



DARCH

a showcase of graduating students' works

INTERVENTION

End of Year Show 2021
www.sp.edu.sg/abe/life-at-abe/end-of-year-show

The School of Architecture and The Built Environment (ABE)

is Singapore's first and most established school in the training of professionals in the built environment. We are also the only school currently offering a comprehensive range of built environment programmes.

Our curriculum emphasises on creativity-driven and hands-on approach allowing students to build strong foundation in transforming spaces through enhancing users' experience using creative solutions.

FOREWORD

Building Singapore is a never-ending task. As our economy continues to transform and lifestyles evolve, the construction industry continues to design for quality work, live and play environment for residents.

ABE's vision is to create a sustainable future envisioning concepts and designs for a built environment that is conducive for quality live, work and play.

Hence we train our students to be creative and competent in the areas of on digital, social and environmental sustainability.

END-OF-YEAR SHOW 2021

EOYS2021 is a showcase of built environment projects from the Diploma in Architecture (DARCH), Diploma in Interior Design (DID) and Diploma in Landscape Architecture (DLA). It is an attestation to the skills and knowledge of our graduating students.

The show features works spanning phenomenology, sociology, user experience, sustainability and more. These are pertinent interventions in this dynamic sociopolitical climate.

Join us as we present the future leaders of the construction industry and to celebrate this milestone in our graduand's academic journey.

"To see is to be on guard,
to wait for what emerges from the background,
without any name, without any particular interest:
what was silent will speak,
what is closed will open
and will take on a voice."

- Paul Virilio

CONGRATULATORY MESSAGE

The prophetic dromologist, the late Paul Virilio, in many of his writings, presciently warned of an upcoming event, one that should concern us: the dissolution of the city. Matter and experience lost to transparency and speed. Virilio to be sure was writing in the early 80s, with the advent of cable TV and the first shoots of the personal computers. He was also then witnessing, the "electrification" of the city, where physical gates were being replaced by camera eyes. Windows, gates and doors overcome by monitor screens. It was the time, where recording and playback of images was becoming portable. The nature and definition of space was starting to definitely change. The city was also become more transparent, it was losing its friction, with movement accelerated by highways and mass rapid railway.

The last year, in a world ground to a halt by the ancient-ness of disease; yet seamlessly moving forward by collapsing space and time with digital technology, one does wonder [and we wonder with Virilio], what then is the future of urban space, the architectural material and the domesticity of place, now that all of life can seemingly conducted via a screen.

And thus so too is this year's EOYS: digitalized, framed in windows, remote from touch. Yet it is a strenuous attempt to capture the physical - all of the three years of imagining and materializing: of students, tutors and support staff. I congratulate all of you for graduating during a challenging and unforgettable moment in history. As with Virilio, look what is coming forward with a critical eye, and make sense of it, instead of just accepting it as reality.

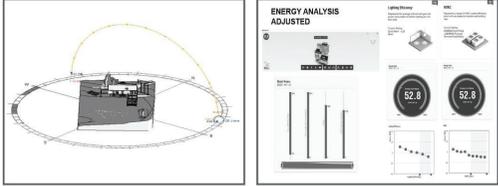
Dr. Faris Akbar Hajamaideen

Director

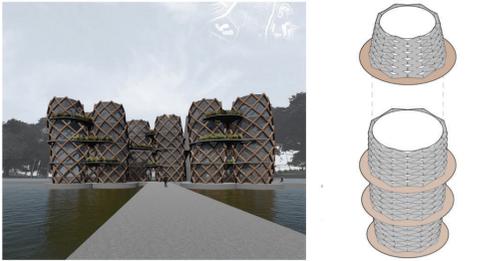
School of Architecture and the Built Environment



Our fabSTUDIO supports the notion of Build Smart by inculcating areas of Advanced Digital Fabrication in alignment to IDD Initiative. Students learn various fabrication techniques while applying their skills in problem-based challenge to appreciate the importance of design principles with digital fabrication and assembly.



Our BIM elective module instills the second pillar in industry transformation - Designing Efficiently. Students are able to get a better overview of resource savings, more efficient project lifecycles and coordination in the design and construction process.



In collaboration with NTU, our Biomimetic Design Workshop reinforces the 'Build Green' pillar where students explore biomimetic strategies to design dwelling units for sustainable community. This resonates with our curriculum in the areas of green design.

DARCH

DIPLOMA IN ARCHITECTURE (DARCH)

Notwithstanding the anchorage of its legacy, the curriculum at DARCH is continually evolving to remain true to its commitment of delivering industry relevant graduates.

