aspirATion

The magazine for aspiring
Architectural Technology professionals

Issue 8
Summer 2019

Welcome to issue eight of aspirATion magazine!

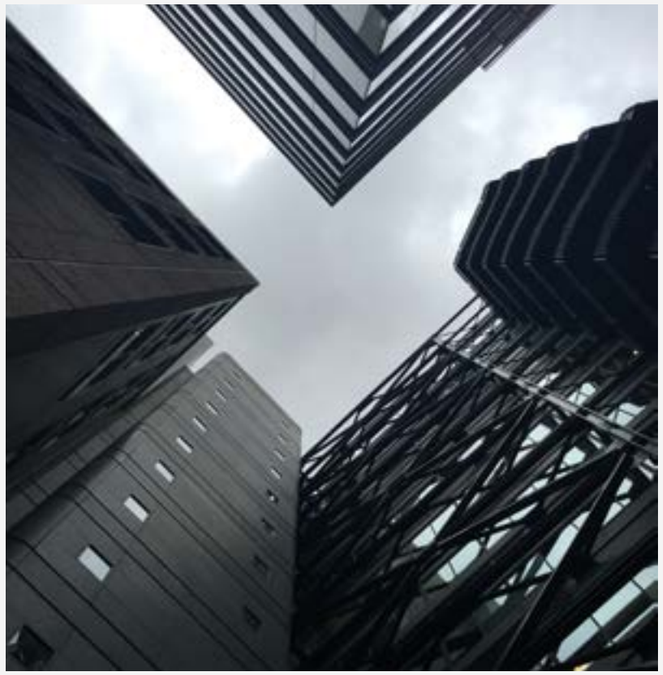
As the new Editor of the magazine, I am excited to be bringing you interesting content to support you in your studies, at work and for your future career. In this issue, student members share their experiences of opportunities they've taken such as exciting projects and world travel linked to Architectural Technology. For anyone wishing to become more involved with CIAT, don't forget that you can join your local aspirATion Group and help shape the Institute. Page 12 tells all about how you can get involved and see what some of the aspirATion Chairs are up to.

Students from VIA University College, Sheffield Hallam University, Birmingham City University and Waterford Institute of Technology worked in collaboration for a three-day BIM workshop in Aarhus, Denmark – we hear all about their experience on page 15. AT Awards | Students 2019 are open. Have a look at what last years' winners had to say!

As this publication is YOUR magazine, it is a great opportunity to have your voice heard on various issues. We are always pleased to consider other topics for inclusion, so please do get in touch and let us know.

Alison Blow
Editor

Education and Membership Administrator
alison@ciat.org.uk



Celebrating Architectural Technology at its best, nationally and internationally

Designed to recognise excellence in Architectural Technology globally, the suite of AT Awards are open to all professionals, whether they are based nationally or internationally.

Student AT Awards
The Student AT Awards are open to students, whether they are based nationally or internationally. They comprise of two categories:

- The Student Award for Excellence in Architectural Technology (Project)
- The Student Award for Excellence in Architectural Technology (Report)

See ciat.org.uk/awards.html to find out more and to enter

AT Awards event, 13 September 2019, Village Underground – tickets now available

The deadline is 23 June 2019

AT AWARDS

Find out more and enter at
ciat.org.uk/awards.html
#ATAwards

In anticipation of this year's AT Awards, we spoke with the 2018 AT Award winners...

WINNER

Student Award for Excellence in Architectural Technology: Project

Elizabete Jacobsone
ACIAT

Elizabete Jacobsone ACIAT of Meehan Associates in Dublin won the Student Award for Excellence in Architectural Technology: Project in 2018. Elizabete tells us a little about her project and what she is doing now.

Tell us about where you studied and your interests?
I studied Architectural Technology at the Institute of Technology, Carlow for four years. I'm very interested in buildings and how they are built, so as an Architectural Technology professional I got to look closely at the concept, design and technical aspect of construction, which inspired me to study this programme. My personal hobby is drawing, and this programme also explored technical drawing, so this was of great interest to me.

> 'I found entering the AT awards easy! the guidelines are very straightforward'

What made you enter the AT Awards | Student?
When I was in my third year, I entered for the Awards but was unsuccessful. By the time I was in the fourth year, I wanted to achieve that goal and also to motivate myself by gaining further knowledge and skills. That is what drove me to enter the AT Awards again. To achieve such a great prize in the end was really worth it and knowing all the hard work had paid off.

Did you find entering easy?
I found entering the AT Awards easy! The guidelines were very straightforward outlining what was needed and most of the work you do in the fourth year really comes together with this Project Award.

What was your project about?
The aim of this project was to design an environmentally friendly building on the IT Carlow campus for Architectural Technology students. The site is located on Kilkenny Road, Moanacurragh, Carlow, Republic of Ireland. The proposed design of the institute is with an inside-out concept – as well as outside-in, in relation to the surrounding context where welcoming urban spaces provides possibilities for outdoor work and teaching.

The new building design offers the opportunity for students to be more creative. Additional facilities focussed on optimal learning and sharing their work with fellow students. The building is three storeys in total with gentle slope elevation. The whole building is about 6000m^2 of floor area including a courtyard on the roof level. The design of the building aims to achieve the best passive standards for heating, cooling, ventilation and daylighting using natural resources. This was achieved by studying the microclimate of the site as well as implementing locally used materials.

The materials used for the building were carefully analysed for best performance using BIM and Life Cycle Assessment. Throughout the project, the materials were analysed and compared using a tool called Tally (an add-in tool for Revit software) which gave the different materials comparison. All materials held an Environmental Product Declaration (EPD). I combined my thesis project and written dissertation project throughout the year which helped me a lot to gain more understanding of my whole project.

What was the most challenging aspect you faced when entering?
The most challenging aspect was to put all those years of work on a few sheets, how to show everything by presenting the concept, design, sustainability and technicality of the project. I had to give myself a few days just to condense my work in the hope it came together. This editing process has helped me choose and showcase my best work.

What was your greatest influence when working on this and how did it inspire you?
My greatest inspiration was to motivate myself to do better for the last year at university. I saw the opportunity and I took it, I believe little things like this help students to motivate themselves to do work, as I have motivated myself.

How do you feel about winning the Award?
I feel very grateful and honoured to receive such a great Award. The goals which I set for myself and the recognition I received recognition for, are very self-motivating and will help me do more and be better in the future.

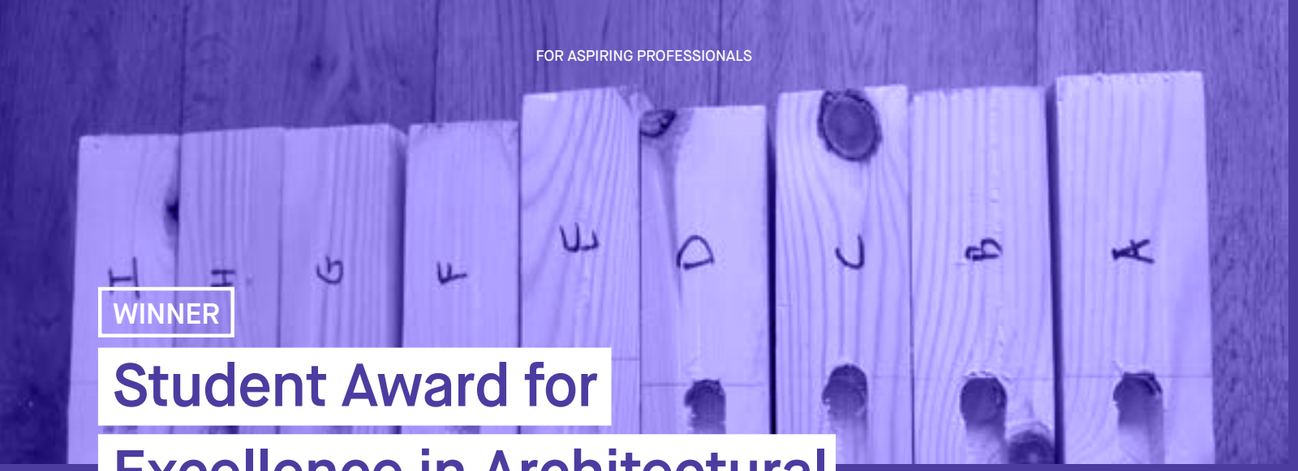
If you could do it again, is there anything you would do differently?
If I would do it again, I would have thought more about my written report and provided a slightly broader view of my project. I would have started the presentation sheets earlier to give myself more time, and not leave it to the last minute, which is some students' greatest weakness!

Do you have any tips/advice you can give to those considering entering this years AT Awards?
For anyone thinking about entering the AT Awards, I would definitely encourage them to do so. I would advise them to look at previous years entries and start thinking about how they can put their work onto the sheets. Also, look at the brief that CIAT provides on the website at an early stage.

What are you now doing?
Since finishing university, I have been working in Dublin at Meehan Associates. We are a small company of nine people and each person has great skills which come together perfectly when working within a collaborative environment. At Meehan Associates we are a great team, we love exploring new ideas, creating good design solutions and most importantly work well together. We listen to each other and have great relationships with our clients.

