



# JOSH HAMILTON

### ABSTRACT AUCKLAND

This photographic series captures a selection of architecture from Tāmaki Makaurau Auckland's CBD using abstract techniques informed by Jeanette Hägglund, a Swedish architectural photographer. Her work employs simplicity and pattern, and allows the viewer to focus on simply a fraction of the architecture.

Abstract Auckland is a photographic series in which I sought to make the bland architecture of the CBD more interesting. To do this, I captured minor details that I found intriguing instead of the entirety of the buildings. I found that Hägglund seldom has clouds or distractions such as surrounding buildings or other context in her images, consequently helping to enhance the detail.

Shooting this series helped me better understand the impact of good composition. While roaming the streets of Tāmaki Makaurau Auckland looking for the next building to photograph, I realised how many different styles of architecture there are, particularly Brutalism, which I had never noticed. This project opened my eyes to the hidden gems within the dense urban environment of the city and its less-than-appealing apartment blocks.







# NATHAN FRENCH

### C O N T E X T

In this photographic series, I sought to redefine our perception of urban spaces, through a series of twenty-six images based around the idea of context. These images showcase the dynamic context where architecture meets the everchanging form of urban environment, aiming to capture a unique perspective on architectural spaces within the city. Taking the approach of creating an image rather than the conventional idea of simply taking a photo, I hoped to capture urban landscapes in a different light.

To create the unique effect within my images, a shutter speed of approximately one second was used. The camera was initially held steady, allowing for detail of the architectural elements to come forward, and in the final moments of the exposure the camera was flicked to the side or on an angle. This introduced the controlled chaos of movement and light leaking into the images.

The result is a blend of architectural details juxtaposed with streaks of light and subtle blurs, bringing movement and energy into static space while showcasing the real-world context of the physical architecture and the ever-changing fast movement of city life.





Page/ 216

# BHARTI LAL

### BIOPHILIA

I wanted to capture the connection I was experiencing with nature, and through photography I became more aware of my surroundings. After studying photographic techniques and how a photographer creates something through their lens, I used my iPhone features such as exposures, angles, shadows, shapes and, most importantly, lights to take and make photos. Inspired by biophilia, I used a frame within the surroundings to narrow the object and focus on the view.

Otherwise the sky becomes infinite and, when mesmerised by nature, it's too vast to capture effectively. An iPhone is not the best tool for this type of photography. Therefore, I found using a frame helped focus my subject, while everything narrows into that one window, capturing the single moment in a sight.





# GUANGYU ZHU

### LESS IS MORE

The first three images exemplify the capabilities of Bing AI, offering a glimpse into the promising future of graphic and 3D design. As an architecture student, it's crucial to recognise the potential that AI holds as a valuable tool in our educational journey. Rather than shying away from it, understanding and integrating AI can enhance the creative process. It's an opportunity to redefine and elevate the architectural learning experience.

This class has illuminated a valuable lesson for me: the timeless principle that sometimes less is more. Despite the advancements of AI, there remains an enduring power in simplicity. A restrained use of space and colour can often unveil details that might be overlooked in a more complex approach.

Below, a realistic yet futuristic image of an indoor public space in the Ancient Academy in China; this public space is elevated. The image is from the perspective of the middle yard of a Beijing siheyuan, with a depth of field and camera noise points. The setting is in the spring and autumn periods in China, with people dressed in garments from that time.









# RENEE VELTMAN

LIFE DRAWING



![](_page_11_Picture_0.jpeg)

### YANG JIANG

### DIGITAL FABRICATION

Building on six weeks of Rhino software training, we were tasked with designing and creating a complex 3D printed tower to house a scented candle. Notably, the design of the tower should carry a sense of historical significance. The purpose of this project was to test our skills in modular component design, through developing 3D printing techniques, working with Cura, and prototyping modular connections. I chose the University of Auckland Clock Tower as the prototype, successfully incorporating the function of a candle holder into it.

My design journey for the 3D printed tower began by drawing inspiration from the neo-gothic University of Auckland Clock Tower. Imagining the fusion of this historical structure into a functional candle holder, I conceived a design that included a detachable dome and a hollow core for candle placement.

Using Rhino, I translated this concept into a 3D model, preserving the true dimensions of the Clock Tower. To optimise for 3D printing, I employed a modular approach, breaking down the complex form into simpler, geometric parts. This streamlined the printing and assembly processes, while reducing chances of print failures.

Prototypes at different scales served as tangible feedback, providing a clear path for design enhancements. Based on these insights, I refined details, including scaling, textures and structural balance, increasing the final product's aesthetic and quality.

The final 3D print demanded careful oversight to troubleshoot any issues that arose, ensuring the best-quality print in the given time-frame. Post-printing, I meticulously finished and assembled the components, ensuring a smooth surface and precise alignment for the final model.

This project challenged my skills in 3D modelling, printing techniques and prototyping, thereby expanding my knowledge in 3D printing. Overcoming various challenges, such as scaling issues and printing difficulties, enhanced my problemsolving and project-management skills. This experience taught me the importance of careful planning, iterative design and meticulous craftsmanship in transforming an architectural icon into a functional, aesthetically pleasing object.

![](_page_12_Picture_8.jpeg)

![](_page_12_Picture_9.jpeg)

![](_page_13_Picture_0.jpeg)

# SINEAD MCCLAY

### TE RANGIMĀRIE

Te Rangimārie is a building that embodies multiple functions. It was initially established as a Māori youth centre. At the time, Ōtautahi had trade training schemes that enticed many young Māori to the city. Commissioned by the Roman Catholic Church in the 1960s, it was a popular place of worship, while encouraging a sense of belonging in the city. To truly appreciate Te Rangimārie as a building, it is essential to delve into the religious and social context of the time that so crucially informed the design process and eventual outcome that we know today as Te Rangimārie.

It may seem unusual to select a Pākehā to design a Māori centre, but Paul Pascoe appears to have taken interest in Māori design and its influence on the architectural style of Aotearoa much earlier than this commission. His contributions to the volumes of Making New Zealand in 1940 included the history of Māori buildings predating European arrival. Pascoe talks about the typical layout of the whare, with the entrance door at the end of the building, and walls that firmly rooted the building into the ground. Praising the ornamentation, he acknowledges the skill shown in the carved elements and tukutuku panels that adorned the structures. Pascoe also acknowledges the whare rūnanga, the carved meeting house, as the earliest public-building typology in Aotearoa. He speaks of how the craftsmanship in the construction helped express the character of the makers' communities.

