

GUILDHIGHT



AUTUMN 2018

ISSUE IV

TO SERVE, TO LEAD'

*Imperial Engineers recall their
time in the Singaporean National
Service pg. 24*

IN THIS ISSUE...
MOTOR CLUB
EMIT: KICKSTARTER



DES ENG DEBUT
DRONESOC
CGCU FESTIVAL



Half way through term already? To prevent course blues and boredom setting in, here's your forth edition of *Guildsheet* - formerly known as "The Bolt" - the official publication of the City & Guilds College Union.

I love democracy, I love the Union - after a landslide Autumn election I would like to thank **over 600** students who voted to support liberty and free journalism. I pledge to continue to deliver a strong and stable *Guildsheet* in the Union's interest. Furthermore, as an upstanding bastion of truth, (along with the likes of *The Guardian* and *Vogue*) *Guildsheet* was surprised to be caught in a bout of public upheaval and *Imperial Secrets* last year - although we can confirm that the *Beit Beaver* article about our "Grammally Sponsorship" is in fact fake news. In relation to this, I must however admit that there were several errors in our last print - a flaw which fell through the net of our many proof readers and copy editors. When indeed we get some I will make an example of them.

In light of the "24 rolls" fiasco, (Page 46) a second editorial position was opened. An this issue I will introduce our newest *Guildsheet* member Fatima of Chemical Engineering and asking her the most important questions: Can you spell DoCSoc correctly? And will you mis-sell warm buns to the public at large? As for Issue IV, we have fresh content including a contribution from our sponsor, Shell and a reflection from our political commentator on the *Felix Campus Sexism survey*, released last June.

My thanks goes to our outgoing CGCU President and DPFS, Claudia Caravello for her tireless assistance and support, to our new President, Andrew Hill and to our Committee (especially Alessandro Bonardi for bringing pizza) who continue to transform our office CAGB 350 into a washroom, kitchen and storage space (...Labour Soc).

Tom
Thomas Cross
Editor, *Guildsheet*

IN THIS ISSUE:



Guildsheet is a member of the Student Publication Association (SPA). We wish to thank Andrew Hill, Fatima Khan, Alessandro Bonardi, Alice Jackson and the CGCU Committee for their contributions. The views represented in *Guildsheet* are those of its contributors, no matter how censored. They do not necessarily represent the views of the City & Guilds College Union or Imperial College London.

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PROJECT PENGUINS: ONSHORE CAMPAIGN

DOMINIK GRADUATED FROM IMPERIAL IN 2015 AND JOINED SHELL. TAKING HIS EXPERIENCE IN HARDNESS TESTING WITH HIM ON HIS VOYAGES, HE WAS TASKED WITH TESTING THE SEABED PRIOR TO PILE DRIVING.

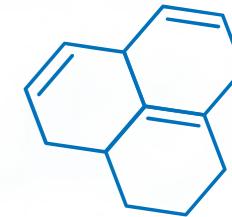
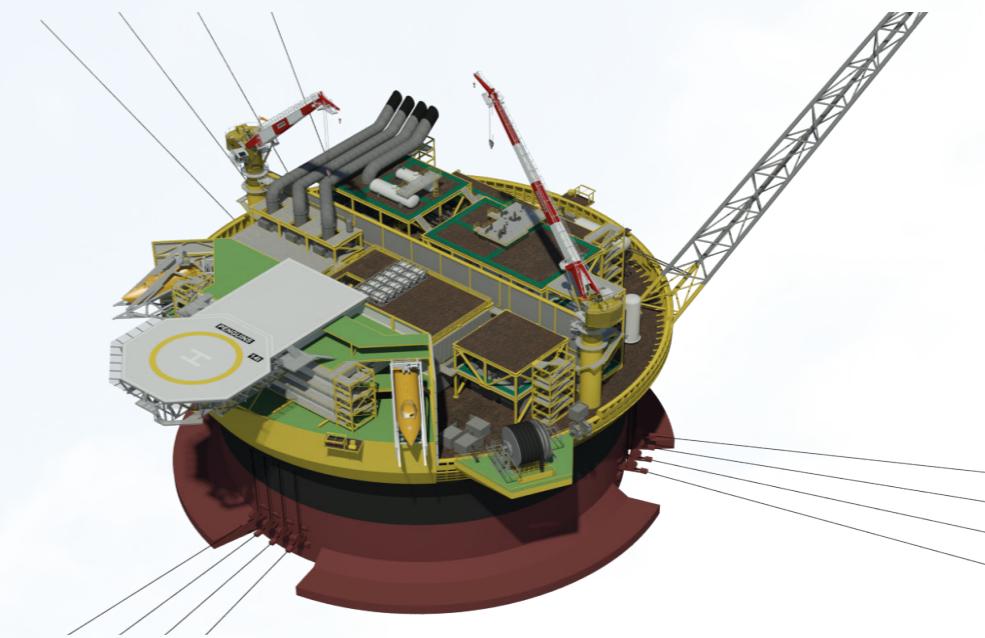


Having graduated from the Civil Engineering Department at Imperial College in 2015, Dominik Sznajder joined Shell and moved to The Hague, Netherlands, to start his career at one of Shell's Engineering Hubs. Since then, he has been involved in many projects around the world that have helped him grow and develop as an engineer. In this article, he shares one of the most exciting opportunities he's had so far - the chance to work on the Penguins Redevelopment Project in the UK North Sea.

The Penguins field is located around 160 km from the Shetland Islands and is adjacent to the UK/Norway border. It is currently producing oil and gas through one of the iconic Brent Platforms. However, the Brent field is being decommissioned and, there is now a need for something to replace it.

The selected concept is a brand new Floating, Production, Storage, Offloading (FPSO) unit, that is currently being built in Qingdao, China. Its peak production is expected to reach 35,000 barrels of oil per day and the storage capacity will be 400,000 barrels of oil. The project targets delivery of first oil from the new host in the early 2020s. I have been working on the project for over a year. One of the main tasks for me last year was to prepare and attend an offshore campaign with a purpose of collecting soil data in 165m water depth at the location of the future FPSO. The preparations for the campaign involved a close collaboration between other mem-

“We had to adapt to the ship’s deck constantly rocking and moving beneath us. Safety was a number one concern.”



bers of the project team, vessel contractor and the government to obtain relevant permits. As part of the job, I went offshore last year and acted as a junior Client Representative with a responsibility for overseeing the Geotechnical activities.

The crew mobilised from Aberdeen at the beginning of October and travelled 290 nautical miles, passing various offshore installations, up to the Penguins Field. Even though the first few days onboard were slightly rough in terms of adjusting to the ground constantly moving, the whole crew quickly adopted the can-do attitude and we were ready to start the work.

As a Client Rep, my role was to set an example as a safety leader. This included working together with the contractor on risk assessments, and specifically the work procedures, attending toolbox talks, and stopping the work if the activity was unsafe. When you are offshore, the most important thing is safety. You really do start understanding why the handrails are so important!

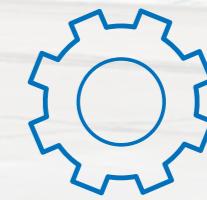
My time offshore was a great learning opportunity to see all the safety guidelines and standards being used and lived by at the work site. Closely following the Geotechnical Investigation helped me understand the importance of the in-situ testing, as explained during my Geotechnical classes with Prof. O’Sullivan. It is a truly amazing experience to see that the data you are collecting, by deploying a 10-tonne

Cone Penetration Test equipment, will be used during the design in a couple of months.

Following the offshore campaign, I have been working hand in hand with both Geotechnical and Structural Design houses to deliver a design of twelve 2.4m diameter and 30m long mooring piles that will keep the FPSO in place. Later on, Shell will offer me an opportunity to see the construction and offshore installation of the vessel, which I am already excited about! In summary, since I've joined Shell, I have been offered opportunities to develop professionally as a Civil Engineer and work in multidisciplinary teams.

I have also been exposed to both technical and commercial parts of projects and managed to travel quite a bit, including remote places the middle of the sea. Shell provides you with a lot of responsibility, yet there is support out there, if you need it. If I were to choose whether I would want to work for Shell again, I would definitely say yes! ■

**Dominik
Dominik Sznajder
Shell**



SEXISM? IN 2018? *Comment*

As an outlet for the public good, *Guildsheet* believes in always giving both sides of a story - no matter how sensitive. In "Positive Discrimination: Hard Answers", one of our political commentator discusses the impacts of promoting (arguably overly) the issues of women in engineering in response to a *Felix* article.

In *Felix* (Issue 1689, dated 16th March 2018), the results of their sexism survey were published. I, like many, was horrified with the results, especially with the ones regarding not knowing where to go at Imperial for support and lack of support offered when asked.

One thing which flared up was the topic of positive discrimination in the Engineering department by an Aeronautics student under the name of 'James'. This caused a bit of upset on Imperial Secrets, with many people writing in to slate this point of view (how dare someone say what they think, this is the 21st Century!). While I disagree that women in Engineering at Imperial are 'here to fill quotas' and that their 'technical skills' are lower than that of men, I strongly agree with his anger towards bursaries only available to women. There is a massive issue with culture and stereotyping children at a young age. I hope our generation can fix this, but it isn't going to be fixed at the level of higher education. We need to enforce this right from the start.

“ Girls get given dolls, boys get given things to build with. ”

Providing women-only grants to undergraduates who are already going down the engineering path is pointless and derogatory. It implies women can't compete with men, so they require some grant or bursary to help them. In talking with women around the department, they generally feel the same way. And I can't blame them. This causes alienation amongst male engineers.

Shall I even point out the other minorities in British engineering? People from ethnic mi-



norities make up 25% of the UK's primary school children, 25% of engineering graduates and 12% of the working age population but only account for around 6% of those employed as professional engineers. LGBT+ representation in engineering is 20% lower than expected, with equally disturbing statistics relating to derogatory comments in workplaces. Do I see grants for those minorities in engineering? I think there would be lots of hurt over that... ■

#metoo
Political Commentator



YE OLDE GUILDSHEET

"The Bolt is dead: keep it dead"

From at least 1969 until an abrupt end in around 2011 *Guildsheet* (and CGCU Live!, founded 2000) were the main publications of the CGCU. *Guildsheet* was notorious for causing outrage for copying *Felix* in the last (spoof) edition of the year, *Gulix*.

