



# Felix

The Student Newspaper of Imperial College London



# EDITORIAL

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## New Experiences

Henry Alman – Felix Editor



*In general, this section will be either a personal soapbox for the Editor-in-Chief that finally won't result in me getting dragged away kicking and screaming by the Facebook Police, an exploration of a topic that Felix finds particularly relevant in a given week, or a 'behind-the-scenes' look at the operation of the Felix team. This week, it's a slightly mushy, overly-sentimental, prose-style version of every awful piece of third-rate poetry you have ever read. Bad metaphors abound.*

A new year, a new Felix, and a new cohort of students to join the Imperial community. It's an exciting time – although the dreariness of the weather has somewhat detracted from the energised vibe, as the primary sensations of life become the squelching of feet in soaked-through shoes and the irksome dripping sound of wet umbrellas dumped in room corners.

Being from the UK, rain isn't anything new. As many international students will learn or have learned, most British stereotypes are a load of nonsense – but the incessant drizzling of half-hearted rain day-in and day-out is a depressingly real fact of life, as is our tendency to moan about it ceaselessly.

'Welcome Week', indeed – it seems the clouds don't ascribe to the concept of a warm-welcome. Still, we should not let that dampen our spirits. Felix is here, and this is my little welcome to you.

For those of you who are returning students: you know that we've done

award-winning work in the past. We will maintain that high standard this year, and that standard applies across every section of the paper. Whether you just like the Puzzles and Centrefold or are one of those who avidly reads the News section every week to keep up with college events, we will strive to excel.

For those of you who are just joining us: a significant portion of this issue of Felix is dedicated to welcoming you and introducing you to a few of the core organisations you'll be interacting with over the next year. The rest has been put together with heart and passion by the Felix team before the term has even started, giving you a taste of what is to come from each section throughout the year.

The team this year are a smashing bunch. As one 'fish out of water' – in a new role and tackling new challenges as Editor-in-Chief – speaking to all the freshers out there who are moving from small ponds back home to a very large pond here

at Imperial: I can tell you that you won't find a better and more dedicated group of students than the Felix editorial team. I'm also proud to say that we have a lot of new students already joining the team, all of whom are already contributing to and getting involved with the Imperial community.

I can tell you from experience that coming to Imperial is an opportunity – academically, yes, but also in terms of holistic wellbeing. London is, speaking frankly, pretty awesome, and there are a plethora of societies and clubs and organisations you can get involved with here. These will give you new experiences, open your mind to new possibilities, and help shape

you as a person and a student during your time here.

As a note to remember in the coming week, when you may be overwhelmed: you're not alone. I'm experiencing new things too. For example: the centrefold of Felix is usually a semi-nude photo of a society. Tradition dictates

that the Editor-in-Chief stars in the first issue. Yes – this week, I experienced for the first time a naked photoshoot, and can now die happy knowing that a picture of my bottom will forever be part of the British Library (where every issue of Felix is archived.)

The process of learning and growing never really stops. I used to think that one day I'd be an 'adult' at long last and everything would make a bit more sense. I'm 23 now, have been at Imperial on-and-off for five years, and I still don't have a clue. My 18th and 21st birthdays meant nothing – I didn't wake up the next day having any more of a clue than I had drinking the night away prior to sleeping. I'm becoming ever-more convinced that we have all been deceived, and that really we all stay young forever in our minds.

You'll possibly experience the same feeling throughout this year. Certainly at points you'll feel a little bit panicked – perhaps while pumping out the worst piece of work you've ever dared to submit at 4am and slowly realising that you might have to change your expectations of your own perfectionism, an experience I went through approximately ten thousand times during my degree.

When that happens, just remember: we're all just fishes jumping into the same boat, flapping around, and wondering when the rain will start to pour so that we can take an easy breath.

Perhaps the weather is a warmer welcome that perhaps I first realised.



### The Felix Team

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# NEWS

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## The Climate Strikes Back

*On Friday 20th September, climate strikes organised predominantly by young activists took place across the globe. Imperial students and staff were at the forefront of that action.*

### NEWS

**Henry Alman**

*Editor-in-Chief*

Last Friday, over 100,000 people gathered in central London to participate in one of the largest climate strikes ever to occur – with another 200,000 people across the country also participating.

It was one of the largest climate strikes in world history, with an estimated four million people joining worldwide. The strike was also heavily supported by scientists, with over 2000 from across the globe pledging support. Strikers reported seeing a large proportion of young people – especially students from university, high school, and primary school – attending.

The strikes follow a new surge of climate activism support among young people, largely spurred by Swedish teenager Greta Thunberg, who has been fiercely campaigning for global reform on climate policy for over a year – giving speeches to politicians in multiple countries, at UN summits, and the World Economic Forum.

The UK strikes were organised by the UK Student Climate Network (UKSCN), with over 200 events taking place around the UK, and were supported by various unions around the country – including the University and College Union (UCU). Liaising with the UKSCN was Divest Imperial, a student-led campaign that aims to challenge the college to cease investing in fossil fuel-based companies, alongside other

groups such as the Environmental Society, ICU and the GSU, and Imperial Extinction Rebellion. Divest mobilised Imperial students, encouraging them to meet outside the faculty building (or ‘blue cube’) in Dalby Court and march to the strike together – with the hope that the visual display might inspire faculty staff to support climate activism at Imperial in future.

In a joint action, the Imperial UCU’s president, Michael McGarvey, organised a climate demo on the Queen’s Lawn, which was attended by around 200 people and featured speeches given by megaphone on a range of climate change-related topics. He also spearheads the UCU’s side of the Fossil Fuel Divestment Campaign, which liaises with groups such as Divest to pressure the college.

Imperial is known to be heavily invested in fossil fuel companies via its investment portfolio, as reported by Felix in January 2018, as well as having tight industry links with companies – such as BP, who sponsored several academic documents handed to students in Mechanical Engineering last year. The college President, Alice Gast, sits on the board of Chevron, one of the world’s largest oil companies, and receives a £300,000 a year salary for it (Dec 2018); the college portfolio has at least £6.5 million (Oct 2018) directly invested in fossil fuel companies and oil field services, and even more likely to be indirectly invested via managed funds; and fuel companies also invest into the college.

As a result, Imperial



**A hundred thousand people gathered in central London for the climate strike last Friday // Mark Marra**

places 130th out of 154 universities in the UK on the People and Planet University League tables, which ranks universities based on their ethical and environmental performance – receiving a 0% score on both the environmental policy and ethical investment categories.

In spite of this, there is also a scientific dedication across many departments to researching sustainable energy across much of the college – and in this regard Imperial is a world leader, with research groups such as the Energy Futures Lab, the Sustainable Energy group in the RSM, and the Grantham Institute.

The Divest campaign predominantly focuses its time on researching the connections between Imperial and the fossil fuel industry, creating workshops and training, organising protests on campus, and liaising with other like-minded groups such as Fossil Free London and Student Climate Action.

They pressure college and meet with management in order to make the case for divestment; however,

**“We need to make a stand, and have some integrity.”**

they feel that the college is not receptive to their message.

“Divestment is not simple or easy – we know that. But as a student, I want to see from college any sort of commitment – especially for an institution which is so involved in sustainability research,” said Ruben, a member of Divest. “We need to do it, to make a stand, and have some integrity. Imperial has a lot of influence within the fossil fuel business – by divesting, they can encourage those companies to change their focus.”

Michael echoed this

notion. He believes that this type of collective action between staff and students is essential to instigating change.

“You can have individuals making lifestyle decisions, but we have to change the systems that produce fossil fuel on a grand scale. Given the future repercussions of climate change, we need moral leadership. The tangible thing we can do as an organisation is to send out a strong message.”

Fossil fuel companies have been shown to have been aware of the potential risks of fossil fuel dependence since research conducted during the 1980s, and actively Oil companies have invested over £200 million per year into lobbying against climate change awareness since the Paris Agreement. Investigations conducted by UK non-profit influencemap furthermore reveal that fossil fuel companies collectively invest only 3% of their

\$115 billion investment into sustainability. Additionally, there are around sixty universities across the UK who have already divested, including other Russell Group universities such as Edinburgh. Despite this, Naomi Pratt, a head figure in Divest, says that the college has repeatedly stated that they consider fossil fuel companies “partners in the fight against climate change.”

Recently, the UCU and Divest met with the Provost to propose and discuss plans to divest, focusing on three key points: an ethical investment policy that includes staff and students, a 5-year divestment plan such that there is a slow withdrawal, and a dedication to conducting the process publicly (rather than discreetly.) However, there is little indication from the college that there are any plans to divest soon.

## NEWS

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## Blackett's Refurbs: A Different Approach to Lack of

## NEWS

Henry Alman  
Editor-in-Chief

*Physics is dealing with space problems by optimising poorly designed spaces, rather than moving to new campuses.*

The Blackett Laboratory, home of the Imperial Physics department, has undergone a partial refurbishment prior to the new term, including a new lecture theatre and computer suite. The new spaces will open in October.

Prior to the refurbishment, the computer suite was heavily outdated: described as having “a noticeably stained carpet, fans blackened with age, and 60s-era signs reminding students not to smoke inside – an activity that has been illegal for over twelve years.”

