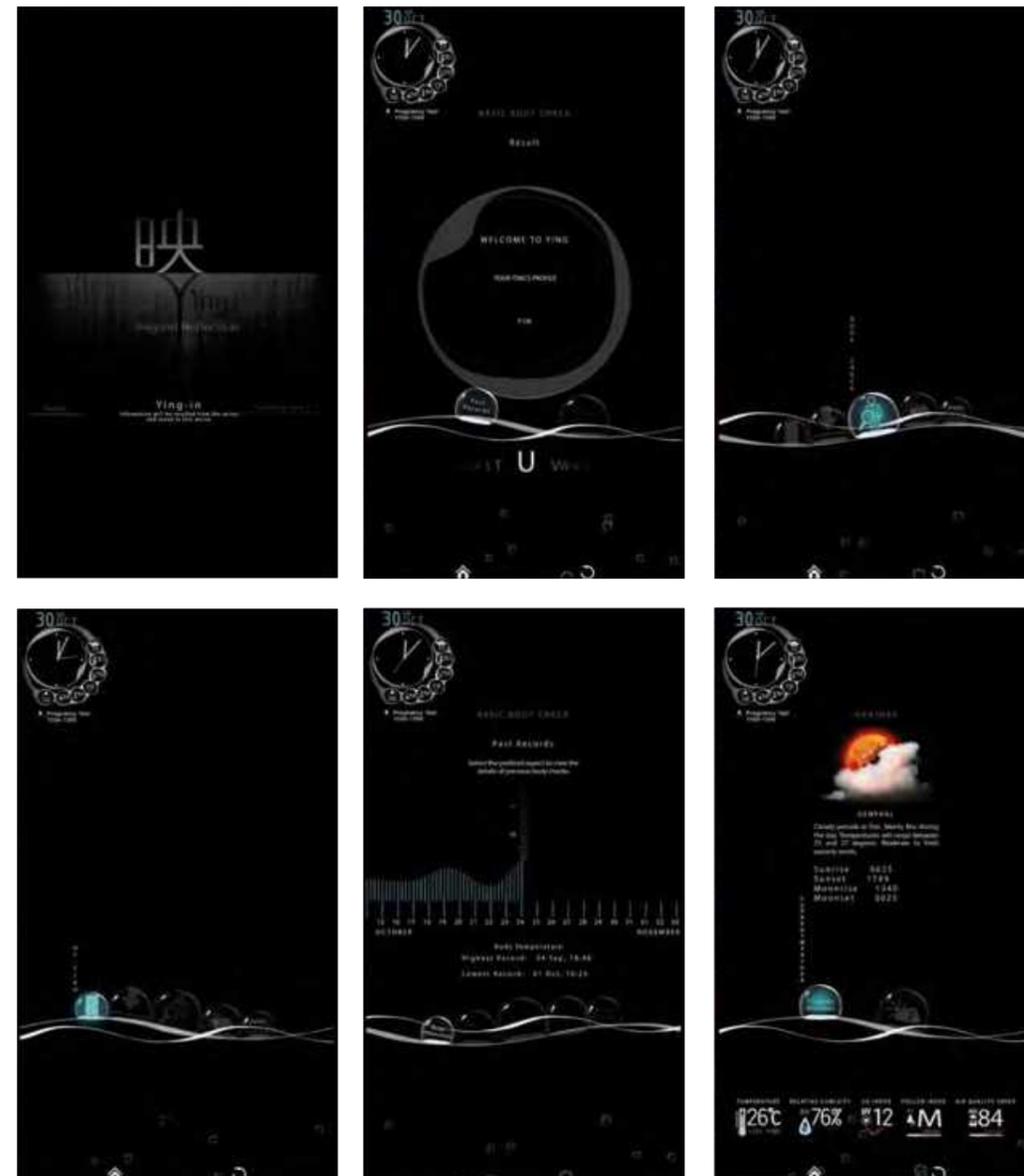


CLIENT
JAMES LAW CYBERTECTURE Ltd.

YEAR
2009

Ying 映

Ying 映 is a complete interactive graphical user interface for the Cybertecture Mirror developed by James Law Cybertecture in Hong Kong. Integrating a bathroom mirror with a touchscreen healthcare, cosmetics and entertainment system and other appliances, the system includes a dedicated app suite based on a high-contrast, water-themed GUI.



STUDENTS

CHAN Po Yee
ZHANG Wenwei
Friedrich BLAUERT
YIP Chun Nam
LI Nga Yee
FUNG Shuk Fong
FAN Hing Wan
WONG Shun Yin
CHAN Ka Yu
TANG Yan



MTR Fare Service Facilities



CLIENT
MTR Corp. Ltd.

STUDENT
CHAN Kwan Yu

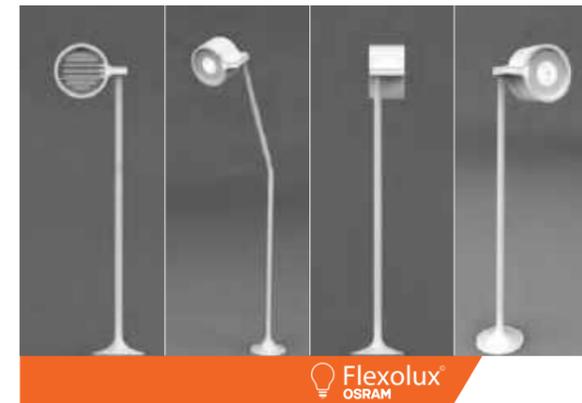
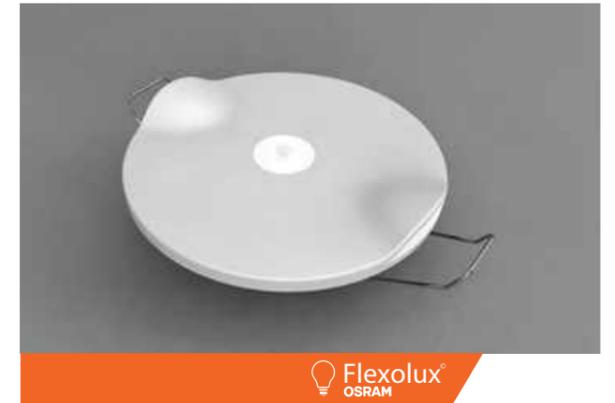
YEAR
2008

In collaboration with MTR Corp. who operates the Hong Kong subway system, this project proposes a new generation of Fare Machines for Hong Kong's subway stations. The specific objectives are to promote simple, unified, user-friendly and barrier free design and to provide a swift and convenient fare service process under the pressure of very intense usage.



Osram Flexolux

FLEXOLUX is a series of LED-based spotlights. As a distinguishing feature, FLEXOLUX luminaires largely consist of silicon rubber bodies, which allow beam flexible angle adjustment without exposing open seams and gaps.



INDUSTRY COLLABORATOR
OSRAM

YEAR
2008



YEAR
2006



Funky Party Cake

The Funky Party Cake is a construction toy for preschoolers that integrates light effects and a music sequencer. The cake plays a party song, which can be interactively deconstructed and reconstructed by taking the cake apart and by assembling it in many combinations.

CLIENT
[CONFIDENTIAL]
STUDENTS
LAM Lai Ching
TAM Sze Man
LUNG Sui Man
Yuk Cheuk Lam
Roger KELLENBERGER
MAK Wing Shan
FU Wai Shan
DEPIN Charlotte
CHAN Wing Chi
CHAN Wing Yee
WONG Hang Yue
CHAN Yiu Kei



STUDENT
TSANG Ka Ki
CLIENT
BO innovations
YEAR
2006



Interactive Tableware

Plate Tectonics, 琢形約禮, Le Gardin Protager and TonePan are interactive sets of tableware for luxury and casual markets. They engage users in new processes of food presentation and consumption. Form factors have co-evolved with new menus and methods of food presentation that have been developed with each set.



STUDENT
TSANG Ching Chi

YEAR
2007

STUDENT
YU Tsz Hang

YEAR
2008

STUDENT
ZHONG Lei

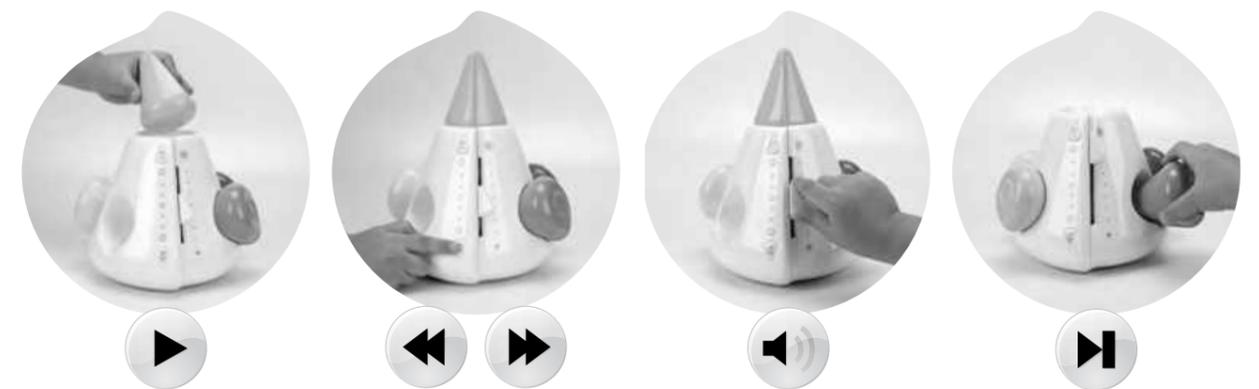
YEAR
2008



Shellody

Giving Children Back Their Music: In the digital age we have lost touch with our audio material. Adults are lost in music and children have lost their music altogether. Storage media are vulnerable and tiny, playback devices are complicated and fragile. The times of easy to handle cassette tapes, tough players and one-button playback are gone. And while adults enjoy most convenient and user-friendly access to audio material, their children grow up without the control to create their personal soundtracks.

Student: CHEUNG Kevin
 Winner of SDAA Outstanding Graduate Award
 COW/2009 Int'l Design Festival 2nd Prize (Product Design)

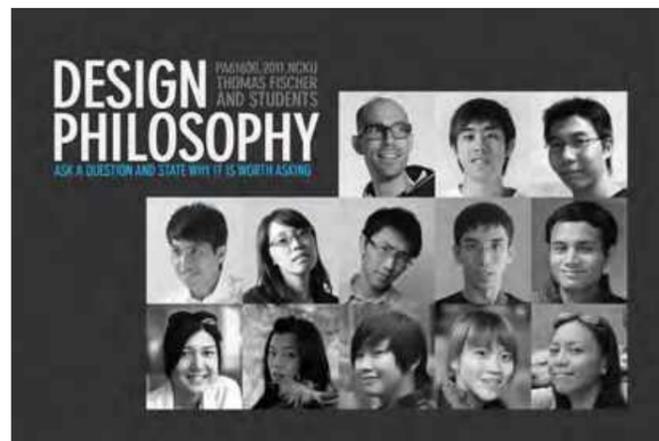


Shellody is a music player for kindergarten and primary school kids. Sound files are stored in 5 color-coded seashell shape tokens. The product interface is simple enough to be grasped by a toddler: Playing back music only takes placing a shell on the top of the player. With help of parents, Shellody connects to a home computer and allows dragging and dropping new music into the shells from the online Shellody audio store.