This year, the Guilds committee decided to bring back the venerable publication to usurp the failure that was "The Bolt". Needless to say at over twice the thickness, the Sheet is already well on the way to cause ripples on campus but also serve the 4200-ish guildspeople at South Ken.

To see more vintage copies of *Guildsheet* and *Gulix* check out our new webpage at cgcu.net/guildsheet. ■



New Guildsheet Editor

Guildsheet is proud to announce the election of our second editor - Fatima Khan!

Hi, my name is Fatima and I'm a second year ChemEng. I'm from Birmingham (aka I live in the Midlands and have no opinion on the North/South debate). I ran for Guildsheet editor because I enjoy being creative and wanted to do something different alongside my studies. As for what I'll bring to *Guildsheet*? Probably some of the best puns you'll ever hear... and my stellar spellchecking skills. I'm excited to see what this year will bring and what *Guildsheet* will become!

Can you spell DoCSoc Correctly?
Yes, DoCSoc = doctors society, DoCSoc = Department of Computing Society

Will you mis-sell warm buns to the public at large?

These questions are interesting. I think you can sell anything if you have the confidence. Act confident and no one will question it. ■

Fatima

Fatima Khan
Editor, *Guildsheet*



Fatima joins the *Guildsheet* team from this issue and was also the architect of this year's Spanner freshers' Guide.



MOTOR CLUB NOT LAST IN BUKC 24 HOUR EPIC

IN JULY THIS YEAR, THE CGCU MOTOR CLUB MADE ITS ANNUAL TREK UP TO MIDDLESBROUGH FOR THE BRITISH UNIVERSITIES KARTING CHAMPIONSHIP'S 24 HOUR RACE AT THE TEESSIDE AUTODROME.

And what a trek it was; 9 hours in a stiflingly-hot Union minibus sat in stationary traffic all the way up to the north is, if nothing else, a character-building experience. Fortunately, Teesside is a true great among the circuits the BUKC visits – fast, long, and incredibly bumpy, the track is a true challenge for even the most experienced drivers.

As the name implies, the 24-hour race is a twice-around-the-clock epic; 44 teams of between 4 and 12 drivers from universities from around the country compete in (theoretically) identical karts to see who can complete the most laps of Teesside in 24 hours. From when the Union Flag is waved to signal the start of the race on Saturday until the checkered flag falls on Sunday the engines are running full tilt with the only breaks being brief pitstops to fill the fuel tanks and change driver.

The event began with 2 and a half hours of practice, to let the drivers figure out which way the track goes before the racing started. As the session went on it became clear that we had an issue – despite having our quickest driver in the kart, we were losing huge amounts of time on the straights. With only minutes until the start of the race there was still no improvement, so we brought the kart into the pits for repairs.

All we could do was change the spark plugs and hope that the problem would go away. With no time for further testing, we assembled on the grid for the start.

The race began at 2pm on Saturday with a traditional Le Mans-style start. The starting drivers lined up opposite their karts, and when the start was signaled, everyone sprint-

ed across the now-live race track to try to get going as quickly as possible. Nice to see that motorsport, at least, has escaped the omnipresent hands of Health and Safety!

Sadly it became immediately obvious that the problem had not been fixed, as we dropped right to the back of the pack at the start. While we had never expected to be contending for the victory, we now knew that we had our work cut out just to not finish last. The race was, as it is every year, exhausting; several of our drivers were left with painful blisters after their hour-long stints. Due to our lack of engine power, our strategy was to keep out of trouble, try not to break the kart and spend as little time in the pits as possible. Our pit stops were impeccable; like a well-oiled machine, we got the kart in and out with great speed. This was definitely the best aspect of our performance - indeed, probably the only good aspect!

Our strategy of avoiding unnecessary time in the pits was a resounding failure; at various times during the race we had to stop to fix issues. During the night, one of our drivers decided to forget about saving the kart entirely and managed to take a tyre off the rim on a kerb. At another point, one of our engines stopped on track. There were a few spins and minor crashes as well.

Overall, not the greatest of races. But there were people with even worse runs – by morning all we had to do to not finish last was stay on track. Despite the pain of blisters, and having lost an entire night's sleep, we managed it. Imperial finished 43rd out of 44 entries (though we prefer to phrase it as coming 43rd in a race with over 200 drivers).



Spirits were high on the Saturday afternoon. The karts raced into the darkness and the sunrise beyond as part of the epic 24 hour race.



Not the greatest result on paper, but one we all felt proud of. Here's hoping for better luck next year! If you're interested in motorsport, the Motor Club is the society for you. We run regular arrive and drive karting trips, compete in the British Universities Karting Championship, and maintain our classic Mini and fleet of high-performance racing karts. Contact us at motor@ic.ac.uk if you would like to sign up! ■

Owen Heaney
Motor Club



MY FIRST TIME: IC HACK '18

A DEMONSTRATION OF WHAT IS POSSIBLE IN 24 HOURS WHEN YOUNG, TALENTED MINDS AND LITRES OF RED BULL COME TOGETHER.

Let's admit it, pizza at midnight is the real driving force behind the technological advances of the past few years. The Hackathon is essentially the culture that built the technological titans of today - Facebook, Google and Microsoft. And the annual hackathon organised by DoCSoc keeps up that spirit with IC Hack '18, which returned bigger and better than ever. IC Hack '18 only saw the list of sponsors grow, with Microsoft being the title sponsor. Over 300 students, both from Imperial and other universities got together to come up with something cool, something neat, something awesome. The only condition was that they had 24 hours to work on their projects. Some (including me) were participating for the first time, whilst others were regulars.

Gracing the opening ceremony was Theo Blackwell, London's first Chief Digital Officer. He shared about his role in realising the Mayor's ambition to make London the world's smartest city, ensuring that the capital's status as a global tech hub helps transform the way public services are designed and delivered, making them more accessible, efficient and responsive to the needs of Londoners.

At the end of the Opening Ceremony, after all the sponsors had shared about their companies and what they do, the hacking began.

The designated hacking spaces were all over Sherfield Building, and groups occupied the Senior Common Room, Junior Common Room and the Queen's Tower Rooms. The energy started off really high - with a variety of music blasting, thanks to the crowdsourced music suggestions from a collective Slack channel. The scale of IC Hack is hard to wrap your head around. How many drinks does it take to keep over 300 students awake and active for 24 continuous hours? Your guess is probably nowhere near the actual 2 tonnes that was brought in for the event.

The amount of soft drinks is not as impressive when you start considering the thousands spent on food - the menu for the weekend included Nando's, Domino's Pizza, Pret A

Manger and Farmer J. (Unconfirmed reports state that American Express called up one of the organisers to confirm that they did really use their credit card to spend over £2000 on Nando's.) Also highly popular among participants were the crepes, waffles and candy floss stalls that set up on Saturday evening.

The scale of IC Hack is hard to wrap your head around...

No less impressive were the several workshops that were held over the weekend - when participants weren't busy trying to fix their code, they were kept busy by Microsoft teaching them how to use their Azure Cognitive Services APIs, or hearing from Ocado Technology (a Gold Sponsor) about Scala and functional programming.

However, the most popular workshop didn't involve any fancy APIs or even any code. Next Jump's Sleep Class was by far the most popular workshop, with demand so high that they had to have a third run of the workshop to meet the demand. Next Jump staff walked participants through a 20 minute session of



Yoga Nidra, which left participants feeling refreshed enough to keep them going for the rest of the long weekend. Later in the night, Morgan Stanley hosted a Bar Night for the participants in the Imperial College Union Bar for participants to take a break from squashing bugs to socialise and enjoy a free drink on them.

So where did all the food and the hundreds of Red Bull cans consumed go? It went into some awe-inspired projects that surprised both students and sponsors. The teams submitted the projects that they worked tirelessly for 24 hours on into different categories, and 2 finalists for each category were selected. Each finalist group then spent no more than 2 minutes presenting and demonstrating their idea to the audience and judges, and the winning team for each category was chosen at the end of the Hackathon. Taking home 3D Printers was FPS Galloper 3000, the winner for The Best Hardware Hack category. They used Microsoft's Kinect to build a motion-controlled way to play Counter-Strike.

Winning the Best Newcomer's Hack was Feedbacker, an app that uses Microsoft's Emotion Recognition Service to gauge the excitement level of the audience during a lecture, using it to provide feedback to the lecturer. Winning The Best Web App category was Queen's Treasure, which is a web-based interactive adventure game built with Queen's Tower as its primary setting. Fascinatingly, all the art used in the game was drawn up by

the team within those 24 hours, which was definitely a surprising feat. Winning the best Mobile Category App was SugarHoneyIceTea, a hilariously named app that helped individuals track their consumption by asking them to take pictures of food and drink they consumed. Winning Best Game/Augmented Reality Hack and taking home Nintendo Switches was iSpyAI (which I was part of), a hyperlocal AR treasure-hunt game where multiple players would race to find objects in their immediate vicinity to gain points. There were also sponsor-categories, such as the TPP Greatest Impact on Healthcare category and the Accenture best Ethical/For Good Hack category.

The logistical sophistication and the level of organisation that IC Hack 18 required to run smoothly was well satisfied by DoCSoc's volunteers. Every event during the weekend started on time with very little delays, and the smallest details weren't left untouched (toothbrushes, slippers and blankets were provided for participants who wanted to catch some sleep during the weekend). The cooperation of the sponsors and the impressive lengths DoCSoc went to make this event smooth-running was evident from how enjoyable IC Hack was. As a first-time participant at IC Hack 18, I only hope for more successful hacks over the years. ■

Kapilan M
DoCSoc



An afternoon In New York

by

Shahrukh Muhammad



Landing in New York just a couple hours before the deadline for his final report worth 25% of the year; the creator of AERO TIMES recounts the crucial moments and decisions taken to ensure he would take care of his affairs back in the U.K, before starting his counselling job at a remote Summer Camp in the Adirondacks.