What kind of projects are you currently working on?
I am currently working on office fit-out projects, based around Dublin mostly and other parts of Ireland. I also have a project at the moment which is abroad, with great clients from American IT companies amongst others. We also work on loads of different projects within our office – from residential to large data centres and this gives me the opportunity to work on different projects and broaden my skills in various types of work.

I'm still learning a lot as I go and am grateful for the opportunities that come along the way. Therefore, important opportunities, like the Student AT Awards, are great to be part of and I would recommend anyone to do it even for the experience. ■



WINNER

Student Award for Excellence in Architectural Technology: Report

Darren Nelson
ACIAT

Darren Nelson ACIAT won the Student Award for Excellence in Architectural Technology: Report in 2018. Darren tells us about his Award and what he is doing now.

Please tell us about your studies and interests?
Having worked in the cable management industry for over 20 years at various levels from designing sheet metal and plastic components to running a factory, I found myself working from home for a company that was giving me less and less work to do. As architecture had always been an interest of mine, I decided to give up work and enrol as a full time student at University of Central Lancashire (UCLan) studying the Architectural Technology degree – a brave decision with a wife and two daughters to still support and at 45 years old! With my experience and an HND in Mechanical and Production Engineering (attained at UCLan back in 1994) I was able to start the programme in Year 2 and thoroughly enjoyed the challenge even though it was hard at times, especially juggling working three days a week in an architects practice and in university the other two days. The hard work paid off and I graduated in the summer of 2018 with a first class Honours degree.

My interests are mainly cycling, listening to rock music and attending as many gigs my wife and I can. Family is extremely important to me, and I certainly wouldn't have made it through without them, so family time going on walks with our dog are key to de-stressing and having fun.

What made you enter the AT Awards?
The encouragement from one of my lecturers, Ann Vanner. Ann taught us on a Friday in the final year for a module entitled Design Project and the special study – this formed my Report entry into the AT Awards. The main reason I entered was for the chance to prove to people that you are never too old to have a career change, even though my cohorts constantly reminded me how old I was! I was hoping it might give me a boost in the market place, an advantage over other people looking for a job.

Did you find entering easy?
The hardest part was that I had to reduce my special study thesis from 4500 words to 3000 and I struggled removing content in fear of it being important! However, entering itself was easy, as all you have to do is upload your work through the website. I suppose the competition pushed us to do the best we could with our Design Project and Report.

What was your report about?
My report was an experimental one studying the structural effects of reinforcing timber joists using carbon fibre, glass fibre and steel rods. An individual rod was inserted into a groove filled with a structural adhesive and then, using UCLan's tensile testing machine, each joist was loaded until destruction whereby measurements of the amount of load were recorded. I then used the information to compare the various readings concluding that the rod and the structural adhesive does provide an increase in the structural strength of a piece of timber. I think it could have a very positive effect on saving some buildings and I would love to be able to investigate, experiment/develop it further in practise.

What was the most challenging thing you faced when entering?
Honestly, being scared that I wasn't good enough! Looking at the previous entrants was quite daunting and I am not one to `sing my praises` so entered more for the experience rather than I knew I would win.

What was your greatest influence?
Conservation is vitally important to me and, combined with our conservation lecturer's passion it influenced me to not only look at what can be done to prevent historical timber buildings failing, but also attempt to use conservation in my final year design project as well. So thanks to Chris O' Flaherty, Senior Lecturer at UCLan!

> 'The framed certificate and trophy are proudly on display in my home office'

How do you feel about winning the Award?
Absolutely chuffed to bits! It is a great achievement and one I am over the moon to have won. The framed certificate and trophy are proudly on display in my home office.

If you could do it again, is there anything you would do differently?
For my Report entry I wouldn't change anything, why should I? I won! Having said that, I have come up with a possible solution to why the carbon fibre rods did not perform as well as expected. Had I had more time, I might have been able to carry out further experiments to justify my thoughts.

Do you have any tips/advice you can give to those considering entering this year's AT Awards?
Just go for it. If you don't enter, you can't win. It is a great experience. What you shouldn't do, however, is do what I did when they announced the winner. Having seen the other five entrants' work, I didn't think mine was in the running, so when the third and second places were announced, and then my name was called – the shock of winning and having had a few drinks caused me to blurt out some colourful language! All the people around us starting chuckling... note to self, have a drink after the winners are announced!

What are you now doing?
Well, as I write this, I am just about to embark on a new exciting career at Gilling Dod Architects in Chorley but prior to that I was working full time as an Architectural Technologist at Wilson Mason LLP in Samlesbury. I joined them for a summer job at the end of my first year at university and stayed there until February 2018 when I left to concentrate on my final few weeks of the degree. I was lucky enough to be offered a permanent position after graduating.

What kind of projects are you currently working on?
Well, I cannot say for the new career as I haven't started yet! At Wilson Mason, I was working on two student accommodation refurbishment projects for the University of Manchester. I was providing the majority of the CAD drawing work for layouts and details, along with being involved with site meetings and also design team meetings with the M&E and Structural teams – on odd occasions I chaired the meeting. I find I am constantly learning!

Is there anything else you would like to add?
Yes, I'd like to thank everyone who supported me through what can only be described as a tough, final year. My wife, Justine has been a rock helping me where she can and keeping the girls (Tara and Cordelia) out of my hair when I was stressing about university work. Ann, my university lecturer, has been great. I'd also like to thank the suppliers of the materials, PH Timber and Rotafix who provided the structural glue and carbon fibre, glass fibre and steel rods. I couldn't have done it without any of you. ■

You may know that each CIAT Region/Centre has a Committee. In order to welcome more people into the profession and support them aspirATion was developed for those that are still studying or are newly qualified. To find out more, read about what the Chair of the Western & Scotland East aspirATion groups are up to...

aspirATion CHAIR

Western Region

Simone Gray

I became the Chair as I felt I would gain a better understanding of CIAT on my route to becoming a Chartered Member, along with helping other young professionals in similar situations. This is the perfect opportunity to develop my professional portfolio and establish myself as a member that supports learning and development across the Region. In time, I will develop links with students, universities, graduates and local practices to create a more integrated local community.

I am based in Plymouth and work for Bailey Partnership four days a week whilst I attend college one day a week, studying a Foundation degree in Construction. On this programme, alongside other Architectural Technology professionals, there are other students following different routes in the built environment sector. This benefits me as I am creating connections to different aspects of the industry which could be used in the future. The programme is a Plymouth University one held at Plymouth City College, meaning I have access to both educational establishments. I can use this to my advantage to raise awareness of any future activities for both aspirATion Group and CIAT and increase the participation of current students. I also have a chance to raise awareness of the Institute's objectives and future activities whilst attending school careers fairs with Bailey Partnership. This makes school leavers and GCSE students aware of the different bodies that are available to provide help and support in the future.

A resource that I believe in beneficial to all aspirATion Groups are social media accounts. Having a presence on social media is a useful way to communicate between members whilst being able to promote the aspirATion Group and upcoming events, along with introducing CIAT to potential new members.

> A resource that I believe in beneficial to all aspirATion Groups are social media accounts

I am currently working with a number of the Regional Committee members, including Paul Chapple MCIAT (Western Region Councillor) and Nathan Morris MCIAT (Western Region and aspirATion Treasurer). Having a close working relationship with them allows me to easily maintain a relationship between the aspirATion Group and the Regional Committee. ■

> 'I see real potential for this group and I can see that it is a valuable resource for young members'

aspirATion CHAIR

Scotland East Region

Jamie Yorkston
MCIAT

I graduated from Robert Gordon University in 2014 with a first-class Honours degree, and since then worked with a small local practice dealing with both domestic and non-domestic projects. Throughout my years at university, I was very passionate about entering the industry as an Architectural Technologist and was always looking to learn just that bit more about materials, products and technologies that are evolving within the construction sector. Within 3rd and 4th year I was approached by the programme leader to set up events where various guest speakers came into the university to present to my peers on various subjects. This was purely on a volunteer basis as I knew this would further expand everyone's knowledge and widen my contact bases at this early stage in my career.

I was approached by the Architectural Technology programme leader and the current Scotland East Chair to attend the first aspirATion Group meeting early last year. They both knew my interest within the industry and where I am aspiring to be within CIAT.

Since this first meeting, I have been a pro-active member with the launch of the Group and run several events with the Group from setting up CPDs, being involved in university critical evaluations of 3rd and 4th years work, and presenting at the Architectural Technology – a Professional Insight event.

As Chair, I see real potential for this Group and I can see that it is a valuable resource for young members working their way into industry and towards Chartered Membership. Having gone through university, gaining employment and Chartered status, I feel my experiences are of interest to fellow members and I can share my skills and knowledge gained thus far.

My aims for the direction of the Group have already been evident with the CPDs I have arranged. Students (mostly local) are keen to get involved and my own personal understanding of the importance of such an Institute have developed. Going forward, I want to ensure members are clear with what the Group can achieve, but also make sure that people begin to feel the benefits of being part of the aspirATion Group. ■

WHERE IT'S AT

Please email Alison Blow (alison@ciat.org.uk) to be put in contact with your local aspirATion group.