ICD / NCKU

YEAR
2011



Design Philosophy Deck of Cards

Under what conditions do students formulate and engage difficult questions - not as tasks that are to be answered quickly and correctly but as opportunities for sustained self enrichment and learning? This card deck is the outcome of an exercise in question-asking with a cross-disciplinary group of design students.

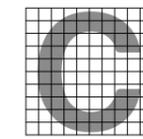
MOTIVATION

Students tend to offer assertive, quick and correct answers more than to cultivating difficult questions as challenges and standards to grow by. In this exercise we asked and justified questions about design that matter to us, regardless of what how they might be answered.

<p>Herbert Hsu, Institute of Creative Industries Design</p> <p>When is a non-responsible designer irresponsible? (Non-responsible; dependent on others' choices; irresponsible; reckless)</p> <p>Why is this question worth asking? In the past, I found myself obeying design methods provided by teachers without care for the possible consequences. I see now that designing involves taking responsibility. To some extent, designers who are not prepared to take this responsibility are irresponsible and may not be the most suitable to make choices on behalf of others.</p> <p>How is this relevant to my studies? It relates to my interest in ethics and politics of designing.</p> <p>How do I intend to address this in the future? Designers who reconsider methods, tools and other standards supplied from the outside of any given project take responsibility for themselves and for others. This may be a good way for me to address this question in my practice as a designer and as a design researcher.</p>	<p>Ennis Chen, Institute of Creative Industries Design</p> <p>How can I maintain the intentions, essence and spirit of my design throughout the production and marketing process?</p> <p>Why is this question worth asking? Design aims to improve people's lives. But profit-oriented companies tend to reduce production costs and invest in advertising, instead of maintaining the original intentions, essences and spirits of their designers' work. What if companies were to pursue the fulfillment of user needs, business needs, environmental needs, social justice and good design with equal priorities?</p> <p>How is this relevant to my studies? I want to better understand the relationship between design and the marketing field and its effects on social well-being. I respect this question to inspire more questions and more thinking in my research.</p> <p>How do I intend to address this in the future? I do not know yet whether I will assume the role of a designer, of a producer or of a marketer in the future. But I am determined to take this question into consideration seriously in my research and professional future.</p>
<p>Jenny Tsay, Department of Industrial Design</p> <p>In a design process, when is it preferable to design as a team and when is it preferable to design individually?</p> <p>Why is this question worth asking? Having worked on various design projects and experiencing different styles of work division, I find that the choice between teamwork and working individually influences the nature of design outcomes. With the two approaches come different choices of design methods that are beneficial at different times in the design process.</p> <p>How is this relevant to my studies? This relates to my interest in exploring the use of design methods at different times in the design process while investigating the relative benefits and downsides of both approaches.</p> <p>How do I intend to address this in the future? I am interested in finding preferable patterns of division of work related to design and design research methods in my future studies.</p>	<p>Vivian Yeh, Department of Architecture</p> <p>When does scientific research involve designing?</p> <p>Why is this question worth asking? There are parallels between science and design. But while designing is carried out rationally and irrationally, scientific research is expected to be conducted purely rationally. Designing often incorporates methods and outcomes of science. But science rarely acknowledges the incorporation of processes and outcomes of designing. I am skeptical about this.</p> <p>How is this relevant to my studies? I studied digital architectural design in the past. As a PhD student I now conduct material tests in scientific experiments. The two modes of working are generally thought of as being fundamentally different.</p> <p>How do I intend to address this in the future? In my future studies, I would like to integrate digital architectural design with environmental science, as a scientist with a designer's viewpoint. I hope to conduct 3D numerical simulations and practical field experiments with a view to design spaces in which materials perform to meet the occupants and users' needs.</p>
<p>Dennis Liu, Department of Industrial Design</p> <p>When is the time to speak more rationally? And when is the time to speak more emotionally?</p> <p>Why is this question worth asking? On the one hand, emotional speech helps express many thoughts and ideas appropriately. On the other hand, it can sometimes be misunderstood and conveyed too much or too little. Rational logic can similarly get in the way of the careful expression of thoughts and ideas.</p> <p>How is this relevant to my studies? I consider designing a special case of speech: The expression of thoughts and ideas. Designers such as myself take responsibility to strike careful balances between emotion and rational logic in their expressions.</p> <p>How do I intend to address this in the future? I will pay careful attention to what I feel and what is formally correct as well as to appropriate balances between them. I will try to avoid looking at the two aspects separately.</p>	<p>Aaron Lescoart, Institute of Creative Industries Design</p> <p>When does a prepared mind stop being a receptive mind?</p> <p>Why is this question worth asking? I recognize myself to be biased towards excluding new ideas and holding on to familiar assumptions when such cases conflict with preparation I have done such as learning, or progress made on any project. I expect awareness of this will help with my own personal growth and development of ideas.</p> <p>How is this relevant to my studies? This is not typically related to any specific field of study I am pursuing, but is something I have experienced in the past.</p> <p>How do I intend to address this in the future? This question is one that I hope to keep in mind throughout the course of my research, therefore permitting my thesis to grow and evolve from its original ideas and members.</p>
<p>Brian Wang, Institute of Creative Industries Design</p> <p>What is the value of playing in design?</p> <p>Why is this question worth asking? Design has come to be described as an intentional action "in order to" create; however, this does not consider what playing's "just because" can offer to design. I believe that ignoring the spectrum that lies between "in order to" and "just because" can be limiting in design.</p> <p>How is this relevant to my studies? When doing design research, I often feel the need to post-rationalize: my design processes in logical and easy to digest manners at the cost of giving more faithful accounts. I feel that this stems from the scientific method's dominance in academia, and I believe I will encounter this during my thesis.</p> <p>How do I intend to address this in the future? I hope I will be aware of this question in my future designing and design research.</p>	<p>Riza Romero, Institute of Creative Industries Design</p> <p>If a designer balances between enabling and restricting when designing, while at the same time being enabled and restricted by resources used, what implications does this have on processes and outcomes?</p> <p>Why is this question worth asking? Designing calls from the past to create a future. But having the freedom to create does not exempt designers from the ethical responsibilities of bringing about desired futures. This is because design, whatever the initial intention, comes with consequences to human life.</p> <p>How is this relevant to my studies? This question inspires further self-awareness by inviting me to examine and reflect on the processes of design, paving the way to more informed design research. More than that, it serves me as a reminder that, no matter how small, changes or attempts at it have consequences.</p> <p>How do I intend to address this in the future? This question gives me a standpoint from which to ask, "How and why am I doing this?"</p>



YEARS
2011-2012



initial

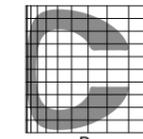
$$x_t = (P_1 * x_i^2) + (P_2 * x_i * y_i) + (P_3 * y_i^2) + (1 + P_4) * x_i + P_5 * y_i$$

$$y_t = (P_6 * x_i^2) + (P_7 * x_i * y_i) + (P_8 * y_i^2) + P_9 * x_i + (1 + P_{10}) * y_i$$

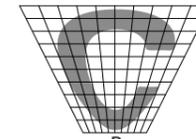
whereas:

$p(x_i, y_i)$ is any point on the initial grid

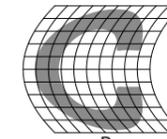
$p(x_t, y_t)$ is the corresponding point on the transformed grid



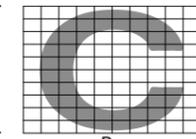
P₁



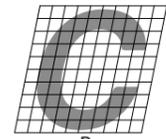
P₂



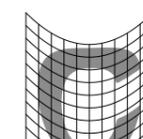
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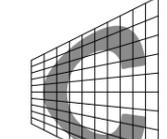
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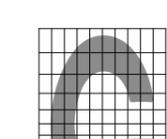
P₅



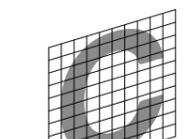
P₆



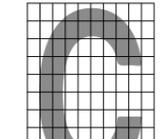
P₇



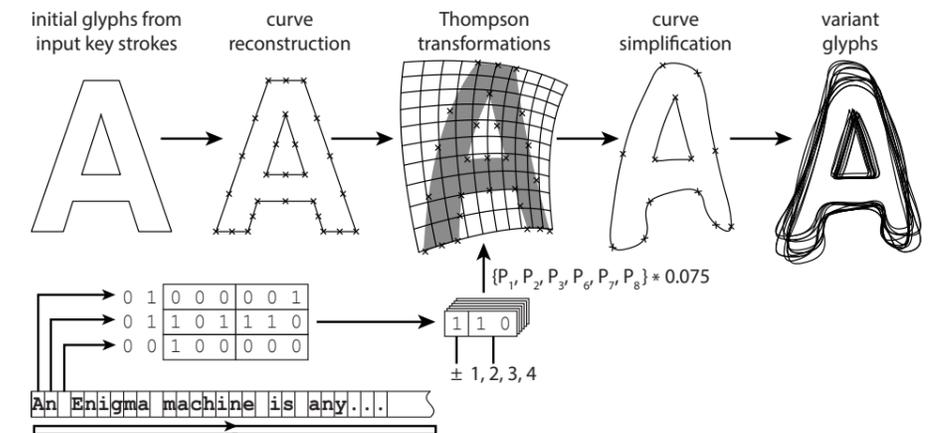
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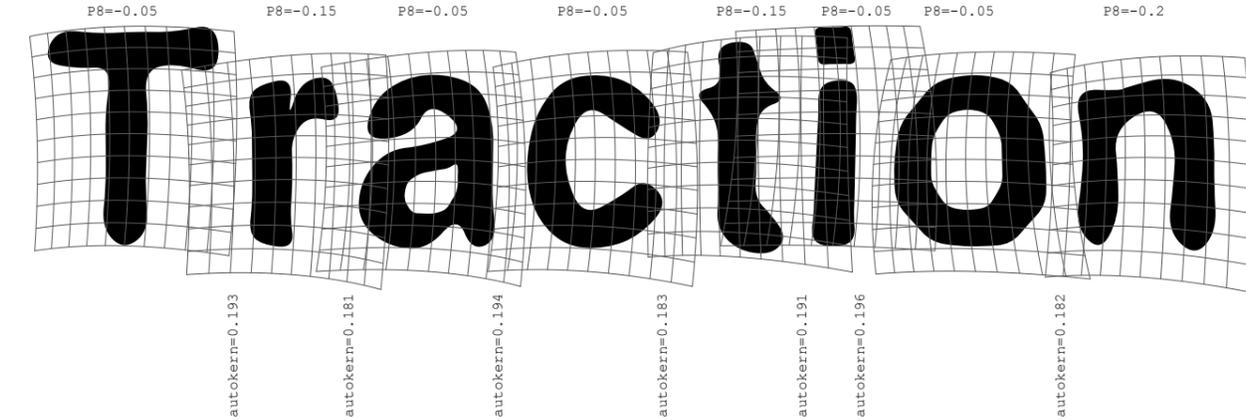
P₁₀



Design Enigma

This is a conceptual re-imagining of the mechanical typewriter, which interactively generates non-uniform typographic output in endless variations, based on previous input. It demonstrates the possibility of non-determinability based on simple mechanisms. The system implements a so-called non-trivial machine, a non-determinable, recursively-operating device which is isomorphic with the Enigma cipher machine. It combines key ideas from the works of D'Arcy Thompson, Alan Turing, Ross Ashby, Heinz von Foerster, Friedrich Kittler, and Ranulph Glanville.