In the most recent Built Environment Industry Transformation Roadmap, the 3 ways that the industry hopes to transform itself was summarized into 3 succinct ways 'Build Smart, Efficiently & Green', as a response to challenges from arising from digital revolution, rapid urbanisation and climate change.

The curriculum at DARCH is strategically position to provide students with the foundation to meet these transformations. With modules dealing specifically in these areas, students receive training in skillsets that will make them a valuable asset to the industry upon graduation.

We hope you will enjoy the works featured in this edition.



Phenomenology Atelier



DARCH YEAR 3

The final year programme places equal emphasis on both design and technology. Students are required to develop the design of multi-storey commercial or institutional buildings and address the issues of tropical architecture in an urban setting. These issues encompass sustainable concerns and the forging of a contemporary tropical identity. As part of the learning objectives, students are required to integrate steel and lightweight envelope construction into their projects. They also apply their understanding of local building regulations and building services requirements into their schemes.

Sociology Atelier



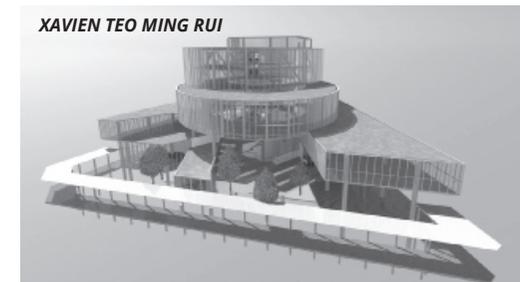
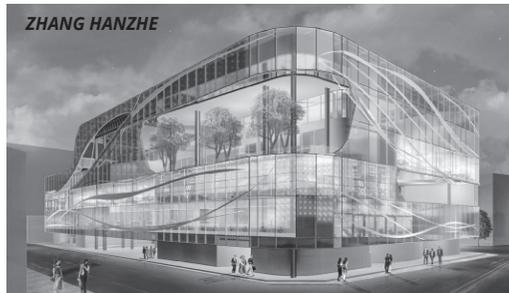
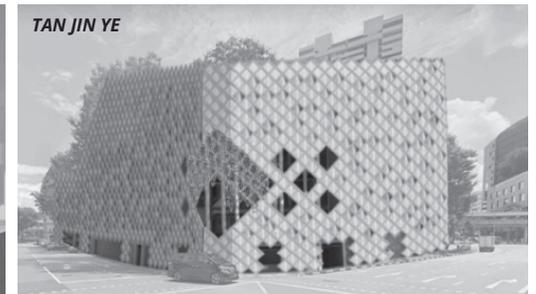
Sustainable Design Atelier



PHENOMENOLOGY

Phenomenology is the study of structures of consciousness as experienced from the first person point of view. Phenomenological issues of intentionality, consciousness, qualia and first person perspective have been prominent in recent philosophy of mind.





SOCIOLOGY

The study of human societies interactions and behaviour on influence of architectural space (space rationality). Adopting a human approach on both collective and individual levels of design. To design buildings to fulfil the needs of social institutions in response to social aspects of architecture, through quantitative and qualitative research as a basis to determine perceptions of well-being of the occupants.