What are aspirATion Groups?

aspirATion Groups are for future and newly qualified Architectural Technology professionals and are designed to encourage Institute activity amongst students and graduates.

What do they do?

aspirATion Groups operate in a voluntary capacity in the Region/Centres, working with members, educational establishments with Accredited or Approved programmes and industry professionals. They report directly to the aspirATion Committee, made up of each Region's/Centre's Chair which then feeds directly to CIAT. aspirATion also has a voice on Council.

Who are they?

The Groups are made up of student members, Associate members, profile candidates, Technician and Chartered Members. Group members are actively interested in promoting, developing and contributing to Institute activities. Each group has a nominated Chair, see page 12 to meet some of your Chairs.

Terms of Reference

The terms of reference of the aspirATion Committee are to:

- Provide a focal point for the Institute's activities and objectives with respect to all future AT professional members;
- Maintain a dialogue between the aspirATion Group and the Institute's other Groups and Committees regarding any issues that may affect future CIAT members and to ensure that they are not adversely affected by any of these issues;
- Raise awareness of the discipline, Institute and its activities, objectives and constitutional processes; Engage with and increase the potential for participation among current students and
- Increase awareness of the discipline and the Institute to potential AT and other associated professionals.

How can you get involved?

We currently have the following Chair vacancies:

- Region 04 East Midlands
- Region 08 Central Region
- Region 10 South East Region

The Chair will work with the established Regional Committee, CIAT Accredited programmes, colleges, peer groups such as neighbouring aspirATion Region, members of BRE Academy, CIOB Novus, RICS Matrics and industry professionals within the Region to organise events which can include social, CPD events or site visits.

To apply, we would require you to submit a personal statement outlining why you would be suitable for the role of Chair relating to the terms of reference.

Europe Centre BIM Workshop

VIA University College, Aarhus, Denmark

Architectural Technology students from VIA University College, Sheffield Hallam University, Waterford Institute of Technology and Birmingham City University took part in an intensive, three-day BIM workshop. This took place between 5–7 November 2018 at VIA University College in Aarhus.

The event was organised to gain knowledge and share skills about BIM, 3D, 4D and 5D modelling and drone scanning the terrain. It was a great opportunity for students to work in international teams and learn new programmes such as Formit and Mind View, etc.

We were assigned to different groups and some of us had previously discussed the proposal over A360, which is a collaboration platform made by Autodesk. We had two and a half days to come up with the design, analyse our building and estimate the price of the project. This was crucial for finding the best project, as the criteria for winning was the economically most advantageous bid. ■

Day 1

We got to know each other over breakfast prepared by some of the aspirATion members from the Europe Centre, this is a very typical way of the Danes to start a productive day. Later, we were introduced to some of the tools we were expected to use during the workshop such as Formit and Revit Integration presented by Brian Dempsey from WIT. Following, Lars F. Matthiesen introduced us to drone scanning and using point cloud in Revit to create terrain. Even though the weather in November is not favourable, we managed to have a practical drone flight on the plot. The rest of the day was spent on planning and brainstorming our conceptual designs.

Day 2

From the content of VIA's syllabuses it is clear that there is emphasis on the pricing and planning of building projects, visible already in the earliest semesters, which seemed quite new for students from WIT and SHU as they are more focused on developed analysis of the building and incorporating it with the design. Ernest Muller, Building Planning and Management lecturer from VIA, introduced tools and a step-by-step pathway to come up with the price estimate and a time schedule for a project like this. Later, we had a lecture about sustainability and solar in Revit presented by Gordon Chisholm MCIAT from WIT.

Day 3

Some of us spent the night at the university as we wanted to have our final product just perfect. Design and analysis such as fire, statics, daylight and solar analysis, time schedule and price were displayed on two A1 posters per group. Each of the groups had to assign points for each poster without knowing who made what. However, we had some technical problems and unfortunately we voted differently.

Here’s what our students have to say about the workshop:

“

One of our university modules included a workshop at VIA in Denmark, to develop our skills as a team. We found the workshop to be very challenging as it created a competitive environment between the teams to create the best design. This pressure pushed the team members to create and contribute at their best. Being the team manager, I was put in place to make sure the team coordinated together and was working in harmony.”

–

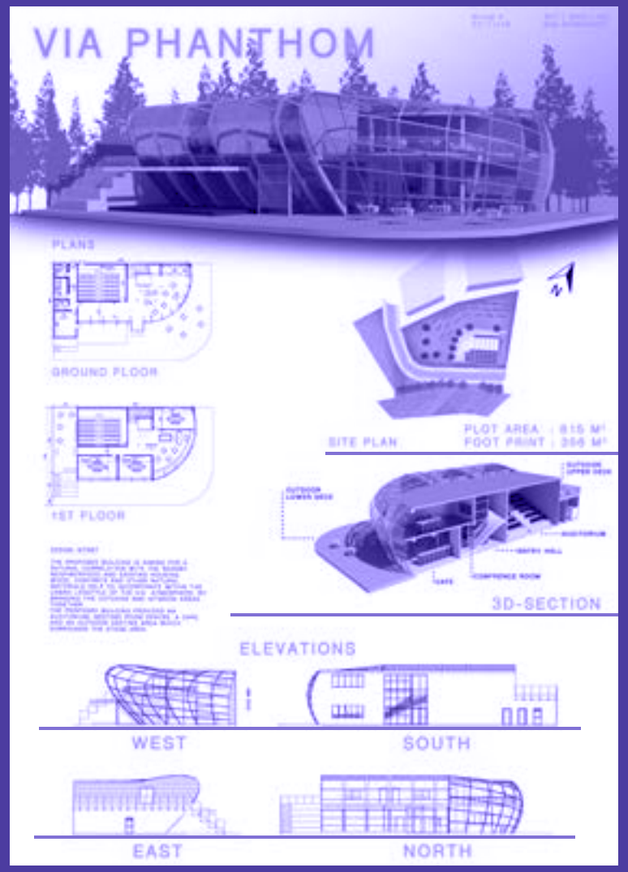
Richard Formon, Sheffield Hallam University

“

In the late October last year, I attended my Regional West Midlands aspirATion group, during which, our Chair, Isabelle Piorkowska, briefed all the attendees on upcoming events such as CIAT Annual General Meeting and BIM workshop that would be taking place in Aarhus, Denmark early November that year. Having had applied for a semester exchange at KEA, School of Design and Technology in Copenhagen, Denmark, I thought that the participation in both events could be extremely beneficial for me. I had a deep desire to meet new fellow students and professionals from the industry in the country that I soon could be living in. Now, I live in Copenhagen, and looking back, I am so grateful for everything that had happened. Not only did I expand on my BIM knowledge but also formed new friendships with students across all three universities. The amount of work was tremendous, however, very well balanced with social activities. I believe that the time I spent in Aarhus was very productive and prepared me well for my Birmingham City University assignments. Incredible experience!”

–

Aldona Weber, Polish, Birmingham City University, AT



The winning team

Alex Tomasica

–

Claudia González-Llanos Gallardo

–

Matthew Marshal

–

Frederik Jensen

–

Wiki Górska

–

Liam Céitin

–

Will Pettifer

“

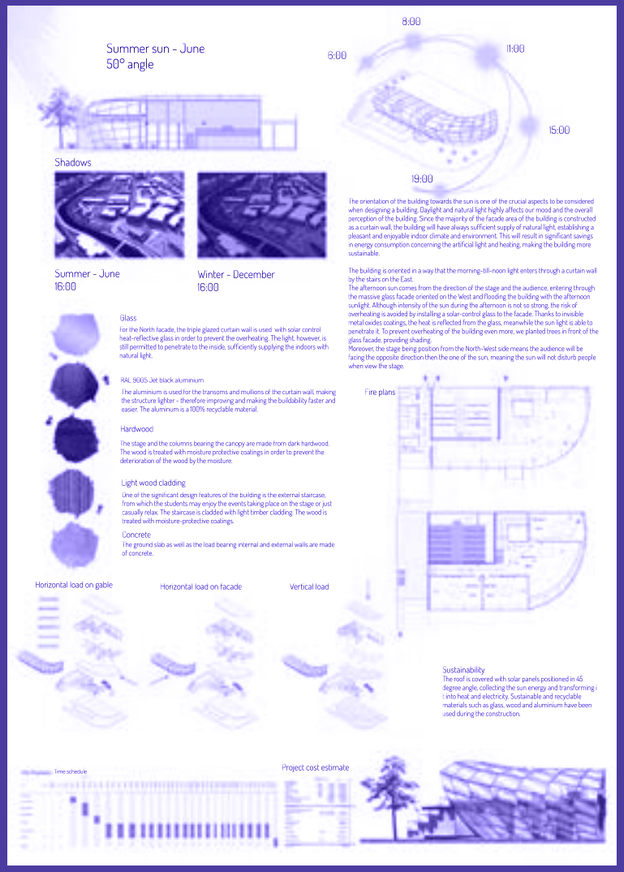
Our design intent was to propose a building with an aim that it would establish a natural correlation with the nearby neighbourhood and the existing housing. In order to design in a way that fits the modern surroundings of the university campus, but at the same time to allow it to manifest itself among the curtain wall. A massive glass wall grants the building with an extravagant and contemporary appearance.”