The suite has received new chairs and desks, group study spaces, a ‘breakout space’ for relaxation, and a brand new carpet, among a slew of new technological features that cater to more effective teaching as well as students with disabilities. They will also incorporate a new scheme where students can book out department-owned laptops, so that they can work on projects at home.

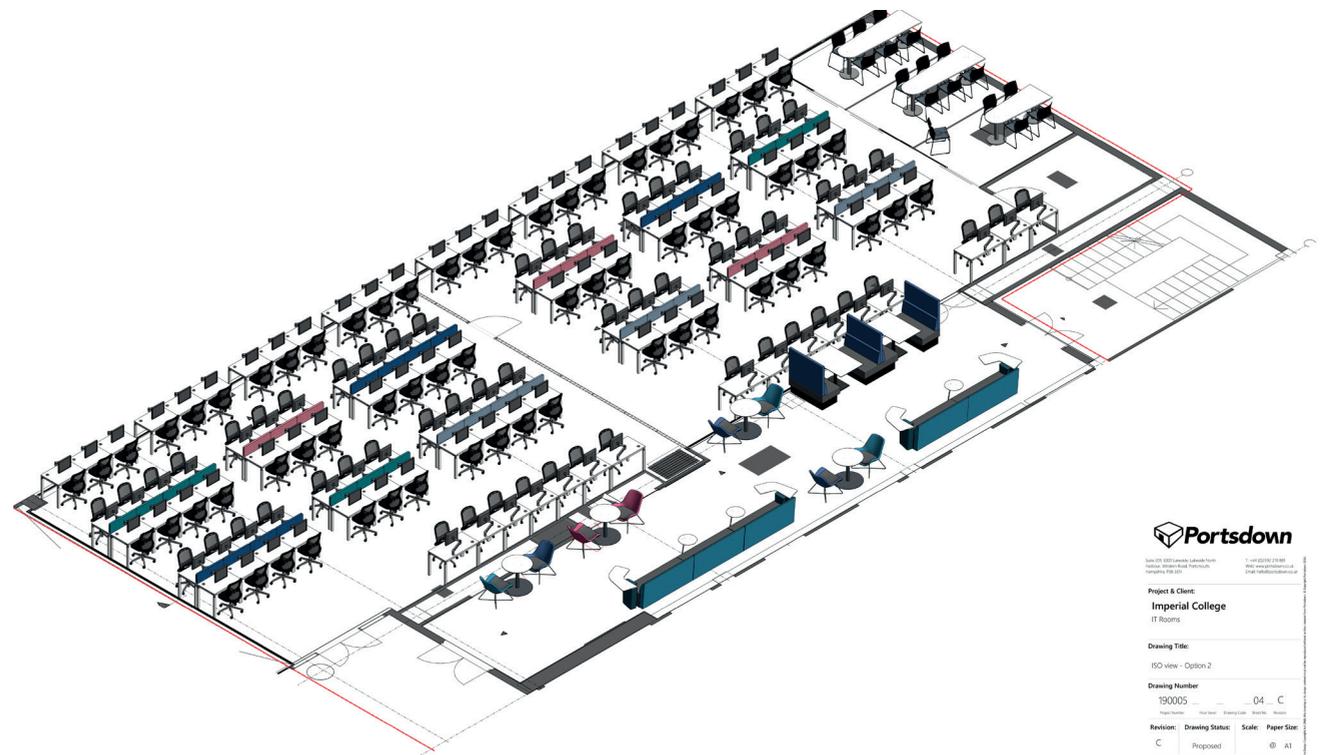
Felix spoke to Michele Dougherty, the Head of Department in Physics who took the reins in January 2018, and Luke White, who extensively liaised with students and was heavily involved in the project, about the refurbishments. Michele said that she “didn’t know” why the

refurbishment had not taken place before now, having not been involved with the decision-making process prior, but that it was “clear as day” that it needed work after new lighting was installed last summer.

“I was unaware of the status of the computing lab when I was not Head of Department, because I did not go into the computing lab. I knew what the lecture theatres and tutorial spaces are like, but I think unless a member of staff had gone into it, they probably wouldn’t have been aware.”

When asked whether this lack of awareness on behalf of staff of the poor quality of student spaces, and whether the segregation of student and staff-occupied spaces contributes, she clarified: “Communication is always the key, and that’s one of the things I’ve tried to do since becoming Head of Department. I would much rather everyone was aware of the difficult decisions that need to be made, and that choices have to be made – and that’s not always an easy choice to make. What I want to try and make sure we do as a department is we talk about it as a department, so nobody can pretend that we don’t know that space needs work.” One of the first things Michele did in her new role was opening up the staff common room to final-year students to foster connectivity.

In regards to the apparent lack of action on necessary refurbishments, Luke identified a key problem: necessary renovations are not always easy to see. For example, the building has a legal requirement to update all of its electrical wiring within the next two years – a gargantuan and expensive



The new computer suite has massively improved functionality // Portsdawn

task, but one that has no perceivable benefit to staff and students. Additionally, the time during which work can be completed without seriously disturbing teaching is limited to summer break – and often only one or two projects can be undertaken simultaneously without making the building feel unusable.

Despite these setbacks, additional revitalisations to Blackett are being planned – with student consultation at the forefront, once again in collaboration with Luke and others throughout the department. The Student-Shapers programme, on this project led by Hunain Nadeem, has also identified multiple potential study spaces, as well as existing spaces, that also need a redesign – such as the infamous ‘Dungeon’ on level one of the building.

However, he was also keen to note that while this is a positive development, and one that will be welcomed by students, it should not be viewed as a ‘fix’ for various problems with Blackett. Physics is home

**“The space dedicated to students is simply not sufficient.”**

to around 900 undergraduates, all of whom share a new computer suite with 120 computers, a small common room with just a couple of microwaves, and study spaces scattered haphazardly throughout the lower floors of the building. The only floor dedicated fully to student space is Level 3, out of 12. The facilities and space dedicated to students is, he argues, simply not sufficient for one of the largest departments in the college. Queries about plans to refurbish the common room were met with the immediate response that the physical space itself is constrained – the most that can be done is replacing furniture in order to more effectively utilise the space.

Even these types of positive revitalisations

can come with threats to what little is available; acquiring funds and support for improving deeply unsatisfactory areas comes with conditions that could partially counteract the effectiveness of the improvement. The new active learning centre is one example.

It is a fantastic facility, featuring high-definition screens, touchscreen functionality, multiple projectors, surround sound systems, individual aeroplane-style overhead lighting, well-spaced desks so that lecturers can reach every student during “classwork” sessions, plugs and data connections at every desk, and more. It is also allowing the department to revamp their tutorial sessions for the incoming year of freshers, switching from 20-student groups to a mixture of 60-person groups in the active learning space and smaller 5-person tutorials similar to what later-year students currently receive.

However, securing this for Blackett meant allowing the space to be booked by any department in the

college to use, further impacting on the amount of space available for physics students at any one time – although physics gets priority on block-booking, and assurances have been offered that the impact on their students was carefully considered and minimised before the proposal was accepted.

It’s notable that physics is one of the few departments at Imperial whose undergraduate numbers have remained approximately constant over the last several years. Indeed, as of yet expanding has not even been a consideration. It’s a purely hypothetical question; the main lecture theatre can only house 250 students, and so growing further is impossible. The department’s stance is that even if they could expand, they are not sure they would want to:

“For me it depends on whether it improves the teaching experience for both students and staff. I would worry very much – even if we had the space – about increasing student numbers hugely until we have our student

# NEWS

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## Space

experience where we want it to be. Once we've done that, then we can think about other things that we can do ... I wouldn't even want to contemplate increasing student until we've got our act together as far as the student experience is concerned."

Blackett and physics are not the only ones at Imperial to have struggled with space and facilities. There have been multiple approaches to the problem across different departments in recent years. The college decided to sell St. Mary's, to the outcry of many medical students, and build improved spaces at other campuses such as Charing Cross to compensate. Several departments decided to move a portion of their facilities and faculty to the White City campus – and Michele revealed that when she took up office, she was also asked to consider a similar move for physics.

"When I first became Head of Department, I was asked to look into how many staff might in the future move over to

**"When I first became Head of Department, I was asked to look into how many staff might move over to White City."**

White City – and which specific parts of the department might have that desire. And then I became aware that there wasn't a college fund to finance the move. The conversation

evolved into discussing our needs and wants in terms of space overall and what's good for the department long-term."

Asked about the presence physics might one day have in White City, she said "organically, it would be good to have a footprint over there – a lot of our staff work with the chemists anyway. The thing that worries me is undergraduate students remaining in South Kensington while staff move, which may have an effect on the connection between staff and students. This is something that I know Chemistry is working very hard at. White City is a fantastic space; we should be thinking about how we utilise it, but it will cost a lot of money to move there. There needs to be a plan around how that would be carried out."

The approach in physics is, therefore, to invest heavily into fully optimising the space available before giving

**"Until we turn things around in the short-term, nothing is ever going to happen in the long term."**

up on the historic Blackett building – at least for now. In her words: "until we turn things around in the short-term, nothing is ever going to happen in the long-term ... making the space we have better for students – that's a starting point."