In 1947 Paul Pascoe wrote for the magazine *Landfall*, critiquing Aotearoa architecture and that the definition of modern often resulted in the failure to respond to the environment in which the building resided. From his writing, it seems that Pascoe had

an interest in Aotearoa developing its own distinct architectural style. Perhaps he felt that further integration of Māori design would assist with this, rather than relying on overseas precedents

Some of Paul Pascoe's designs potentially show the influence of his research into Māori architecture. Arthur's Pass Chapel has, in part, been compared to a wharenui and has a similar simple beauty that focuses on a strong, grounded structure. Furthermore, St Chad's Church in Ōtautahi shows some similarities to Māori design. It appears that Pascoe requested a complete redesign of his previously drawn plans after an overseas visit. The new design appears to incorporate some Māori design elements - the repetitive triangular motifs in the ceiling could possibly reference shapes often seen in tukutuku panelling. The rafters extend through the walls of the church to meet the ground. His desire to shape a true regional architectural identity is evident in his writing. and it could be suggested that his overseas trip gave him clarity on what was unique about Aotearoa.

The journey of Te Rangimārie shows the strength and resilience of the community who fought to establish this centre. Architect Paul Pascoe successfully respected Māori values throughout the process and stood alongside the community to fight for their space. Throughout the years, Te Rangimārie has proven an intrinsic social base for the Māori community in Ōtautahi. It has been home to many memories and movements, from the moment it was conceived to the present day. The integration of spirituality and culture has led to a design that has served as an essential structure for the Māori community in Ōtautahi.

![](_page_14_Picture_9.jpeg)

![](_page_15_Picture_1.jpeg)

![](_page_15_Picture_2.jpeg)

![](_page_15_Picture_3.jpeg)

![](_page_15_Picture_4.jpeg)

# YANG JIANG

### PASCOE HOUSE

This research investigates the Pascoe House, an embodiment of New Zealand architect Paul Pascoe's modernist philosophy. Built in 1948 as his family home, it reflects Pascoe's careful integration with site condition, functional spatial organisation, and intelligent utilisation of natural environment. The strategies Pascoe has used to respond to local climate and geographic conditions, and meet occupants' needs, show his commitment to functionality and simplicity. Furthermore, his honest use of local materials, particularly the prominence of rimu timber, highlights his design principles. The Pascoe House stands as a testament to early modernist architecture in New Zealand and provides a contextual understanding of the transition from international modernism to a distinct New Zealand vernacular architecture.

This Pascoe House project developed within an historical context, specifically the emergence of New Zealand Modernist Architecture in the 1930s, supported by Pascoe's unique contribution in the 1940s. It required us to create a physical model – a reproduction of the house. In pursuit of authentic and detailed understanding, my lecturer and I embarked on a research trip to Christchurch, which included touring the actual house and procuring invaluable materials from the University of Canterbury's Macmillan Brown Library. The model was meticulously constructed on a 1:50 scale, strictly adhering to the original drawings drafted by Paul Pascoe. The process of creation involved a digital fabrication workflow that married digital modelling and laser cutting techniques.

The Pascoe House is a pivotal example of Pascoe's design philosophies as expressed in his manifesto. It exemplifies the integration of modernist principles in conjunction with the local climate, geographic conditions, socio-economic situation, and lifestyle needs. Moreover, its spatial organisation, design features and materiality reflect Pascoe's dedication to creating a functional, modern living environment. The Pascoe House continues to serve as a landmark example of Christchurch's modernist residential architecture.

![](_page_16_Picture_5.jpeg)

![](_page_17_Picture_0.jpeg)

## ERICA LIM

### DRAWING JAPAN

Exploring Japan – while developing and exploring drawing techniques that I will carry with me for a lifetime – was thrilling. Something that I will treasure from the trip is learning to really immerse myself in a space. The focus of this trip was drawing, something I was not used to doing in public or very much at all. It forced me to stop and really take in the finer details of my surroundings – the way light falls, the vibrant or subtle colouring that makes up a space, the movement of people transitioning through, or the complex carvings held within the traditional buildings.

Drawings really do speak more words than at first you might expect, especially in a place like Japan, where the transition from tranquil spaces to hustling and bustling cityscapes happens in an instant. This was something that intrigued me, that such a vast array of design styles and types of buildings could coexist within the same area. For example, you might find a quaint Japanese temple on the same street as an expressionist-style building, or a modernist style, or even a brutalist style. This seemed bizarre; however, it allowed us to dynamically explore a wide range of Japan's architectural history.

![](_page_18_Picture_4.jpeg)

![](_page_18_Picture_5.jpeg)

![](_page_19_Picture_0.jpeg)

DRAWING JAPAN

![](_page_20_Picture_2.jpeg)

Page/ 231

# WILLIAM UNG

![](_page_21_Picture_3.jpeg)

![](_page_22_Picture_2.jpeg)

![](_page_22_Picture_3.jpeg)

![](_page_22_Picture_4.jpeg)

![](_page_23_Picture_0.jpeg)

# SINEAD MCLAY

![](_page_24_Picture_2.jpeg)

![](_page_25_Picture_0.jpeg)

# DON MAFI

![](_page_26_Picture_3.jpeg)

![](_page_26_Picture_4.jpeg)

# TYLER MAITLAND

![](_page_27_Picture_3.jpeg)

# JOANNAH INOCENTES

![](_page_28_Picture_2.jpeg)

![](_page_29_Picture_0.jpeg)

![](_page_30_Picture_0.jpeg)

![](_page_31_Picture_0.jpeg)

![](_page_32_Picture_0.jpeg)

### ELISE ALEXANDER

### UNIVERSITY OF WESTMINSTER, LONDON

SEE IT, SAY IT, SORTED - The next stop is Baker Street, exit for ... University of Westminster

From a scorching, humid summer sun to a crisp, freezing winter. In January 2023 I departed Auckland, New Zealand, for London, England, where I spent the next five months of my life. As I now reflect on my experience abroad, I am so grateful to those at Unitec and home who helped me to pursue this experience, and to everyone in London, especially my friends and tutors, who made me feel so warmly welcomed.

At the University of Westminster (UoW) I was enrolled in the equivalent of Unitec's Bachelor of Architectural Studies, specifically in two classes: City Tourism and Urban Change, and Design and Detail (the main design studio/technical studies class). The tourism class was a refreshing and exciting class that focused on the history of the city as a place and how recent global events (including Covid-19) impacted the city, primarily in an economic way. We worked throughout the semester to create a written portfolio, and at the end we were challenged to create a walking tour of a city/area of a city with a clear intention to help boost tourism. Alongside our weekly lectures, we explored case studies of multiple cities such as Venice, Tampere and Barcelona to better understand the impacts of tourism on cities. Although this class was not directly linked to architecture and design, it has helped me to better understand how a city works and what I can do as a designer to work alongside the needs of a city. Additionally, as part of this class, we were fortunate to visit the Foster + Partners headquarters, where we were shown around and got to stand atop and overlook one of the main architects' working floors, which looked out onto the River Thames. After this, we walked to Battersea Power Station and were given a tour and explanation of its history, as we touched on the idea of how city tourism can be boosted by repurposing grand industrial buildings.