“

I was first introduced to the BIM workshop from our lecturer. He explained that it would be a chance to work with BIM software and collaborate with students from Ireland and England. He explained that the course would involve lectures and an opportunity to design a project based on a brief they would provide. In terms of what I got out of the experience - It was very interesting to see how the English and Irish educations compared and related to our studies here in Denmark. More often than not the differences were minor, and I found that very interesting. I did see a slight difference in focus in terms of modelling and design process, but the technical knowledge was very comparable. I enjoy designing, so the poster aspect of the course was probably the highlight for me.”

–

Rekai Ewan Campbell, Australian, Zimbabwean, South African, VIA University College, ATCM.



Studying & working abroad: International Experiences

Gregory Holland

Gregory Holland is a student member enrolled on the BSc(Hons) Architectural Technology programme at Liverpool John Moores University. We hear how studying AT has led to opportunities for Gregory to visit Denmark and Vietnam.

A Danish Delight

Gaining experience abroad is something that I think everyone dreams of and wants to participate in at some point, whether that be whilst studying or in professional life, during their career. Fortunately, I was given the opportunity to accomplish this early in my university life at Liverpool John Moores University (LJMU) through the connections and relationships developed with international organisations as well as other like-minded universities. After being successful within the application process, I was able to study abroad for one semester (roughly five months) in my second year of study from February to June 2018 on the Bachelor of Architectural Technology and Construction Management programme at Via University College.

The location in which I would find myself housed in, was the small city of Horsens in Denmark, consisting of only about 58,000 people as opposed to the plentiful 552,000 that I am a part of in Liverpool, England. Statistics aside, it was the culture that I was most looking forward to experiencing as well as the people; as they are what makes a country vibrant. Denmark is a country I knew to be innovative in a lot of ways, namely technology and building systems. Although I couldn't wait to get on the plane, I wasn't sure what to expect as I hadn't lived away from home for a continuous period of more than two weeks prior to being accepted, which I feel is the norm for most young people who don't move away for university.

However, feelings of apprehension aside, within my excitement of travelling to a different country and staying there for an extended period of time, I was distracted from the type of work I'd be involved in whilst over there. It admittedly, for some reason unknown to me, didn't enter my mind that I'd be designing projects using regulations that I wouldn't be used to. I'd go from using the English/Welsh Building Regulations to using the Danish ones (BR15). This was the first hurdle that I had to adapt to; aside from the freezing cold weather that I most certainly wasn't accustomed to. A hat, scarf, gloves, winter jacket, thick socks and boots couldn't keep that chill at bay!

Another aspect of living and studying in another country is effective communication. The programme I transferred to was an international programme and, therefore, there were many nationalities from all over Europe within one programme. This is one of the aspects of studying abroad that I was most excited about; I got to learn about lots of different countries over the programme of the five months and I got to take part in greetings, games and activities that people do in their own countries. I made friends with people from countries like Belgium, Romania, the Czech Republic, Malta, Syria and many, many more. It truly was an overwhelmingly spectacular experience.

Danish architecture is extremely modern. Structures like the Wave in Vejle and the ARoS Art Museum in Aarhus are a testament to the innovations and original ideas that the Danes are more than capable of making a reality. Their attitude towards the environment through collaboration is fascinating, Denmark is host to a large number of events to promote sustainability; one in which I attended was called Building Green. Companies to do with every part of the inner and outer workings of a structure were present, from Kingspan to start-up agencies. It was clear that a difference is being made.

Visceral Vietnam

Having gained a more studious experience with designing and regulatory statutes within the UK and Denmark, I felt confident enough to apply for an internship as an undergraduate Architectural Technologist during the summer of 2018 from July to August (two months). Similarly, I did this through my University and succeeded in gaining a placement for a globally recognised Dutch company called Royal HaskoningDHV in Ho Chi Minh City, Vietnam. With brief reference to statistics this city consisted of approximately 8.4 million people, which is exponentially larger than Liverpool and Horsens. Whilst I studied in and explored Denmark, I developed my confidence and ability to effectively collaborate not only between disciplines but also over nationalities; this may sound simple but being exposed to many different nationalities broadened my horizons in many ways.

> It was the culture that I was most looking forward to experiencing

One of the more important ways in which I found myself being developed was how I greeted people. Different countries greet people in different ways, whether that be a; handshake, a kiss on the cheek, a respective bow or even a hug. Being respectful to a person's national culture is not only indicative of a polite attitude but is also an impressive way of optimistically communicating your acknowledgement of their country of origin. Professionally, it can be seen as you not only being friendly but also shows your appreciation for their culture and indicates you have an understanding that things are done differently depending on where you are located.

In Vietnam, I expressed an interest in sustainability and so I worked with LEED v3 (Leadership in Energy and Environmental Design) on various projects, mainly warehouses and breweries, for companies like Heineken; which was such an immense accomplishment professionally. I helped my colleagues with the 3D modelling of the brewery in Revit and worked with Green Building Services Engineers on LOTUS (the Vietnamese equivalent to LEED) and the aforementioned LEED Silver Certification. I also went on site visits and went to factories to understand the manufacturing process of different building systems whilst exploring the architecture as well as the culture of Vietnam.

In terms of architecture, throughout Vietnam there are many buildings that are attributed to the French colonials who erected postmodern structures to show their imperium as well as their hold within the region. Although Vietnam became independent in 1945, most of the French architecture still remains which, most definitely, provides a strange juxtaposition throughout the city. Typical Vietnamese architecture is drastically different to that of the French as you might imagine; taller skinnier buildings line the streets, often residential constructs which house one family per floor in a space that is rather small. Slums are situated right next to luxury hotels which demarcates an unambiguous line between classes and defines its people.

I'm so pleased that I took the plunge and have been able to not only broaden my horizons and appreciate how Architectural Technology is practised in three different countries, but also meet the professionals within those countries that do tremendous work towards this innovative industry. I look forward to seeing what else is out there! ■

You can follow Gregory on Instagram using @gregoryhollandphoto

CPD Corner with Brewer Smith Brewer Gulf (BSBG)

This is a new feature for aspirATion magazine, BSBG has kindly allowed us to feature one of their blogs in each issue. These are very insightful and prepared weekly by the team. It is refreshing to see the senior technologists at BSBG research, develop and deliver training material to their internal staff as well as allowing access for all via LinkedIn, google searches and now aspirATion magazine. You can check out all of their blogs by visiting www.bsbgltd.com/blog

BSBG is a CIAT Group Membership Practice and is proud of the pivotal role has played in the development of the UAE over the last 40 years. Primarily focusing on the Middle East and North Africa (MENA) market, the innovative nature and consistently high standard of BSBG's output has earned the practice a significant reputation in the MENA region. BSBG has a rare mix of extensive local experience matched with high end, multi-disciplinary design capabilities and an acute focus on budget and programme. The practice has a very structured and prescriptive approach to projects, focusing on client relationships, design and delivery. With specialist teams of Engineers and Interior Designers who engage with Architects and Technologists from the outset, BSBG provides fully cohesive and coordinated design solutions that are informed, purposeful and innovative. BSBG provides a professional consultancy service from project inception to on site completion and handover.

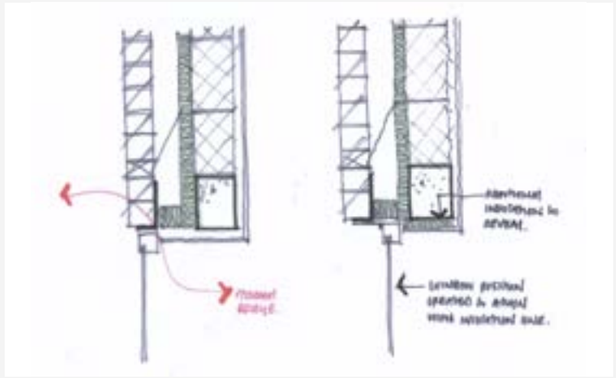
The practice strives to ensure its reputation is upheld, by employing the region's best technologists and designers, an international team from approximately 13 countries made up of more than 90 architects, designers, technologists and business support. It boasts a remarkably diverse portfolio, attracting some of the largest and most highly regarded clients within the Gulf region, from all sectors of industry including residential, commercial, educational, hospitality, leisure and retail.

Minimising thermal bridging – walls & junctions

BSBG's Senior Chartered Architectural Technologist, Chris Day MCIAT, guides us through the complexities of thermal bridging, the need to minimise it and its impact on building performance.

What is a thermal bridge?

A thermal bridge (or cold bridge, depending on the climate) occurs when a more conductive or poorly insulated building material interrupts the continuity of the thermal barrier, resulting in heat transfer and energy loss through the building fabric – or thermal bridging. Weak points between the insulated and non-insulated spaces, which result in a thermal bridge, have a detrimental impact on the overall energy performance of the building and also pose a potential risk of condensation and mould growth. Thermal expansion of materials (Thermal coefficients of expansion) may also cause damage to materials as we will see below. All types of Thermal bridges should be avoided where a viable detail solution can be achieved.