The Friendly Russian

At JFK Airport

As I landed at **JFK**, a realisation became even more real; in my rush to tie up all my affairs in the U.K I forgot to arrange any travel arrangements from the Airport to **Syracuse** where I was supposed to rendezvous with a camp employee that evening. Also my phone was still locked to the shady embezzlers that are Vodafone, who wouldn't unlock it for use in the U.S before I paid my three months bill, leaving me with the option of paying £10 per day for use. Luckily, I met a friendly Russian at the Airport, bound for Moscow for the match, who told me to download the MTA and Greyhound Apps; which will assist me in making my way to Syracuse.

The GDP Report

Finished on a Porch in Times Square

Even before the rush against time to finish a 1/3 of the report, sitting on a porch in **Times Square**, in 2 hours 36 minutes, with only 5% battery remaining when I clicked upload and submit on blackboard, there was equal amount of craziness leading up to it in London: the 11pm train that I was supposed to take from **Blackfriars** to **Gatwick** was delayed till 3am, inducing panic as it would only give me just under an hour for check in, baggage drop and security. However, not much else could be done, but make camp at Blackfriars and finish off as much of the Report as possible. Also the fact that I was joined by other fellow travellers who were bound for the same flight provided some much needed **consolation**.



The Pretty Girl

On the 4 hour bus ride to Syracuse

I saw her through the window from my seat on the Greyhound bus destined for Syracuse, huffing and puffing, but relieved as she made it to the bus on time. And of course, out of all the seats she could've sat on, she chose the one beside mine after a quick scan at the persons on the bus. We ended up talking as we both shared our fair share of misfortunes through the day. **Amanda** was her name. There was no element of romanticism as we both had a certain someone back home that we were trying to reconcile with. Nevertheless, the conversation made us both distinctly aware of our basic instincts; that were somewhat buried under the pile of crap that was served to us duly throughout the day.

Some Form of Conclusion

Before the real story began

As I spent the next few hours staring out the bus window at all the attractions the journey provided, while Amanda laid fast asleep on my shoulder, I contemplated all the craziness of the day, the things that were to come and the things I had left behind: My final project in disarray, my family in a middle of an emotional crisis, a certain someone that I still wasn't able to fix things up with. One thing was clear: If this was a taster of what the rest of the summer was going to be like, I would have to keep an even closer watch on all my thoughts, all my words and all my actions, if I were to come out of this summer with my integrity intact. And I was right to prepare myself like that; the oncoming **nine weeks** would push me to my absolute limits: Physically, Spiritually & Artistically. ■

To be Continued in AERO TIMES III

AN INTERVIEW WITH *Becky Neil*

**Becky Neil:
ICU Deputy
President
(Welfare)**

Students, mental health, and the Union. What is Imperial doing to improve the wellbeing of its students?



Mental health awareness is on the rise, but there is still more that can be done. The Deputy President (Welfare) of ICU, Becky Neil, is pushing the Union to discuss and destigmatise the topic of mental health even more. *Guildsheet* Editor Thomas Cross caught up with Becky to find out what the Union are doing to improve the wellbeing of students.

So, what do the Union do in general?

The Union is one of the only ways which College will listen to the student voice. Individual emails sent by students about issues can often get lost and left unread. We allow students to be heard. The Academic and Wellbeing Rep networks are some of the best ways to voice your opinions, and concerns brought up to Academic and Wellbeing Reps are discussed at length. In other words- students are really able to make a change. It can be difficult to see what we do unless you sit in the meetings, so hopefully I can shed some light on what goes on behind the scenes.

Why is it so important?

Across the UK, other unions protest by shouting and waving banners when they have a problem with the way something is run. However, if we want something changed at Imperial, the process is arguably more civilised - we sit around a table and discuss, this is what has historically been our “Special Relationship”. We determinedly negotiate with College, telling them why things should be changed and ensure that students and faculty see eye-to-eye.

Imperial is comprised of over 18,000 students, all of whom have different opinions. The College don't always know what to do- they want the students to tell them. Sometimes it can be hard when staff in the meetings ask me “What do the 18,000 students want?”. We want to represent the best interests of everyone. It's really important to engage with us, so we know what you want. You can either get in touch with a rep, volunteer in the Union or contact us via social media.

Why is the Wellbeing role so important?

By promoting the word “wellbeing” so much, people start to understand its importance. It's a real thing that we need to keep talking about. I am currently working alongside College and CSPs (Clubs, Societies & Projects) to drive a massive change. There is a stereotype that, at a world-class institution such as Imperial, students should feel pressured by work all the time. Some students are lead to believe that “if their degree is not hell, they're not learning enough”. This is simply not true- just because we are a top university does not mean that the mental health of students should be compromised.



We also want Imperial to have a more community feel; people feel alienated and as if they don't belong here. We believe this is mainly due to most students coming from backgrounds where they were the best in their class, for example. Competition between students can also breed toxicity; we can be too scared to ask for help because we believe no one else is struggling.

[Wellbeing] is a real thing that we need to keep talking about

What would you change about the Union?

Representation. I feel like there is not enough diversity within the main five Officer Trustees, although it improves when you include the Felix Editor and the ICSMSU President. There aren't any postgrads, one person of a BME background, and one international. The male to female ratio is good though- there are two women.

What are your feelings on departments having "Women's Tutors"?

I think it's a good idea. It's important that students have people that they feel comfortable talking to. For females, they may feel more at ease with other females. There just so happen to be fewer female personal tutors, so directing students to these tutors may give them that extra confidence they need to talk about their problems.

How can someone get involved with the Union?

There are a lot of ways to get involved. Firstly, you could become an Academic or Wellbeing Year Rep. In one of these roles, you would collect feedback from peers and alert staff of these issues. There are Academic and Well-being Representation Networks, so the network of reps will work across departments to communicate best practices. As a rep, you would attend a number of meetings with both College and Union Staff, together finding student-centric solutions to problems.

If a role like that is too much commitment and you just want to get your voice heard, you can contact us via email or tweet us. (Emails and twitter accounts are at the end of this article). Alternatively, you can pop into the office for a chat; we're based on Level 2 of the Union Building.

How can someone who is struggling with their mental health get help?

For less urgent matters regarding the course, you can contact your Year Reps. There are also mindfulness sessions which are offered by the College Chaplaincy (whether you're affiliated with a religion or not) For things which are more urgent or serious, you can contact college personal tutors, or the Imperial College Health Centre.

If you are struggling with any of the issues mentioned in this article, don't be afraid to seek help.

Imperial College Health Centre:
020 7584 6301

Samaritans: 116 123

Nightline (6pm-8am):
Phone: (+44) 207 631 0101
Text: (+44) 7717 989 900

Chaplaincy: imperial.ac.uk/chaplaincy

Find out more about Imperial's counselling services at: www.imperial.ac.uk/counselling/

Imperial College Union:
Level 2 Union Building
020 7594 8060

Becky Neil: Deputy President (Welfare)
dpwelfare@imperial.ac.uk
Twitter: @ICU_DPW

Find out what your Officer Trustees are up to:
imperialcollegeunion.org/officers ■



SAFETY FIRST

— ALWAYS USE PROTECTION —

WELFARE SUPPLY JUST ONE KNOCK AWAY
PICK THEM UP FROM THE CGCU OFFICE (CAGB 350)
OR EMAIL cgcuwelf@imperial.ac.uk TO ARRANGE A PICK UP
(ALL DONE IN DISCRETION)

SOC SPOTLIGHT: Drone Soc



In a slightly extended Soc Spotlight we focus on the Imperial College Drone Society - Dronesoc. In Issue 1 of "The Bolt" we featured the group, which were founded mere months ago. Now at the tender age of one it appears that things can only go up and up (no pun intended) for this group of aerial robotics enthusiasts. With the backing of Autodesk, an industry standard Computer Design firm and the support of Aeronautics Aerial Robotics and passionate UAV Professor Dr Mirko Kovac there seems no ceiling (again no pun) to their achievement.

Hi, we're the Imperial College Drone Society. We're quite new – in fact we are just over a year old. In this rather short span of time, we've been working diligently towards our goal: building London's leading hotspot for drone enthusiasts. And if you're not a part of us yet, do consider gaining access to industry events, exciting projects, drone-building courses, simulator sessions and whole bunch of fun flying for less than the price of an average London pint - and I can guarantee you more enjoyment.

We are probably most famous well known for QuadBasics – Imperial's only aircraft-building course available to students. If you haven't heard of it, it's a 6 week course that takes



you through the basics of building a drone, and tickets usually sell out in minutes. I mean, who doesn't want to learn to build a quadcopter? We also do semi-regular flying sessions (weather allowing) at Wormwood scrubs, always announced on our Facebook page.

We also do love doing big, exciting events – the last one was called Print and 'n' Fly and it was truly big and exciting and a bit of a pain to organise. We chose 10 finalists teams to design and fly a 3D printed mini-drone – it was a stunning success. There were two very self-explanatory categories, creative and racing, and the winners ended up pulling off a **FLYING QUEENS TOWER WITH CURLY FRY ARMS** and a six-motored monstrosity with two forward-facing propellers. What else did you expect from Imperial students?

A shoutout to the winners, finalists and all who participated (all the submissions blew us away!). It was a lot of fun for you, me and the rest of the incoming and outgoing committee, and we look forward to Print 'n' Fly 2 next



**The winner:
FLYING QUEENS
TOWER WITH CURLY
FRY ARMS**

term! We've also done a lot of had an amazing time doing outreach – Last year we took enthusiastic high school students through the construction and racing of brushed quadcopters at the White City Harrow Club. And just this April, two of our members (Tex and Nicole) have been in Birmingham teaching primary school kids how to make little drones.

We've been a presence at quite a few Imperial Fringe events, giving many people their first ever taste of multirotor flight and the fun of drones.

These events will hopefully be a frequent occurrence thanks to our fantastic industry links and our dedicated members, and we hope our



new members will get as much out of them as the previous members did!