This is an approach

which will likely be popular with students – giving them a clear benefit with little potential drawback – but the concern is what the long-term solutions might end up being should the trend of expansion across the college continue. There is a cap on how effective optimisation can be; in the end, physical limitations in the space will mean that nothing more can practically be done. One option that's being explored is building a new student-focused space via donations – the issue there then being that real estate near Blackett is very expensive, or completely unavailable.

One core difference with the physics department's approach is the abundance of student consultation during these projects – a sign that a

genuine commitment to involving and integrating students into the department is present. The college's decision to sell St. Mary's, by contrast, was made with very little – or, depending on who you ask, none at all.

As these refurbishment projects have been undertaken over the last several years, physics' National Student Survey scores have been plummeting. Despite a small rise in many satisfaction categories in the 2019 survey, every category from satisfaction with teaching to feedback to management have fallen over 10%, and in some cases much more, since 2015. The hope remains that changes such as refurbishments and curriculum reviews will continue to improve the student experience – but Michele clarified that the

priority is not the score itself, but to holistically and genuinely improve student wellbeing.

"When I saw the NSS comments last summer, I was devastated ... they're really saddening. And we're beginning to turn things around a little. But I had warned everyone in the department – I said we're not doing this to turn around NSS scores. It doesn't take a year, it takes four, five, ten years to turn them around – if that's what we're aiming at. For me, I just did not want students leaving here thinking 'I haven't enjoyed my time here'. It's not an easy degree – I don't want to change that – but I want it to be an interactive degree. I want students to feel part of the department – we are not a department without the students."



The new 'active learning' lecture theatre is very exciting, but massively improved functionality but came with a cost // Portsdown

# NEWS

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## The Ethos Evacuation: What Happened

*Ethos had to be evacuated, but information on why is scarce.*

### NEWS

**Henry Alman**

*Editor-in-Chief*

On 23rd September, the Ethos gym in Prince's Gardens was evacuated after reports of "an unusually strong chlorine smell". In response, up to ten emergency vehicles were called and placed on standby, while the surrounding street was closed entirely.

The building was subsequently attended to by the fire department over a period of hours, ensuring that no dangerous chemical leak or fire had been the cause.

An Imperial spokesperson commented: "the fire brigade were called yesterday following reports of a unusually strong

chlorine smell at Ethos Sports Centre. A portion of Princes Gardens was briefly closed as a precaution while these reports were investigated. The road and Ethos have now reopened.

The smell was caused by higher than normal chlorine levels in the spa due to a systems fault. Following a thorough investigation we have already put a number of measures in place to ensure this cannot happen again. A specialist external engineer has checked and signed off all equipment and confirmed there are no ongoing safety concerns."

The nature of the systems fault is currently unclear; although measures were already in place to prevent such issues at Ethos, it appears that an unforeseen combination of events caused



Up to ten emergency vehicles were called to the scene on standby // Felix

those measures to fail. The college has since reviewed and tightened those controls.

Staff reportedly had to leave "without shoes" as belongings were left behind in lockers after the fire alarm went off. The

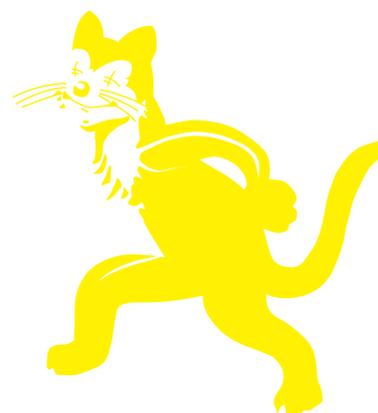
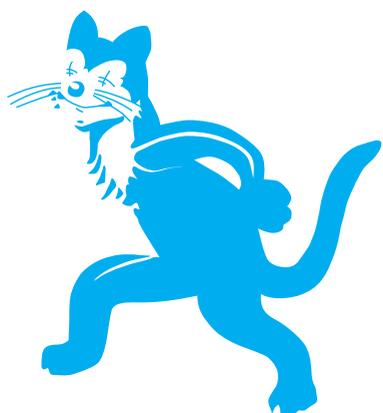
fire alarm was purposefully activated by a member of staff so that the building would be evacuated, rather than by the systems fault itself.

Students were left confused and uncertain, under the impression that there

was a "gas leak", after the evacuation. The only public notice or statement from the college was on the Alerts page - which was then taken down once the incident had been resolved. This has left some students feeling

frustrated, and concerned about the ongoing safety of the sports centre, due to a lack of information - when in fact it has been safe for several days.

## *Felix is recruiting!*



**We want you – yes, you! We're looking for writers, photographers, editors, illustrators, reporters, computer experts and grammar nerds to join our team. No experience needed – we'll teach you everything you need to know. If you're interested, send us an email on [felix@ic.ac.uk](mailto:felix@ic.ac.uk)**

# A CONVERSATION WITH...

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*This year, Felix is introducing a new section: 'A Conversation With...' in which we will have weekly interviews with the Union sabbatical officers. This week, however, they want to welcome students and introduce themselves.*



## **Shervin Sabhegi - Deputy President (Welfare)**

Hi, my name's Shervin, and I'm your Deputy President (Welfare) this year! It's my responsibility to ensure all Imperial students have their wellbeing looked after, and to promote the voice of all students no matter who you are or what you believe. The key areas I'm responsible for are student support services (such as the Disability Advice Service and the Counselling Service), Halls of Residence, and Equality Diversity and Inclusion. I also lead the Wellbeing Representation Network, comprising wellbeing reps in every year and course, as well as 8 Liberation and Community Officers who lead the Union's efforts to represent underrepresented groups and celebrate all people at Imperial. This year, I plan to campaign within the university to improve services to students, as well as to review the structure's our Union has that represent the wellbeing interests of students. Flick through to my article 'Welfare and Faring Well at Imperial' if you want to find out more!



## **Abhijay Sood - President**

Hi everyone – I'm Abhijay, your Union President this year. As President, I'm ultimately responsible for the activities of the Union, and representing the interests of students to College.

I ran for this position because, for all its strengths, our university could do more for its students. With this in mind, this year I'll be working to increase student representation, as well as the representation of academic/support staff, at the highest levels of College. I want to ensure that wherever possible, the people affected by decisions are directly involved in the decision-making process, whether that's around our courses, the cost of food on campus, or student services.

Within the Union, my priorities are communication, preserving and improving our offer to students, and getting our student staff paid the London living wage. We're also going to be asking for your input in helping us set priorities for the next three years. I want to make sure you have opportunities to make your voice heard, and that we let you know what's going on, so that together, we can make Imperial a better place.



## **Ashley Brooks - Deputy President (Education)**

Hi, I'm Ashley, your Deputy President (Education) for this year! Hope you've had a great summer wherever you've been and whatever you've been up to! I'm responsible for all things related to your learning and teaching experience, from exciting new initiatives to fundamental assessment & feedback; and from new undergraduates to seasoned postgraduate researchers. To achieve the best possible outcomes, I look forward to working closely with the Academic Rep Network on this year's journey. It's already been a busy summer working on the Union's response to the most recent National Student Survey (NSS), and I'm pleased to say that our recommendations (formed from a close reading of student's comments and in close collaboration with student reps), have been well received, and endorsed, by the most senior college committees. In a similar vein, we are now also working on the Union's response to the biannual Postgraduate Research Experience Survey (PRES), so watch this space, and look out for your reps!



## **Fifi Henry - Deputy President (Finance and Services)**

Hi, my name is Fifi and I am your Deputy President (Finance and Services).

On the finance side of things, I manage the finances for all clubs, societies and projects. This tends to fall into my day-to-day tasks, and you can often find me at my desk reading sponsorship contracts.

The other official half of my job is services and making sure that what both Imperial College Union and College offer meet the needs of you, the students. I also often get involved with College services to represent student views. Also head to my bio on the Unions webpage to start to have your say on the Summer Ball 2020!!

My underlying aim is to make lasting and sustainable changes across the services we offer students, and so will chair a Services & Sustainability Board this year as well as working with Greening Imperial! Ultimately, I want to be part of ensuring you graduate from Imperial proud of the institute and your Union.



## **Thomas Fernandez Debets - Deputy President (Clubs and Societies)**

Hi, my name's Thomas and I'm your Deputy President (Clubs & Societies). Half Dutch, half Spanish, I moved from Hong Kong to London to study Biomedical Engineering at Imperial.

Little did I know most of my personal and professional development would come through my time on the Lawn Tennis Club committee and as Sport Chair. Clubs, Societies & Projects (commonly referred to as CSPs) are a great place to meet like-minded people with similar interests and they provide invaluable development opportunities as they're all student-led.

This year, I'm looking forward to working with elected volunteers to facilitate, promote and celebrate our 350+ CSPs – you can meet them across the South Kensington campus at Welcome Fair on Tuesday. With projects ranging from working with sports clubs to implement the Sports Hub, promoting Arts & Entertainment clubs through their own bar nights, to engaging all CSPs to celebrate their events through the Union's central social media channels, it's going to be a busy year but I'm looking forward to it!

CU

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*Another new section being introduced this year - the constituent unions are a major part of college life and welfare, as well as being an essential component of Imperial's history. Here, each of the four will run weekly columns.*

## CGCU

**Thomas Cross**

CGCU President

The City & Guilds College Union (CGCU) is the student body of the 4200 undergraduates and 1600 postgraduates across the Faculty of Engineering. Since 1889, we have stood up as the student voice for Imperial engineers: enhancing your student experience, boosting welfare, and advocating on your behalf on academic matters.