Types of thermal bridges

These fall into two main categories, which are:

Non-repeating thermal bridges

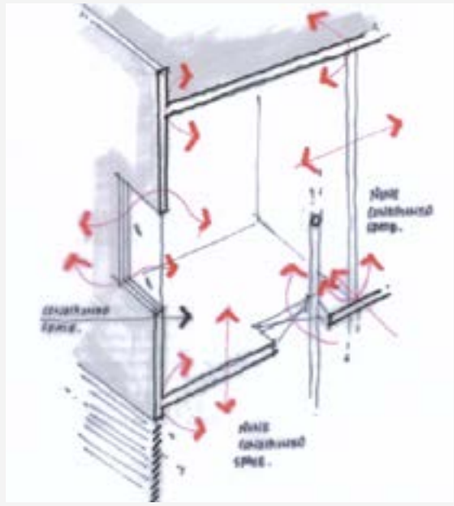
Junctions of floors, roofs and poor detailing at window jambs, to name a few. These are avoidable and should be designed out.

The common causes of thermal bridging

Multiple situations and interfaces could lead to unwanted heat transfer. A few examples are:

- Steelwork detailing – Where steelwork bypasses the building
- Service penetrations through areas of condition and none condition spaces.
- Reveals around windows and doors.

Junctions between walls and floors, and walls and roofs. If the design team fails to include all suitable allowances that prevent thermal bridging in the design, they are not meeting their due diligence and providing the client with an energy performing design, compliant with the engineer's thermal model and statutory building regulations.



Key concerns & considerations

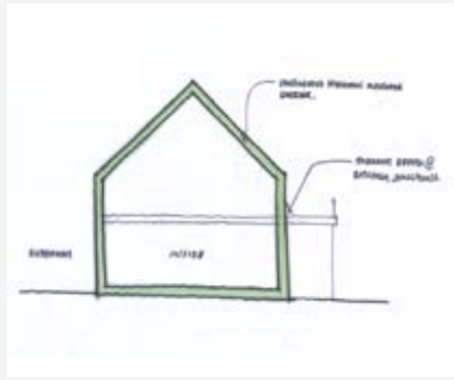
Interstitial condensation

This is a form of structural dampening that occurs when warm, moist air penetrates inside a wall, roof or floor structure and reaches a dew point and condenses into liquid water. The warm, damp air may penetrate a wall from the exterior of an air-conditioned building in a warm climate where a thermal bridge is found. The dew point should never be present within the wall make-up. This condensation/temperature difference may allow mould growth, corrosion of metal components and/or a reduction in the thermal insulation's effectiveness. This may result in structural damage without visible indications until significant harm has occurred.

Key consideration – The mechanical engineer's performance targets should be reflected in the detail and monitored throughout all stages of the design process. The U-value and dew point calculations should then be run-through with the assistance of a specialist insulation consultant to develop a composition which will prevent such an occurrence.

Additional concerns with weak/thermal bridge points are:

- Coefficients of thermal (thermal expansion) in a material can cause breaks and cracking to the materials surrounding it. We have to ensure we pay attention to the thermal expansion between different building elements and allow for compressible joints and split ties where required.
- Over specifying insulation to outweigh the repeating thermal-bridging – although this may maintain the performance targets, this will still cause localised problems that must be addressed in the detail.



How to minimise thermal/ heat transfer

Think about the details. It is important to spot a thermal bridge and design ways to prevent this early in the design. A keen eye and a good thought process are required, keeping in mind a need for a continuous, insulated line.

Imagine a swimming pool filled with water. If there is a weak point/damage in the lining, the water would find its way out. By having a continuous material forming a sealed box, the water will remain and prevent expensive running costs to refill constantly to meet the requirements. This works similar to a building. A weak point will leak energy and require extra operation requirements to achieve the target environment. A continuous thermal barrier is needed in the building enclosure; the location of this barrier for most buildings should be outboard of highly conductive materials. All penetrations through this line should be broken with a thermal break pad.

Lapping of insulation where direct continuity is not possible can mitigate thermal bridges (eg: EFIS on blockwork where this meets a column. Good design would prevent this at the design stage but the column cannot be left exposed, so a stepped EFIS detail is required). Window-to-wall interfaces create additional challenges that need to be carefully reviewed for energy considerations and condensation risk due to positioning of the fenestration within the rest of the assembly.

Thermal breaks built into to the structure will help to stop the flow of heat. These thermal breaks are thin layers of insulated material (such as aerogel strips) which can be adhered directly to metal beams, effectively 'breaking' the heat bridge. Most building materials are permeable so the common method of controlling interstitial condensation is to control indoor moisture. The majority of buildings control this by using the ventilation systems with dehumidification through the ventilation system and also can be controlled by an impermeable barrier on the warm side of the wall. ■

Ever wondered what kind of documentation the industry uses? Are you undecided as to whether you would like to be an employee or run your own business after your studies? In order to make an informed decision, CIAT has prepared documents for you to use as an educational tool to help you understand your roles and responsibilities as a practising Architectural Technologist.

Please log in to ciat.org.uk and find out more in your My CIAT area.

What is it like to be an Architectural Technology student?

Evelina Bujorean

Evelina Bujorean

Evelina Bujorean is a student currently studying BSc Architectural Technology and Construction Management at VIA University College. Originally from Moldova she has decided that Denmark is the country where she wants to study and develop professionally.

The environment in which I study is extremely multicultural and the majority of the work is done in groups. The content in which we deepen our knowledge ranges from local Building Regulations, BIM, building services, architecture, structural and material design, building design.

What I have clearly noticed throughout these two years, is the progress which I have made. Through hours of lectures, personal research and devotion I have become proud of the work I have done. With every semester, my projects have become more complex and better organised. I have increased the amount of work I am able to do in a shorter timeframe, but also the quality of the work I have produced has developed substantially. I have improved and learned from the mistakes I have made, and this has brought me one step closer towards becoming a professional.

We worked on one and two storey family houses and then got involved in the development of modular houses. During the following semesters, the projects included multi-storey office building and refurbishment. All the projects were carried out in teams and developed step by step.

> “I have improved and learned from the mistakes that I have made”

What I can definitely say, following an Architectural Technologist’s path requires a lot of motivation, self-discipline and focus. Every project “you carry on your shoulders” is later on your responsibility and is more or less bound to your personality.

In the near future, I plan to work for an established practice and I am confident about my skills and knowledge I have gained during these last two years.

For all future students of Architectural Technology, I would recommend that you embark upon this profession only if you are a born perfectionist. Your job is to create the skeleton of the building by connecting its bones and you will be heavily involved in the projects, bringing in many valuable skills. ■

Three steps in three years

Jacob Handford
MCIAT

Jacob Handford MCIAT of 16a Architecture Ltd, based in Exeter, tells us about how he progressed from his final year at university (Autumn 2013-Spring 2014), to graduation (Summer 2014) and ultimately becoming a Chartered Architectural Technologist (Autumn 2016).

I studied Architectural Technology at Plymouth University. The degree provided me with a reinforced knowledge foundation that assisted in my progress to the next step in my career. The modules studied included contract procedures and professional practice, and although academically heavy they were truly brought to light once I was in the working environment. Additionally, the process of refined design and coherent resolution of technical aspects, which I learnt within the studio, ensured not only my ability to exist in the professional domain but one that I excel in.

Developing my 'practical' professional career was a steady process but always progressive, which you could liken to a positive correlation graph! My experience within the built environment sector has resulted in a distinct advance of my effective design and aesthetic technical detailing skills along with client relations. Although the time spent in practice, in no way results in a natural career progression, it is rather that it makes effective use of your time to learn, develop and react to legislation and the built environment. Throughout this time, in a direct parallel, was the evidential inclusion of my personal design influence/'stamp', project responsibilities and status within the industry. The pinnacle, for me, was the complete transition of a design concept through to project management and finally a completed scheme. All previous experience, whether academic or practical, led to me receiving the respect of all other professionals and, ultimately, producing good architecture.

When it came to progressing my Associate membership, the professional assessment application form itself best reflects the world of Architectural Technology. You are not confined to an array of closed questions or restricted parameters to prove your competence; but instead you should visualise anew, with a few constraints (Designing, Managing, Practising and Developing) that you should work with harmoniously to achieve your final product. You can express yourself and elaborate on your achievements to date, broadcasting your journey through Architectural Technology. It is your story and everyone's will vary; no different to the realms of design.

Although I did not use the 'Mentor Match Me' scheme directly, I can only emphasise it is a paramount resource for your continued professional development. My route included a similar principle whereby an experienced professional at my practice was always on hand to aid my progression. As a person, they maintain a library of knowledge, a parallel connection with construction and the importance of Architectural Technology. This first hand guidance proved to be fundamental in my journey to becoming qualified, something that cannot be achieved by relying solely on literature and electronic resources.