LOW JONG HENG



VALENCIA PRISHA CASSANDRA MALONZO



MIN THEIN KYAW



KEILYN RYO LAZARO BALANA



MOHAMMED AKMAL BIN MOHAMED ZAIN



KENNETH TAN KAI JIE



NG E-SHYANG



NG JIA SUEN



KHIN HTAR HAN



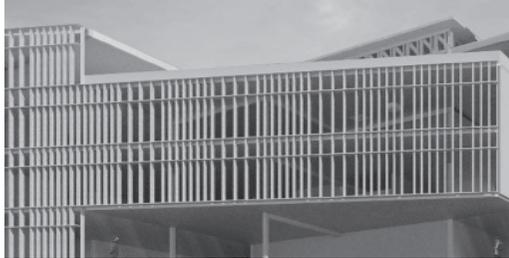
NUR HAZIMAH BINTE ROSMAN



DEAN CHUA YONG DA



DEL CARMEN CARL ADRIAN HABOC



SUN CHING SAMUEL



SITI NURFAHANAH BINTE NORMAN



ESTHER CHAN HOOI TOONG



GARREN HUANG KANXING



STANLEY GAN LOCK HENG



LIN YU WEI



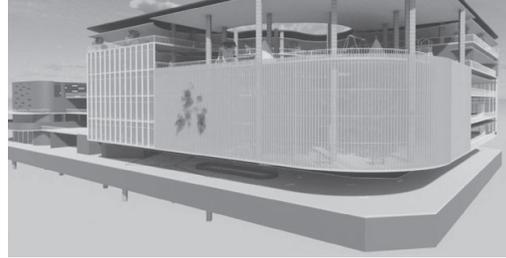
HANNAH LEE HSIEN



JOSHUA GOH SHENG YI

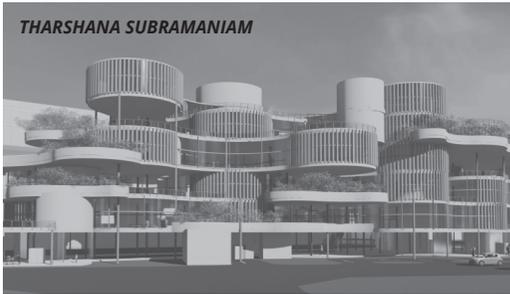
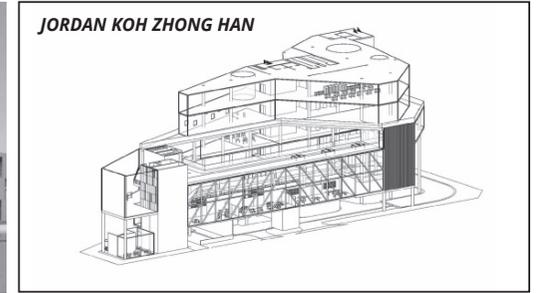
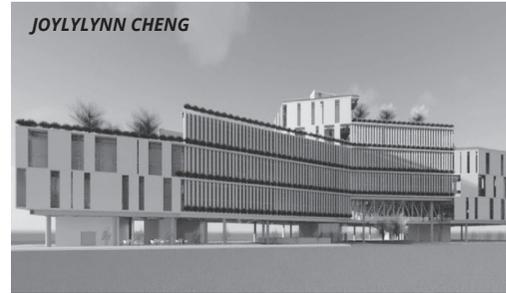


TAY MING XIANG



TOH JING KANG

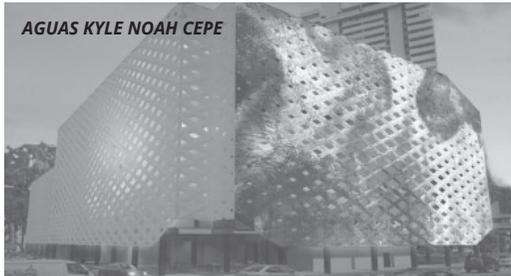
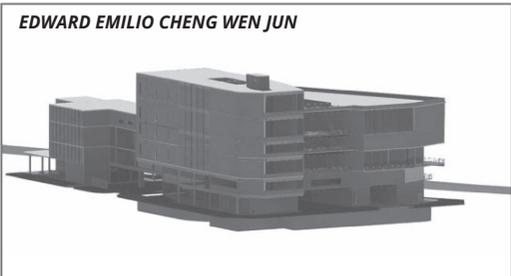
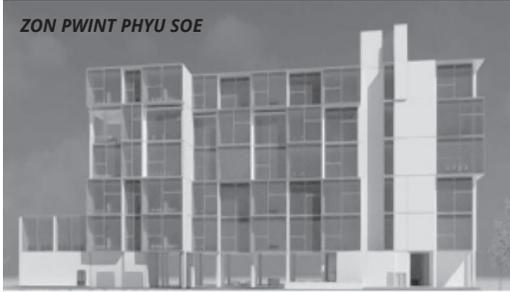




SUSTAINABLE DESIGN

Students are tasked to tackle the illusion and inconvenient truth of climate change. Climate Change has become a global emergency. Rising sea level submerges coastal regions and displace communities, extreme weathersa are affecting crops and livestock areas and the potential to feed the world's population. The architects are responsible and has a role to play in mitigating climate change and their impacts.





ELECTIVES



Fab Studio
by Keith Tan

Material Sensibility
by Lee Keng Keng
Ng Wen Yi



Projection of Ideas

by Choo Thian Siong
Dr Faris Hajamaideen



**BIM Essential using
Revit and Naviswork**
by Juneita Juma'at



01

Fab Studio started as a community based initiative and aims to kick-start awareness of digital fabrication through design and innovation.

02

Material Sensibility provides a better understanding on building materials such as concrete and exploration on its performance and usage.

03

Projection of ideas seeks to critique the banal use of digital tools for drawings that we see today and using digital techniques to speculate reality.

04

BIM Essential using Revit and Naviswork creates, area scheduling, solar studies, energy analysis, design coordination and documentation.