If you are an undergraduate or postgraduate Student at Imperial College London studying Aeronautics, Computing, JMC, or any of Bio, Chemical, Civil, Design, Electrical and Electronic, Electronic and Information, or Mechanical Engineering, then you are both a member of the Imperial

College Union and the CGCU.

Our main purpose is advocating for you, our students. If you don't like something with your course and want your voice heard, come to us. We'll stand up for you and see that your needs are heard and your opinions are valued. For many of you, university will be unlike anything you will have experienced; here you have an ownership of your education and together we can change things.

This is what Unions are for. To be the student voice. We also organise some amazing events, well-being campaigns, and we manage the eight engineering departmental societies and nine C&G clubs – such as Racing Green, Space Society and IC Robotics. For more information on these go to [cgcu.net/clubs](http://cgcu.net/clubs).

This year we've got three main foci - Com-

munity, Inclusivity & Support. We want to re-develop the sense of community within the Faculty of Engineering that used to provide great out-of-degree relief to Imperial students. We want to make the CGCU a student body that is personal to you, whatever your background is; a body that enriches your student experience. If times get tough we're here for you, and work with both faculty and our alumni

association (CGCA) to support students whose work and wellbeing is affected by unfortunate circumstances – whether that be financial hardships, mental or physical illness, or other situations like bereavement.

A unique feature are our mascots - mighty symbols of our trade. Each CU has them, and the other universities in London used to (until they decided not to be fun.) For engineers these

are the mighty Bronze Spanner III (29kg) which fits the fasteners on Tower Bridge, and the Immense Bolt (31kg). The "Great Game" between students is stealing other Unions' mascots and holding them to ransom. This is just part of the utter madness that the CUs engage in on the social side - along with other non-academic pursuits, such as our publications Guildsheet and The Spanner or the "Pie Squad".

Our office is CAGB 350 (located in the City & Guilds Building where Aeronautical, Civil, and Mechanical Engineers have lectures) - so why not pop by for a chat or a cup of tea? We're always open when the light is on, with our mascots and striped blazers. Also, look out for C&G Week in February, just one of the many events ("ents") we run. It will be a week of welfare activities, club nights, sports, and other activities showcasing the inter-departmental community that is the CGCU. In first term, we also have our annual welcome dinner, first dog petting session, the launch of our legendary football league, and a mince pie and mulled wine night.

*Keep up with the CGCU via Facebook (IC CGCU), Twitter (@IC\_CGCU), or on their site, [cgcu.net](http://cgcu.net).*

## WELCOME TO THE CITY & GUILDS COLLEGE UNION

Imperial's Faculty of Engineering Union since 1898. Advocating for students for over 120 years.

- 4200 Undergraduate Students
- 3000 Postgraduate Students
- 17 Clubs and Societies
- 8 Departments



## ICSMSU

**Ben Russell**

ICSMSU President

Introducing: the grand, the magical, the won't-believe-your-eyes spectacular: Imperial College School of Medicine Students' Union (ICSMSU) and our new column in Felix!

To our dear freshers: welcome to Imperial. Let me offer congratulations for what I imagine is the bazillionth time on getting in and making it to halls on your first day (that's step one complete)!

To our returning students: no, I can't believe that the summer is over either, but I'm sure the 5th and final years simply feel they never really began.

Starting university can

be a tough time for even the biggest fish in smallish ponds, so it's important to know that you're not alone and are in fact now part of many great new families and communities.

The greatest of these families (and indeed, as with all great families, one with a turbulent but inspiring past) is that of the ICSM. ICSM was officially founded in 1997 by the merger of the ancient Medical Schools at St Mary's, Charing Cross, Westminster and the Royal Postgraduate – but our story is a lot older than that.

It was in the very labs that still stand at St Mary's where Sir Alexander Fleming discovered penicillin in 1928, where Sir Roger Bannister gained his MBBS before running the 4-minute mile in 1954,

and where Adam Kay first started writing This Is Going to Hurt – and those are just a few of the more famous examples.

Our students have been the core of our community for over 150 years, and in that time we have changed – and learnt – a lot together. Now, our Student Union stands proud to still offer the services we did back in 1854, and we hope that you will be able to celebrate and enjoy these during your time here.

If you need academic advice, want to change how the course is run, would like to speak about welfare, wellbeing or mental health, want to join one of our 60+ clubs and societies, or simply get involved in a year packed with fantastic inclusive events, ICSMSU is ready for you – come

by our office, located in the ground floor of SAF, any time.

The real question is: are you ready for us, and for the amazing years ahead?

*The ICSMSU can be contacted via email at [icsm.president@imperial.ac.uk](mailto:icsm.president@imperial.ac.uk), and events and club information can be found at [facebook.com/icsmsu](https://facebook.com/icsmsu) or Instagram @icsmsu*



**Ben, the ICSMSU President // ICU**

## CU

felix@imperial.ac.uk

## RCSU

**Alex Auyang**  
RCSU President

**G**reetings, and welcome to Imperial!

If you're a student studying one of the natural sciences (Biochemistry, Biology, Chemistry, Maths, or Physics) you're also a member of the Royal College of Science Union (RCSU).

The RCSU aims to promote interdisciplinary interaction within the natural sciences, and to

create positive change for our students throughout the College. We fulfil these aims by hosting social and academic events throughout the year as well as maintaining a student representation network that liaises with staff. Overall, our goal is to help you make the best of your time at university.

If you're interested in representing your peers in meetings with staff, and putting something nice on your CV, consider running for a position as a year representative in the autumn elections. Additionally, if you're interested in writing and/or science

communication, considering contributing to our magazine, Broadsheet, or entering the science challenge (which has a hefty cash prize for its winner). More information can be found on our website at [www.rcsu.org.uk](http://www.rcsu.org.uk).

We always welcome visits from any of our members if they have a question, so come and visit us! There is usually somebody from the committee there to help. We have an office in the Sheffield building (the building with the Junior Common Room in it). If you follow the walkway, there is a door next to the

Santander. Walk through that door and make your way down the hallway to find our office.

The RCSU also runs quite a few events during Freshers' Fortnight. More information can be found on our Facebook page, [www.facebook.com/RCSUnion](http://www.facebook.com/RCSUnion). RCSU events occur throughout the year and typically have heavily subsidised tickets – they are a great way to have a fantastic time for a good price and meet fellow students along the way.

Lastly, we have our mascot: a thermometer, chosen as it is an instrument used by all scien-

tific disciplines, named Theta. Theta has had a number of incarnations, with the current mascot, Theta Mk.IV, being a seven-foot steel thermometer weighing over 100 pounds (45 kg). The CUs regularly try to 'borrow' (read: steal) one another's mascots as a game, but the RCSU also keeps an 'inviolate mascot' which cannot be stolen: a Dennis N-Type fire engine fondly known as Jezebel.

University, if anything, is an opportunity to try new things and meet new people. You're only an undergraduate for so long, and years certainly do fly

by. I wish you luck with your university journey and hope you to make the most of it. I'll be writing here in the CU section in Felix throughout the year, so stay posted!

*The RCSU can be contacted via our Facebook page at [www.facebook.com/RCSUnion](http://www.facebook.com/RCSUnion), or email at [rcsu.president@imperial.ac.uk](mailto:rcsu.president@imperial.ac.uk)*

## RSMU

**Chris Carter**  
RSMU President

**H**ey everyone! I'm Chris Carter and this year I'm serving as President of the Royal School of Mines Union (RSMU). This is a welcome from me to you, to congratulate you on meeting your offers and encouraging you to get involved with the Imperial community.

The RSMU is one of four undergraduate Constituent Unions at Imperial, and we represent students studying Geology, Geophysics, Earth and Planetary Science or Materials Science and Engineering. If you study one of those subjects, you're automatically a member of the RSMU!

As a Union we have a variety of functions: we support a large variety of sports clubs which are open to all students, run our own events throughout the year, represent our members and their interests at all levels of the College and Union decision-making, and



The 'Bottle Match' // RSMU

make sure that your time at Imperial is as enjoyable and memorable as possible.

We have a number of our own unique traditions, the most important of which is the 'Bottle Match' – a weekend of sport and bitter rivalry between the RSMU and our nemesis, the Camborne School of Mines (CSM) down in Penryn. This February over 150 members of the

RSMU will be heading down to Cornwall for this fierce competition, with eight sports teams participating. Bottle Match is a great reason to get involved in one of our many sports teams, including: football, rugby, hockey, cricket, badminton, and (my personal favourite) Lacrosse!

We run many events throughout the year, and have a great line-up

planned for Freshers' Fortnight – from mini-golf and arts and crafts to bar nights and pub crawls. We'll cap the fortnight off with our annual Freshers' Dinner, getting dressed up in formal attire and experiencing some good food. The Freshers' Dinner is a great way to perfectly finish off the hectic prior two weeks, where you can hang out with new friends and make even more!

That's all from me this week, but I and the other Constituent Union Presidents will be running this weekly CU column in Felix throughout the year – so be sure to pick up a copy every week (I recommend the Puzzles page as a personal favourite – outside of our own section, of course!)