However, this did not compare to my very first day at UoW in my Design and Detail class. The semester began with a long trip down to visit the new Flimwell Park development and Hastings Contemporary Art Gallery. I went with about sixteen of my classmatesand my two studio group tutors. It was a very nerve-racking experience as it was the first time meeting my classmates and tutors, but it turned out to be an amazing trip and a great bonding experience. Throughout the semester we also made trips to H.G. Matthews Brickworks, the Building Centre, and RIBA Headquarters in London to explore exhibitions. The UoW design studio runs a bit differently from Unitec's. Firstly, since the UK semesters run according to the seasons rather than the calendar, I went into a Semester Two class, when back home it would have been a Semester One class. The year group was split up into seven studio groups that focused on different design strategies; I was placed into studio group DS2.4. Year Two. Group Four. Our focus was primarily on fragments and sustainability, whether it be social, economic or environmental. We spent weeks researching the area of our site and developing a design that would reflect the needs of the area and become a model for future sustainable projects from which to draw precedent. The location of our selected site was in an area of London called Somers Town - a forgotten part of London that has only recently been the focus for regeneration. It is an impoverished area with high crime levels, blocks of social housing, and highly polluted air from the two major stations that border it: Euston and St Pancras International. For my project. I focused more on the social sustainability of Somers Town, by creating a counselling and cat café building where residents could enter free of charge to relax with cats, eat, study, do yoga, and more.

![](_page_33_Picture_8.jpeg)

Throughout the semester our studio group was pushed to not settle with any designs, urged to keep exploring ideas, keep making models and keep rethinking why we were doing certain things. This felt like a huge change to how we are taught at Unitec, and I did struggle at first. Every week we discussed what we had come up with so far and were always met with: "I'm not sure this works, why don't you try this, have you heard about this material, have you seen this building, you should visit this place tomorrow," etc. After a few weeks I realised it was significantly changing the way I thought and how I approached my design. I am now really grateful for how my amazing tutor, Camilla Wilkinson, pushed me to keep thinking and not settle on anything. I learned so much every week by researching different materials, different buildings, and different needs of certain people, especially how spaces can be designed better for people struggling with anxiety and depression.

The structure of teaching was also different, in that there was an interim crit and a final crit, but these are both seen as development stages. The final submission was two or three weeks after the final crit, where we submitted our portfolio of twentyfive pages, plus an appendix, plus a five-page design statement.

Unfortunately, I did unknowingly choose a tough time to exchange in London, as teaching strikes began not long after the start of the semester. We were left without in-person instruction for a few weeks, but some of us still gathered in our studio space to work together. Then, at the end of the semester, we were hit with a marking and assessment boycott, which pushed back the release of our final grades and impacted many students all over the UK.

Overall, my experience participating in an exchange in London was a positive one and I would urge everyone to consider an exchange, whether it be to London, Florence, Wismar, Auburn or Melbourne; it is an unforgettable experience.

Also, although you are there on exchange, there is plenty of downtime to visit the sites, explore the city, and maybe do a weekend trip to a different location, especially if you are exchanging in the UK/Europe. You never know what exciting events may happen where you are staying. I was there at the time of King Charles III's coronation and got to experience a day of celebration and witness the beginning of the King's procession, something I will never forget. There is also beautiful architecture unlike anything you will see in Aotearoa New Zealand. I got to visit places we learned about in Critical Studies, one of my favourites being Strawberry Hill House and Garden, as well as Lloyd's Building, Chiswick House, Syon House, Kew Palace, Marble Hill, St Paul's Cathedral, and more. I lean more towards the historic sites, but there were also the newer icons, such as the Shard, the Gherkin, and the Fenchurch building (the Walkie-Talkie).

![](_page_34_Picture_7.jpeg)

![](_page_35_Picture_0.jpeg)

![](_page_35_Picture_1.jpeg)

![](_page_35_Picture_2.jpeg)

![](_page_35_Picture_3.jpeg)

![](_page_35_Picture_4.jpeg)

![](_page_36_Picture_0.jpeg)

# JACK CULLOTY

### HOCHSCHULE WISMAR

Kia ora, my name is Jack Culloty and I am a Master of Architecture student studying for a semester at Hochschule Wismar in Germany on an exchange programme. I am currently in my first semester of my master's and having the opportunity commence this in Germany seemed like a once-in-a-lifetime opportunity.

So far, being on the other side of the world, I have learnt a lot about myself and about architecture. It has been a great opportunity to experience different cultures, while meeting people from Slovakia, Germany and the United States has helped me gain different perspectives on architecture. Wismar has an inclusive environment where you never feel alone. There are many students from other countries at the school sharing this unique experience, enabling each other to empathise and share cultural and architectural ideas from different countries, which is inspiring when working on different projects. The projects we can work on include designing a school of architecture in Venice, learning how to critically evaluate sustainable green buildings in Germany and getting the opportunity to learn about the different architectural styles seen in Europe.

The student culture at Wismar has been really great, particularly for a student who has come all the way from Aotearoa New Zealand, alone, to study. The professors here at Hochschule have made me feel really welcome, as have the other students, who value my New Zealand perspective and have been happy to work with me and offer their work spaces. The opportunity to make friends in Germany has been an added bonus and I will keep in contact with many when I return to New Zealand. Even when the semester concludes, the thought that I have contributed to projects overseas and that my name is recognised in different places for different projects is an amazing thought.

One of the other great things about being in Germany is that it is a central hub within Europe, giving me the opportunity to travel to some iconic cities such as Hamburg and Berlin, and also to neighbouring countries like the Netherlands, Denmark and the United Kingdom. I am grateful for the opportunity to study abroad and, when I return to New Zealand, I will be able to share and apply the skills and knowledge that I have gained from this experience. I hope to be able to readily apply these to future projects at Unitec and, ultimately, I hope they help shape my thesis project.

Living in Germany has shown me how to be independent not only as a person but also as a student. Wismar in particular has taught me to make critical design decisions on my own. The exchange programme has also increased my confidence and capabilities as a student and an individual – now I have the confidence to travel overseas more often and perhaps work overseas if the opportunity presents itself.

To all Unitec students, I highly recommend taking an opportunity such as this, as it is a unique experience that can benefit your studies and your career, and perhaps make your love of architecture even stronger.