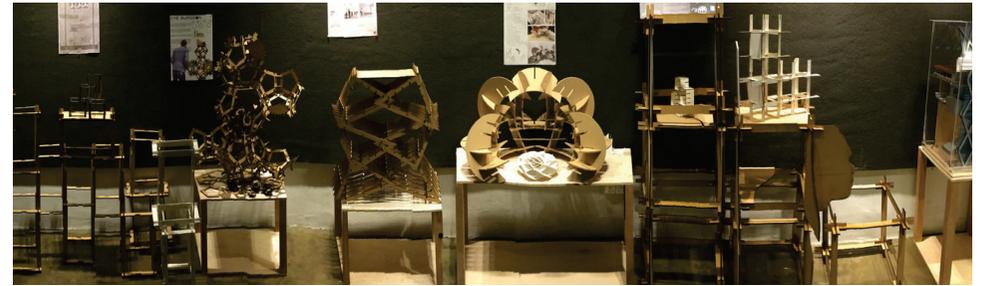
Fab Studio

Started as a community based initiative, fabSTUDIO aims to kick-start awareness of digital fabrication through design and innovation. Having established a digital fabrication laboratory in the School of Architecture and the Built Environment (ABE), fabSTUDIO seeks to support ABE in the areas of Advanced Digital Fabrication in alignment to the Integrated Digital Delivery initiative.

As a school-wide elective, students from all over ABE immersed themselves with learning various digital and manual fabrication techniques and applying their skills in problem-based challenge. The main objective of the program is to allow students to appreciate the digital revolution through the eyes of a designer and critique on the “whys” and strategies behind every digital approaches. This program addresses 3 principles of design in digital fabrication and assembly namely modules, joints and adaptability. Students were required to research and propose a challenge and to address it through creating modular structures, coupled with possible integration of sensory devices.

Through the discoveries, students will appreciate the importance of the design principles with digital fabrication and assembly in mind, right from the start of the design process.

Tutor: Keith Tan



Material Sensibilities

Material Sensibilities - Material, Techne & Craft is an elective module offered by the School of Architecture & the Built Environment. (CONCRETE) commonly used in construction industry with exploration on its performance & usage. The module is taught in theories and hands-on sessions.

This elective equips students with a better understanding on building material and exploration on its performance and usage. Allows students to explore flexibility of the materials in its forms and texture and re-define possibilities in its performance and usage. Introduces hands-on sessions with lab-based learning to recognise the strength and characteristics of the material and explore the performance of the material in terms of one of the 3 architecture qualities: firmitas (stability), utilitas (functionality) and venustas (aesthetics).

*Tutor: Lee Keng Keng
Ng Wen Yi*



Projection of Ideas

This year's brief for Interrogating Computational Design seeks to critique the banal use of digital tools for drawings that we see today. Drawings as vehicles ideas and expressions have been twisted to serve only as a singular instrumental role of construction. Current digital tools are used as digital replicas of the actual buildings which are unable to represent ideas and narratives. This year's thematic exploration, "Projection of Ideas", aims to look at the abilities of drawings to convey narratives and the creative possibilities. Three types of drawings were explored, augmentation, protocol and future fantastical (Bartlett 2016).

Augmentation

uses the act of drawing as a means to extend beyond what the hand can draw. Using digital techniques to speculate realism.

Protocol

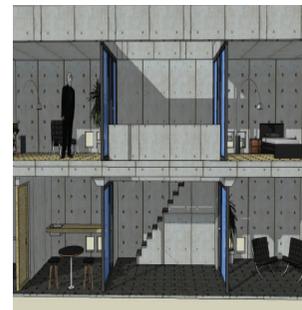
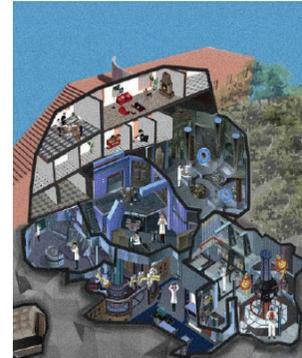
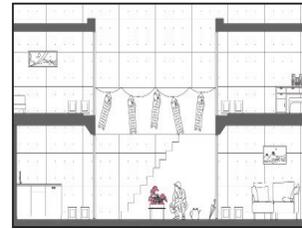
uses procedures or rules to encode new data through drawings. It is about how new types of drawing practice can provide new insights to new spatial research.