A :01000001	E :01000101	g :01100111	: :00100000	c :01100011	n :01101110	i :01101001	a :01100001
n :01101110	n :01101110	m :01101101	m :01101101	h :01101000	e :01100101	s :01110011	n :01101110
: :00100000	i :01101001	a :01100001	a :01100001	i :01101001	: :00100000	: :00100000	y :01111001
P1=-0.15	P1=-0.15	P1=-0.2	P1=0.05	P1=0.2	P1=-0.1	P1=0.15	P1=0.15
P2=0.05	P2=0.05	P2=-0.05	P2=-0.05	P2=-0.05	P2=-0.15	P2=-0.15	P2=-0.05
P3=-0.1	P3=-0.1	P3=-0.15	P3=-0.15	P3=0.05	P3=-0.15	P3=0.2	P3=-0.1
P6=-0.15	P6=-0.15	P6=-0.15	P6=-0.15	P6=-0.15	P6=-0.05	P6=-0.1	P6=-0.15
P7=0.05	P7=0.15	P7=0.15	P7=0.15	P7=0.15	P7=0.05	P7=0.05	P7=0.15
P8=-0.05	P8=-0.15	P8=-0.05	P8=-0.05	P8=-0.15	P8=-0.05	P8=-0.05	P8=-0.2





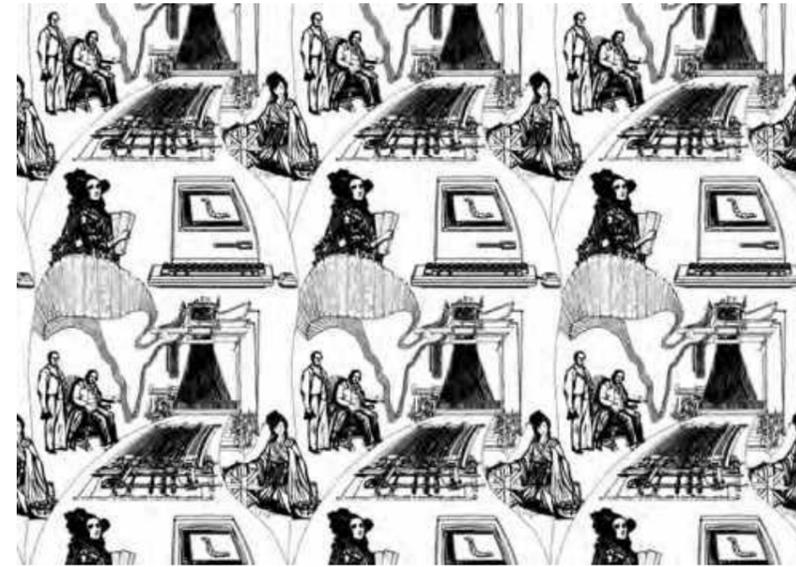
INTENDED CLIENT
SUZHOU SILK MUSEUM

YEAR
2014



STORY

Silk weaving was invented in China 5,000 years ago. Fibres of eight silkworm cocoons are unravelled at a time, spun into a thread, and woven into fabric on a loom. Coloured threads can be woven carefully to show pictures made up of small parts called pixels. When you look closely at a digital photo, say of a silk worm, you find it also made up of pixels. Industrial Revolution Frenchman Joseph Marie Jacquard invented a loom that weaves silk pictures automatically, following instructions given on punched cards. Based on punched hole patterns, different threads are lifted at different times during weaving, controlling which colours come to the front of the fabric. The Jacquard Loom inspired 19th century Englishman Charles Babbage to design the Analytical Engine, a mechanical computer programmed with punched cards. His friend Countess Ada Lovelace described how punched cards are used with the Analytical Engine to solve mathematical problems. Thus, they invented the basics of digital computers and software programming found everywhere today. Your computer was inspired by silk weaving technology with roots in ancient Chinese places like Suzhou where Jacquard looms operate until this day.



UNDERGRADUATE
RESEARCH FELLOWS

SUN Chen-xing
DAI Xiao-wei



Woven Code

Using thousands of punched cards, this project demonstrates that the operational, but deteriorating Jacquard looms at the Suzhou Silk Museum can be used to tell their own story, and to productise that story for sale through the museum's shop to generate revenue for the maintenance and continued operation of the historic looms.



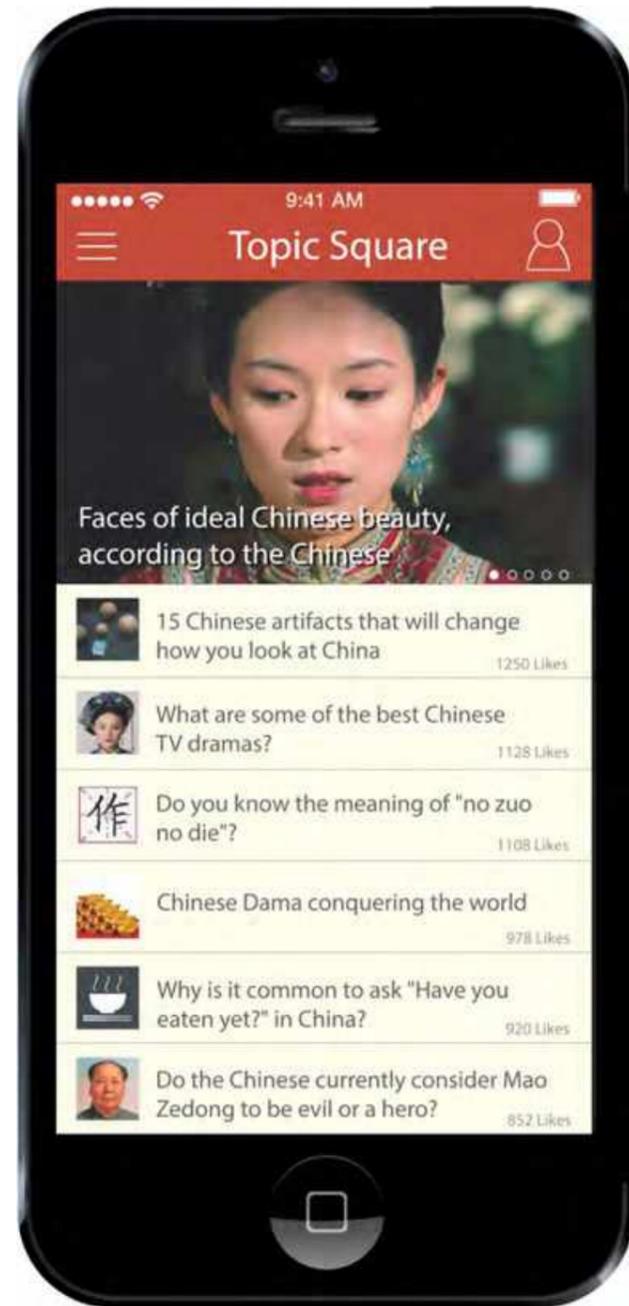


Hello China

STUDENTS
GAO Tong-wei
HE Lei
HU Xiao-yi
MAO Xnn-yi

YEAR
2014

Hello China is a social network and mobile app to enable cross-cultural exchange between Chinese people and non-Chinese people centered on popular culture and internet memes.