![](_page_37_Picture_10.jpeg)

![](_page_37_Picture_11.jpeg)

3355 303350371 8355 

Page/ 249

### JESSICA HARTLEY

### HOCHSCHULE WISMAR UNIVERSITÀ DEGLI STUDI DI FIRENZE, FLORENCE

For the final year of my bachelor's degree, I am completing two semesters of study abroad. My exchange began at Hochshule Wismar in Wismar, Germany, for the summer semester, and I am now at Università degli Studi di Firenze in Florence, Italy, for the winter semester. Living in two different European countries for six months, I have had a unique experience in each.

In Wismar, I was allowed complete freedom in my course selection, granted they were similar to the papers at Unitec. I had the opportunity to complete an architectural lighting paper, and a hands-on project for restoring the ruins of a fortress in the nearby city of Kiel, and to study the history of contemporary architecture in Stuttgart and Barcelona, accompanied by week-long site visits.

Studying in Wismar also provided a unique experience of German architecture and culture. Before World War Two, the city of Wismar was part of Sweden and, during the war, was heavily bombed and historically rebuilt; the campus itself used to be a military camp, making for a particularly unique setting to study within. Therefore, while the fundamentals taught here are stereotypically 'German', with emphasis on concrete materiality, the influence of Scandinavia emphasises the importance of sustainable approaches. The campus is incredibly well-equipped resource-wise; they encourage you to make use of 3D printers, laser cutters, sewing machines, and undertake woodwork and metalwork, even for personal use. They also have ateliers, which are set up almost like working student offices. An atelier is shared by 10-15 students, who have around-the-clock card access to these rooms to work and socialise in.

Campus life is heavily student-orientated, often hosting events on the rooftop or in the green areas. While studying, I had the added obstacle of attempting to pick up the German language. My classes were primarily in German, and all my professors, classmates and friends were German; as it is uncommon for people in Wismar to speak English, this meant I was fully immersed in the language.

Studying in Wismar was an incredible experience, as I was able to explore northern Europe and beyond during the semester. I frequented Copenhagen, and even had the privilege of attending the industry event 3daysofdesign, where I could engage with the design industry and network for potential job

opportunities. My time in Copenhagen has had an impression on my architectural approach; it is easy to understand why it is the World Capital of Architecture this year. While it was incredibly hard to say goodbye to the life I had built and the friends I had made in Germany, I have recently begun settling into my semester in Florence, Italy, after the summer break. Similarly, as in Germany, my classes are in Italian, my professors are Italian, and my friends are Italian, but my Italian is still essentially non-existent. However, unlike in Germany, where many young people speak excellent English, the Italians genuinely cannot. I am currently taking papers on the history of contemporary architecture and urbanism, a territory and governance project in San Giusto, Prato, and an urban planning project regarding the Fiume Elsa in Tuscany. My course has involved many interesting site visits around Tuscany and further regions, and much group work.

The campus here is spread across two locations within the city: the primary campus used to be a monastery and, while it has beautiful inner courtyards, it is a terribly confusing place to navigate. In Italy, the teaching material focuses heavily on restorative and renovative architectural sustainability approaches, as well as the preservation of culture. And, of course, studying in Florence, the city where the Renaissance was born, there is a significant focus on preserving and respecting the regional style.

![](_page_39_Picture_10.jpeg)

# MATARIKI TAKAPUNA

### STUDENTS FROM DESIGN STUDIO TWO

In 2023, students from the Bachelor of Archtectural Studies Design Studio Two undertook the Matariki Design Exploration Project, which aims to explore the cultural significance of Matariki and its associated traditions and practices, through the lens of design. Students were tasked with creating an installation for an event that celebrates Matariki, through researching, planning and constructing architectural follies that reflect the ethical and culturally sensitive design practices that align with the values of mātauranga Māori.

Design goals that students aspired to included understanding and applying the cultural significance of Matariki, the traditions and practices associated with Matariki, how Matariki connects to the natural environment and the cycles of the moon, and how to incorporate cultural values and feedback into the design process through engagement with community members; all with the core values of mātauranga Māori at the forefront of the project:

Whanaungatanga – promotes a sense of connection and belonging between people. Kaitiakitanga – recognises the responsibility to care for and protect the environment. Manaakitanga – shows respect, generosity, and kindness of others. Rangatiratanga – acknowledges self-determination and leadership.

Students presented their follies in September at the Takapuna Matariki Market, which was held in collaboration with local community groups such as I Love Takapuna and Auckland Council's Eke Panuku.

![](_page_40_Picture_6.jpeg)

![](_page_41_Picture_1.jpeg)

![](_page_41_Picture_2.jpeg)

![](_page_41_Picture_3.jpeg)

![](_page_41_Picture_4.jpeg)

![](_page_41_Picture_5.jpeg)

![](_page_41_Picture_6.jpeg)

![](_page_41_Picture_7.jpeg)

![](_page_41_Picture_8.jpeg)

![](_page_41_Picture_9.jpeg)

# RESOURCE MATTERS

#### NATALIE LAMBOURNE

The built environment is responsible for 20 percent of all carbon emissions in Aotearoa, which provides significant potential to reduce the industry's contribution to carbon emissions. Although timber plays a crucial role in our emission-reduction profile due to its ability to sequester carbon, more can be done. Using other bio-based materials can further reduce our carbon footprint, given they have low (or no) carbon emissions, sequester carbon and are also renewable resources.

As part of the Resource Matters elective, we travelled to the lower North Island to see first-hand a wide range of projects in terms of style and scale, and at various stages in their life cycles. These projects all have something in common: they demonstrate alternative low-carbon materials and approaches that are more sustainable than the mainstream buildings we see daily. As well as lower carbon footprints, less waste, and better end-of-life outcomes than mainstream construction, many of these materials perform much better in providing a comfortable environment to live in. Low-carbon and bio-based materials have massive potential as a solution to the climate crisis. We were lucky to visit so many exciting projects and spend time with people passionate about alternative materials. Here are five highlights from the trip.

Andrew Simpson's Rammed Earth House, Waikanae We visited architect Andrew Simpson's rammed earth house, currently under construction in Waikanae, and heard about the testing and experimentation process that is essential to building with this material. If earth from the site is being used (as in this case), then the recipe for the earth mix needs to be determined based on the composition of the soil and the amount of clay present. Each test mix needs twenty-eight days to cure, so it is a significant and time-consuming process that needs to be undertaken early in the project. The mix was made with four parts earth and one part paper pulp – no concrete required!

Regarding material choices, Andrew's priorities have been centred on carbon efficiency rather than energy efficiency, and on considering the end of the life of materials. He has been using the Living Building Challenge methodology as a guideline for his project – for example, his house is free of red-list materials – however, he is not so concerned with achieving certification. This was an encouraging approach, as the house will have many of the credentials of a living building, which is undoubtedly a positive outcome.