Future Fantastical

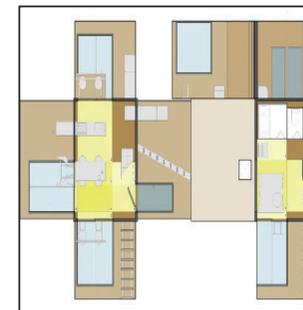
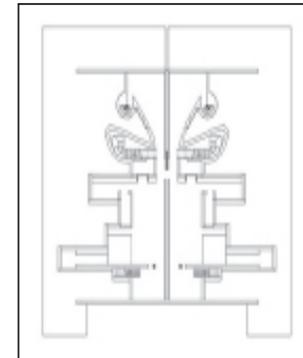
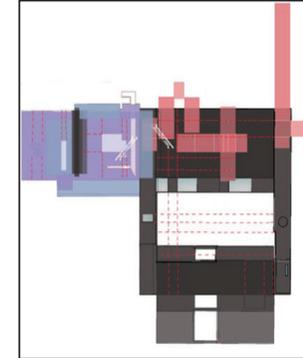
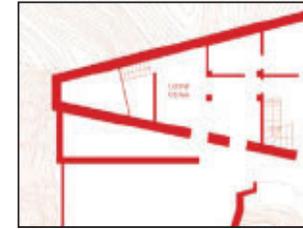
uses drawings to speculate on the future without pragmatic hindrance. It embodies the freedom of expression, enacting the desires of society and proposes new ways in which architecture can facilitate new societal configurations.

*Tutor: Dr Choo Thian Siong
Dr Faris Hajamaideen*

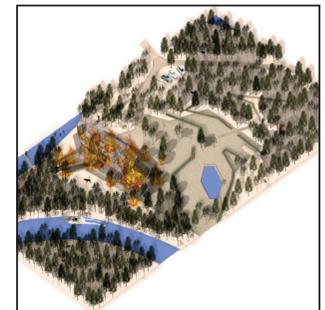
Augmentation



Protocol



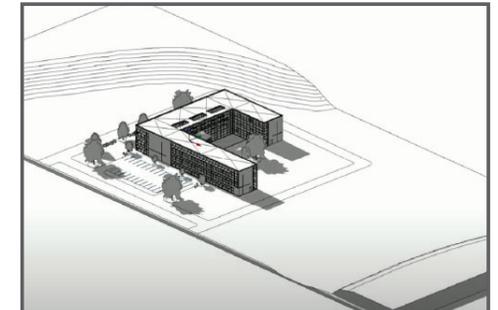
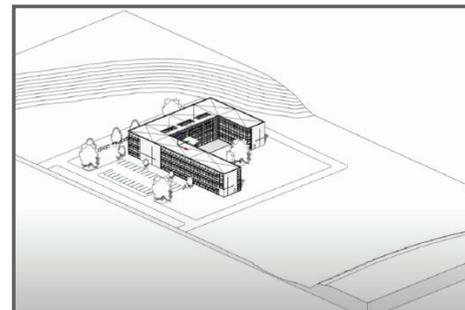
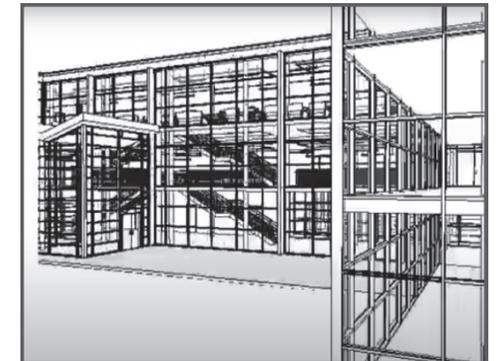
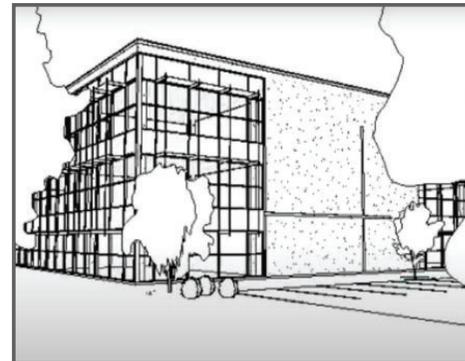
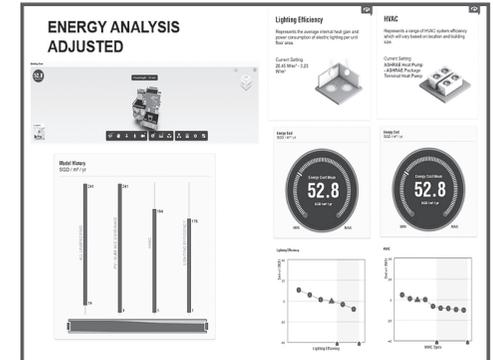
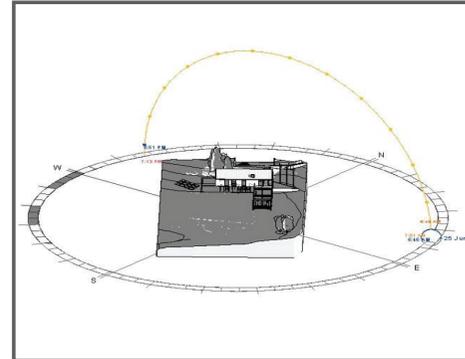
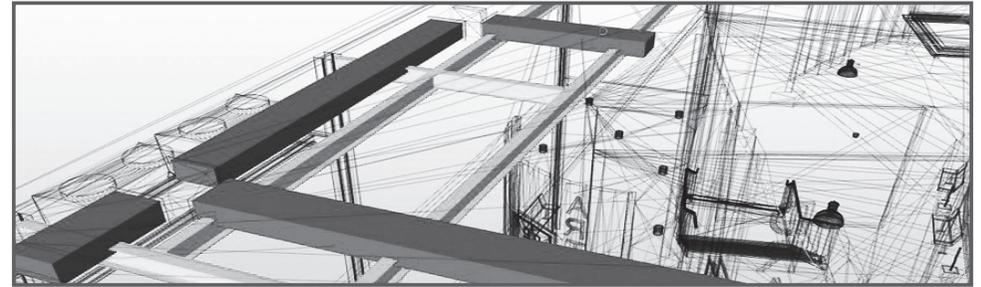
Future Fantastical