*You can follow the RSMU on Twitter at @union\_rsm, on Facebook at "RSMU Freshers 2019/20", and by paying attention to your Imperial email (we know you don't open half of your inbox! Do it!) You can also contact me at [rsmpres@ic.ac.uk](mailto:rsmpres@ic.ac.uk), or join us in the RSMU Office in Room 2.27A in the RSM building.*

# WELFARE

felix@imperial.ac.uk

## Welfare and Fairing Well at Imperial

Your new Deputy President Welfare **Shervin Sabeghi** provides their advice on staying staying mentally healthy at Imperial

### WELFARE

#### Shervin Sabeghi

Deputy President (Welfare)

Welfare. It's a hot topic right now, especially at universities. You often read horror stories about welfare issues at universities in the news, and many have been forced to take emergency measures to protect their students in response to these. It's very much on the agenda of many institutions, including Imperial College, but what does it all really mean? As the Deputy President (Welfare), as well as working to improve the welfare of students, I think it's crucial that I communicate with you all about issues going on to bust myths, set straight false perceptions, raise awareness about support, and keep you in the loop about various welfare related topics. This section in Felix is plays a big role in this. It's a place where all students can write about things important to inform their peers about, and where your reps – be it Liberation and Community Officers, or Welfare Officers – can talk about topics involved in their remit.

Starting with the basics, let's define what 'welfare' means: "the good fortune, health, happiness, prosperity, etc., of a person, group, or organisation" says dictionary.com, and that pretty much sums it up. It's all the things that come together such that you are faring well – this can mean different things to different people, and everyone has a different



Your new welfare officer // Union

way of defining when they're faring well, and when they're not. University, for many, is the place where they start properly discovering what welfare means to them. Transitioning into adult life paired with the pressure of university responsibilities can be a big strain on your welfare. At Imperial, the workload is high and, let's face it, we're the biggest bunch of over-achievers you'll find, so this strain can be especially intense as we pile on the pressure to reach the heights of academic attainment we're used to reaching before coming here. Sounds like a bit of a bleak picture, but don't panic, it doesn't have to

be so. Doing a degree at Imperial doesn't have to be a painful rite of passage – take it from someone who's already done their 4 years! Whilst undoubtedly a certain level of dedication to studies is required to succeed, anyone can enjoy their time here, engage in extra curricular activities, have that ever-elusive social life.

None of that is to say that achieving this is easy, in fact it can often be very difficult. That's why, between the Union and the College, there are hundreds, if not thousands, of people working to help students attain the best welfare they can. I'm just one of them. The

I lead two networks of student volunteers: the Wellbeing Representation Network consisting of nearly 100 student reps across College who represent the welfare needs of students, and organise events to build communities. I also lead eight Liberation and Community Officers who represent the four 'traditional' underrepresented liberation areas (LGBT+, Black and Minority Ethnic, Disabilities, and Gender Equality) as well as four community interests and groups (International students, Interfaith students, Ethics and Environment, and Mental Health). They run events and campaigns to ensure the rights and raise the voices of these groups, as well as building their communities at Imperial.

On the College's side, there's a plethora of people responsible for welfare. In your departments, you have your personal tutors, your senior tutors, and a variety of pastoral staff members. In the central College, there's the Student Support Services who provide central support like the Disabilities Advice Service, the Counselling Service, the Mental Health Service, the Student Financial Support Service, etc. You even have wardens and sub-wardens if you're living in Halls. You'll never be able to remember every single person who can help you (heck, even I don't), but it's important to remember that someone can help you if you need it. Never let an issue get really bad before you let someone know about it. And, if you don't

know where to go to get help, someone (be it your wellbeing rep, or your personal tutor, or anyone else with a wellbeing remit) will be able to point you in the right direction.

As I ascend onto my soapbox, there's just one takeaway I want to make sure comes out of this article. Your welfare is important, and it's totally in your power to fare well at Imperial. It might not always be easy, but there are so many people working every day to make it easier – and there will always be someone to reach out to when it's particularly hard. The perception of university life, especially Imperial life, being painful is rife, but it doesn't have to be so.

**"Your welfare is important and it's totally in your power to fare well at Imperial"**

Work hard, but have fun – and keep your welfare at the forefront of what you do, however you choose to define it.

**"Doing a degree at Imperial doesn't have to be a painful rite of passage"**

Union deals more with the representation side. The Deputy President (Welfare) is the chief student rep who is responsible for all things welfare at the Union – I work full time to represent students and champion equality, diversity and inclusion.

# POSTGRADUATE

gsu.president@imperial.ac.uk

## The Postgraduate Union is Recruiting!

### POSTGRADUATE

**Sara Hendricks**

*Graduate Felix Officer*

Imperial's Graduate Student Union has welcomed a new group of leaders who are revising, refreshing and re-shaping the future of this growing department. Kicking off the 2019/2020 student year is a new cast of leadership who have taken the help of this post graduate group. The grad union represents over 9000 graduate students and researchers. This year's leadership team consists of Mohit Devgan President, Milia Hasbani VP (Representation), Zixiao Wang VP (Operations), Raya El Laham Engineering Officer, Emily Brown Medicine Officer, Emma Couves Natural Science Officer, Dr. Joseph Tam Treasurer, Rachele Invernizzi Secretary, and Sara R. Hendricks Felix Officer.

This upcoming year,

**"This upcoming year, the group will be working on bringing a sense of community to grad students at Imperial"**

the group has decided work on bringing a sense of community back to post graduate students at Imperial. We are also, working on creating a new Identity for the chapter and improving

engagement between post graduate students and researchers at Imperial. This will be accomplished through curated events, activities and networking opportunities. Right now, the team is planning stages of a variety of events that will be beneficial to both students and our global business community.

The Grad Union is also hard at work creating fresh new content that is relevant and engaging for all our social media platforms and website. A top priority for the union is building a strong bridge between Imperial and it grad students. Doing this takes a team that is diverse and dedicated to change. In the new year we are also looking for opportunities to build relationships with companies and individuals who are willing to sponsor some of our major events and projects.

If you are interested in the redevelopment of the Graduate Union well, we want you. The Union is looking of more bright, experienced, energetic and talented grads and researchers to join our team. Your expertise will be valuable to our organization's growth and success.

In addition to openings within the Graduate Union there is a great need for graduate student course representatives. Academic representatives are the student voices of their program. In this role they are responsible for communicating the needs of the students to Imperial to ensure all programs are innovating and well-rounded for the student's advancement. Topics such as how to integrate technology into an existing program are the types of changes the Academic rep will be responsible to give insight and feedback on. Becoming an Academic rep, you also gain ex-

perience with building programs at a university level as well as you will gain new leadership and business skills.

**"The Graduate Union is hard at work creating that is relevant and engaging for all our social media platforms"**

Here are some of the openings still available for the 2019/2020 school year:

#### Activities and Events:

Imaginative students who will ensure the GSU offers a wide range of exciting events. The team will work closely with the Imperial College Union team to make these events a success.

Events officer (4 openings)

#### Education and Welfare:

Faculty representatives for the research and teaching branch are important connection points between the PG Rep community of each faculty and the GSU.

Taught Academic and Welfare Officers (4 openings, one for each faculty)

#### Sponsorship:

Organized and inspiring representatives who help the GSU receive internal and external funding for all our activ-



Imperial College Postgraduate Union is ready for the new term!// Imperial College London

ities. This person is also responsible for managing our bills and accounting.

Sponsorship Officer (1 opening)

#### Communications:

This team of creatives promotes all our GSU activities and provides regular content for the website, newsletter and Felix.

· Website Officer

· Social Media Officer

· Publicity Officer

(3 openings)

Campus officers (Hammersmith, Silwood, White City): The GSU wants to expand activities to involve students from all campuses. The campus officers are the connection points to channel information across all Imperial College sites.

· Silwood Officer

· White City Officer

· Hammersmith Officer (3 Openings)

Various openings for graduate Academic and Department representatives. These representatives cover all the departments and research models at imperial.

#### Election Process:

Elections will be held in October. Dates and opportunities to run will be announced shortly on the hub. You can register for any position you are interested at [vote.union.ic.ac.uk](http://vote.union.ic.ac.uk)

By joining the Graduate Student Union or representing for your department you'll have the following opportunities:

· Be the graduate representative for your course

· Have a voice on key

issues and decisions

· Lobby for change

· Attend departmental meetings

· Gain valuable training

· Join the large ICU representation network

All openings can be found here:

<https://www.imperialcollegeunion.org/your-union/your-representatives/a-to-z/graduate-students-union>

If you don't have time to participate on the GU or as a Academic Rep, please visit us at [www.imperialcollegeunion.org/gsu](http://www.imperialcollegeunion.org/gsu) we are glad to take all your suggestions and ideas for future programs and projects. Or just visit our site and meet our new leadership team!

# CLUBS & SOCIETIES

felix.clubsandsocieties@imperial.ac.uk

## Meet the Superior Imperial College Mascots

This week RCS Motor Club Chair **Hannah Lau**, wants you to know all about the best mascots you can find at Imperial

### Clubs & Societies

#### Hannah Lau

RCS Motor Club Chair

Imperial College is known for many things. Its outstanding research, its infamous male-to-female student ratio, its collection of pewter tankards (allegedly the largest in Europe!) But not many people – even IC’s own students – know about the four vintage vehicles living in Imperial’s own South Kensington campus amidst all the hustle and bustle.