![](_page_42_Picture_8.jpeg)

Andrew Simpson's rammed earth house. Photo: Natalie Lambourne.

#### Natural Building HQ, Ōtaki, with Tom Beauchamp and Blue Forsyth

We were very fortunate to join Tom Beauchamp and Blue Forsyth at Natural Building HQ for hands-on experience with natural materials. It was fascinating to learn about their testing process and see the results of their research, such as Blue's experimentation with biochar and manure. We learned the basics of earth building and the qualities of its essential ingredient – clay. The amount of clay content in the earth is critical, and the desired amount varies depending on the method; for example, rammed earth requires about 15 percent clay content. Tom and Blue demonstrated many of the different tests that can be done to determine clay content, from quick field-tests to making and drying a test brick. When it came to the hands-on activities, we started with learning a bit more about using straw bales, which are always laid 450mm or 350mm wide, depending on whether they are on the flat or the side, making a module to design around. We had a go with re-sizing a straw bale, fitting it into a timber frame and applying a clay-slurry plaster mix. We got stuck into making a cob mix by stamping on it with our feet to combine it. Blue demonstrated how pressed bricks are made and how cob construction comes together – a pretty freeform process.

![](_page_43_Picture_4.jpeg)

Natural Building HQ, Ōtaki. Photo: Natalie Lambourne.

#### Te Wānanga o Raukawa, Ōtaki

At Te Wānanga o Raukawa, we were hosted by kaihautū Rawiri Richmond and Ewan Brown from Tennent Brown Architects. Ewan gave a presentation about his work there, including the masterplanning of the campus, as well as the design and build of Te Ara a Tāwhaki – the main building, which houses the student hub, library and lecture theatre – and Ngā Purapura – the health and wellness centre. Tennent Brown worked closely with local iwi on the development, and buildings have been named after landmarks significant to the mana whenua of the

area, such as maunga and sea passages. Te Ara a Tāwhaki is the main building, containing the library, student services and hub, and lecture theatre. These functions are separated into three sections of the building, representing the three baskets of knowledge attained by Tāwhaki, and expressed in the front façade. Of particular importance is the entrance, which houses many whakairo forming a waharoa into the main lecture theatre. These leftover carvings were taken out of storage to find a new purpose in this building. Contributions from Myke Te Momo.

![](_page_43_Picture_9.jpeg)

Te Ara a Tāwhaki at Te Wānanga o Raukawa, Ōtaki. Photo: Natalie Lambourne.

Ngā Purapura is a facility designed to enhance the wellbeing of Māori. It is split into five sections: Te Taha Tinana is the physical wellbeing section that includes a gym; Te Taha Hinengaro and Whānau are the intellectual and social wellbeing sections, situated in the middle as teaching spaces, with a large foyer containing a café; and Te Taha Wairua is the area that represents sensory awareness and spiritual wellbeing. The northern façade has four pitched roof forms to capture the associated functions.

The architects are closely following the Living Building Challenge framework and are going through the process of receiving full certification – becoming one of only thirty Living Building projects worldwide. One of the challenging aspects of implementing the framework is the considerable investment of time (and therefore money) that goes into understanding and researching materials to ensure no red-list elements are in the project. Every single product, adhesive and fixture needed to be thoroughly interrogated. This raised interesting questions that the industry needs to grapple with – ideally, this information would be more readily available; for example, if firms paid to access an up-to-date database of materials.

![](_page_44_Picture_4.jpeg)

The Kākano (seed pod) space inside the busy Ngā Purapura. Photo: Natalie Lambourne.

#### The Dogbox by Patchwork Architecture, Whanganui

Our Whanganui portion of the trip started with a visit to the Dog Box, a house designed and built by a group of architecture graduates known collectively as Patchwork Architecture. The overall ethos of the house is efficiency in design, materials and cost.

The house is honest in its materiality, and it incorporates many lower-cost options such as D-grade plywood and steel fencing balustrades, which create a compelling 'agri-chic' aesthetic. The arrangement of the home in plan was particularly interesting, too, with circulation at one end serving spaces in the centre – living/kitchen/dining downstairs and bedrooms upstairs – and services at the far end of the house – toilet and laundry downstairs, bathroom and

toilet upstairs. Unconventionally, circulation between bedrooms and the toilet on the upper level all happens outside on the covered deck, reminding us how flexible we could be in how we dwell in and use our homes. The moveable exterior screen can create privacy and shade or open up to nature and the sun, all while enjoying the outdoor bath, another flexible feature of this fun home.

The Dog Box is an excellent example of how using upcycled materials can be a real asset to the design and something that drives the creative process. It was particularly inspiring to see what architects can create when they have the flexibility to experiment with materials and techniques on their own home builds.

![](_page_45_Picture_1.jpeg)

The Dog Box, Whanganui. Photo: Natalie Lambourne.

#### Straw-Bale Passive House, Whanganui

Our last stop was Rachel Rose and Hamish Randle's straw-bale passive house. It is only the second of its kind to be built in Aotearoa New Zealand, and they are in the process of getting Passivhaus certification, which they expect to complete. They wanted lowtech and reliable solutions that could be controlled manually as much as possible. The mechanical ventilation heat-return system, a core component of Passivhaus design, is highly efficient in terms of energy consumption. With plans to install solar in the future, the system could be run totally off-grid, making this rural home more resilient to power outages caused by future extreme weather events. Rachel and Hamish's ethos is to build a house that will last for more than one generation, emphasising sustainable materials as much as possible. The house has straw-bale insulated exterior walls, light earth interior walls and naturally durable timber used throughout. To reduce waste onsite, the leftover straw from the bales used in the exterior walls was used to create the light earth mix for the internal walls. Seeing an example of biobased materials used in an innovative new build in conjunction with high-performance Passivhaus technologies was inspiring.

![](_page_45_Picture_6.jpeg)

Straw-bale passive house, Whanganui. Photo: Natalie Lambourne.

#### Summary

This field trip was an incredibly valuable experience. Seeing and touching real applications of alternative and natural materials has been an engaging way to learn and we really appreciate all those who shared their knowledge, passion and enthusiasm for lowcarbon and bio-based building materials with us. We witnessed first-hand the potential for alternative materials and methodologies to reduce the building industry's contribution to global warming.

#### Drawing Japan, designed for all years and disciplines, engages with East Asian urbanism and architecture. After years of relative isolation, the elective group led by Jeanette Budgett, Carl Salas and HIKOI Garden Tours partners Penny Cliffin and Ian Henderson ventured overseas in the September break of 2023. Based on the premise that drawing is a learned skill and a fundamental tool of the architect, students were asked to draw on site as a form of engaged observation.