BIM Essentials using Revit and Naviswork

This semestral long elective will explore the use of BIM software, namely Revit and Navisworks Manage. Assessment will be via assignments. Students will get an opportunity to learn about BIM standards, creating sheet files, area scheduling, solar studies, energy analysis, walkthrough, worksharing, quantity take-off, automated material scheduling, and the design coordination and documentation.

Tutor: Juneita Jama'at



WORKSHOPS



Archifest 2020: Design To Serve
In collaboration with WY-TO Architects



01

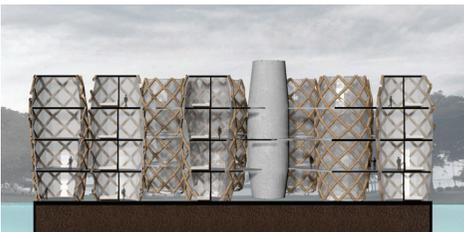
As part of Archifest 2020 'Architecture Saving Our World', the Designing to Serve Workshop is conducted in collaboration with international architectural Firm WY-TO and School of Architecture and the Built Environment, Singapore Polytechnic. The Workshop aims to tackle a little known issue of homelessness and the possibility of creating a sustainable lightweight and transportable

Biomimetic Design Workshop
In collaboration with EcoLabs, NTU



02

The Biomimetic Workshop aims to explore nature inspired design which are resilient and efficient. VISION: Tackling the Illusions and Inconvenient Truth of Climate Change. GOAL: Learning the Right Principles and Methods for Sustainable Design in this Anthropocene epoch. There are a lot of misconceptions that sticking paraphernalia like solar panels or green walls validates a building to be sustainable.



Biomimetic Design Workshop

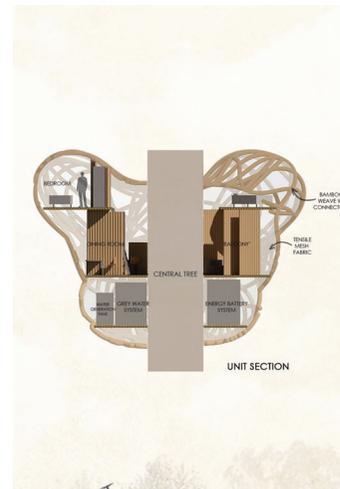
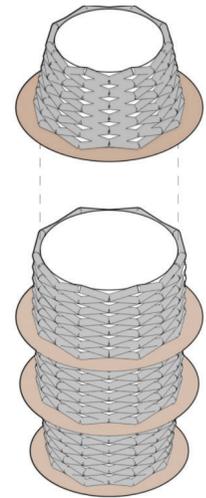
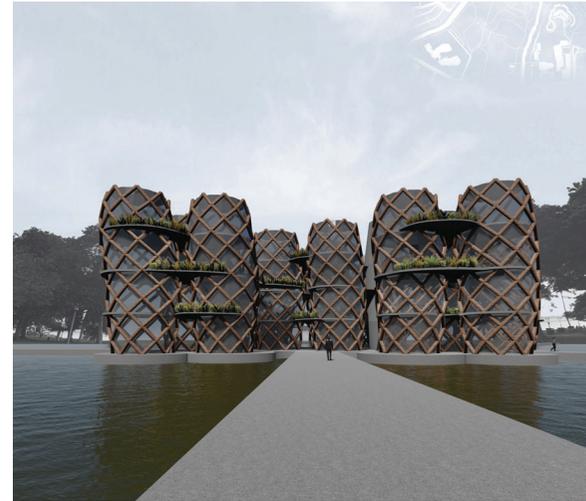
The Biomimetic Design Workshop is conducted in two phases. Phase 1 is a research and ideation phase which looks at how animals and plants have evolved efficient biological strategies in order to adapt to their natural environment.