Speaking of the near (and slightly more distant) future, there are many exciting opportunities for you to get involved with our society very soon! One such project that you can sign up to immediately is our silent drone project - is it a stealth drone? A mysterious package delivery bot? Or a new way of getting snoops for Felix? The only way to find out is to drop by the White City Invention Rooms on

Another highlight was our collaboration with the Imperial Sailing Club at the Imperial Icicle and our Varsity event with University of London Sailing Club. Thank you so much to Nath Davey and Imperial College Drone Society for the coming to film us and putting this amazing footage together an awesome montage of drone footage from the event!

For the next academic year, alongside the exciting things we already do, we'll be launching a couple of new initiatives involving (without giving too much away) an adaptation of our QuadBasics course that begins with P (hint: synonymous with a two-dimensional, infinite surface), and our version of a LAN party – more details will be dropping as soon as they become available. For regular updates, do follow us on our Facebook page or subscribe to our newsletter. ▶

Anyway. We're the Drone Society.

Jianxuan Chen
Dronesoc Committee



Drone Soc

featuring Tex



A keen business intellect, Tex displays unwavering compassion to his fellow man. Spreading a message through his raps: *TEXmusic*

So, Tex what's the buzz (too many puns) and vision with DroneSoc?

We want to inspire students and show them that engineering is not just about metal working and loads of nasty calculations. It's about creativity, innovation, and out of the box thinking, and Autodesk and Rapid Electronics is helping us do just that. Seeing your own creation fly feels really good!

Together they came up with a STEM challenge called "Airgineers", where students from high schools would be taught how to design and make their own drones using the kit that we provide. The idea is to design the body chassis in Autodesk Fusion 360, 3D print them and assemble with the electronics kit. For now we have 2 classes: Micro drones, small and nimble and a bigger sized drone called the "3S". There are 8 competitions happening all over the UK during the summer to find the best drone design.

A major force within the Imperial College Drone Society, *Guildsheet* caught up with Tejasva Malhotra (Aero II) AKA Tex. From a modest Indian upbringing, the charming, charismatic and cool exterior presented by Tex rarely does him credit. Perhaps the best summary given is that on his LinkedIn: 'Aircraft enthusiast. Rapper, producer at *TEX Music*.' Our editor, caught up with him to talk vision, software and the future.

Very impressive! Having a company like Autodesk on board must be pretty fly - what else have you done with them?

I worked with Autodesk in Birmingham this Easter break at the MACH Conference, for a whole week. I was there with Nicole, another driven first year aeronautics student at Imperial, and Mark Chester; a certified trainer from Autodesk. The MACH Conference is Europe's biggest event for companies to show how their products can make manufacturing easier or more efficient, but they had a small education side where companies like Autodesk showed what they were doing to get more students involved in engineering. It's a great thing I think.

We assembled the micro drones, the parts of which were provided by Rapid Electronics. At the event, we taught students, from 11 year olds to 19 years olds, how a drone functions, the physics and the engineering behind aerial robotics, and how to fly them yourself! We had a safety net area, for health and safety reasons, where we were allowed to fly our drones. We had 10 drones that we assembled, and a maximum of 3 were allowed at any given time. At times we were flying and repairing drones simultaneously, it was a great sight to see.



We had groups of secondary and high school students that were introduced to the idea of Airgineers, and they had a great time flying the micro drones. We even caught the eye of the BBC media team and the event was featured on BBC breakfast! Nicole and I were winners of the creative category of a drone competition "Print n Fly" that took place at Imperial last term, hosted by DroneSoc and sponsored by Autodesk. Nicole's team had designed a fusion of the Queen's Tower and curly fries, two of Imperial's most iconic things!

laughter Ah, that's class - so Autodesk and Fusion 360 is an essential tool then?

Definitely, as all the CAD programs go I'd say that Autodesk and Fusion 360 is The Program for the Modern Engineer. Like a lot of people say I'm not working wth Fusion because its Autodesk I'm working at Autodesk because of Fusion 360 - the program is just designed in that way. Yeah, it's good at what it does and the atmosphere is just so friendly - for me it's somewhere you want to work.

The future's looking pretty good. Anything big planned?

I designed a futuristic flying car concept. Nicole and I will be going back to our respective high schools and will be giving them a talk about drones, and teaching them how to design, and assemble their own drones. From next year, we will also be working on other projects from Autodesk.

As Course Officer of Imperial's DroneSoc, I will also be teaching a few courses at Imperial and together we will be doing loads of exciting new projects! Rapid Electronics has also agreed to sponsor the electronics for my new versions of the flying car, which I will start working on after my exams.

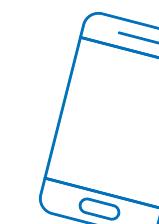
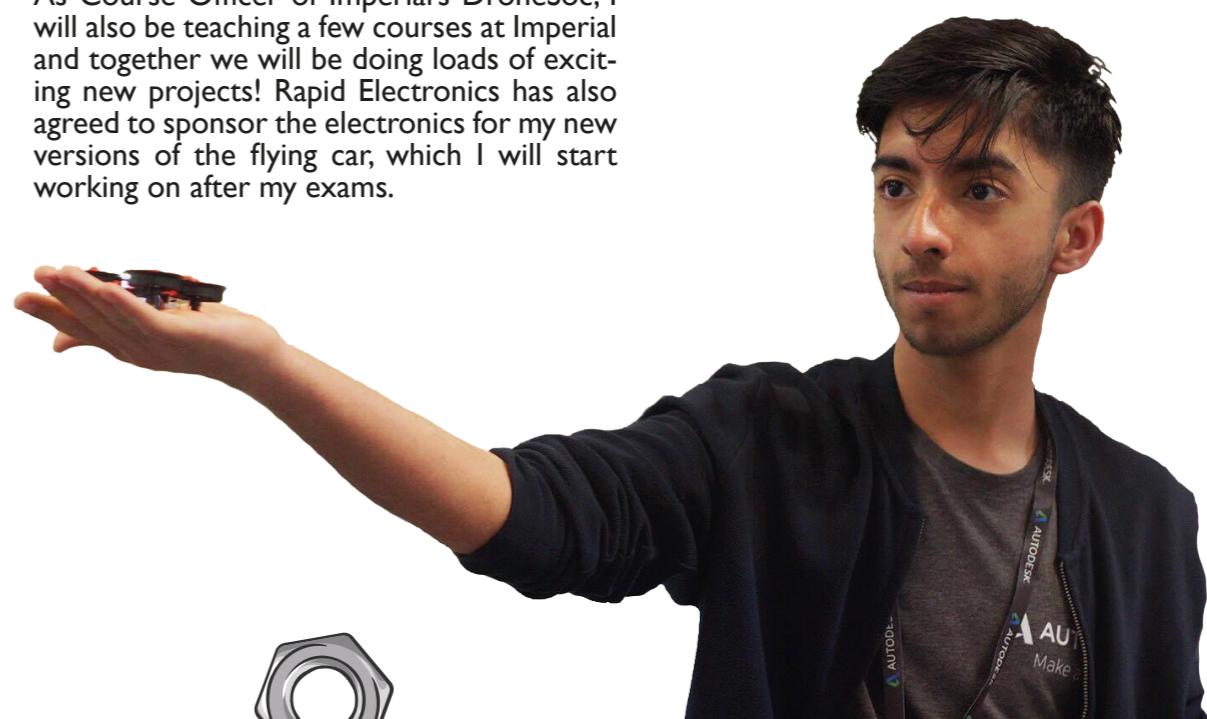


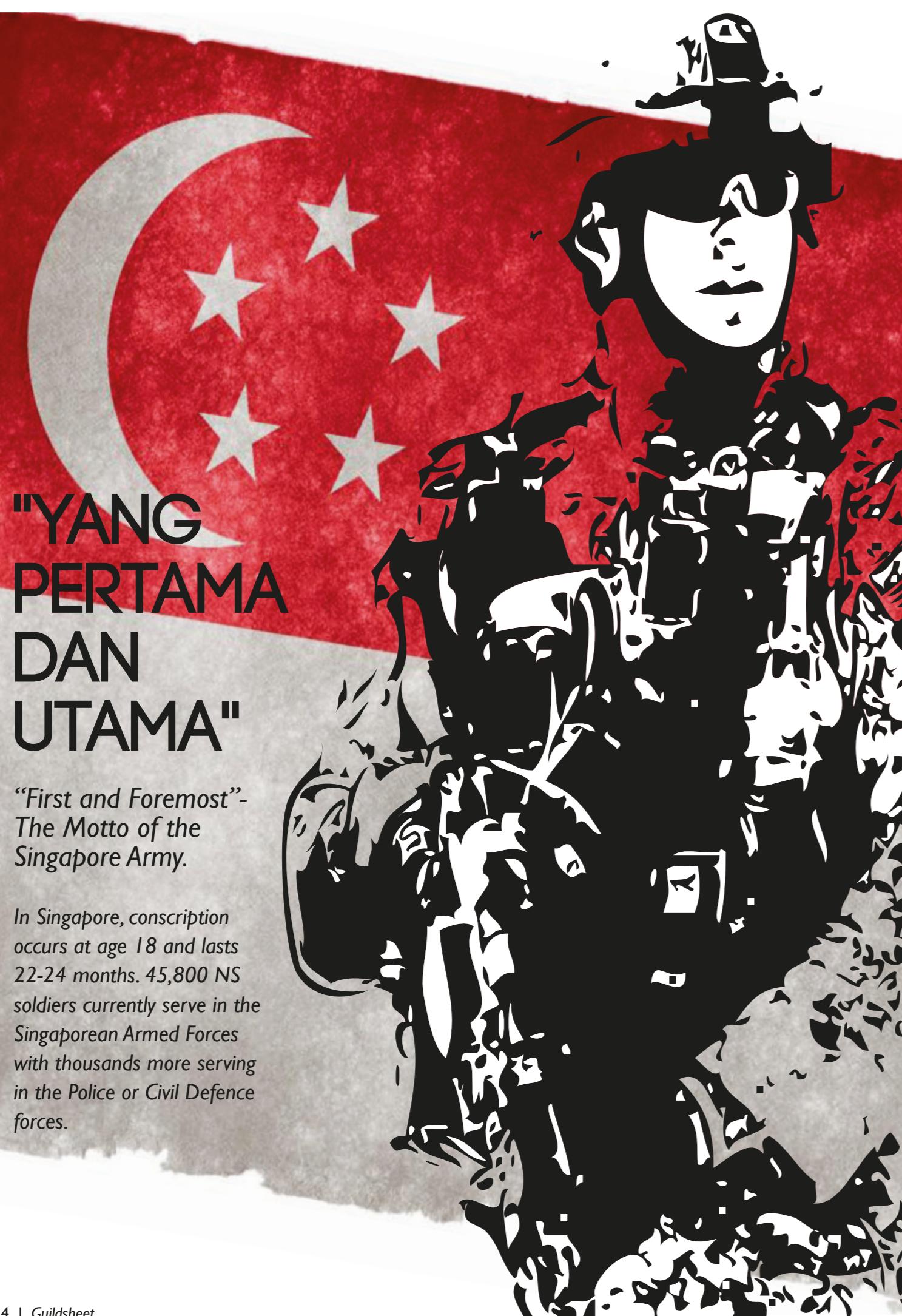
Tex and Nicole at the MACH Conference.