Japan is complex, convenient, exhilarating and intensely hot in September. We walked in the street and withdrew to the subway for airconditioned respite. We sweated and drew where we could in the shade. An extraordinary public transport system of trains and buses connects dots in space seamlessly with the help of a digital nervous system, aka Google Maps. Japanese signage, apparently so committed to personal convenience, indicates where to queue and which carriage to sit in for your nearest exit from the subway. It is not for the individual convenience that it is remarkable, but that it serves everyone – that it makes living with 37 million people in Tokyo, the largest city in the world, so surprisingly workable.

We observed a care for collective society in Japan. The Japanese call it omoiyari and it extends to such considerations as turning your phone to silent, not answering it and not speaking loudly on the train. A traditional behaviour, yet one that adapts to and serves all who live in a dense metropolis. A consequence of their exceptional public transport is that roads and motorways in Japan are not car clogged. Just metres from the city's free-flowing arterial routes are tranquil streets in which cars move slowly and patiently around pedestrians – shared space. A curious consequence of sharing space in cities, where there is so much palpable density, is that there is more space and calm for everyone.

To be invited inside in Japan is to step up from the ground to the elevated floor and is always accompanied by the removal of shoes. Respect for the floor is manifest as people slip their shoes on and off between ground and floor, inside and outside. and between bath and toilet. Between the roof and the ground are the lightweight sliding screens that traditionally enclosed buildings. They contrast with the late-twentieth-century in situ concrete walls of Tadao Ando. His influence can be seen everywhere in contemporary Japan and nowhere more powerfully than Awaji Yumebutai on Awaji Island. The colossal concrete landscape is crumbling – weeds sprout in the cracks. They gave us pause, those cracked concrete edifices. So often in Japan we wanted to ask - Is this the future? Have we arrived there yet? Drawing and questioning, we made our way ...

![](_page_46_Picture_6.jpeg)

![](_page_47_Picture_1.jpeg)

![](_page_47_Picture_2.jpeg)

![](_page_47_Picture_3.jpeg)

![](_page_47_Picture_4.jpeg)

![](_page_47_Picture_5.jpeg)

Page/ 258

# AURANGA TOWN CENTRE WOVEN PROJECT

### ESHA PATEL

This brief required Design Studio and Digital Fabrication students to design and build a bike pod for Auranga's town centre. The project used Abodo's Vulcan cladding material; imperfect pieces and offcuts were supplied at no cost. We set out to explore the potential advantages that repurposed construction materials could offer to a community, as well as the benefits of utilising recycled materials in architectural projects.

The original bike pod in the town centre was designed and built in 2018. Its current condition highlighted the significant impact of environmental conditions on built structures. Learning from this experience, it became crucial to address site conditions and prioritise structural durability in the development of the new bike pod.

The project continued to evolve and eventually transformed into a more permanent and multifunctional pavilion. This effort involved enhancing the design complexity while also increasing the size and scale of the pavilion. During this process, it was necessary to address early design challenges related to material layering and lamination to ensure structural durability.

![](_page_48_Picture_5.jpeg)

![](_page_48_Picture_6.jpeg)

## NGĀKŌROA SCHOOL BOOKSHELVES

### KYAH SUCKLING AND ALEXIA PENG

Ngākōroa School is a newly developed primary school on Rorotu Avenue, Auranga. The brief given to students by our clients provided an opportunity to design Ngākōroa School's new bookshelves, to be placed at the centre of the school's library. The bookshelf design considers both Unitec | Te Pūkenga's and Ngākōroa School's shared values and principles of Mātauranga, Manawanui and Kaitiakitanga.

The school was gifted the name Ngākōroa by the Ngāti Tamaoho Trust; it is provided by nearby Ngākōroa Stream – 'ngākōroa' signifies 'the long fingers' and reflects the stream's unique characteristics. It originates in the Pukewhau foothills, where small streams converge into a larger entity, eventually reaching the estuary where Ngākōroa School stands today. The river historically served as a vital resource for the early Māori community, providing them with a space to cultivate medicinal plants and a water source for various needs. Furthermore, the river was a place of recreation and occasionally hosted special events. It was a hub of knowledge exchange, enabling the Māori to continue learning, sharing experiences, and knowledge with the various papakāinga situated along the Ngākōroa Awa.

The winning project, designed and built by Kyah Suckling and Alexia Peng with assistance from Digital Fabrication students, integrates the essence of Ngākōroa School's culture and shared values.

![](_page_49_Picture_6.jpeg)

## 24-HOUR DESIGN COMPETITION

### ROHAN SADHU

In the year 2050, a new chapter unfolds in the architectural landscape of Tāmaki Makaurau Auckland. Almost three decades after AUT's accreditation, the time has come for the city's fourth school of architecture to emerge. The twist? The sites include the sea floor, active volcanoes, and the surface of Mars. The second twist? The students are all animals – octopuses, kiwi, frogs, and even capybaras!

Hosted by Unitec | Te Pūkenga School of Architecture, the Student Architecture Network of New Zealand (SANNZ) once again tested the skills of Aotearoa New Zealand's future architects in this year's 24-Hour Design Competition, marking the tenth anniversary of the competition. We were extremely fortunate to have over seventy students compete in teams of four or five, battling it out to design the most interesting and poignant architectural campus possible, in exactly twentyfour hours. This included an icebreaker design challenge at the Point Chevalier RSA, intense design work in Unitec's Building 48, and a final presentation night at Citizen Park in Kingsland.

Judging this year's competition were Gina Hochstein (Lecturer at Unitec | Te Pūkenga School of Architecture), Kerry Francis (Lecturer at Unitec | Te Pūkenga School of Architecture) and Akash Kumar (Emerge representative from the NZIA Auckland Branch). Final designs were wide ranging and imaginative – from a school in an architectural underworld to a cruise-ship school for penguins in Antarctica.

SANNZ would like to congratulate the Unitec | Te Pūkenga School of Architecture students who won awards during the competition for their fantastic design work: Matthew Brown, Josh Hamilton, Erica Lim and Felix Qi.