This workshop looks at how nature's highly evolved biological processes can provide intelligent and sustainable solutions for our built environment.

The workshop explore show biomimetic strategies can be used to design off-grid dwelling units for a sustainable community.

Phase 2 will be the design development of selected schematic design proposals ideated during Phase 1. Phase 2 involves the use of computational design techniques to develop the selected design proposals. Students are trained to use computational design tools as part of the design development process. The design proposals have been submitted as competition entries for a Parametric Design Competition and the pedagogical framework has been presented in an international conference

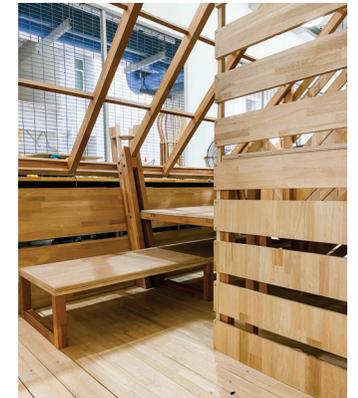
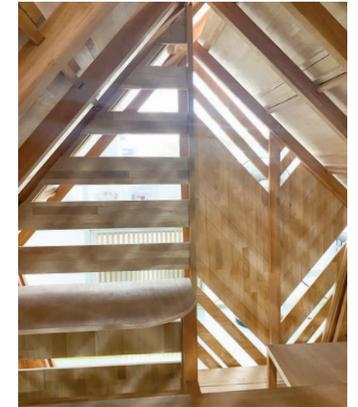
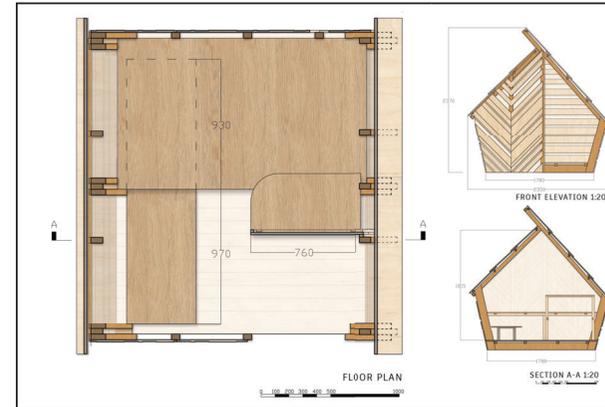
In collaboration with EcoLabs, NTU



Archifest 2020 Design To Serve

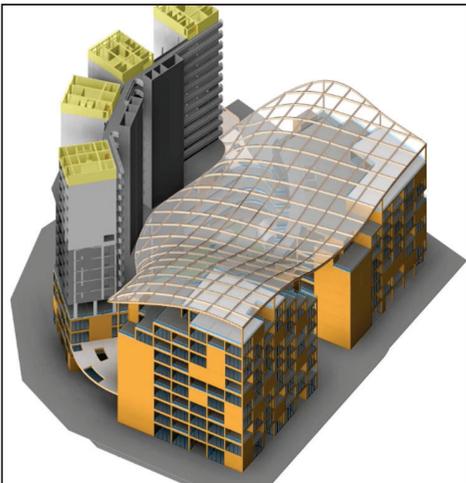
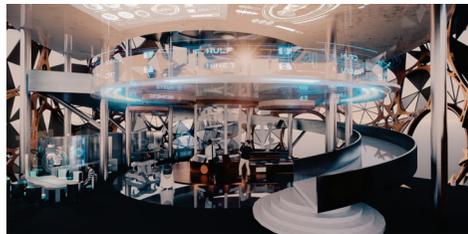
The workshop aims to tackle a tiller known issue of homelessness and the possibility of creating a sustainable lightweight and transportable shelter. We are a group of students from Singapore Polytechnic's School of Architecture the Built Environment. Singapore Polytechnic (SP) is a post-secondary education institution located in Singapore. Established in 1954, SP is the first and oldest polytechnic in Singapore. of awareness of the homeless situation locally because homeless people are often overlooked from our day to day experiences. Hence, in collaboration with WY-TO, the workshop aims to build a sustainable and portable shelter for the homeless within the span of 3 weeks to try to tackle the homelessness issue. The workshop consisted of students from Diploma in Civil Engineering with Business (DCEB), Diploma in Interior Design (DID), and Diploma in Architecture (DARCH), who came together with the intention to learn and to be part of a greater purpose. Despite the differences in their fields of expertise, all students have a common goal to raise awareness of homelessness here in Singapore and to create inclusive designs specifically for them. With this opportunity, we believe that design can make a positive impact on the most vulnerable members of society.