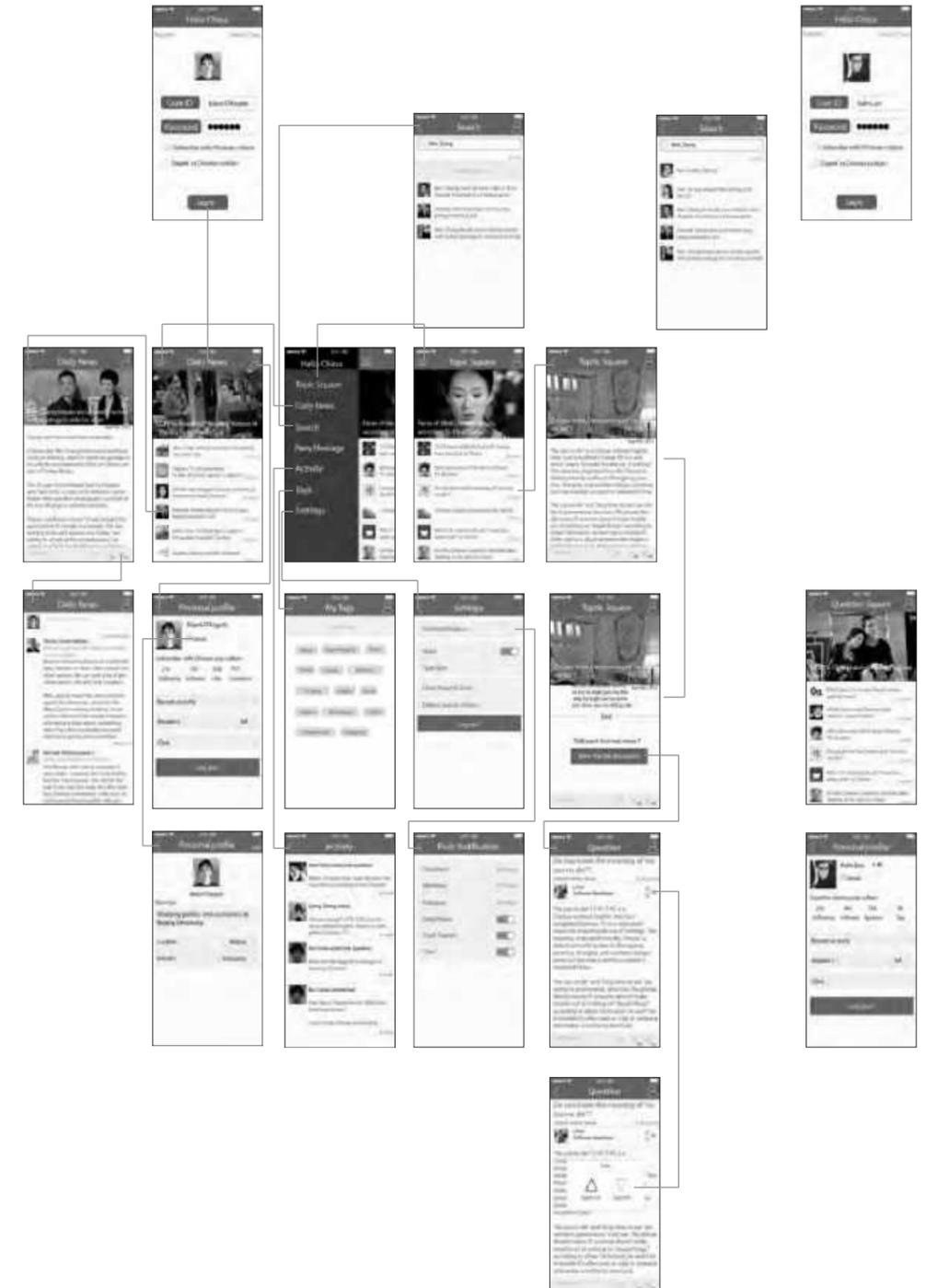
AWARD

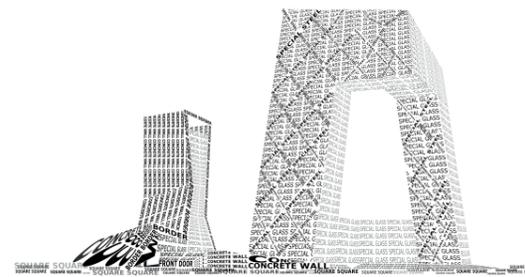
Hello China won the 2014 云彩飞 ("Flying Cloud") Innovation and Entrepreneurship Competition, which includes a grant of RMB300,000 for the commercial development of the project.

INTERACTION FLOW

Log in as a foreigner who want to know more about Chinese pop culture

Log in as a Chinese who is expert in Chinese pop culture





CCTV Headquarters
 Location: Beijing, China
 Construction: 2004-2009
 Architects: Office for Metropolitan Architecture
 Typogram by: Zhe Wang

border 边缘
 concrete wall 混凝土墙
 stone door 石门
 special glass 特种玻璃
 special steel 特种钢
 square 广场
 stairs 台阶



The Museum of Islamic Art - waiting for selectable dictionary
 Location: Doha, Qatar
 Construction: 2006-2008
 Architects: J. M. Pire
 Typogram by: Hao Shuyi and Qiao Jiatun

arch 拱形门
 bounding wall 围墙
 bridge 桥梁
 canopy 篷盖
 entrance 入口
 exit 出口
 glass 玻璃
 handrail 扶手
 limestone 石灰石
 outdoor porch 室外走廊
 rail 栏杆
 shadow 阴影
 trellis 凉架
 water's edge 水边



Walt Disney Concert Hall
 Location: Los Angeles, USA
 Construction: 1987-2003
 Architects: Frank Gehry
 Typogram by: Liu Xin

door 门
 frosted glass 磨砂玻璃
 glass 玻璃
 railing 栏杆
 stainless steel column 不锈钢立柱
 steel 钢
 stone step 石阶
 stone 石材
 street 街道
 tree 树
 vegetation 植被
 white glass 白色玻璃



Jubilee Church
 Location: Rome, Italy
 Construction: 1998-2003
 Architects: Richard Meier & Partners Architects
 Typogram by: Xie Qing

bright 明亮的
 column 圆柱
 concrete 混凝土
 cubic 立方体
 curvilinear 曲线的
 door 门
 elegant 优雅的
 exposed frame curtain wall 外露框幕墙
 entrance 入口
 portico 门廊
 quiet 安静的
 rectilinear structure 直线结构
 roof 屋顶
 silent 安静的
 structural support 支持结构
 transparent 透明的

Architectural Typograms

An architectural typogram is an illustration of an architectural object in which typography is used to express ideas and building elements visually.

I developed this exercise as a new and integrated approach to introduce students to design thinking, to basic techniques of architectural visualisation, to familiarise students with notable architects and their works, and to further enable non-English speaking students to use English as a medium to engage with architecture. The result is an architectural dictionary illustrated with typograms of notable buildings. The dictionaries are subsequently used as a student learning resource. This teaching approach is applicable to other design disciplines.

This project was awarded the 2013-2014 Annual XJTLU Teaching Prize for Innovative Teaching Practices.



STUDENTS
 VARIOUS BEng ARCHITECTURE STUDENTS

COLLABORATOR
 MARIAN MACKEN

YEARS
 2013 - 2017



COLLABORATORS
MARIAN MACKEN
ANURADHA CHATTERJEE

YEAR
2014



Shared Territories

As the Director of XJTLU's Design Research Institute I co-curated Shared Territories, a peer-reviewed international design research exhibition in Suzhou, China. The exhibition was based on the curatorial themes "inquiring inquiry" and "research as design". Its contributions were solicited internationally by invitation, and by an open call across the XJTLU campus.



The one-month exhibition showcased a broad variety of design research areas, methods and media, of local, regional and international projects, from academic and industrial contributors. The purpose of the event was to further stimulate design research interest and discourse across our campus and beyond in the intellectual territories shared between all who rigorously engage in open-ended, creative enquiry.



LOCATION
SUZHOU, CHINA



STUDENTS

- HU Enbo
- ZHOU Yi-feng
- XIAO Jia-jie
- WU Min
- WU Yue-xuan
- DAN Zi-hang

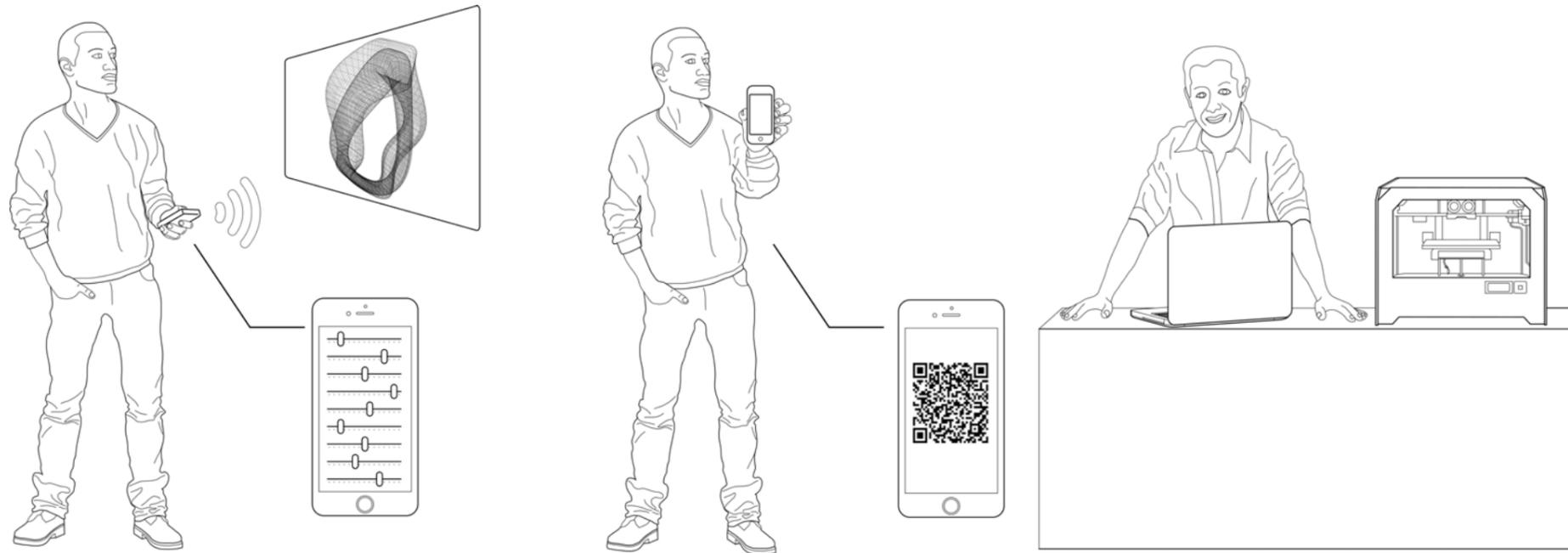
YEAR
2014



Gadget Radar

Gadget Radar is a social network and mobile app design that allows its user base to crowd-source and navigate affordable offers in the consumer electronics market. Users record products and the locations of low price offers to allow members of the Gadget Radar community to locate and compare offers, and to navigate to the best offers, taking travel cost and travel time into consideration. Gadget Radar won an Honorable Mention at XJTLU Sixth Innovative Entrepreneurship Competition.





COLLABORATOR
Christiane M. HERR

YEAR
2015



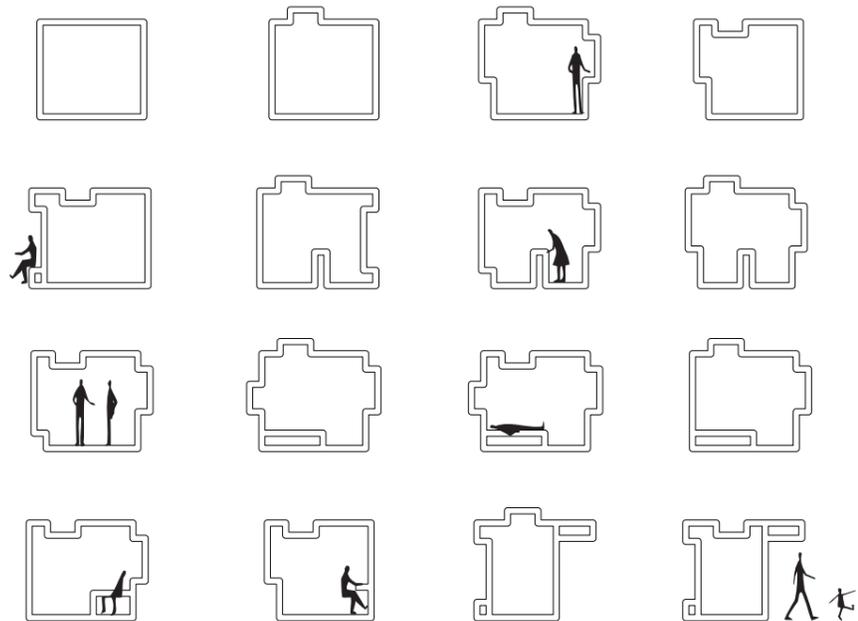
Interactive Parametric Jewellery

This is an interactive parametric jewellery design and fabrication system for an exhibition on parametricism in London. Visitors of the exhibit can use their mobile devices to parametrically design jewellery. Chosen designs are encoded using QR codes, which can be read at a fabrication counter where sizing is completed, metals types are chosen and items are 3D-printed.