Way back in the 20th century, the City and Guilds Union, Royal College of Science Union, and Royal School of Mines Union all decided to acquire vehicles of some description at various points throughout the century – starting with the Guilds’ purchase of a 1908 Rover (Boanerges I) in 1920.

Bo’ I, as he was affectionately known, served as a faithful (if loud) mascot until 1924, at which point he was no longer permitted to participate in the annual Veteran Car Club’s London to Brighton run on account of his youthfulness. In came Bo’ II, a little 1902 James and Browne town car – the only known surviving vehicle of the type – that more than lives up to its namesake of the biblical ‘Sons of Thunder’ (when he’s not ‘Boken’, as students affectionately if exasperatedly say when he decides to yet again chuck out a bit of his engine). Once again qualified for the VCC’s Brighton runs, students have since diligently kept Bo’ in various



All the mascots// Imperial College Asset Library

states of good repair year after year.

Then comes 1955. As reported by Felix at the time, “Mines was waking up to the fact it hadn’t a mascot”. So, in true inter-departmental competitive spirit, the RSMU acquired a 1919 Aveling and Porter steam traction engine and named her Clementine after the miner’s daughter in the song ‘Oh, My Darling Clementine’. Unfortunately, after only a scant five years, Clementine I followed the fate of the song’s eponymous star and was lost to the students when it was decided that a steam engine with its multitude of health and safety requirements was too much for the Union to handle. The students

turned their attention to other suitable vehicles to take Clem I’s place, and eventually decided that a 1926 Morris T-type one-ton truck that had previously served on a brewery estate was a suitable replacement – her beer holding capability surely had no influence on the decision whatsoever. Clem II has since enjoyed life as the RSM mascot, and despite a couple of complete overhauls over the years by students who had to pick up the pieces (sometimes literally) left behind by their predecessors, she is now back on the road trundling across the UK to various vintage vehicle rallies, steam shows, and a great number of pubs and chippys!

Not wanting to feel left

out, the RCSU’s scientists decided they needed a suitably flashy vehicle of their own to transport their president around – a 1916 Dennis N-type fire engine was perfect, and it just so happened that a soap factory had one for sale. After being offered £50 for said fire engine, the factory was kind enough to donate her to the students for education, and so the newly christened Jezebel came to Imperial – no thanks to the multiple bearing failures that already occurred en route to campus for the first time. Since then, generations of dedicated students have kept her 55 square feet of brass polished to a shine, and proudly show her off whenever the op-

portunity arises. She has even starred in films and shows such as Blue Peter, The Jokers, and Downton Abbey (in the first episode of season five), and has even had an encounter with the Queen Mother!

One would think that three vehicles for three constituent unions would have been enough, but in 1980 the Guildsmen were gifted a 1926 Nera-Car motorcycle by an aeronautics professor, and Bo’ suddenly had a little brother. It was generally agreed that whatever name the ‘nearly a car’ motorbike was to be called had to compliment “Bo”, and eventually it came down to two options – ‘LLOCKS’ or ‘Derrick’, after the Hollywood star Bo Derek. Rather

sensibly, “Derrick” had the winning vote.

Nowadays, the vehicles are kept in their garages on the South Kensington campus, and are lovingly cared for by volunteer students and alumni from across all departments. Every Wednesday, in a corner of the campus, you might come across one of the vehicles and a grease-covered monkey – or, rather, a student – underneath, tinkering away. You might hear some less than proper language when the vehicles, old and cantankerous as they are, inevitably throw a fit and decide to not cooperate. You might look up from your studies in the library at the sound of Jez’s bell, Clem’s horn, or Bo’s engine, and see the vehicles head out for an event or ‘test drives’, to the sound of cheering from random bystanders. You might even get a ride on the vehicles yourself at the various College and Union events the vehicles pop up at annually, such as the upcoming Welcome Week.

Now that we’ve made the medics wish for their own motorised mascot, I wish you all a wonderful year ahead, and ask that you keep an eye and ear out for Jez, Clem, Bo’, and Derrick! Don’t worry, they don’t bite (no promises about the students though)! To get involved with maintaining these wondrous pieces of history, please contact Hannah Lau, the RCS Motor Club Chair, RSM Motor Club Treasurer, and proud “nosy member” of Team Bo’, at jez@imperial.ac.uk.



# Welcome to Imperial College Union

For the best Imperial experience

## Welcome back!

A huge welcome to all new students - we're looking forward to meeting you at the **Welcome Fair** on **Tuesday 1 October**. The Fair starts at 11:00 at the main entrance to College on Exhibition Road at South Kensington Campus. All Imperial students are invited, including returning students who would like a refresher.

This Welcome Week is jam-packed with loads of events. We've designed them just for you to meet other people, learn about Imperial College Union, and to have fun and make great memories in your first few weeks, on campus.

Get your tickets for all the Welcome events at:  
[imperialcollegeunion.org/welcome](https://imperialcollegeunion.org/welcome).

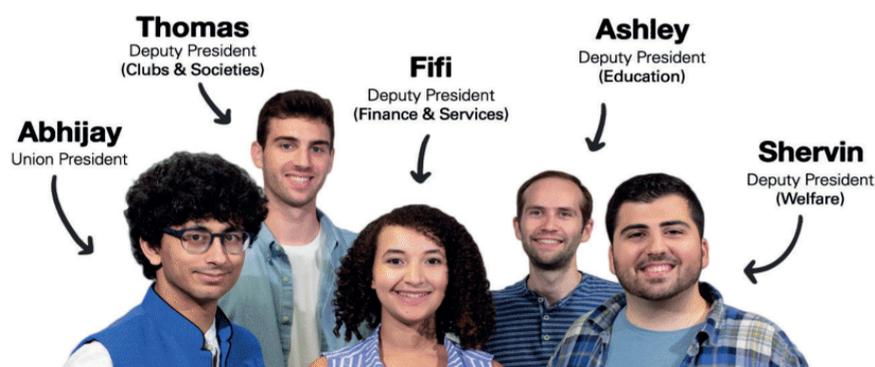
### Other useful links:

Bars and restaurants: [imperialcollegeunion.com/food-drink](https://imperialcollegeunion.com/food-drink)

Clubs, Societies & Projects: [imperialcollegeunion.com/activities](https://imperialcollegeunion.com/activities)

Advice & Support: [imperialcollegeunion.com/advice](https://imperialcollegeunion.com/advice)

Join a Liberation Group: [imperialcollegeunion.com/liberation](https://imperialcollegeunion.com/liberation)



#icuelections

# Autumn Elections 19

## Meet our Officers

Our new Officer Trustees have been hard at work all summer, putting foundations in place to fulfil the aims and promises on which they were elected in March. The team, who will lead the Union full time for a year includes (left to right, pictured above) Abhijay, Union President, Thomas, Deputy President (Clubs & Societies), Fifi, Deputy President (Finance & Services), Ashley, Deputy President (Education) and Shervin, Deputy President (Welfare).

Read their plans for the year ahead at [imperialcollegeunion.org/officers](https://imperialcollegeunion.org/officers)

Find them at Level 2, Imperial College Union, Beit Quad

Keep in touch and let's maintain our democracy year round!

## Let's elect our Reps

Reps and Officers influence the student learning experience, help their peers access support, represent their area of study at Union Council, or ensure underrepresented groups are heard. **Nominations open at noon, Thursday 3 October** for those interested in becoming Academic Reps, Wellbeing Reps, Representatives to Council, Constituent Union committee leaders, Clubs, Societies & Projects committee leaders, Disabilities Officer or International Officer. **Nominations close at noon on Monday 14 October**, while **voting opens at noon on Monday 21 October**.

For more information and to stand for a position when nominations open, visit [imperialcollegeunion.org/autumn-elections](https://imperialcollegeunion.org/autumn-elections)

# Your Union Events

Friday 27 September

Make great memories



**28** Saturday  
September

**Show your Colours**  
Beit Bars | 19:00 - 01:00

**Postgrad Welcome**  
h-bar | 19:00 - 23:00

**29** Sunday  
September

**Karaoke**  
The Union Bar | 18:00 - 22:30

**30** Monday  
September

**Comedy**  
Metric | 19:30 - 23:00

**Board Games**  
h-bar | 19:30 - 23:00

**1** Tuesday  
October

**Welcome Fair**  
South Kensington Campus | 11:00

**UV Ping Pong**  
Metric | 19:00 - 23:00

**Super Quiz**  
FiveSixEight | 20:00 - 22:00

**Speed Tasting**  
h-bar | 19:30 - 23:00

**2** Wednesday  
October

**Wanna Go Wednesday**  
Beit Building | 12:00 onwards

**CSP Wednesday**  
Beit Bars | 19:00 - 02:00

**Karaoke**  
h-bar | 19:30 - 23:00

**3** Thursday  
October

**Cocktail Night  
ft Live Music**  
Beit Bars | 19:30 - 23:00

**Pub Quiz**  
h-bar | 19:30 - 22:30

**4** Friday  
October

**Welcome Carnival**  
Beit Bars | 20:00 - 03:00

**80s vs. 90s Silent Disco**  
h-bar | 19:30 - 01:00

**5** Saturday  
October

**Musical Bingo**  
h-bar | 19:30 - 00:00

[f](#) [beitbars](#) [f](#) [hbarpub](#) [f](#) [reynoldsbarcx](#)