In collaboration with WY-TO Architects



COMPETITION

An Inquiry into Neo-Typologies Team Ardent



Pixelation Team Sunny Side



The International Building Design Competition 2020 is organised by Singapore Building and Construction Authority (BCA), in partnership with Singapore Polytechnic (SP), National University of Singapore (NUS), Nanyang Technological University (NTU) and Singapore University of Technology and Design (SUTD).

This year's theme, "Sustainable & Intelligent City" stresses the importance of designing sustainable and smart building or buildings in the urban Singapore context.

The competition is to design mixed-use development that integrates residential, retail, commercial, community, and transportation usages under one roof to a totally new level, so as to maximise the land use in our land-scarce island state.

The key aspects for the design competition is to generate design options through a synergetic approach encompassing the following: Sustainable Building Design

01

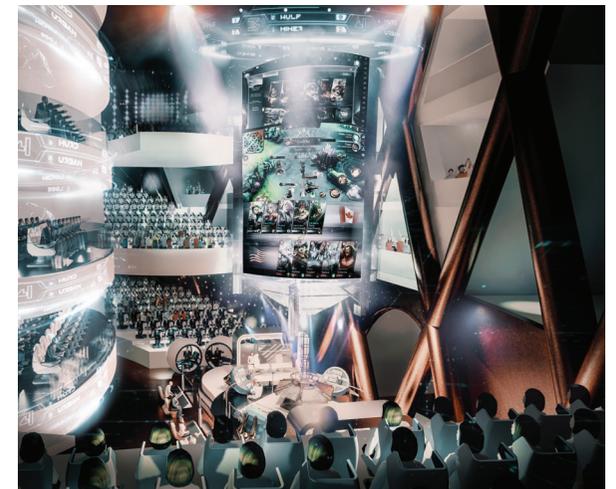
Team Ardent - To create a unique cohesion between the different retail spaces together with residential areas to rebirth a habitat aimed at families and the creative class of the future.

02

Team Sunny Side - The overall concept of the Green Shopping Haven is to provide a sanctuary away from city life. This allows middle aged expatriates to reside in a green sanctuary whilst in close proximity to a shopping haven. At the same time, the concept also takes into consideration of the constant evolving experiential shopping.

Team Ardent

A chapter of rebirth, to fall, folded to eternity, a metropolis reconstructed. Orchard Road, once the pinnacle of Singaporean retail, is perishing. The building was envisioned as a multi-serve as a support to the pre-existing neighbours, thereby seeking for a transition of rebirth. As shoppers now have the ease of purchasing necessities from heartland malls, orchard's clientele is evolving. This shift in demand has caused a shift in supply, with many who used to regard the Somerset belt to have lost most of its original allure, in addition to the rising sentiment of elitism and hierarchy. The building will be a keystone of the orchard landscape, rebirthing the Singapore Shopping experience and yet not detracting the merits of the existing proximal buildings that atmospherically transcends trends and time.



Team Sunny Side

Nestled between the historic Ngee Ann City and the youth-centric Scape, this mixed development endeavors to form a Shopping Haven embedded into a Green Sanctuary, embracing the progression of technology for expatriates to live in while providing an everlasting changing shopping culture for Singapore's vibrant youth to enjoy for many years to come.

PIXELATION

Nestled between the historic Ngee Ann City and the youth-centric Scape, this mixed development endeavors to form a Shopping Haven embedded into a Green Sanctuary, embracing the progression of technology for expatriates to live in while providing an everlasting changing shopping culture for Singapore's vibrant youth to enjoy for many years to come.



Splitting



Extruding



Terracing & Inserting Void