Online Parametric Customisation of 3D-Printed Buildings



INDUSTRY COLLABORATOR
WINSUN

COLLABORATOR
Christiane M. HERR

UNDERGRADUATE RESEARCH FELLOWS

HAN Yi-xin
WU Hao
JIANG Hao

Segments Available

Segment 1 Segment 2 Segment 3 Segment 4 Segment 5 Segment 6 Segment 7 Segment 8 Segment 9 Segment 10 Segment 11 Segment 12 Segment 13 Segment 14 Segment 15

Segment View
Click in the image to add the segment to stack:

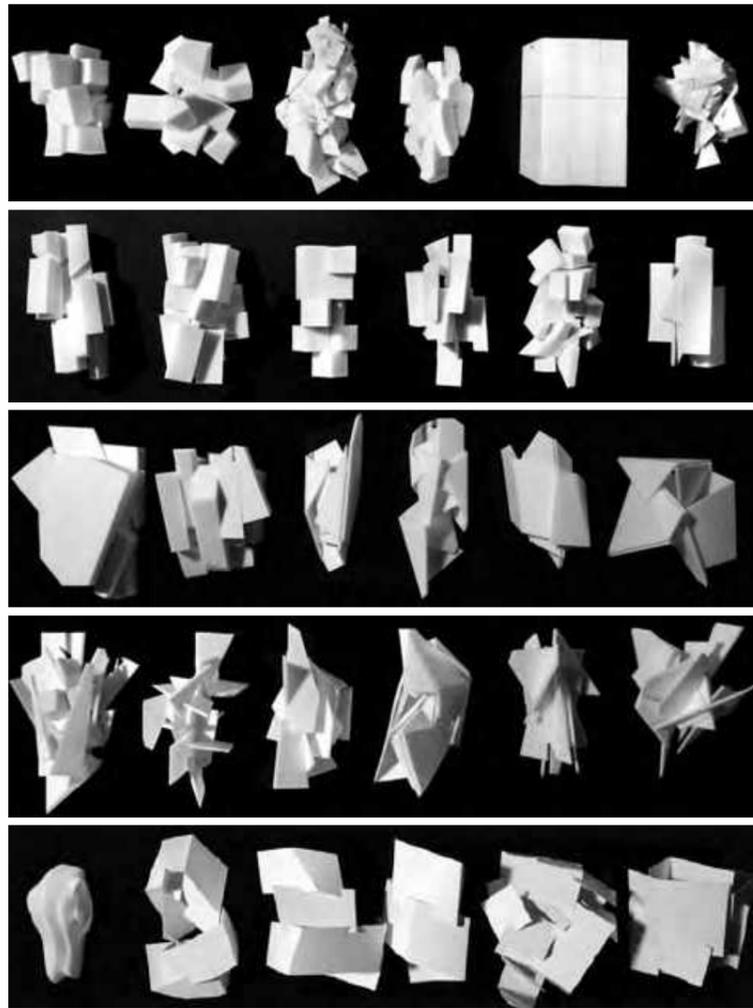
Segment ID: 7
Max height: 3.30m
Max width: 4.50m
CL length: 16.80m
Features:
reception desk,
inside seating, one
shelf, skylight

Segment ID	Color	Layers	Height
Segment 1: ID1	white	55 layers (97.07cm)	1.75m
Segment 2: ID1	white	55 layers (97.07cm)	1.75m
Segment 3: ID1	white	11 layers (26.47cm)	0.35m
Segment 4: ID1	white	55 layers (97.07cm)	1.75m
Segment 5: ID1	white	55 layers (97.07cm)	1.75m

Activity Monitor
Changed colour of segment with ID 2

External dimensions (width x height x depth): 4.20m x 3.70m x 3.25m
Material volume: 12.8m³
Floor total length (estimate): 84.60m; rebar material cost (estimate): RMB576.40
Footprint area: 6.61m²; total weight: 30.745 tons (foundation load: 4.846 tons per m²)
Total material cost (estimate): RMB18,315.21

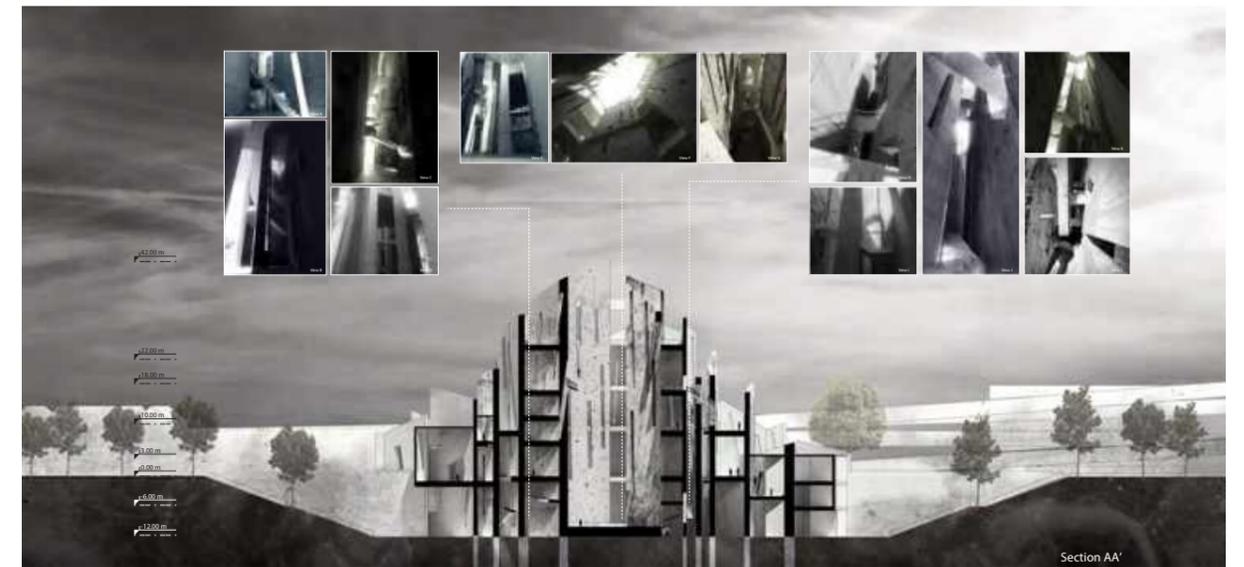
Advances in 3D printing technology have reached architectural scales and materials, and Suzhou-based company Winsun (盈创) is establishing itself as a global leader in this emerging research field. Taking a research-through-design approach, and engaging Winsun as an industrial partner, this project investigates the potential of 3D printing for online parametric mass customisation of small concrete buildings to address varying client needs and site contexts. Findings include a suitable form language, a set of structural design and construction constraints, and a parametric customisation approach. Established through experimental programming, model making and expert interviews, these are evaluated through experimental construction. Winsun's 3D concrete printing technology is based on the pioneering work and patents of Behrokh Khoshnevis.



Urban Mountain Retreat

The city is a gigantic machine that challenges its inhabitants on a daily basis to conform and to perform in terms of productivity and efficiency. Life is standardised and synchronised to benefit collective functioning at the expense of mental balance and spiritual well-being. There is practically no time and no space to reflect or contemplate, especially outside of churches and organised religions. This project faces this reality with a non-standard space that provides city dwellers with a stress-free spiritual experience to contemplate, meditate, worship, and otherwise practice any faith individually or in groups of various sizes, and to meet fellow urbanites with spiritual needs.

Urban Mountain Retreat was included in the RIBA President's Medals Student Awards Exhibition



STUDENT
SUN Chen-xing

CO-SUPERVISOR
Christiane M. HERR

YEAR
2016





IDEERS Earthquake Safety Design Competition

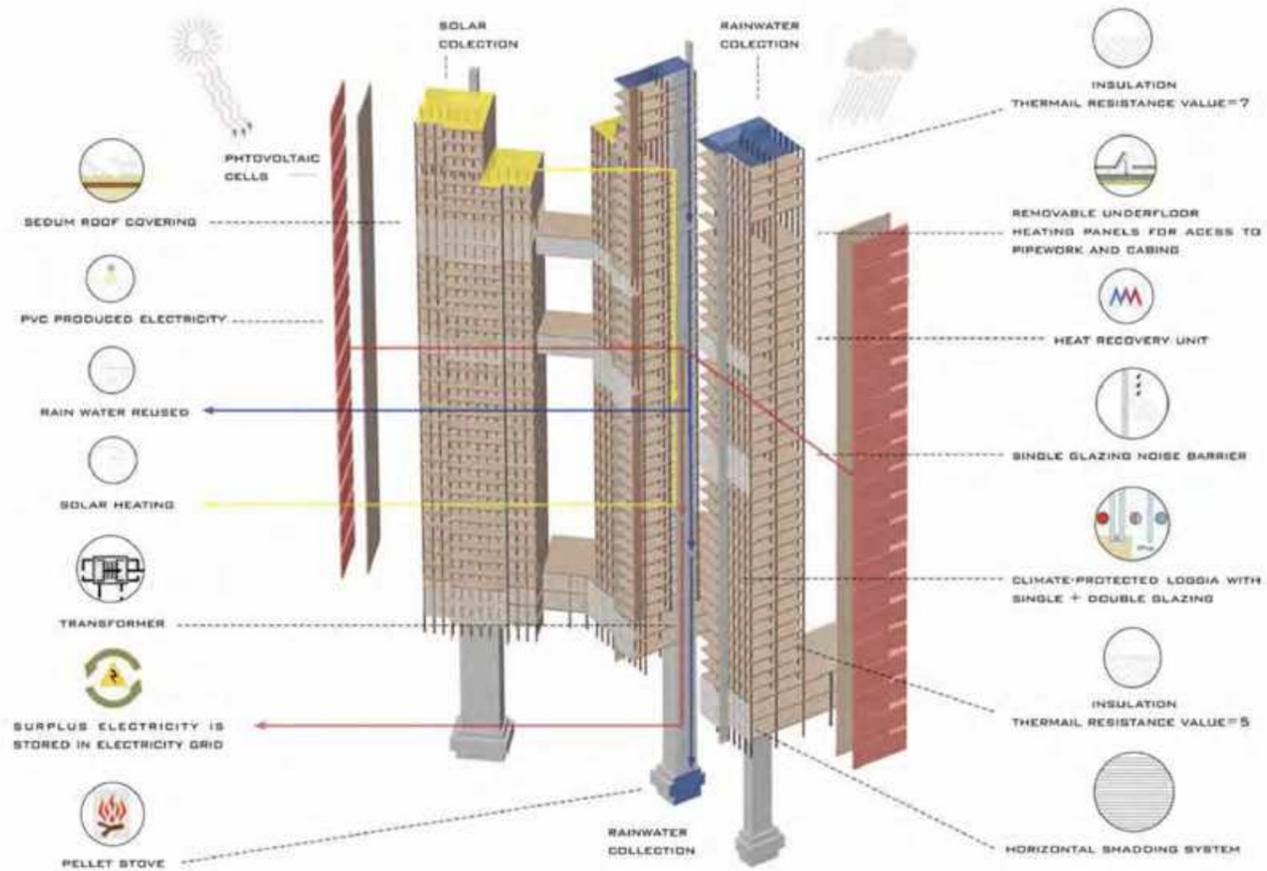
Between 2012 and 2018, several teams of 3rd-year students from XJTLU's Department of Architecture participated in the International Annual Earthquake Safety Design Competition IDEERS 2018 in Taipei, Taiwan, supervised by Christiane M. Herr and myself. Student teams typically spent two months during the summer continuously improving the earthquake resistance of their structures as well as their craftsmanship. The contributions of XJTLU were awarded with several awards every year, including Best Structure Design Prize and the Best Architecture Design Prize, competing in a large field of over 40 international teams competing in the undergraduate category. The XJTLU students teams' successes are a particularly impressive achievement as they were competing among a majority of engineering students.