# STAND

Take charge of your Imperial  
experience - become a Rep

**Disabilities  
Officer**

**International  
Officer**

**Academic  
Representative**

**Wellbeing  
Representative**

**Constituent  
Union Committees**

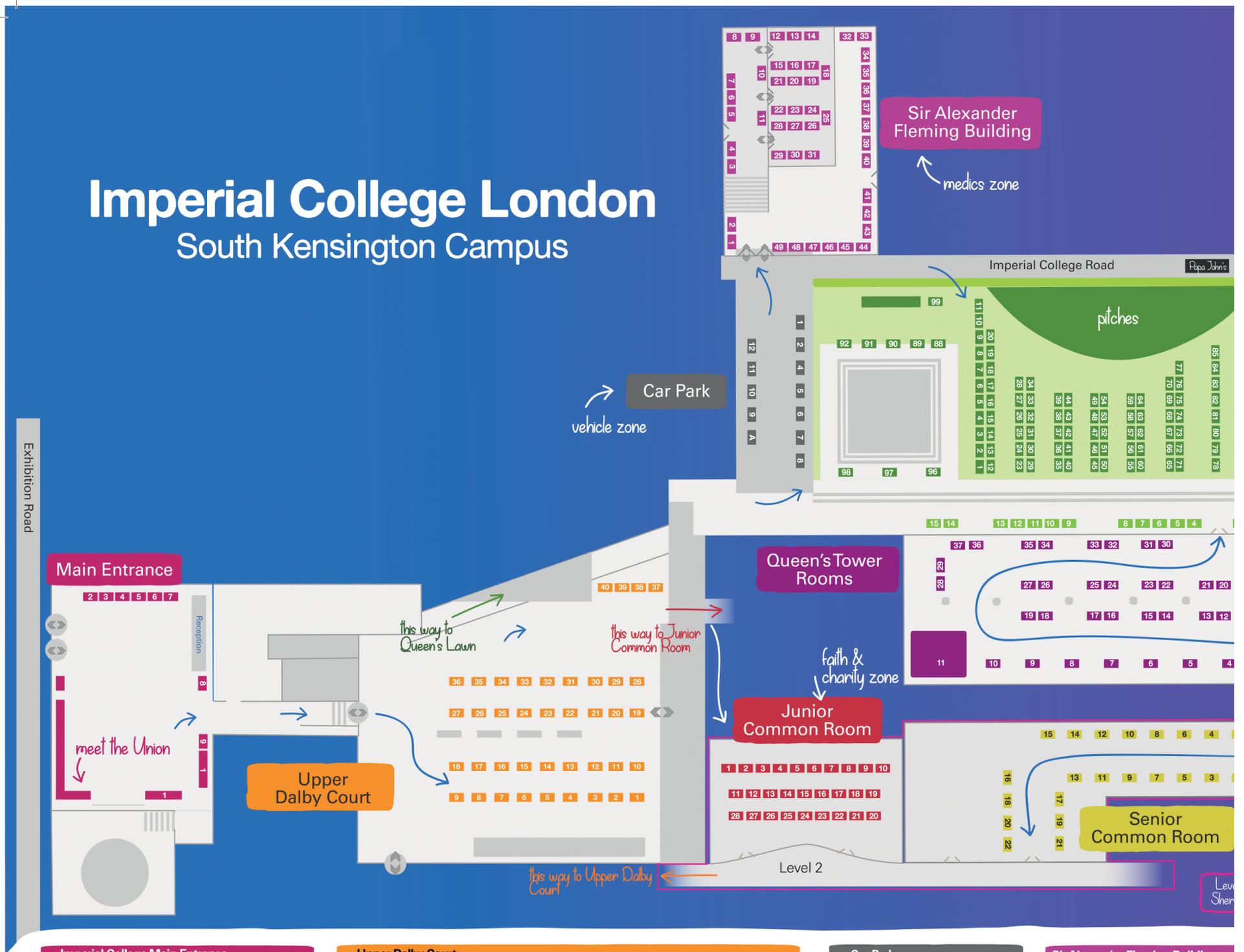
**Representative  
to Council**

Stand for these roles or learn more:

[imperialcollegeunion.org/elections](https://imperialcollegeunion.org/elections)

Nominations open, 3 October  
Nominations close, 14 October

# Welcome Fair Map



## Imperial College Main Entrance

- 1 CGCU: City & Guilds College Union
- 1 GSU: Graduate Students' Union
- 4 Imperial College Welcome Team
- 1 ICMSU: Imperial College School of Medicine Students' Union
- 5 Imperial Alumni
- 3 Imperial Careers
- 2 Info Point
- 8 IQ (Imperial College LGBT+)
- 9 Liberation Officers
- 6 PAARY
- 1 RCSU: Royal College of Science Union
- 1 RSMU: Royal School of Mines Union
- 7 Vote Registration

## Upper Dalby Court

- 15 Aeronautics
- 16 Bio Engineering
- 17 BioChemistry
- 18 Biology
- 6 Chemical Engineering
- 7 Chemistry
- 8 Civil Engineering
- 20 Conservative
- 1 Consultancy
- 38 Data Science
- 9 De La Beche
- 2 Debating
- 35 Design Engineering
- 30 Divest
- 36 DoCSoc
- 25 Electrical Engineering
- 32 Environmental
- 5 Feminist
- 29 Finance
- 28 FinTech
- 11 Geology for Global Development
- 26 Geophysics
- 21 History
- 31 Indian National Student Association
- 12 Investment
- 19 Labour
- 13 Law
- 3 Left Forum

## Car Park

- 8 Animal Protection & Education Society
- 7 Bike Users Group
- 2 Drone
- 1 First Aid
- 12 Motor (C&G)
- 5 Motor (RSM)
- 3 Racing
- 10 RCS Motor Club
- 11 Team Bo'
- 4 Vehicle Design
- A Sailing

## Sir Alexander Fleming Building

- 1 ICMSU
- 10 Christian Medical Fellowship
- 11 Connect
- 14 Medical Education
- 15 Acute Care Specialities
- 24 Dermatology (Medics)
- 26 Immunology
- 27 Heart Society
- 3 Gazette
- 34 Asian Medical Students Association
- 35 Geriatrics and Elderly Medicine
- 36 Clinical Genetics
- 37 Coding (Medics)
- 38 BioMed
- 31 General Practice (Medics)
- 41
- 47
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## Stalls Index

# Welcome Fair Map

**Queen's Lawn**

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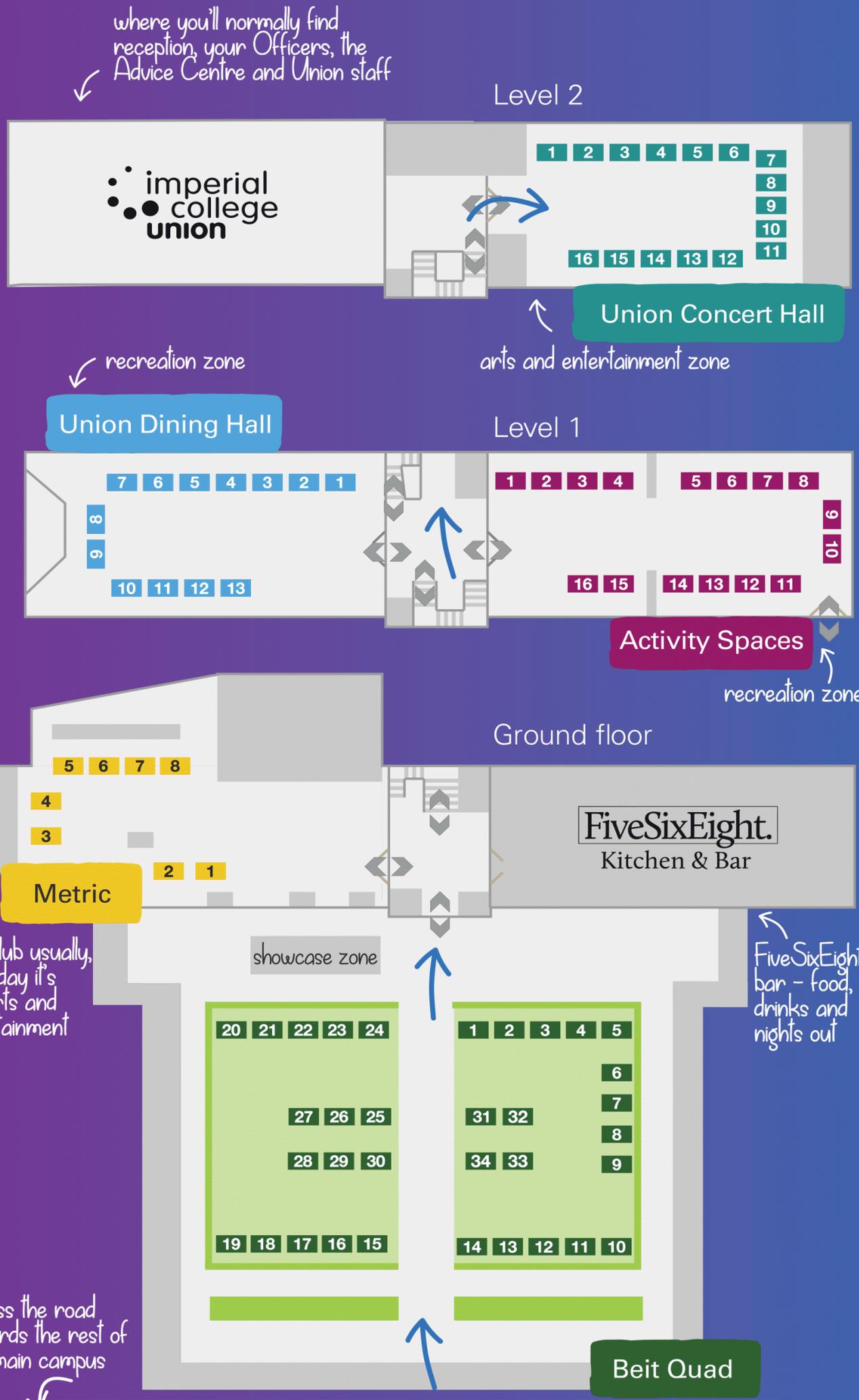
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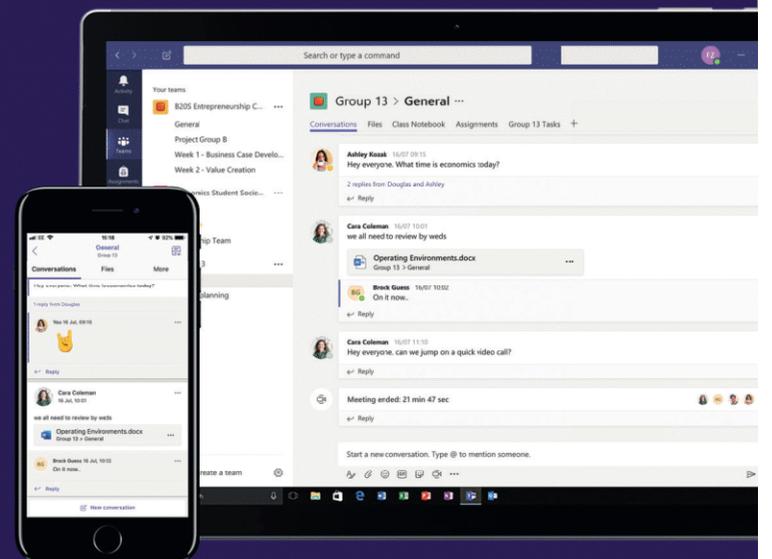
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## ARTS