> "Ultimately the process of university, to graduating, through to becoming Chartered was seamless"

The company ethics of 16a Architecture Ltd and its coherent reflection with the discipline of Architectural Technology, allow me to continue my role within the industry as a Chartered Architectural Technologist. My job role has extensive functions due to working within a micro enterprise; this allows me to practice in all aspects of the discipline. A highlight of my career, to date, was the development of a BIM platform and we have now successfully exceeded BIM level one and are intensely engaging with the principles of BIM level two. One of the main functions of my role in the practice is initial client liaison, whereby an articulate brief can be developed, which then continues through to a developed design and onto design input at the construction phase. These jobs vary from single storey extensions to housing developments and large commercial schemes. Ultimately, for me, the process from university, to graduating and finally to becoming Chartered was a seamless one. Although the experience and development of your career may take some time, it all stems from your ability to create buildings that ensure your design results in structures that are functional, economical, perform efficiently and are effective within the context of the users environmental needs. It is no different to the principles accumulated from university.

The form itself is simple and in no way tedious, the ability to start and complete the application only encouraged me further to progress becoming Chartered. Through the process of becoming Chartered, my design ability has enhanced as has my capability to technically inform others of correct/better construction. This can only provide better architecture which, I believe, is the ultimate achievement within the built environment and the discipline of Architectural Technology. ■

My latest work in industry

Jack Beaman

Jack Beaman studies at Salford University and is employed at Carter-Zub Building Consultancy. He tells us about one of the latest projects he has been working on.

From an early age, I have always had a keen interest in and passion for creativity. Whilst enjoying the freedom of design, architecture and construction was always something that appealed to me. I chose to study and get into the industry as it not only allows me to express myself in terms of creativity, but also enables me to make a positive impact on the built environment in my local community. In addition to this, every project is different and forever changing, keeping the job constantly exciting and challenging.

I have been working in industry now for over two years and have worked and been involved in several exciting schemes and developments for Carter-Zub Building Consultancy. One I am most proud of, is a scheme my practice allowed me to completely run with myself, under the observation of one of my mentors, Thomasz Zub MCIAT.
The project consisted of two Grade 2 listed worker cottages located in Lytham, St Annes, Lancashire. The client had purchased both with the intention of converting them into one main dwelling. The client had requested an open plan arrangement, which offered a modern sense of living whilst still holding on to the history and heritage of Lytham, St Annes. The property's new layout design includes three bedrooms, a home office, a state of the art cinema room as well as a generously sized kitchen space.

I came up with several options, but one of the main issues that arose was that there was a walkway owned by an adjoining owner on the ground floor separating the two cottages right through the middle.

This was an issue, as the option to simply knock through and open up the space was eliminated right from the start. Designs and layouts were configured and amended to help give the two cottages a real sense of unity and bring the living space together, as well as improving ceiling heights on the first floor to maximise space whilst still holding on to the cottage's heritage and style. For this, I opted for the cottage to be extended out into the rear garden and the existing single-story element of the property to be converted into two-story, in keeping with the rest of the existing dwelling. I then configured and relocated the kitchen on the ground floor with views out into the garden, which also had a reading area and downstairs toilet located to the back of the property.

This kitchen also boasted a vaulted ceiling right up to the rafters and a stairway leading up into a dining/lounge area on the first floor. Having this area overlooking the kitchen, helped to create a space which still felt connected although they were not on the same level. The first floor offers a generously sized master bedroom which includes a walk in wardrobe/dressing area and en-suite with private access onto the outside terrace area. Walking down the hallway, you are taken into an open plan living/dining area with plenty of lounging space and views of outside. Another bedroom is located at the opposite end of the cottage again with private en-suite.

Located on the ground floor is a further guest bedroom with views out into the garden, a state of the art cinema room and home office. Both, the ground and first floor, offer magnitudes of natural light coming from a modern curtain walling system, sliding doors and a glazed terrace area which really helps make the space feel open and fresh. The terraced area was added to help maximise outdoor space, as room in the garden had been taken up by choosing to extend the single story element of the property. During the design stage, I had to take into consideration the front elevation of the property.

> Every project is different and forever changing, keeping the job constantly exciting and challenging

This was not altered in any way to preserve the history due to it being classed as a Grade 2 listed building. Incorporating modern elements internally and to the rear of the property really helped to bring the cottages back to life and offer comfortable living for plenty of years to come.

I really enjoyed working on the concept and design of this project. Having the freedom from the client to come up with several new liveable concepts and being given the full responsibility of the project by my employer is something I'm very proud of and happy about. I hope to continue my learning within the construction industry and have plenty more projects given to me in the near future, which I can continue to create and design, with the intention of becoming a successful figure within the industry. ■

The Georgian Townhouse

Aaron Edge-Stenson

Aaron Edge-Stenson student member at Nottingham Trent University talks about the Georgian period of architecture.

As an aspiring Architectural Technologist, understanding historical design is of critical importance. A large number of Britain's historical buildings derive from the 'Georgian' period of architecture due to the massive industrial advancement in this period. The Georgian period, spanning from 1714 to 1830, was one of great variety and was heavily influenced by the social, political, and economic constraints of the period. Although a seismic shift did not occur during this period, it did help establish the more practical and pragmatic architecture seen during the industrial revolution.

The grand stately homes we now regard as a pinnacle of British heritage often derive from the Georgian periods. Stately homes such as Kedleston Hall or Saltram House were made possible by the ever-expanding wealth of the bourgeoisie and upper classes during the Georgian period. Such grand homes were constructed on large estates, often featuring gate house entrances. The homes themselves often carried ornate classical details, denoting the variety of design in the period.

Much of the remaining Georgian architecture which surrounds us, consists of Georgian Town Houses, notably in cities such as Bath or Nottingham. Georgian design was often, but not explicitly, dictated by the availability of both materials and funds. Indeed, often brick built town houses would be finished with stone quoins or corner stones if funds were available. Likewise, some buildings were given a stone face, as a sort of stone cladding to make them appear more ornate.

Given the nature of the Georgian period, and particularly the state of mass transport in the period, material selection was dictated by vernacular materials, or put simply, what materials were readily available locally. As the railways became more and more developed, designers could be much more versatile with material use.

Georgian buildings were typically very linear in their design and were rarely unsymmetrical. The influence of Classical design on Georgian design can be found in ornate doorways so often found on Georgian Town houses featuring columns deriving from the classical orders, namely; Doric, Ionic and Corinthian. The grand stately homes built in this period owe much of their impressive detailing to the classical orders.

Often Georgian Town houses had two or three stories, typically, two rooms deep and symmetrical both internally and externally. Almost explicitly featuring a panelled door in the centre of the house

'The grand stately homes we now regard as a pinnacle of British heritage often derive from the Georgian periods'

if large and detached, and a door to one side where terraced. Terraced townhouses tend to open from the front door straight onto the road, with no porch.

Perhaps one of the greatest and most obvious defining characteristics of Georgian design is the use of windows, which often would have been small, six panelled windows, due to glass being highly expensive. Georgian windows would typically be sash windows with pulleys to lift them up or down.

Georgian roofs were not exclusively hipped as many writers would suggest, although they often were. The more ornate buildings would also feature decorative cornices and moldings, and the external walls often exceeded the height of the eves, forming a parapet wall. Chimneys were often paired and located on both sides of the houses, reflecting so as to best distribute heat throughout the house.

In conclusion the period was most significantly influenced by the constraints placed upon it by logistics, the availability of finance, materials and most crucially transport. The passage of goods was very slow with only partially developed rail network meaning certain materials were in short supply. Hence a variety of different styles and materials was deployed by designers throughout this period to make their buildings stand out with limited resource. Perhaps this suggests why architecture was so varied in this period? ■

My study & placement experience

Ethan Dunbobbin

Ethan Dunbobbin is a student member studying Architectural Technology at Sheffield Hallam University. Ethan tells us about his time in Sheffield and the benefits of a work placement.

Architectural design was an easy choice for me. Intrigued by construction and design, I chose to pursue this career by enrolling onto the Architectural Technology programme at Sheffield Hallam University. Sheffield has been a brilliant place to study this, as it is full of inspiring buildings and architectural landmarks. The city's skyline is so diverse with a multitude of historic builds that are accompanied by new and creative designs. From the oldest pub, Sheffield's cathedral to the modern glass fronted additions to the high street. A brilliant place to visit is the David Mellor museum, located only half an hour drive from Sheffield city centre. It's unique circular shape is part of the old circular gas holder which was built between 1906 and 1907 and forms the foundations from which the reciprocal roof sits on.

The design is eye catching and stands out against the regional architecture. This building also draws from its surroundings and makes use of a local building resource, being built from the same detailed stone that is commonly found in the village's buildings. A popular design movement such as brutalism uses harsh raw materials to create an overall aesthetic. Many of these are unique concrete buildings, of which Sheffield has many. One example is the Crucible theatre and the Moor Street electricity substation. Sheffield is an inspiring place to study architectural design. In my previous two years at University I developed my skills in 2D and 3D modeling softwares, like Revit, and how they seem to play a large part in how design and information is produced.

These are no longer just a digital model used by the architectural community and are now used universally by different companies in the architecture, engineering and construction (AEC) industry. This has been highlighted with the recent introduction of BIM level 2 and how it can improve all aspects of the design process.