BEng Architecture students
Xi'an Jiaotong-Liverpool University

COLLABORATOR
Christiane M. Herr

YEAR
2012 - 2018





Timber Towers for China

The second studio module in the MArch Des programme focuses on establishing and developing mutually inspiring relationships between technical and environmental requirements and design ideas. The studio addresses increasing systemic interdependencies of human habitation, built form, technology, society, natural and urban environments in contexts of high population density, as they are typically found in the fast-expanding cities of Asia. Design proposals must be based on a strong research background to develop experimental future-oriented mixed-use towers on a site in Shenyang. The projects all employ timber for the load-bearing structure as well as other parts of the building. Design proposals were informed by detailed lighting analysis and a strong focus on sustainable construction. The studio was taught in collaboration with Atkins Shanghai, who shared a project site and provided critical feedback at all stages of the project.

Master of Architectural Design Year 1 Studio

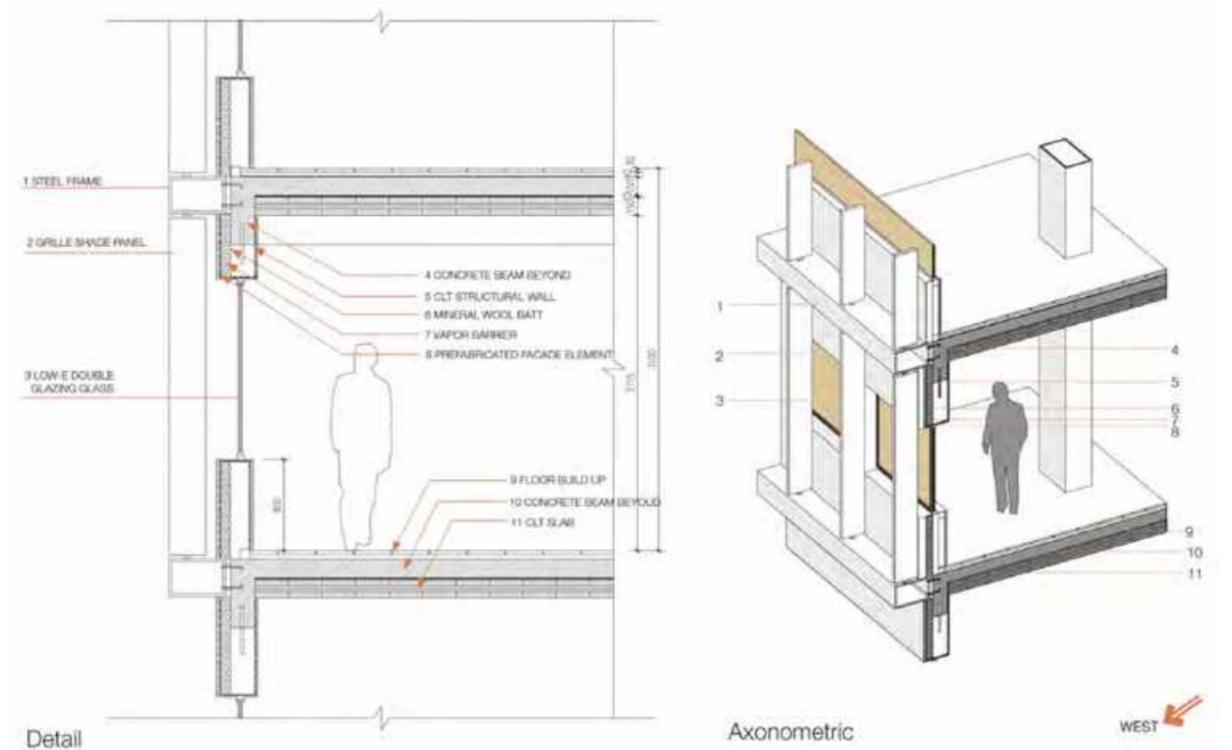
Xi'an Jiaotong-Liverpool University

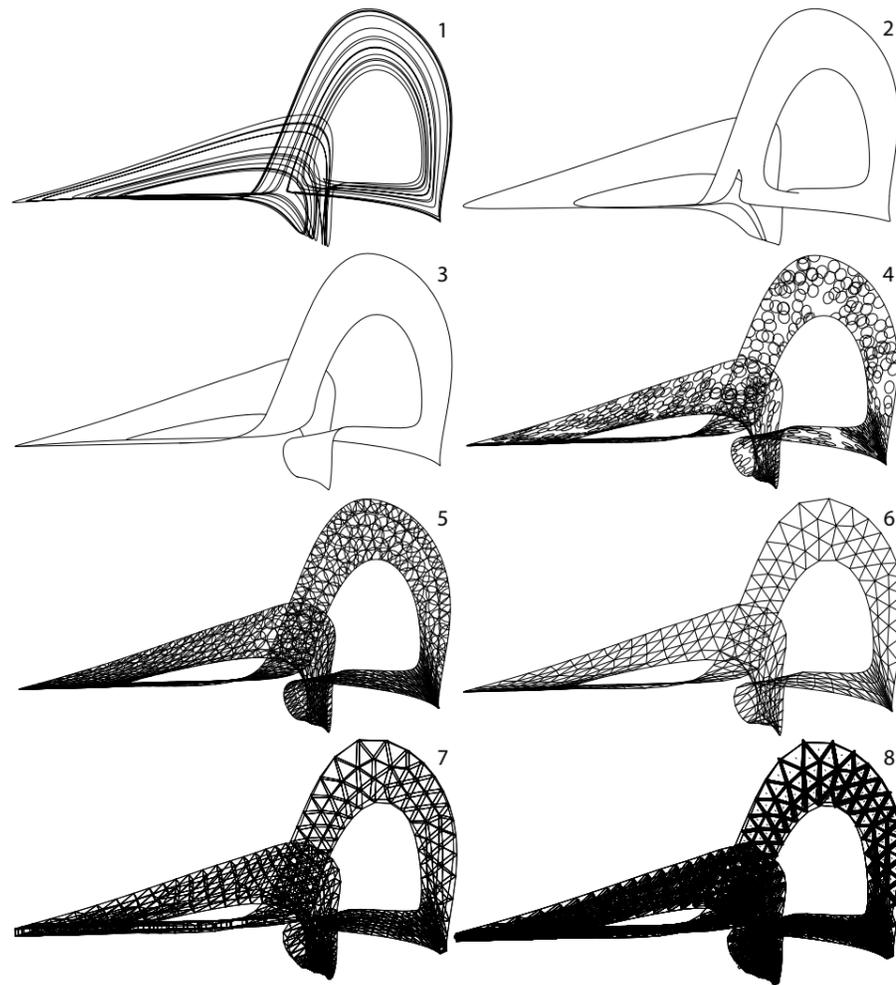
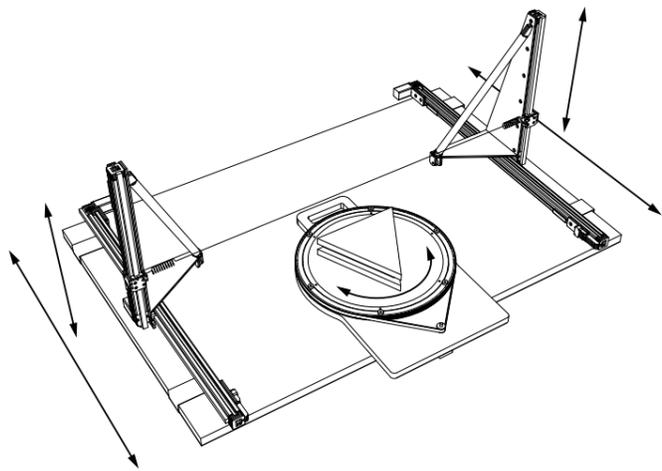
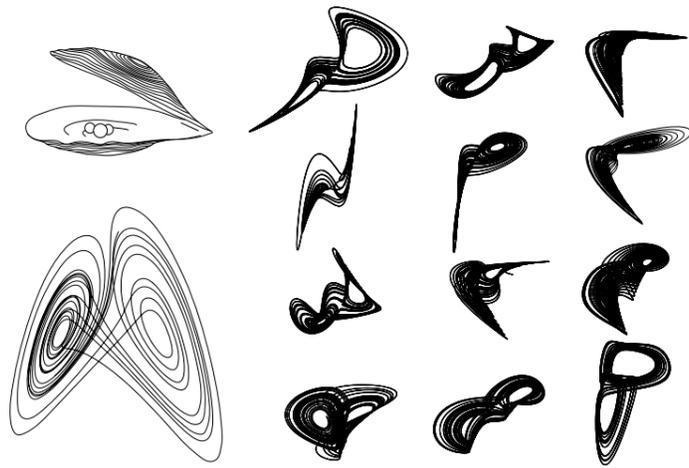
YEAR

2016 - 2017

COLLABORATORS

Marco CIMILLO
Christiane M. Herr





COLLABORATOR
Christiane M. HERR

INDUSTRY COLLABORATOR
Michael GRAU (RFR Shanghai)