(As for other things Tex just smiled - a small glint in his eye)

Yeah there's a lot in the pipeline - just watch this space. Great things are coming. ■





"YANG PERTAMA DAN UTAMA"

"First and Foremost"-
The Motto of the
Singapore Army.

In Singapore, conscription occurs at age 18 and lasts 22-24 months. 45,800 NS soldiers currently serve in the Singaporean Armed Forces with thousands more serving in the Police or Civil Defence forces.

TO SERVE, TO LEAD

TALES OF NATIONAL SERVICE IN SINGAPORE:

The UK stopped National Service (NS) in 1963. Before that, from the ages of 18-21, all males were required to serve in the Armed Services for 18 months. In some countries, however, service is still required. The Republic of Singapore is no exception; 'boys become men'. Here are their stories.



Andrew Ng
(42nd Singapore Armoured Regiment)

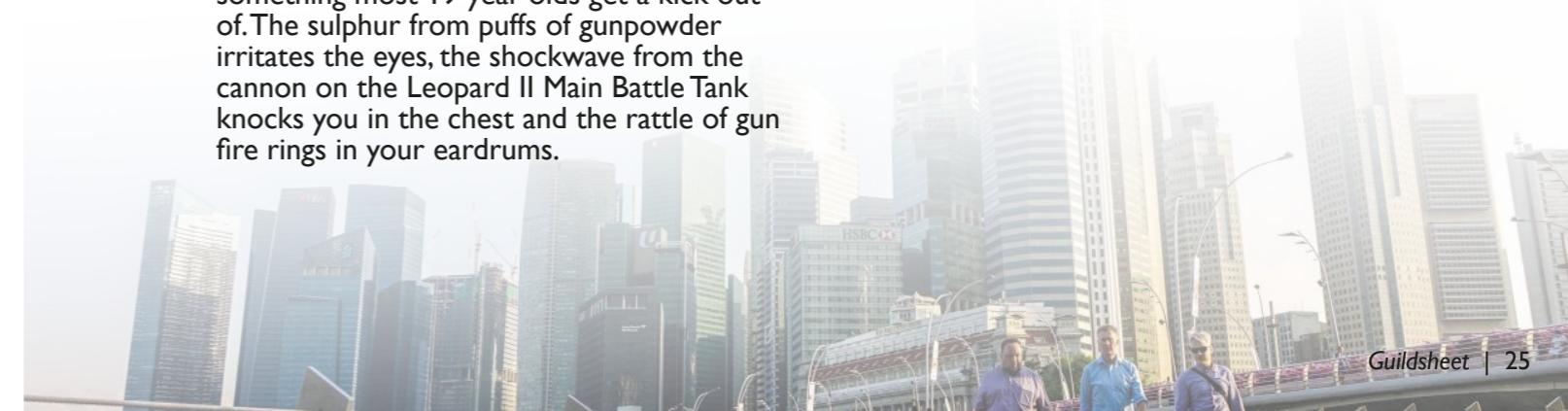
22 months. That is the amount of time it takes to complete 2 academic years here at Imperial. It was the amount of time that I spent in the Singapore Army. I served in the Armoured Infantry, operating alongside Armoured Fighting Vehicles and Main Battle Tanks.

I often get asked, "What was it like serving in the army?". Loud, dirty and tiring. However, at the end of the day, I got to blow stuff up, something most 19-year-olds get a kick out of. The sulphur from puffs of gunpowder irritates the eyes, the shockwave from the cannon on the Leopard II Main Battle Tank knocks you in the chest and the rattle of gun fire rings in your eardrums.

These are just some things that no video game, documentary or book can hope to describe. Every person who has served in a combat unit will have his definitive moment, a moment which he remembers his stint in active service by.

For me, this was during the last night of my final multi-day training exercise. A combat march that was planned to last 2 hours in the pitch darkness of the night dragged on for longer. Low on rations and water, each man burdened with gear, my company perched atop a hill. We watched the sun rise over the objective we were assigned to capture. A raid that was planned to occur in the night became a daylight assault. Improvising as we must, eventually we achieved our objective, bringing to an end an arduous mission.

Resourcefulness, resilience and resolve. These are what I took away after 22 months. ►



Xerxes Chong Xian
(On his experience of Basic Military Training)

A typical day starts as early as 5 in the morning, when the bunks experience a flurry of activity as recruits scramble to wash up and assemble. Commanders do not take lateness lightly, with punctuality measured down to the second.

Push-ups, pull-ups, sit-ups, and timed runs are the bread and butter of any day's activities. I recall fondly of my company's pre-meal routine, where each recruit had to complete a minimum number of pull-ups before the platoon could proceed for meals.

“ Each recruit had to complete pull-ups before meals ”

With Singapore's strict gun laws, most Singaporeans have never seen a gun in person, let alone handled one, making the Weapon Presentation a momentous occasion for each recruit.



Recruit Xerxes during Basic Military Training



Corporal First Class Xerxes at the end of his service

Performed under the cover of darkness, symbolically to shield an army's assets from the prying eyes of the enemy, each recruit is presented with the iconic SAR-21 assault rifle. Affectionately addressed as our "wives", a soldier is rarely seen without it by his side.

The dreaded field camp represents the climax of Basic Military Training. Recruits will head out to the jungle to hone their individual fieldcraft, where they would be at the mercy of the elements. Torrential downpours, blistering tropical sun, dense undergrowth and humidity so palpable it feels like your thickest winter coat is strangling you. Digging of shell scrapes (which doubled as our beds), combat movements as a section and situational tests results in a bone-tired, mud-encrusted soldier at the end of each day. Encounters with snakes, scorpions and the occasional wild boar/s add to the flavour of the experience.

My nights were spent comfortably nestled in my shell scrape, which resembled a bathtub of brown soup, clutching my rifle as I attempted to come to grasp with my very moist existence. Being far from civilisation, one is enthralled by the millions of bright stars dotting the night sky with a tilt of the head. This coupled with the tranquility of the rainforest and the lull of its nocturnal inhabitants offered a brief respite from the most arduous portion of basic training. ►



Ramana Sabapathy
(Human Resource Institute)

Many people, on hearing that I'm from Singapore, say: "Wow, so you had to serve in the army eh? What was it like?" Here's my story of National Service.

Fresh from the intensity that are A Levels, all Singaporean males are required to serve a (maximum) two-year-period known as National Service. I started my service in January 2015, with the standard 'botak' haircut (colloquial Singaporean term for a completely shaved head). ►





Despite the tough training, recruits still have fun

**Sean Chai
(OCS)**

The rest of the articles would probably describe the “tough times”, so here’s my take on the funnier side of things. Here are the top 2 LOL moments in my NS life.

Ambushing the enemy with his pants down (literally): Sometimes the call of nature is just too strong and when you’re out in the wild, the jungle is your toilet. Trying to conceal our movement, we slowly crawled towards the enemy position taking care not to alert them to our presence. Once we were within firing distance, we readied our rifles and tried to spot our enemy through our scopes. Expecting a highly camouflaged entrenched enemy position, little did we expect 2 bare bottoms facing us. Needless to say, we caught them off guard and completed the mission successfully.

Jungle chef: Sometimes the lack of food messes with our minds. Infantry officer cadets go through a 3 day survival training course where they learn to live off the land and build shelters from available materials. During this time they are required to demonstrate certain skills that they have been taught, including the identification and preparation of plant food, in this case the Simpoh Ayer leaf. Typically, the leaf is prepared for consumption by boiling. The lack of food must have gotten to one particular cadet because he decided to roast the leaf, placing it directly above the fire, almost setting fire to it and the surrounding structures he built

Despite national service being a compulsory 2 year thing, on the brighter side of things, it has left us with these fond memories. Also, they give you free food, clothes and housing, plus the occasional allowance. What’s not to like? ■

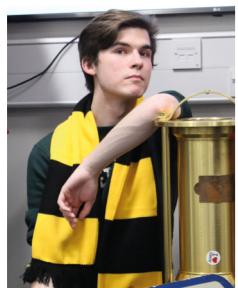


stay
SAFE

TAKE A FRIEND ALONG

If you’re walking home at night,
don’t walk alone and stick to well lit, main routes.

If you go out with friends, stick together.
Tell each other where you are going and who with if plans change.



MASCOTRY UPDATE

AN INSIDE ACCOUNT OF THE TWO RAIDS THAT BEGAN THE 2018 MASCOTRY WAR

Once widely practiced amongst the constituent Universities of the University of London the Sport of Mascotry is alas now only practiced by the constituent unions of Imperial College. Dating back to the early 1900s, the sport/charitable activities sees each union have at least one “Mascot”, an item/valuable keepsake which it must try to defend whilst subsequently aiming to steal the respective mascots of the other unions. Once violated, the mascot can be held random by the successful union.