![](_page_50_Picture_6.jpeg)

![](_page_50_Picture_7.jpeg)

![](_page_51_Picture_1.jpeg)

![](_page_51_Picture_2.jpeg)

![](_page_51_Picture_3.jpeg)

![](_page_51_Picture_4.jpeg)

![](_page_51_Picture_5.jpeg)

![](_page_51_Picture_6.jpeg)

![](_page_51_Picture_7.jpeg)

# ARCHITECTURE BALL 2023

![](_page_52_Picture_1.jpeg)

![](_page_52_Picture_2.jpeg)

![](_page_52_Picture_3.jpeg)

![](_page_53_Picture_1.jpeg)

![](_page_53_Picture_2.jpeg)

![](_page_53_Picture_3.jpeg)

# CHINA TEACHING TRIP

### PETER MCPHERSON

In 2006 Unitec Institute of Technology (Unitec) and Shandong Jianzhu University (SJU) in Jinan, entered into an agreement to establish a joint programme of co-operation for the purpose of enabling "an international partnership for providing first-class higher education for qualified SJU candidates."

The joint programme provides for international teaching co-operation alongside teacher and student exchanges, and joint research ventures. The programme exposes SJU students to a variety of international academics and practitioners in their design studies and through a dedicated lecture series.

Teaching in China has enabled many academic staff in Unitec's School of Architecture to experience the places and culture of China first-hand. This has been valuable to enrich our own understanding, and for many years of teaching international Chinese students in Aotearoa. Jinan is a second-tier city with a population of nine million in the province of Shandong, which has many natural springs that flow into Daming Lake. We often take the 10,000-step walk around the lake. Both the lake and Baotu Spring are in close proximity to the central business district: this creates a juxtaposition of the old city against the modern glass international-style architecture.

For several years we have continued to teach the SJU students online, alongside local Chinese colleagues, due to Covid travel restrictions. Like online teaching locally, this served a purpose and kept us engaged across the two countries, and several online mechanisms continue. But this year we were able to reconnect – dust off our suitcases and head back to China to teach face-to-face once more, a far better way to engage with the students and local colleagues!

Images from September 2023 and our last trip prior to Covid-19, December 2019.

![](_page_54_Picture_8.jpeg)

![](_page_55_Picture_1.jpeg)

![](_page_55_Picture_2.jpeg)

![](_page_55_Picture_3.jpeg)

![](_page_55_Picture_4.jpeg)

![](_page_56_Picture_1.jpeg)

![](_page_56_Picture_2.jpeg)

![](_page_56_Picture_3.jpeg)

![](_page_56_Picture_4.jpeg)

![](_page_56_Picture_5.jpeg)

![](_page_56_Picture_6.jpeg)

![](_page_57_Picture_0.jpeg)

![](_page_57_Picture_1.jpeg)

![](_page_57_Picture_2.jpeg)

![](_page_58_Picture_0.jpeg)

# A

Aaliyah Ormsby Aaron Mack Abdul Aariz Ali Abigail Spence Abigail Wijesuriya Ada Shi Adalia Edwards Adam Collett Adam Honiss Adele Stevens Aden Goel Aditi Shah Aida Crombach Akansha Kumar Alayna Burgess Alessandro Boso Alex Harrison Alex Jackson Alexis Warner Alice Wong Alicia Finn-House Aliyyah Shah Alvin Kishore Amal Makan Aman Preet Singh Amber Mcallister-Old Amber Wilson Amelia Lawson

Amna Al-Shawaf Anar Ulziibayar Aneesa Hussain Angelique Pihama Anna Wilcock Anne-Maree Hallas Anthony Washer Aodhan MacFadyen Arlene Sisarich Arnica Laiman Ashlee Gilbert Ashley Dry Ashvin Pathikulangara Asieh Dadashi Asma Humaira Suhaimi Astha Chitrakar Astrid Aarons Athulya Moodakuzhiyil Aukuso Mauga Esekia Ausage Jr Lauago Ava Wright Avraham Briones Ayesha Ausaf

Bayley Cummings Beatrix Szabone Hegyi Bei Shi Belinda Hughes Ben Nicklin Benjamin Furniss Benjamin Oge Betty Kawapuro Bharti Lal Blake O'Connor Blake Southgate Boyang Hu Brandon Berry Brett Walker Brielle Manson Brittany Familton Brooke Evaga Bryan Lim

### С

Caitlin Ritchie Caleb Scanlon Cameron Ellis Campbell Reelick Carl Reynolds Carmen Leung Carolina Cocever Silva Cecilia Kuang Celia Ruane Chander Bhan Thakur Chelsea Wood Chenlu Liu Chenxu Zhao Chiraphat Yusuwan Christian Angaaelangi Christine Millar Christopher Jury Christopher Nansen Chunlan Dai Claire Price Cole Cranswick Colin Ng Connor De Baugh Connor Le Quesne Corin Anderson Curt Cruz

Dakota Le'Mon Damanveer Singh Daniel Chia Daniel Dobbs Daniel Hannett Daniel Maunsell Daniella D'sylva Danyang Xu David Calder-Flynn David Tan Dawson Collyer Deebika Rajkumar Demelza De Boer Deng Wang Devon Matten Devon Mitschak Dhanice Avy Rodriguez

Dhiraj Lamba Dhruvi Sachaniya Dianne Adamson Dirk Encela Don Mafi Drisana Brown Dusabe Ibambasi Dylan Cardno Dylan Cole

### E

Eamion Culloty Elise Alexander Ella Fowell Emily Young Emmie Kenyon Eric Liyu Erica Lim Esha Patel Ethan Hansell-Hunt Ethan Tesese Evangel Lo Tam

### F

Fadila Sabe Fang Qiu Farheen Ahmed Fatimah Khan Fauzaan Shah Feiyao Jiang Fereti Toleafoa Fernanda Barbosa Marangoni Fernando Basson France Bernard Osorio Francesca Bell-booth Francesca Waiariki Franz Locquiao Frazer Hawke Fubin Kang

### G

Gabrielle Orr Gabrielle Titter Ganidu De Alwis Gavin Liu Ge Yang Georgia Ganley- Sharp Georgia James Georgina Barnes Gohanne Turtal Grace Madden Guangyu Zhu

Hairong Li Hangyul Jeon Hannah Adolph Hannah Oorschot Hao Liu

Harang Kim Harjovan Singh Harold Drinn Harriett Bliss Harrison Chambers Harrison Gobbie Harry Dunavant Harshit Mehta Hayley Wright Hazrat Ali Heimir Oskarsson Helena Tiakiwai Henri Stroh Henrietta Olivier Henry Newberry Hollie Buchanan Holly Probert Hongyu Wang Huan Chen Huiyi Cui Huiyuan Wang Hunter Kingi Henson

> Iliesa Kaifa Isaac Denny Isaac Gordon Isaac Rakich Isabelle Cushman Isha Sharma Isileli Tai