UNDERGRADUATE RESEARCH FELLOWS

WEI Shubo
ZE Mingxuan
YU Xinning

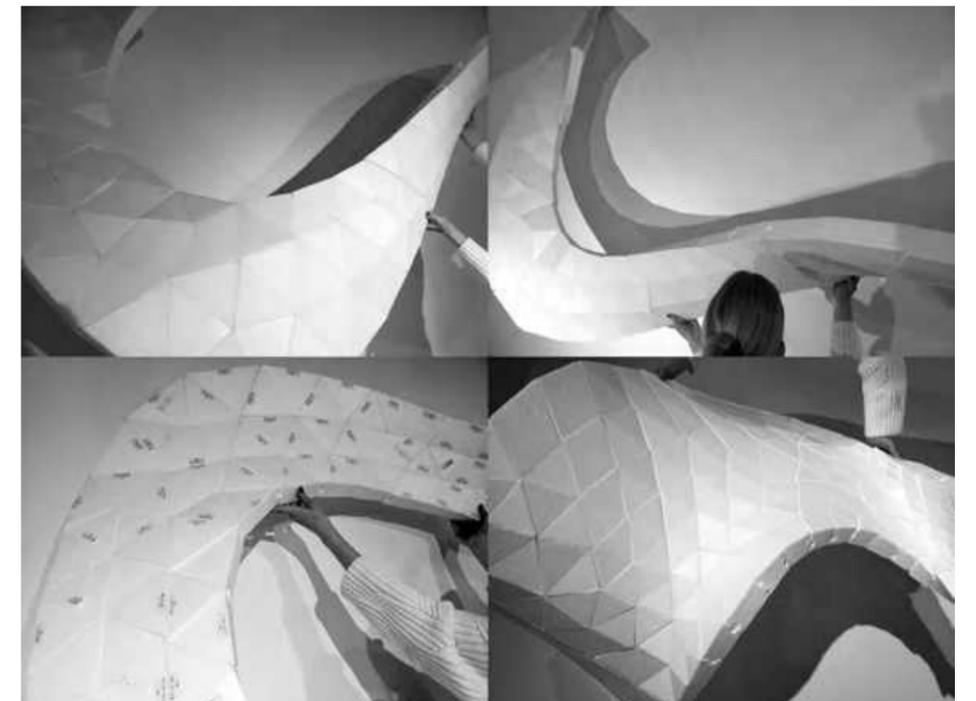
YEAR
2018



Triangulated Shell Foam Structures Based on Robotic Hot-Wire-Cutting

This project is an applied investigation into a digital design and production workflow to generate, rationalise and fabricate triangulated extruded shell foam structures. The project comprises a speculative form-finding and geometry-generation process for a test sculpture, a rationalisation approach, a new type of hot-wire-cutting robot and developed technical and design strategies as well as applicable geometric and fabrication constraints,

We implemented and applied a new hot-wire-cutting robot and a related suite of script-based tools for geometry rationalisation and fabrication control developed by Michael Grau in the experimental production of an indoor shell sculpture. The robot, with its geometrical as well as material constraints, served as the foundation of the project. The sculpture then served as a speculative test object to probe the possibilities as well as the limitations of the robot. We developed a sculpture from cultural imagery and a Lorenz attractor, which we morphed parametrically. We then divided the overall sculpture into seven fragments, each of which being small enough to handle easily and to fit through doors and into lifts. We assembled these fragments manually from the prism tiles.



THE DEVELOPMENT OF EGG WAFFLES IN HONG KONG

The Hong Kong Polytechnic University

Abstract

The paper studies the historical and present development of egg waffles in Hong Kong. It explores the socio-cultural context in which the waffle was introduced and how it has evolved over time. The study focuses on the historical and present development of egg waffles in Hong Kong, and how it has evolved over time. The study focuses on the historical and present development of egg waffles in Hong Kong, and how it has evolved over time.

Special Thanks

To the members of the research team who have supported me throughout this journey. To the members of the research team who have supported me throughout this journey.

Introduction

The egg waffle is a beloved street food in Hong Kong. It is a soft, fluffy, and slightly sweet treat that is enjoyed by people of all ages. The waffle is made from a simple batter of eggs, flour, and sugar, which is cooked in a special waffle iron. The result is a golden-brown, porous, and delicious treat that is perfect for breakfast or a snack.

History of Street Food

The history of street food in Hong Kong is a rich and diverse one. It reflects the city's unique cultural heritage and its position as a global metropolis. Street food has been a part of Hong Kong's identity for centuries, and it continues to be a popular and vibrant part of the city's food scene.

Origin of Egg Waffles

The origin of egg waffles in Hong Kong is a topic that has sparked much debate and speculation. Some believe that the waffle was introduced to the city by immigrants from other parts of the world, while others believe that it was a local invention. The truth is, the origin of the waffle is still a mystery, but its popularity in Hong Kong is undeniable.

Upstart Interview: Odette Galateria

Odette Galateria is a well-known name in the world of egg waffles. She has spent years perfecting her recipe and her craft, and she has become a beloved figure in the community. In this interview, she shares her story and her passion for this delicious treat.

Egg Waffles Focus on the Quality of the Waffle

For many people, the quality of the waffle is what makes it special. It's the soft, fluffy texture and the slightly sweet taste that make it so appealing. In this section, we explore the factors that contribute to the quality of the waffle, from the ingredients to the cooking process.

Perhaps the egg waffle, like any cultural icon, is witnessing a slow but inaccurate evolution, and it requires the efforts of both the traditionalists and the upstarts to maintain the momentum and keep the egg waffle alive.



The sexual life of the elderly

- An exploration of survey methods for taboo topics -
Research report

KEYWORDS

- Taboo topics
- Qualitative research
- Interview methods
- Ageing population
- Identity
- Sexuality
- Sexual abuse
- Class
- Hong Kong

1. Introduction

The paper explores the challenges of conducting research on sensitive topics like the sexual life of the elderly. It discusses the importance of using appropriate survey methods and the role of the researcher in ensuring the safety and well-being of participants.

2. Methods

The research uses a qualitative approach to explore the experiences of elderly individuals. The study involves in-depth interviews with participants, which are analyzed to identify themes and patterns in the data.

3. Results

The findings of the study reveal that many elderly individuals face challenges in their sexual lives. These challenges can be related to physical health, social norms, and personal experiences. The research highlights the need for more support and resources for this population.

4. Conclusion

The study concludes that the sexual life of the elderly is a complex and often overlooked issue. It calls for further research and the development of interventions that address the specific needs and challenges of this group.

5. Appendix

This section contains supplementary information related to the study, including a list of participants, a copy of the interview schedule, and a glossary of terms used in the report.

6. Acknowledgements

The author would like to thank the participants who shared their stories and the researchers who provided support and guidance throughout the project.

7. Analysis & Discussion

This section provides a detailed analysis of the data collected during the study. It discusses the themes that emerged and the implications of the findings for research and practice.

7.2.1 USA for method A: One-on-one interview

This sub-section discusses the specific challenges and benefits of using one-on-one interviews for this type of research. It compares this method to other qualitative approaches and provides recommendations for its effective use.

HOW TO MITIGATE ENVIRONMENTAL PROBLEMS CAUSED BY FAST FASHION

Research and Analysis for Design 2018/19
Thomas Fisser

The fashion industry is a major contributor to environmental problems, including climate change, water pollution, and waste. This report explores the causes of these problems and offers strategies for mitigation, such as sustainable fashion practices and consumer education.

Abstract

The fashion industry has recently become the center of environmental impact. This report aims to investigate the possible solutions from a design perspective by studying the attitude and behavior of the key components in the system, including consumers, designers and manufacturers. Evaluation by qualitative content analysis, the direction falls on clothing, technology and critical design.

Introduction

Fashion, and especially fast fashion, has an ugly truth under its glamorous cover. According to the World Economic Forum, the fashion industry is the second largest polluter in the world. This report explores the environmental impact of the fashion industry and offers strategies for mitigation.

Research Methods

The research is conducted from an interpretive perspective, aiming to gain a deeper understanding of the issue. The key informant approach is adopted to identify key stakeholders in the industry, and their insights are used to inform the research.

Findings

The findings of the study reveal that consumers are a key factor in driving the fashion industry's environmental impact. They are often unaware of the environmental consequences of their purchases and are influenced by marketing and social media.

Factors on Clothing Selection

This section discusses the factors that influence consumers' clothing choices. These factors include price, quality, style, and environmental impact. The research finds that environmental impact is becoming an increasingly important factor for many consumers.

Fashion Designers

Fashion designers play a crucial role in shaping the industry's environmental impact. They can use their creative power to design sustainable and ethical clothing that meets the needs of consumers and the planet.

Conclusion

The fashion industry has a significant impact on the environment, and it is essential to take action to mitigate this impact. This report offers strategies for sustainable fashion practices and consumer education, which can help to reduce the industry's environmental footprint.

Abstract

The purpose of this study is to explore the relationship between culture and design. It examines how cultural values and beliefs influence the design process and the resulting products. The study uses a qualitative approach to explore the experiences of designers and consumers.

Introduction

Culture is a complex and multifaceted phenomenon that shapes the way we think, feel, and act. It is a key factor in understanding human behavior and the design process. This report explores the relationship between culture and design.

Literature Review

This section reviews the existing literature on the relationship between culture and design. It identifies key theories and findings and provides a framework for the current study.

Methodology

The study uses a qualitative approach to explore the relationship between culture and design. It involves in-depth interviews with participants, which are analyzed to identify themes and patterns in the data.

Results

The findings of the study reveal that culture has a significant influence on the design process. Designers' cultural values and beliefs shape their creative decisions and the resulting products.

Discussion

The study discusses the implications of the findings for design practice and research. It highlights the need for designers to be aware of their own cultural biases and the cultural context of their work.

Conclusion

The study concludes that culture is a key factor in understanding the design process. It offers strategies for designers to incorporate cultural insights into their work and create more meaningful and effective designs.