All the work has aided me in the choice of construction methods and materials, which in turn has allowed me to present an in depth, finalised concept and improved my design output overall. In my second year at university, I was assigned a module that combined all my previous experience and knowledge from past modules such as construction technology and technical lab. This work was a refurbishment project of one of Sheffield's architectural landmarks, Park Hill. The

> 'My placement has been an amazing experience and would recommend it to any student'

concept behind this was to maintain the existing grade two listed structure while developing the space for private accommodation and adding an orientation centre for Sheffield's homeless. Listed buildings have many limitations and technical difficulties when it comes to adding to and refurbishing them. Park Hill's design is unique as it is a listed building and one of the largest concrete structures in Europe.

Throughout this project, I reworked multiple elements of the design, including the new retail units, refurbishment of existing accommodation and the addition of new structural features. A building I took inspiration from was the Jewish museum in Berlin, Germany. Its most distinguishing attribute being the glass courtyard. This is a prime example of merging a historic building with modern design and this is something I wish to communicate in my concept for the Park hill renovation.

My University programme offers a placement year to gain industry knowledge and experience of the work place. I obtained a placement in a small architectural design practice in Hathersage located in the peak district, C&A Design. They carry out many different projects however their focus is mainly petroleum based, these can be both nationwide and international. The experience has been a steep learning curve in terms of industry standards as well as the design and detailing knowledge that's needed to produce the necessary information. It's been interesting learning about the different aspects of the petroleum industry and drawings needed such as the scope of work, hazardous zone, fuel line and ducting plans.

During my placement year, I have worked on a few different types of projects, from housing schemes, commercial and ecclesiastical to petrol stations. Most recently, I have worked on a small-scale housing scheme, on the edge of the green belt developing four detached bespoke houses, each with five bedrooms. This project is currently in planning with the hopes of approval by the middle of the year and my involvement on this has ranged from initial concepts to the planning stage.

For the initial development, I worked with one of the company's architects, using a variety of sources that influenced the design. This transitioned into feasibility studies which involved a range of sketching by hand to draft the concept design. I also worked on petroleum projects for one of the company's blue-chip main clients, ASDA. Over my placement, I have contributed to new petrol stations schemes, such as a site in Yeovil that was in the latter stage of tender, nearing the start of the construction. I amended and adapted the landscaping to meet previous planning conditions.

Other projects have included a scheme in Dundee which was for a knock down rebuild. This involved the replacement of the forecourt tanks and updating the existing system to a pay at the pump. It's exciting to see projects you have had a large involvement with get to this stage. This project has recently received planning approval and is in the tendering stage, scheduled to be complete in the latter half of the year. To date my placement has been an amazing experience and would recommend it to any student thinking about going for a placement year. Personally, I feel it has given me an edge going into my final year as well as prepared me for my aspirations after university. ■

My placement year in London

Emma Thomson
ACIAT

I studied Interior Architecture and Property Development at the University of Wolverhampton. This is a three year programme with the option to take a placement year. Eager to gain experience, with the hope of finding a rewarding career after graduation, I began my search for interior architecture firms in London. I placed a large emphasis on the visual impact of my CV, highlighting, where possible, my personality.

> Travel generates creativity; being aware of various cultural elements provides a firm stand point when discussing client preferences

I feel this led to my successful approach for several positions I was offered. On accepting one, I then progressed turning one of my internships into a junior position. I believe that design companies depend on its employees to promote a confident self image, as it reflects well on them. I represented my employers at various functions. This included: supplier meetings, visiting showrooms, site visits and client meetings. Through good relations, I was extended invitations from various supplier events which I attended on behalf of the interior practices.

Through my placement I was able to develop my interests in lighting design. I was introduced to various specialists and able to attend events which benefited me as well as the practice. This fed into my dissertation in my final year focusing on, 'cognitive neuroscience and lighting psychology within buildings'!

During my transition between practices, I travelled to various destinations which inspired and furthered my design process. Travel generates creativity; being aware of various cultural elements provides a firm standpoint when discussing client preferences and managing expectations. The key benefits I received by taking a placement year include, developing my business etiquette as well as widening my skill set.

This is not to say I did not spend time making cups of tea and coffee for other members of staff! It does however provide a great opportunity to build relationships with co-workers and creating good habits. I would suggest syncing your personal calendar with that of your studio, so you are aware of any upcoming meetings and events. As many final year students will point out, organisation is paramount. This is a simple routine which will help you in your final year of study as well as stay on the ball within the industry.

Understanding the leap between coursework and real world expectations is essential. With my experience I was able to develop fundamental skills ensuring I graduated as a strong, capable applicant in the field of Architectural Technology. ■

> 'The key benefits I received by taking a placement year include, developing my business etiquette as well as widening my skill set'

Apprenticeships another way to become an AT professional

Stephen Smith

Stephen Smith, Vice-Chair of the Scotland East Region aspirATion Group, tells us about what he is learning throughout his apprenticeship, life in Fife and the buildings that have inspired him.

From a young age, I can remember being the first kid in the class to figure out how to build an interlocking Lego wall that didn't fall over and I think this was the beginning of my journey. I was very curious as to how things, such as toys, worked and how they were put together, not just what something does, but how it does it. Growing up, I became very technically minded so when I saw an apprenticeship in Architectural Technology being advertised, I wanted to know more. I have always been interested in design and technology, particularly within the automotive industry, which helped develop my love and appreciation for architecture, which I intend to progress through further education.

My Modern Apprenticeship (MA) has encompassed a part-time HNC in Architectural Technology at Fife College and an SVQ Level 3 in Built Environment and Design with Competence Matters while working at Stuart King Architecture and Design Ltd.

Throughout my apprenticeship, I have gained a strong knowledge of a variety of areas within domestic construction, in-particular Sections 6 and 7 of the Scottish Domestic Building Regulations, including U-values, compensatory calculations, SAP's, EPC's and air and acoustic testing, while developing a knowledge of software such as Elmhurst and JPA Designer. On site, I have gained experience of carrying out and assisting with air tightness and acoustic testing to a variety of different types of housing from social to bespoke domestic dwellings.

Through my mentors (Stuart King, Derek Grubb, Craig Sutherland and Malcolm McCallie MCIAT), I have been given responsibilities within architectural projects, such as chairing meetings with clients, liaising with local authorities, submitting planning and building warrant applications, writing construction specifications, on-site surveys and completing architectural drawings using AutoCAD and SketchUp (plans, sections, elevations, site and location plans). These projects include large domestic extensions with a vernacular style, new build houses and recently warrant amendments to a new distillery.

Through gaining knowledge in these subject areas, I have been able to present to clients and schools about my experiences and chosen field, as well as work closely with clients and manufacturers attending meetings. With SKA&D Ltd, I have visited Mitsubishi Electric in Livingston to see the latest air source heat pumps being manufactured and demonstrated.

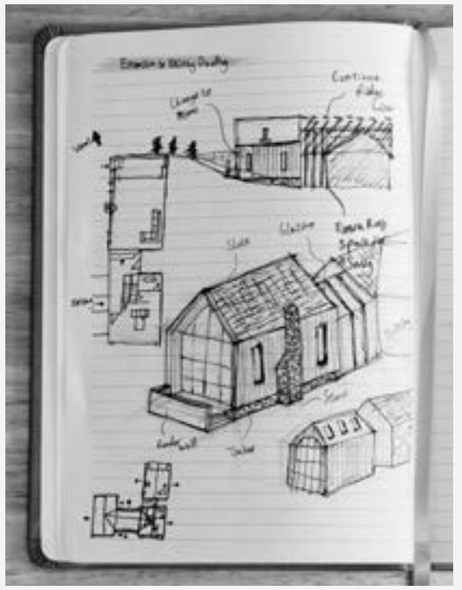
> Student membership has allowed me to network and make new contacts as well as attend CPD events and site visits

In my time as a Modern Apprentice, I have gained both CIAT and CIOB student membership, which has allowed me to network and make new contacts as well as attend CPD events and site visits to learn and expand my knowledge further. Through student membership, I have managed to visit the new St James Centre in Edinburgh and see the project progress through time, as well as visit the newly refurbished Edinburgh Grand in St Andrews Square, Edinburgh to view the latest technologies being used for comfortable and sustainable living by using automation.

Becoming a student member of CIAT has also allowed me to attend regular CPD events, learning about different products with the CIAT Scotland East Committee and gain knowledge from members such as the aspirATion Scotland East Chair, Jamie Yorkston MCIAT and Past President, Gary Mees PPCIAT MCIAT. CIAT progression route events have been particularly insightful into looking ahead into my future career path and striving for Chartership. Recently, I have had the privilege of becoming Vice-Chair of the Scotland East Region aspirATion Group. I am striving to get more students and young professionals involved so they can benefit as much as I have, with the opportunities I have been afforded.

Living in Fife, Scotland, I am surrounded with so many great architectural influences with cities such as Dundee, Edinburgh and Glasgow within a two-hour radius. Fife is famous for its coal mining trade and ports, creating small towns and fishing villages, which create iconic scenery that attracts a lot of tourists. Throughout time, Scotland has always had buildings of architectural merit from hundreds of historic castles and palaces to the Royal Mile in Edinburgh and the famous Mackintosh Tea Rooms in Glasgow. Recently, advances in design and technology have allowed buildings such as the Scottish Parliament (built in 1999) in Edinburgh and V&A Museum in Dundee, to become landmarks and places of interest for the public to visit and enjoy. I have spent a lot of time in both of these buildings sketching and admiring the architecture.