### J

Jack Norris Jack Williams Jacob Alexander Jade Monk Jae Sung Lee Jaidah Cooper-Smith Jaime Seymour Jaireet Sidhu James Richardson Janina Pisirici Janna Mara Jared Hemara Jasmin losefo Jasmine Burring Jason Greiving Javerron Leung-Wo Jaxsyn Tibbotts Smith Jayen Vishal Pratap Jayna Patel Jaynash Chand Jee Hyun Oh Jeffrey Wang Jenelle Chitty Jennifer Fyfe Jensen Gooduuyn Jessica Hartley Jessica Ross Jessica Smith Jessica Tregidga Jeune Milford Jharana Ghimire Jiacheng Li Jiacheng Zhao Jiancheng Qi Jiavi Jiang Jie Feng Jie Zhang Jimena Canelo Sanchez Jimmynett Kaufisi Jingjing An Jingxin Tao Jinru Jia Joannah Inocentes Joanne Higgins Joaquin Santico Joel Davies Joel Hewlett John Kaulima-Panapa Jonah Cleminson Jonathan Brennan Jordan Townley Joseph Bjelic-Webster Joseph Pickles Josephine Reddy Joshua Hamilton Joshua Latham Joshua Porter Josiah Aliimalemanu Juanita Broughton Judith Catley Julia Ilolahia Julianne Buys Junxiang Liao Jyoti Prakash

### K

Kahli Foote Kahurangi Eruera Kamal Rai Perwanee Kania Virgilia Karyn Hollister Katherine Masters Katie-Rose Todd Katyana Sitters-Neale Kayla Hughes Keith Logie Keri Mcconkey Keri Ratima **Kevin Feng** Kevin Tatlonghari Keyi Yang Khanh Tan Nguyen Kimiko Genet Klaiza Jalina Komal Patel Krisha Raju Krishtika Nadan

Kuramahaurangi Kotlowski Kurt Groenewald Kush Raniga Kyah Suckling Kyle Evans

Lara Nel Libo Fu Litania Borrell Long Feng Loren Keating Lovejit Singh Luis Almendra Luis Lorenzo Ferrer Luke Dobbs Lutie Clark Lyrck Johnson

Madison Carkeek Malachi Te Pania Marinah Rondel Marv Nuam Mati Matofai Matthew Brown Matthew Calvert Matthew Challis Matthew Railev Max McGowan Maya Langley Mayur Ram Melanie Hull Melek Lin Melwin Mathew Mey Mey Nam Mia Cheyne Michael Head **Michael Rovers** Michaela Cox Michelle Freshwater Mikayla Funnell Miriam Buhler Mitchell Roos Mohit Prasad **Monique Pritchard** Montesha Perawiti Morgan Ferguson Morgan Manoharan Muhammad Fauzan Mushan Han Myke Te Momo

Nadia de Blaauw Nadine Lees Nafisa Baluwala Narelle McAllum Narjes Rooshenas

Natalie Lambourne Nathan French Nathan Harding Nathan Philip Arriola Nehaal Naidu Ngoc Phuong Thao Vo Nicala Wheaton Nicholas Jones Nicholas Connolly Nicola Munro Nicole Bamfield Nidhiben Patel Nigel Munemo Nikki Clendinning Nitun Ramesh Nora Jean Lee

### O

Ofa Tu'ufue Latu Oliver Jones Olivia Cook Olivia Kay Oonagh Turner Orlando Burdon Oscar Lear

### F

Pamela Ingram Pamela Ocampo Pankaj Chauhan Parizad Wood Parth Patel Parya Rahmani Patrick Pelenato Paula May Puno Penisimani Kulitapa Phillip Osmond **Pieter Erasmus** Pik Lau Popua Aleamotu'A Pranay Kumar Prasadi Rajapakshe Prisya Basir Prival Kerai Purva Parikh

Qeulliano Viane Qian Liu Qin Liu Qinqin Zhu

### R

Rachel Archer Rahul Garad Raylanny Taufa Rebecca Diana Rebecca Moldenhauer Regan Harrison Rejo Johnson Remi Franz Romano Renee Veltman Rimo Ribechini Robert Havell Rohan Sadhu Roma Tallon Romit Chand **Ronalyn Totanes** Ronwal Kumar **Roseanna Rolls** Rosie Dai **Rozielle Yanez Ruairdh Fitzsimons Ruben Boyack** Rui Li Rui Liu Russell Kereru Ruth Baker **Rutik Patel Ryong Chae** Sabrina Chen Sachleen Kaur Sale Pepe Sally Ama Samuel Bell

Samiuela Fatongiatau Sarah Mules Sarah Pour Rohani Sarah Selman Sarah Waller Sarish Kumar Sasha Reekie Scarlett Cibilich Seung-Jin Woo Shahil Naicker Shannon Crowther Shaye - Christie Cornall Shaymaa Al Magasees Shene Strydom Shihui Chu Shoujun Chen Shreeya Malhotra Shrestha Raithwal Shuge Zhang Shutian Zhang Shyheim Paul Sifoni Fetuani Siliuasi Lui Simone Zoellner Sina Lutua Sinead McClay Siosifa Lua Sithumini Nanayakkarage Siyou Wang Sophia Connell Sophie Walker Stella Hamilton-Wallace Steven Loza

Suelen Rodrigues Sun Kang Sylvia Pedersen Sze Kian Teng

Tai Leausa Talafatu Pupualii Tamara Kiseleva Tanishk Mittal Tasnim Taher Tehzeeb Amin Tevalega Feleti Tevita Paea Thanh Nga Nguyen Thays Tristao Cocco Theodora Khan Tevita Paea Thanh Nga Nguyen Thays Tristao Cocco Theodora Khan Thomas Brydon **Tia Hollinshead** Tina Salehi Trevor McBrayne Tupou Fakalata Tupuna Moeroa Taokia Tyler Maitland Tyler Williams

U V

Vaishnavi Mistry Vasi Tuai Victoria Carran Vishal Malpotra Vivian Clarke

Wenxiu Wu William Heays William Ung Willis Ryan

Xanthea Torrey Xi Peng Xiao Fang Fan Xiaonan Ge Xiaoya Lin Xiaoyan Huang Xingru Song Xintao Cheng Xinyi Wu Xinyu Chen Xuemei Wang Yahya Benjemaa Yali Gao Yan Li Yan Pang Yan Sun Yan Wang Yan Zhong Yang Jiang Yi Zhu Ying Li Ying Zhou YingXi Liu Yingxuan Lin Yinliang Li Yinsu Li Yona Al Zhevrey Yona Zhou Yongyi Ye Yuanyuan Yu Yukun Yao Yunqi Han Zane Chang

Zara Deverell Zayir Stafford Zeina Samak Zhan Gao Zhan Shen Zhaohan Cui Zhongsheng Dou Ziqi Pan Zixuan Huang Ziyue Bai Zoe Gurschl Zoey Carafice