Throughout the year the CGCU (as all good unions should) spy, plan and plot to locate and capture the Royal School of Mines’ Davy Lamp, the Royal College of Science Union’s Theta Thermometer and the ICSMSU Pheonix Costume. But, this is not as easy as it seems! Each mascot is protected by a mascot bearer, who vows to guard the mascot with their life... Late one October night the RSM union happened to “leave their door open”, simmilar to how the Scientists left their cupboard open later the week. As Tom Bower, CGCU Secretary told Felix - The guilds had begun this years game of mascotry in avengence of last year.

The City and Guilds College Union (CGCU) have stolen the Davy Lamp and a range of other worthless memorabilia from the Royal School of Mines Union (RSMU) in a raid to retrieve one of the CGCU’s most famed mascots, the Bolt. Last Saturday, the CGCU host-

ed their Annual Welcome Dinner aimed at freshers and thirsty sharks at the Millennium Gloucester Hotel, proudly displaying their two mascots throughout the night: the 29kg (64lb) solid bronze Spanner and the 31kg (68lb) Bolt. Several hours after the event concluded, the

Bolt was reported missing to members of the CGCU committee by President, Andrew Hill. In a clear show of bravado from the CGCU, the Bolt had been left unattended within the Union building for a substantial period of time. Unsurprisingly, it was then swiped by an RSMU member, despite inviolacy.



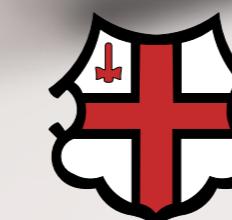
After a cryptic message from the RSMU President, Marta Wolinska, reading “The Bolt is in our office”, was decoded by codebreaking Computing students in the CGCU carried out raid on the RSMU office shortly after dusk on Monday evening. It is unknown how the intruders gained access to the room, but one concerned Materials lecturer reported seeing a group of shifty students dusting white forensics powder over the door handle. Another spectator remarked that the group simply “walked straight in”. There has been no official communication from the CGCU on the means of entry as of yet.



Later on Monday night, a series of compromising images were “leaked” online by the Memperial Facebook page, continuing their six-month trend of not actually posting any memes. One photograph of the culprits posing as Royal College of Science Union (RCSU) members received criticism from the RCSU’s ex-President, Michael Edwards, who said, “It’s blindingly obvious that this was a false flag – the RCSU is completely incapable of stealing mascots”. Not long after, a second image was uploaded purporting to show the real perpetrators: a diverse subset of the CGCU committee.



The CGCU is yet to issue an official ransom note including demands, Mascot pundits speculate that the CGCU may ask RSMU members to drop out and take real degrees instead. ■



Diversity in Engineering

Join CGCU and DoCSoc for a panel and networking evening with high profile engineers representing diversity in engineering!

**Thursday 29th November 6:30pm
Huxley 213 (Clore)**



BECOME A SUPERMODEL TODAY.

We are looking for 5 models from our own Engineering faculties to feature in our Merchandise Campaign.

Successful candidates will receive free stash!

Sign up now and register your interest by mailing guilds.regalia@ic.ac.uk or visiting cgcu.net/enter with a short statement and a picture by the 5th of December 2018.

FOR MORE INFO



SEND YOUR APPLICATION



**Are you passionate about Fashion Design?
Do you want to see your work on campus?
DO YOU WANT TO WIN A £50 AMAZON VOUCHER?**

To celebrate engineering at Imperial, send us your vision for T-shirts, Sweatshirts or Trousers designs which encapsulate the essence of CGCU. The incorporation of our logo is recommended in your designs. The winning design will be made and sold to CGCU members (4200 undergrads), and the winner will also receive an Amazon voucher!

Submit your designs **by the 30th of November** in PDF or JPEG format to guilds.regalia@ic.ac.uk or go to cgcu.net/enter. All designs will be judged by our the committee members and results will be announced in December.

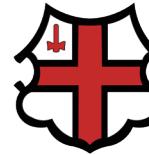
We can't wait to see your designs!

* The CGCU will hold all rights to the designs once you enter the Regalia Competition.

FOR MORE INFO



SCAN HERE TO EMAIL DESIGN





Design Engineering Debut Showcase

Several months ago, the Dyson School of Design Engineering had their first ever showcase hosted in their new, dynamic and beautiful creative space at 25 Exhibition Road. On the final Friday of term, while other departments were getting ready for their Easter holiday, the Dyson School was anything but winding down. The showcase ran through the entire evening and 25 Exhibition Road was crawling with hundreds of

people including guests from industry, students, faculty, families, and friends.

As a new department going through rapid growth and development, the showcase was titled Evolution. The theme reflected the continuous changes and improvements that were being made by the school as a whole and by individual students forging their own career paths.

From the first year MEng work displayed on banners in the stairway, to the researchers on the top floor working on bleeding edge design and engineering, by walking through the gorgeous new building, guests were able to vicariously experience the journey of a design engineer.

The 2018 Design Engineering Showcase was only the first of many to come. In the future we will not only see the new Spring Showcase tradition, but also watch the Dyson School's culture of innovation, collaboration, and enterprise spread beyond the department and beyond the college.

See more photos on Instagram @imperialdessoc



CGCU FESTIVAL 2018

An evening of drinks games and celebrations

A slow Thursday night last year saw some 200 people of the Guild liberate the Union Bar at the South Kensington campus for - with over 200 free drinks given out and many memorable photos. Our editor Tom recalls with fondness last year's Festival.



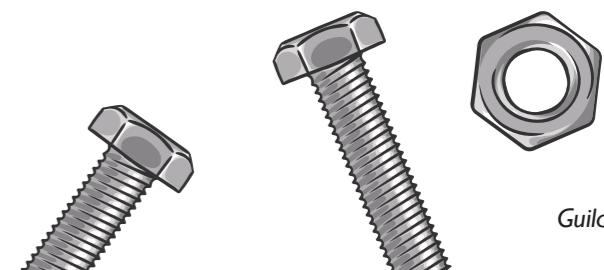
Coco Pops, as well as being a tasty and non-nutritious breakfast cereal, are not meant to be eaten whilst running across campus.

That's pretty much the first thing I remember about last year's Annual CGCU Festival - the particular run in question was part of a series made by myself and our then-Vice President Andrew Hill, to transform the Union Bar into the venue with Guilds regalia. The evening was well spirited, most of the guildspeople there were 4th year mixed Eng or 1st year MechEng. The evening was set up after the historic CGCU football tournament finals which saw "Triple E FC" snatch the title after the 16:00 kick off. The actual challenges and games began at 18:00 with a grand introduction from the then President Claudia. Shortly afterwards Ross Unwin mounted a table to summon the mascots and congratulate the football winners.

The feeling only paralleled by listening to The Smiths

Now, I'm not going to say the evening was utter carnage but there were curly fries aplenty and the drinks tokens were so good that even the RCSU's then-president Michael Edwards was treated on the Guild. Pretty much all of my memories of the evening were behind the Guilds Camera, like a mad French photographer in a Paris underpass I shot everything in sight - a tad carried away I eventually removed the lense cap and got a few hundred blurry images.

The competitions staged were vast - donut eating, curly fry eating - notice a common theme emerging here? Then there were the truly stunning images that came from the after 8 contest - How long can you balance an after 8 on your forehead? The record was over 3 minutes set by James Medler our new DPCS by which time what was left of the mint, a molten wreck, had covered the winners face.



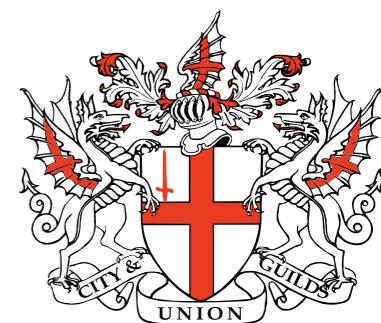
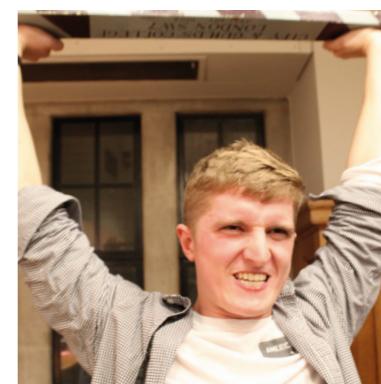
There was also the Spanner Lift Challenge, a new record again set by First Year Aeronautics at 4 minutes 20.

A traditional break of a double bacon cheeseburger with curly fries was a well needed release at the evenings' half way point. (Indeed the only better one was later in the year where the Guilds committee stormed the RCSU colours evening and spent their bar tab... whoops). As the night went on the more guildsmen arrived, notably from the sailing club whose AGM ended a few hours earlier. Notably "The Bolt" received its very first proofreading from the former RCSU president, Micheal Edwards before being used as dart practice. The next targets were the committee members on last year's Spanner.

By 20:00 all the awards had been read out - including the "Guess the number of sweets in the Jar contest". The correct answer was 311 - and this would have been the winning answer if senior guildspeople hadn't eaten some of the sweets that were in the jar reducing the total. As the evening ended the merry guildsmen departed leaving a core of Committee members to clean up and take the assembled guilds paraphalia back to our office.

All in all a very good evening; merry men (and women) and music. For me it's that feeling of camaraderie that I find happens too rarely in the modern world. The feeling only paralleled by listening to the Smiths or discovering strange new concepts you never knew with friends at an ungodly hour in the morning. ■

*Tom
Thomas Cross
Editor, Guildsheet*



Aero II Members wiped the floor for Spanner Lifting



Got an imminent deadline and need Engineering knowledge?

Check out our mind altering and consciousness expanding recommended Youtube channels and videos. With insights into the way the mind works as well as bridge, planes and trains.