SD5018 Design Research and Analysis

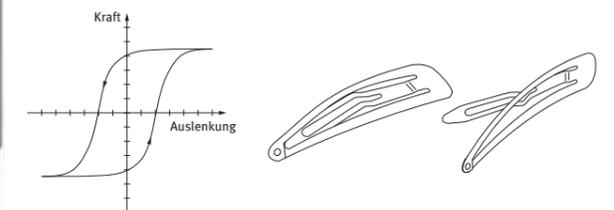
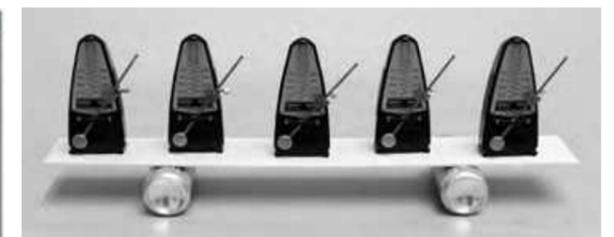
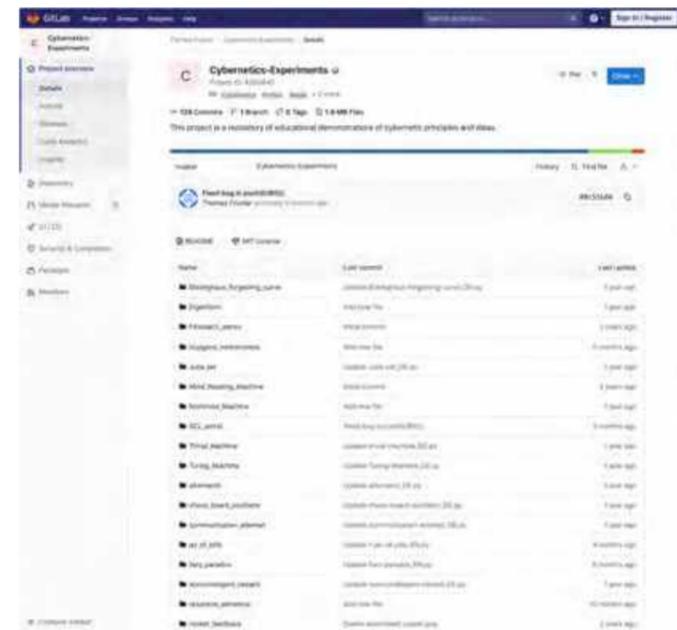
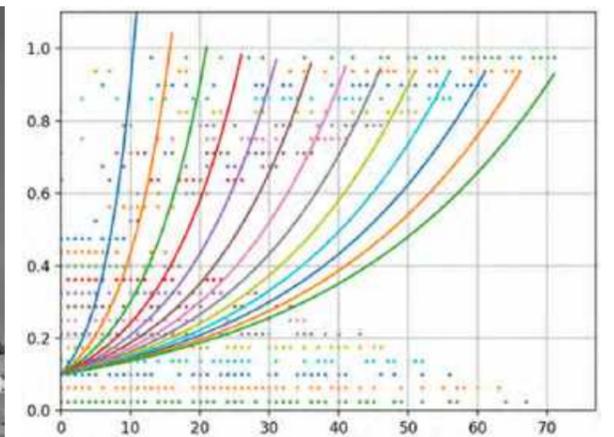
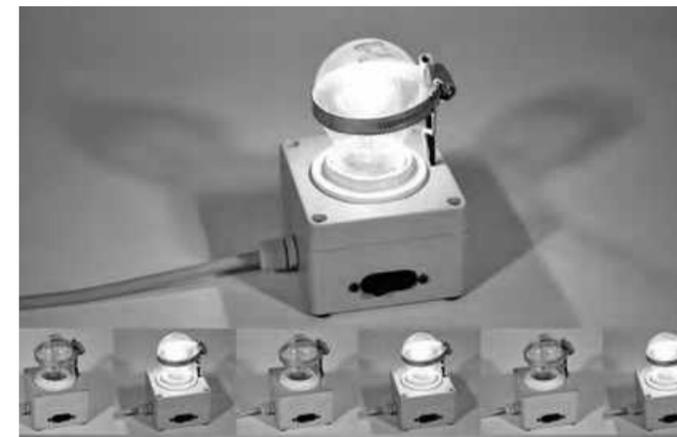
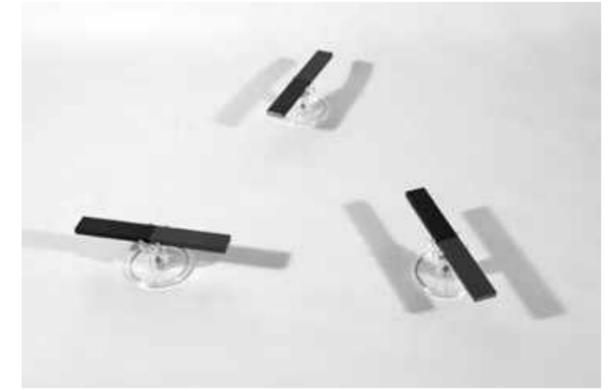
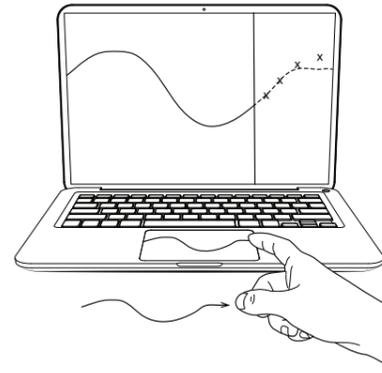
I deliver SD5018 to the SD Masters programmes in a four-weekend compact format During Fall semesters. The module guides students groups in conducting empirical as well as designerly research enquiries and in applying suitable analysis methods, with a strong focus on research ethics and academic communication. Aiming for both relevance and rigour, students identify and negotiate their own projects, identify and justify their research methods, backed up by thorough literature reviews, and execute original data acquisitions or creative developments and suitable analysis processes, which they then communicate in high-quality research reports.

2018-2019
WORK SHOWN BY VARIOUS SD5018 STUDENTS



Applied Design/Media Epistemology

I am developing an applied, speculative epistemology in the intersection between design, media and cybernetics. In this epistemology, technology is a means, not an end. The purpose is to invite students to creative and critical thinking, based on an experiential epistemological practice. For this pedagogical approach, I have developed numerous coding and making exercises, mainly based on Python scripting, and published via an open-source repository. This work has been published and presented in multiple outlets in both English and German language, and has been received enthusiastically.



CODING AND MAKING EXERCISES

Thomas Fischer

YEAR

2010-ongoing

Xi'an Jiaotong-Liverpool University
西交利物浦大学

Department of Architecture

Thesis Title

Thesis Author

Thesis submitted
in partial fulfillment of the requirements of the
University of Liverpool
for the degree of Master of Architectural Design

June 2018

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Review of Literature and Case Studies

2

This chapter starts with a transition from the previous chapter. What has been done or established previously and what is to happen next? Most likely, this chapter sets out to review work of others that is relevant to the inquiry presented in this thesis. There should also be a short statement outlining the structure of this chapter. For example, this review may break down into a section on theory in scholarly sources and a section on build and unbuilt projects. The review of work of others should not only relate to the subject of your study, but also to the methods you use. This may be reflected in the structure of this chapter. Point out the limitations of the review here. For example: What motivated the choice of literature and case studies, and what were the reasons for excluding others? Is work of others merely collected and presented, or is it also assessed critically? If so, how?

2.1 Literature

The literature reviewed in this section will have been selected in some way. This section should therefore point out that the review is based on a selection and it should explain in more detail than above the reasoning behind the selections made: What motivated the choice of some literature, and what were the reasons for excluding other literature? Then follows the detailed review of relevant scholarly works of others. Make sure this section is briefly summarised towards the end.

2.1.1 Literature on the Topic at Hand

A review of literature pertaining to the topic of this thesis can go here. Explain how this was selected and summarise at the end.

2.1.2 Literature on Methods Used

A review of literature pertaining to the methods and strategies deployed in this thesis can go here. Explain how this was selected.

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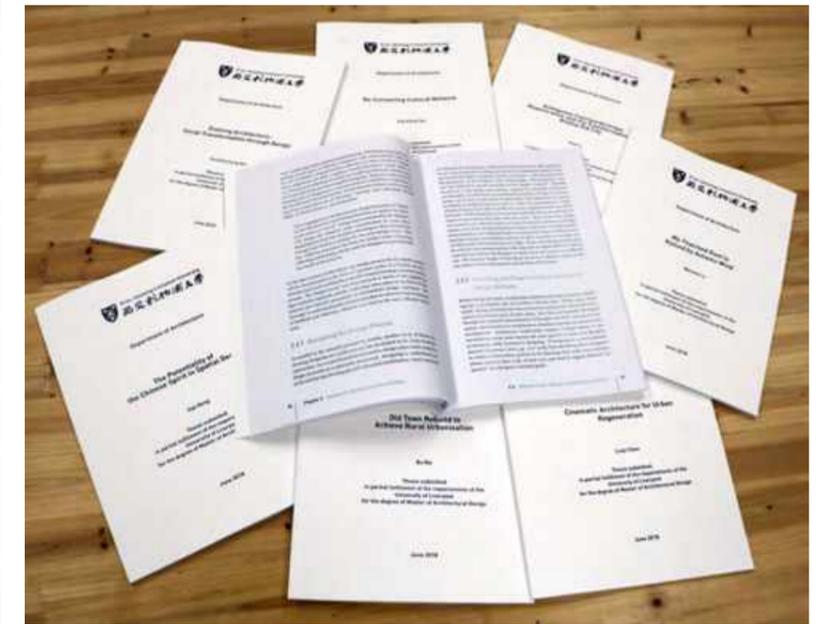
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MANZINI, E. (2007) "Design research for sustainable social innovation". In: *Design research now. Essays and selected papers*. Ed. by R. MCHEN. Birkhäuser, pp. 233-245.



Thesis Popsicle

STUDENT WORK SHOWN BY

DUAN Yawen

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Department of Architecture

**Architecture of the Urban In-Between:
Connecting Buildings and the City**

Yawen Duan

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in partial fulfillment of the requirements of the
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Thesis Popsicle is a free software bundle that includes a document template and written thesis writing guide. I developed it to offer students a toolkit for producing high-quality thesis documents compliant with XJTLU regulations. The template complies with applicable formatting guidelines, official referencing styles, exam regulations and university visual identity guidelines. It runs live from a USB memory stick on any computer without requiring administrator privileges to install applications or fonts. It therefore runs on university lab and library computers, and on privately owned (including outdated) computers. The system is compatible with Overleaf.com where I can offer real-time feedback and advice. providing for cloud-based backup, it protects students' thesis work from accidental data loss. The system is accompanied by a suite of class presentations, handouts and studio pin-up materials on academic and design research, academic writing, thesis structures, literature reviews and referencing etc. My students and I have used the system successfully over the course of several years at masters and at PhD level.





Design Cybernetics

COLLABORATORS

Christiane M. Herr and various chapter authors

YEAR 2019

Design cybernetics offers a way of looking at ourselves – curious, creative, and ethical humans – as self-organising systems that negotiate their own goals in open-ended explorations of the previously unknown. It is a theory of and for epistemic practices (learning, designing, researching) that is deeply committed to the autonomy of others and hence offers no prescriptive methodology. Design cybernetics describes design practice as inextricable from conversation – a way of enquiring, developing shared understanding and reaching the new that harnesses reliable control as well as error and serendipity.

Recognising circular causality, observer-dependency and non-determinability, design cybernetics extends beyond tenets of scientific research into the creative, ethical and aesthetic domain. From this perspective, design is not an ill-conceived subset of scientific research. Instead, scientific research emerges as a particularly restricted subset of the broader human activity of design.

This volume offers a cross-section of design cybernetic theory and practice with contributions ranging across architecture, interior lighting studies, product design, embedded systems, design pedagogy, design theory, social transformation design, research epistemology, art and poetics, as well as theatre and acting. Addressing designers, design educators and researchers interested in a rigorous, practice-based epistemology, it establishes design cybernetics as a foundational perspective of design research.