As my passion for architecture has grown, I have been fortunate enough to visit Barcelona to see



many iconic architectural influences such as Casa Batllo, La Sagrada Familia by Antoni Gaudi and the Barcelona Pavillion by Mies Van Der Rohe. In the future, I hope to visit many buildings by the architect Frank Gehry, who attempts to defy gravity by using twists, turns and shape to create unique buildings and public spaces that appear impossible.

Recently, I managed to take a trip to Fallingwater, Pennsylvania by Frank Lloyd Wright and it was absolutely mesmerising to see such a unique house sit so perfectly within its surroundings. Using multiple cantilevers and ingenious engineering, every element and detail was thought out so brilliantly which made the impossible possible. I think seeing visions become reality within buildings are why I love and appreciate the design and technology that go into architecture. My goals for the future are to progress my CIAT membership through learning within further education whilst keeping a working relationship with my mentors to enhance my knowledge and experience within industry. ■

Build the Arch, Strengthen the Support

A campaign supporting the mental wellbeing of your professionals

Throughout 2019 the Architects' Benevolent Society (ABS) is placing the mental wellbeing of architectural professionals and students at the top of its agenda through its #AnxietyArch campaign, which was launched in February.

The campaign aims to:

- encourage architectural professionals and students to recognise and talk openly about mental health issues and know where they can access help when they need it most
- raise money to enable ABS to support more people experiencing stress, anxiety and anxiety based depression, through its partnership with Anxiety UK
- promote good practice in terms of people looking after themselves, their colleagues, their employees and their families.

These issues are not specific to architecture, with an estimated 1 in 6 adults in the past week experiencing a common mental health problem, but the vulnerability of the architectural professions, widespread long hours' culture, combined with any issues outside of work can impact significantly on mental wellbeing.

The ABS will rely on the support of its volunteer ambassadors across the UK to play a key part in rolling out this campaign. Their role will be to raise awareness of the ABS mental health support offer within the wider architectural profession and to organise fundraising events to support the campaign. The ABS has more than 50 committed and motivated ambassadors who dedicate time in their busy lives to inspire people to support the charity.

One of those committed people is Chartered Architectural Technologist Oli Henshall, Technical Associate for Powell Dobson Architects and Chair for CIAT aspirATion Wales, who shares his personal motivation for joining the Society as a volunteer.

Oli Henshall
MCIAT

Life is very short, and very precious. I have been through my fair share of family tragedy over the past couple of years, and as a result, I found myself most evenings sitting and thinking about how I could turn all the negatives into some sort of positive. I needed to do more than just go to work and go through the motions, I had to try and make a difference in life. I suppose in a weird way, I wanted to make up for the fact that the people who are no longer with us, cannot fulfil their life's dreams. I felt I owed it to them, to not waste or take for granted life while I still had it.

The proposal of an ABS ambassador role fell into my lap whilst I was in the midst of processing all of the above, perfect timing one may say! After a mere 10 minute presentation from ABS, I was sold. What an amazing thing to get involved in, helping and supporting my 'professional' family. Selfishly, it was something I could channel whatever was swirling around in my head, into something positive.

Life is a series of peaks and troughs, it was a breath of fresh air, and to be honest a restoration in my love for humanity, hearing that people like the ABS are here, waiting to pick you up and dust you off when you fall. What an amazing, often life changing thing to do for someone.

The #AnxietyArch campaign will focus on a different theme each month, exploring different triggers for stress and anxiety, along with tips and advice from people's own experiences. Talking about mental health reduces the stigma around it. ABS wants people in the architectural community to know that they are not alone, and there is help available. In March, the #AnxietyArch campaign theme was education, and Oli Henshall has written an insightful article about his experience at University, including some advice for current students.

An insight into Oli's article

1 in 3 students have received or are currently receiving treatment for a mental health problem, an increase from last year' (AJ Student Survey 2018).

I bet that's quite a bit higher than you thought? It shocked me, but, when I started to mull it over, it's not all that surprising really.

University is meant to be the best time of your life, and looking back at my time in Cardiff, it really was. However, you do forget how you actually 'felt' while living the student life; I now just see the end result and gloss over the tough bits.

University life is a very complex and tricky thing to navigate. Some students take longer than others to 'steady the ship' as this lifestyle opens up plenty of opportunity for anxiety and depression to surface. To dig a little deeper, if we split the university experience up slightly, into 'education', and 'socialising' you can see how the contrasting lifestyles can start to muddle the mind.

If I can pass on any insight or offer of support, it would be don't panic. Look at the start of this article, you are 1 of 3! Talking through your concerns and worries can make a world of difference. Don't try to be someone you are not, and don't fall for the pressures placed upon you. University lasts 3 or 4 years, you have the world at your feet, and a career, which will hopefully span 30 or 40 years. You have all the time in the world to grow and develop as a person. The version of you at University is a snap shot of your life, but not the finished article, so don't beat yourself up, you are not finished yet.

You can read Oli's full article, at www.absnet.org.uk/news, along with a collection of #AnxietyArch campaign stories and articles, all written by people with a passion for promoting positive mental wellbeing for architectural professionals and students.

If you would like to share your story or get involved in the #AnxietyArch campaign, get in touch with the ABS directly, they would love to hear from you.

> I now just see the end results and gloss over the tough bits.

The ABS provides a range of practical support through its partnership with Anxiety UK, a national charity with a network of approved therapists delivering a range of therapeutic support. Through this partnership, ABS is able to offer free and confidential support to people at the time when they need it most.

If you or someone you know needs support to cope with anxiety, stress or anxiety based depression, please contact the welfare team at help@absnet.org.uk to find out if ABS can help. ■

@ArchBenSoc #AnxietyArch www.absnet.org.uk

Bamboo Tensegrity Workshop at London South Bank University

Collaboration with Institute of Technology Bandung, Indonesia

Bamboo Tensegrity Workshop at London South Bank University in collaboration with Institute of Technology Bandung, Indonesia.

Jennifer Hardi MCIAT, Programme Director for the BSc (Hons) Architectural Technology and Architectural Engineering degrees at London South Bank University and the Principal Investigator for a Royal Academy of Engineering funded project recently teamed up with Dr Andry Widyowijatnoko, an architect, bamboo expert, researcher and academic from Institute Technology of Bandung (ITB) in Indonesia. They carried out a bamboo tensegrity workshop at London South Bank University in March 2019 as a continuation of a research project.

The three day workshop attracted positive collaboration from academics and students from various disciplines. Tensegrity is an abbreviation of tensile and integrity. The structure consists of compression members connected with wires or strings until it forms a balance and stability without connecting each of the compression members. It creates a floating compression.

In the case of bamboo as tensegrity material, the tension member of bamboo tensegrity is in the form of wire or cable and the compression member is in the form of bamboo pole.

We hope that this beautiful structure will raise awareness of how great bamboo is as a sustainable construction material! Would we do it again, yes we definitely will! Next time, we hope it will be a permanent structure, bigger and even better! ■

01

First day and first stage of the bamboo tensegrity workshop is to prepare the bamboo we have ordered.

02

Group photo at the end of day 1.

03

Laying the bamboo in grids and connecting the wires on the perimeter of the bamboo grid.

04

Putting the tension on the tensegrity structure.

05

Testing the weight of the tensegrity bamboo roof!

06

Moving the bamboo tensegrity roof onto a safe area for the next day construction under careful supervision of Dr Widyowijatnoko.

07

Securing the bamboo tensegrity roof onto the structure and foundation.

08

The roof is up and floating!

09

Dr Andry Widyowijatnoko posing for the camera.

10

Jennifer Hardi and Dr Andry Widyowijatnoko.

11

Group photos of the academics and students volunteers for the project!

> We hope that this beautiful structure will raise awareness for how great bamboo is as a sustainable construction material!

SUBMIT YOUR WORK

Your article could be on any of the following:

- Why did you choose to study Architectural Technology? We welcome a case study from full time, part time, international or sandwich year students;
- Site visits taken place throughout your programme;
- Work placements;
- Competitions and awards that you have taken part in;
- Reviews of modules and programmes that you have undertaken;
- Cultural review of where you live and study, places of interest to visit for other students;
- Recommendations and reviews of useful resources you have used such as software, websites etc;
- Showcasing your work - could be a project, dissertation, your involvement in the end of year shows;
- Any other extra-curricular activities you have undertaken.

This list is not exhaustive and just a few ideas that you may like to write about. It would be great to hear from you with any suggestions.

We are looking for articles around 750-1000 words accompanied by high quality imagery. Please note that not every article we receive may be published, it is at the discretion of the Editor. However, all submissions are kept on file and may be included in future issues.

If you would like to submit an article for consideration for our next issue of aspirATion or if you have any images that you think would look great on the cover, please send them to alison@ciat.org.uk

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