 Real Engineering
cgcu.net/gs/realeng
Rating: 3.5/5

 VSauce (science)
cgcu.net/gs/vsauce
Rating: 3.14/5

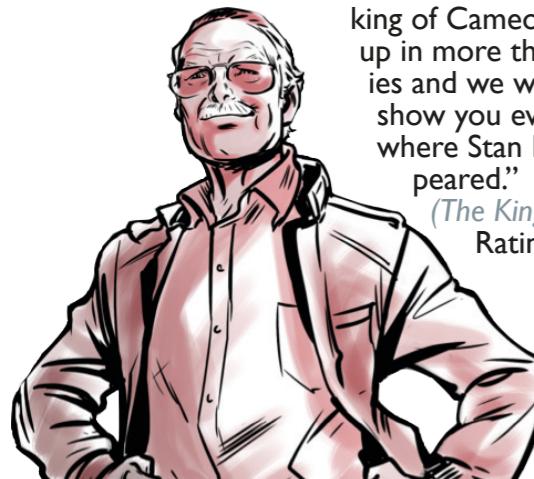
 CrashCourse
cgcu.net/gs/crachcourse
Rating: 2.7/5

Remembering Stan Lee
Every Stan Lee Cameo Ever
(1989-2018)

▼ cgcu.net/gs/stanlee

"Every Marvel fan knows who is the Stan Lee. The king of Cameos showed up in more than 30 movies and we want to show you every scene where Stan Lee appeared."

(The King of Comics)
Rating: 5/5

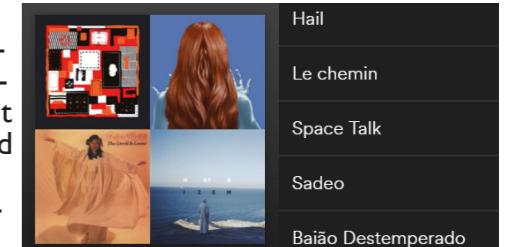


UNDER THE SKIN

with Russell Brand

Are you in need of inspiration or are you moderately disillusioned with things?

If you've answered yes, or no or you couldn't care less then our recommended playlists are for you. This issues selection comes from long and late nights out where your mind begins to roll away and your thoughts drift to the tribal aspects society has lost and why you even bothered to wake up.



"Music you have to pretend to understand" by Theodore Lamort de Gail cgcu.net/gs/musicpretend

Rating: 3.9/5

"This is The Smiths" Spotify Playlist
cgcu.net/gs/thesmiths

Rating: 4.1/5



Editor's Choice: Podcasts

A relatively new feature but a must have for students - podcasts and reading. Now I know what you're thinking - in a palace of science what good does morality and philosophy have? Well it might just be the best thing to pass the time whilst doing your washing on a Friday night.

"Under the Skin"

Russell Brand

The Guardian puts it best: 'The Revolutionary returns as Mr Reasonable' in an epic (currently) 52 part series Brand, with strong ideas rooted in love and compassion, limps his way through his MA in Religion in Global Politics by interrogating and interviewing academics and the famous. From Jordan Peterson to an Imperial Professor, Yuval Harari and a leader in plant based consciousness, watch - or rather listen - to a man I once doubted spout wisdom and knowledge to bring real social change. "Under the Skin: Have a smell - don't eat it"

"My new product, 'Under the Skin' asks: what's beneath the surface of people we admire, of the ideas that define our time and of the history we are told. Speaking with guests from the world of academia, popular culture and the arts, they'll help us to see the ulterior truth behind our constructed reality & Have a laugh"

Personally despite the apparent left-leaning nature of this series I rate it highly. It's funny and charming as well as being exceptionally informative of current political and social ideas, perhaps it might just change the way you think as well?

cgcu.net/gs/skin
Rating: 4.7/5



YOUTUBE SHOWCASE: Constança Rosas

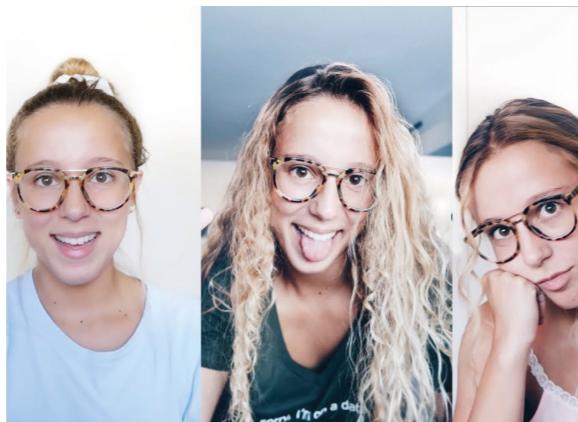



4 teenagers being stupid



Guilford, Portsmouth and Crazy Golf

Follow me and my friends on one of the most famous hikes in Portugal! Spoiler: we are too lazy for this!



Being a Resit Queen

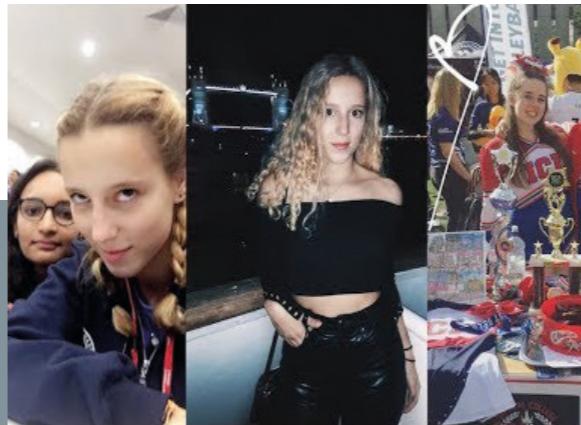
A diary from day one of revision to sitting the exams. Well, studying in August does suck so I made a video about it!



Sometimes it's okay - you don't always have to know what you're doing...

Guildsheet focuses on Constança Rosas this week. As well as being a second year Aeronautics student, Linstead Hall Senior and Vice President of Imperial's Cheer-leading Club - Titans, Constança is also an Imperial blogger and YouTuber. Covering and vlogging about her time at Imperial here are our recommended picks. ■

▼ cgcu.net/gs/constancarosas



Freshers 2.0

Two weeks of me finally doing Freshers right and being of age during the most fun part of the year!
And honey, that is the tea!



The Sun also exists in London

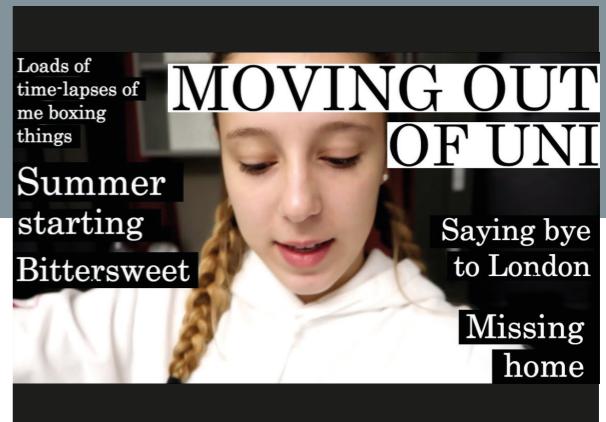
I was told the Summer was also a thing in England, "a week long thing". I saw the sun while I was in London, Once... It does exist here, but I like the snow better.



10080 minutes



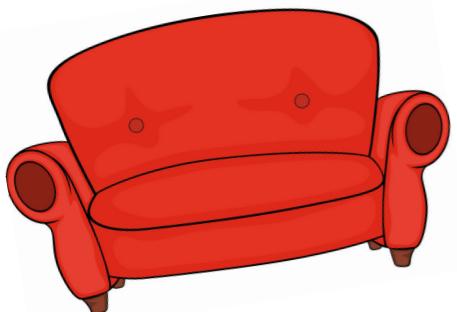
A short video series explaining how my weeks at uni and home are different. It's weird how 10080 minutes boils down sometimes.



Moving out of uni | The end of first year

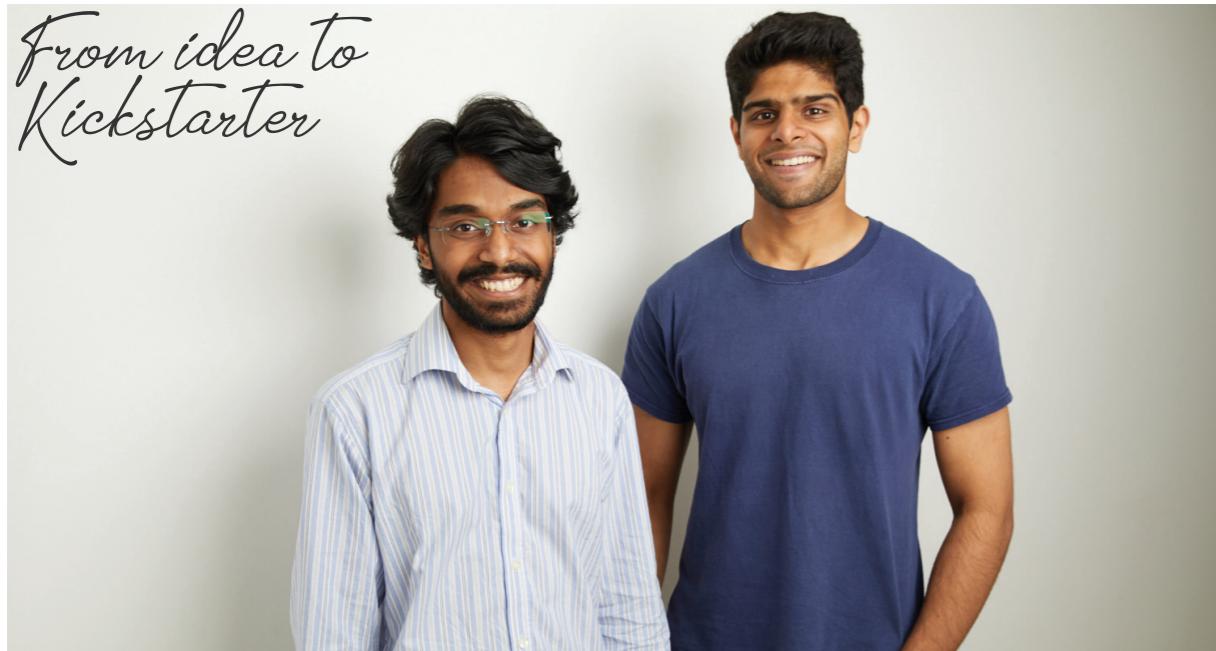
A video full of time-lapses of me boxing and packing all my stuff ready for the journey home!





ON THE *Red Sofa* WITH EMIT

From idea to Kickstarter



On the red sofa in the CGCU office are Stephen Titus, a MechEng graduate, and Thushaan Rajaratnam, a 4th year MechEng student.

They reminisce about how they first came up with the concept for the emit smartwatch, a productivity device which counts down to events and deadlines. "We lived close to each other and whenever we walked back home late at night we'd discuss all the things we'd want to do. But we'd always come back to the common excuse of 'oh, we don't find enough time so we shouldn't really beat ourselves up over not being able to do the things we want to do... apart from uni work,'" says Stephen. Thushaan responds, "I was actually walking back with a friend of mine and I was like 'wouldn't it be a really good incentive if you woke up and every day you just saw the seconds tick away?'". At first we concluded that's really grim... but then we tried it with shorter-term goals like a report in a week's time. We made an app and tried it out on our watch and it helped us with day-to-day stuff."

I guess the best way to think about this is: it's a digital sticky-note.

The concept seems simple enough; changing the wearer's perspective on time to make them more productive. "If you look at time as a depleting resource rather than something that infinitely moves forwards, you tend to value it a bit more," remarks Stephen. "A watch works because it's on you all the time—you don't have to open an app on your phone, it's always reminding you of things you have to be doing."

They hold up their watch prototype, a simplistic black, blended-body watch. The time is displayed in white, and can be changed to show countdowns to events. ▶



emit

Change your perspective on time.



KICKSTARTER · SMARTWATCH · TECHNOLOGY

time | emit

Change your perspective on time.

FEATURES

Day/Night Cycle



Calendar Events



See Progress



Multiple Timers



Phone Sync



Standard Time



2 Day Battery



Day/Night Cycle: Shows countdown to start and end of day. Tap to effortlessly see the next immediate event on your schedule.

Calendar Events: Customise countdowns to last from seconds to years. Multiple countdowns to most important events / goals / look-forwards.

See Progress: Set start and end time of a task. Intuitive representation of your progress.

Multiple Timers: Ability to create many timers. Easy timing of countdowns such as breaks, meetings, exercises, etc.

Phone Sync: Simply select an event on your phone calendar and emit syncs automatically via Bluetooth. Works with variety of calendars including google, microsoft, etc. Compatible with iOS and Android.

"We spent the first few months developing the software... it was around February so we had exams and progress was a bit slow. Around June, we had an initial skeleton prototype in terms of software and started contacting manufacturers to see what they could do. Towards mid-July, we almost solidified the prototype, and that's when we moved onto figuring out kickstarter." recalls Thushaan.

Stephen shows us a quick overview of the device "It shows you normal time, and there is a screen showing the time and you can swipe to see the countdowns of events. It shows you your heart rate and a pedometer. It also shows you a countdown to the end of the day, (either when you go to sleep or when your work day ends). And then, you set yourself some goals." They have set a goal- their Kickstarter launch in 12 days - and the time is ticking down towards the event.

"We want to raise around \$43,000, which translates to about 400 people backing us on Kickstarter. Looking at our list, we reckon we can get 50 backers on day 1" they discuss. Upon asking how they plan on making their campaign successful, they revealed a few of their strategies. "Having spoken to other successful Kickstarters, we realised that the way you successfully fund a project is that you build an email list of people who express an interest in your product and want to back you. We've done that through Facebook ads, targeting people who we think are our target audience - people who like productivity, people who like to spend on smartwatches" says Stephen. "We also included, on top of that, people who have previously backed Kickstarter projects; as soon as you have that criteria, it becomes very US focussed. On top of that, we ran giveaways." Thushaan adds.

As of writing, they have well surpassed their first goal of £4,000 and have 171 backers.

You're not looking for customers - you're looking for a community

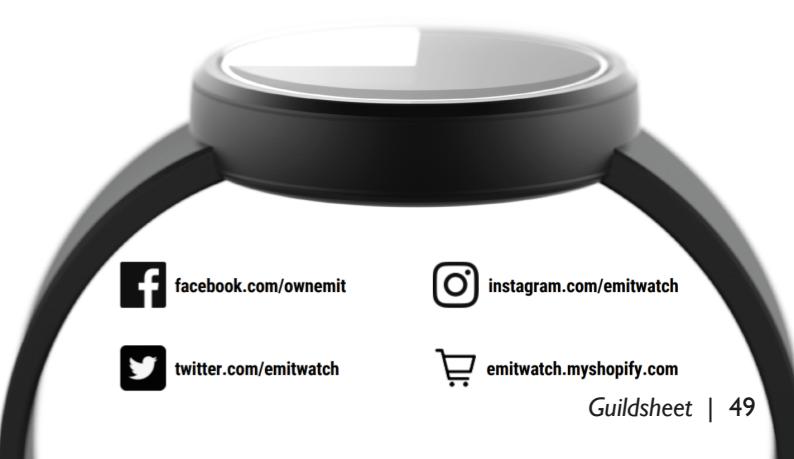
"If you do wear an emit - because it's so difficult to distinguish a normal watch from a smartwatch - we want you to automatically identify someone else wearing an emit. It's almost like an extension of you, it's immediately identifiable. We also wanted to keep it as minimalist as possible; to take away the clutter and have the main focus be time." Stephen explains.

When asked about what's in store for the future of emit, Thushaan answers "For version 2, we want to do a lot more 'monitoring' of behaviours and what events you've set and whether you follow through with them. Then, maybe the app can start giving you advice on what to schedule when". Stephen adds "A very, very rough 5 year plan of where we see emit is first, turn to Kickstarter as it's a great way to show proof-of-concept to investors. Then, we want to go to private investors and raise a larger round."

"We've had quite a bit of help from the Enterprise Lab. Ben, the director, has been super supportive in terms of putting us in touch with other Kickstarter projects that he knows. He's given us a lot of advice on what we need to do in terms of marketing, approaching manufacturers, and has also helped in spreading the word around." Stephen remarks.

They also discuss about how the contacts they made through their degree helped them with the creation of the product. "We had a very design-led approach when making emit. We started with what we're trying to give users, and then how we make it as simple and intuitive as possible. We also had a community of students who wanted to help us; we could draw up on skills like coding, design, people who knew about types of metals and materials." remembers Stephen.

"Our biggest advantage being from MechEng was having students who have different areas of expertise around us." ■



facebook.com/ownemit

instagram.com/emitwatch

twitter.com/emitwatch

emitwatch.myshopify.com



Guildsheet at last year's UCU Strikes

ROLLGATE

THE TRUE STORY, EVOLUTION, REBRANDING

We live in a most interesting, intriguing and complex world. Before I came to the city I never thought I would end up writing, especially not a student publication with "arguably questionable political biases". But with the freedom that comes in a place like this it seems anything is possible. Alas writing wasn't quite how I envisaged the last few weeks of Summer Break.

Needless to say accidental water damage to my phone was the last thing I needed. However, cut off from the techno-barbarians that have taken over and with an ever more Indy Spotify list the mind wonders and a new issue is born - not made.

A humble pink top with the blue slogan "#feminist" stuck me as I walked through a pleasantly sunny Hyde Park last Saturday. It's 2018 - yet the centerfold of this week's Evening Standard was about pro "#me-too" literature. Isolated in concrete, are disdainful barbaric views still present? Arguably yes, one such department (who put far too much onus on capitalisation) are notorious for it, perhaps?

It takes a lot of effort (and favour asking) to produce each and every issue of "The Bolt" - now Guildsheet. Inevitably mistakes are made, some more serious, some less so - and some on the front cover. But hopefully in the future this will be a minor issue. To my



sorrow I do not believe that "Grammarly" is supported in our software.

Imperial College is, to an external, a technical uni with a ridiculously strong post-grad research focus. But walking around (especially now) it's clear that ICL is so much more. Volleyball in the park, a myriad of high flying ideas and the zooming dreams of Racing Green - but a society for everything under the sun: Dancing to Sci-Fi. The Degree work almost becomes difficult to focus on as your personal development seems to be a constant journey. Stranger still I've found I quite enjoy this writing business. But, what of

Guildsheet - Well, with some election magic and committee reform - and a new second editor it does seem like we're here to stay. So relax, drink tea and read the Sheet. ■

Tom
Thomas Cross
Editor, Guildsheet



ENGINEERS

of Imperial

YEAR 3

You thought that by the start of your third year you'd be a functional human being, knowing what is expected of you and studying in a cohesive, efficient manner. You sort of glided through your January exams – you sort of thought you knew your stuff. Sort of... Well, them results just came back. Yeah sort of... And this is why I love this quote by Ernest Hemingway – "I love sleep. My life has the tendency to fall apart when I'm awake, you know?" On the plus side I've heard UCL might not be that bad - some hope



Jiangxuan Chen Aero III



YEAR 11

In Marvel's 'The Punisher', Frank Castle talks about the torture of having no routine. He was right, and last night I woke up at 4am and decided it was the best time to go and derive Breguet Range equations, only to forget it the following morning. It's this story that summarise my lack of order in the panic of revision. Now it's back to study by looking over my notes in the mad and disordered stare of The Punisher himself, except I'm just punishing myself. Odd.

Toby Bryce-Smith Aero II

YEAR 4

There's something beautiful about shared human experiences, emotions and observations we all make through our lives that the invention of language allowed us to start to articulate. You convey concepts every day without second thought but sometimes language (well, your language) fails you and suddenly there just isn't the word. You fumble around in an attempt to explain, not unique in your idea; whatever it is you want to say someone else has wanted to say it before, and in another language there is the exact word you need.

For all those lectures where the lights were on but nobody was home...

"**Boketto**" (n) Japanese - staring vacantly into the distance without thinking about anything specific.

Roasted by your mates?....

"**Trepverter**" (n) Yiddish - a witty comeback you think of only when it's too late.

Scratching together those 3am lab reports...

"**Jugard**" (n) Hindi - Ensuring things happen even with minimal resources, even if they happen 'by hook or by crook.'

Because that one time you'll need it, you'll need it and it's the only word that's gonna fit the bill...

"**Poronkusema**" (n) Finnish - The distance a Reindeer can comfortably travel without taking a break. ■



Sarah Towers MechEng IV

Keep the Sheet Fresh

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Get Involved



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