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# A Beginner's Guide to the West End: How to score cheap (or even FREE!) tickets

One of our Arts section editors shares his experiences and expertise on ways to experience the London theatre scene on a student budget!

## ARTS

## Ozbił Dumenci

Arts Editor

Studying at such a science-based university, it is often easy to forget that London is one of the world's art capitals, with an endless number of plays, musicals, and exhibitions at our doorstep. Unfortunately, the theatre has a bit of a reputation for being expensive, and therefore inaccessible for younger audiences with limited funds, such as students.

That's what I thought too, at least for the first couple of years of university, spending too much money on a small number of shows per year. Now in my fifth year, people tend to be shocked when they hear how often I get to go to the theatre, and assume I am a drug lord. The truth is, I have a few go-to strategies to ensure I get the best deal possible for every show, most of which are only possible because I am a student. Read on for some these tips and tricks, which will help you save some money and enjoy the wonders that the London theatre scene (pun intended) offers.

## Felix Arts (FREE!)

Yes, number one on my list is none other than Felix, the Imperial College student paper, the one you're reading right now. A majority of the articles in the arts section of Felix are reviews of plays, musicals and exhibitions (although we welcome any kind of

contribution if you feel like it). Twice a month, we post a list of press tickets made available for us to review for upcoming performances and exhibitions on our Facebook group (predictably titled **Felix Arts 2019/20**). The members of the group then get to claim the press tickets for free. All we ask for in return is a review to be published in print and online. There is no minimum participation quota, and as long as you review what you've seen, you can participate as often as you like, and as much as you like!

## Rush Tickets

TodayTix is a must-have mobile application for any London-based theatre enthusiast. Not only do they frequently offer good deals on tickets, they release tickets for select shows at 10am each day, for that day's performance(s), allowing two tickets per customer. These tend to cost £20, and get snatched up quickly, as there is only a limited number available. To maximise your chances, I recommend turning the notifications on for the Rush Tickets you're interested in. This will allow the app to send you a reminder shortly before 10 am. As long as you are ready to add the tickets to your basket, you should be all set. Sometimes it's worth hanging around on the Rush Tickets page as any tickets from other users' baskets for which the transactions weren't completed get recycled into circulation. As of now, *Waitress*, *Come From Away* and

*Fiddler on the Roof* are only some of the shows that participate in Rush Tickets, but the selection updates frequently.

## Lottery

There are different types of lotteries which tend to vary in price points, methods, and chance of actually winning tremendously. TodayTix runs daily lotteries for various plays where you can apply to win cheap premium tickets (these tend to be at about £20) throughout the morning for the day's performances. I have never actually got tickets this way, but there is no harm in trying. TodayTix also runs some weekly lotteries, most prominently for *Harry Potter and the Cursed Child*, called the Friday Forty, allocating 40 tickets per performance for £20 per part (i.e. £40).

Some shows run their own lotteries on their website, such as *Book of Mormon*, who also carry out a daily lottery in front of the theatre box office.

## Day Tickets

Now becoming a bit old-fashioned, some theatres ask patrons to queue early in the morning for a chance to obtain cheap, last minute tickets. These do tend to be very cheap. Be aware, though, that these are sold on a first-come-first-serve basis, meaning people tend to queue at ungodly hours, especially for shows that are sold out or very expensive through their general release, such as *Hamilton*. Finally, note that occasionally, these



Mousetrap is the longest running play at the West End! // Wikimedia

are standing tickets. As long as you don't mind standing up for 2.5 hours, seeing *Hamilton* for £10 really doesn't sound like a bad deal.

Additionally, although not technically any cheaper than face value, it is not uncommon for theatres to sell return tickets shortly before a performance at the box office. This has proven to be an effective strategy for me to see shows that are otherwise sold out such as *Fleabag* and *The Cursed Child*.

## Student and Youth Memberships

Some theatres run special schemes for students, which has been a complete game changer for me. Most importantly,

National Theatre's Entry Pass scheme (which is free to sign up for) for those between 16 and 25 provides an allocation of £7.50 tickets (£10 for guests, who also need to be between 16 and 25) to every one of their productions. Additionally, 45 minutes before each performance, National Theatre allows those with a valid student card to purchase any remaining tickets for £15, regardless of their original price tags.

A similar scheme is present within the English National Opera titled "Access All Arias" which provides cheap tickets to the opera. (£30 in the stalls, £20 in the dress circle and £10 in the upper circle). This scheme is also free to join, and anyone below 30 years-old or

those enrolled in full-time education can apply.

## Go Live

Finally, an online scheme called Go Live (previously known as West End for 10) releases £12 tickets for at least two shows a month! The organisation is currently undergoing significant changes, therefore keep your eyes on their new website when it is finally live to see what they are up to.

So, I think not only is this more than enough evidence that the West End can in fact be accessible to all, I hope it encourages you to try some of these out, join our Felix family, and enjoy some of the leading theatre productions in the world on a student budget!

# ARTS

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## Meet the Editors: Eamon - the cool one

### ARTS

#### Eamon Akil Farhat

Arts Editor

**S**o you've come to London, rents are high, a pint costs £500 and you basically can't step out of the house without breaking the bank. But it's all worth it right? London is a city of endless possibilities with a very vibrant arts and theatre scene... But where to start?

That's where I come in. My name is Eamon, and I am one of the Arts Editors this year ready to deliver some great content for you! I am currently in my third year and spend most of my time enjoying the food, music and theatre that London has to offer. In my free time, I study Materials Science and Engineering, but this is definitely a part-time

hobby.

The Arts section is here to help guide you through the most exciting exhibitions, the most marvellous musicals and the most titillating theatres. With reviews of shows happening on your doorstep every week as well as tips and tricks to get cheap tickets, you will become a regular reader in no time! Take some time out during freshers and try

**“Unlike the £10 entry to Ministry, these museums are free and won't leave you with dread and regret!”**

to go and visit at least one museum, there may even be a couple right next door to college. Luckily, unlike the £10 entry to Ministry, these museums are free and won't leave you with dread and regret!

Whether you've ever engaged with the arts scene in your hometown or not, now is the time to get involved and find out what you like. Is strolling through the Tate modern, looking at some inexplicable sculptures what gets you going? Do you prefer watching a Wicked green witch fly across the West End sky? Maybe you even enjoy the sights and sounds at an opera... in Chinese! London has it all.

I wasn't necessarily a connoisseur of fine arts and theatre before coming to university but now I'm hooked. I've been to loads since moving here. Some

have been amazing, some a little weird, but they have all been enjoyable in their own unique way. Personally, I enjoy art that really pushes me out of my comfort zone. The kind of play, musical or exhibition that leaves you thinking about it and reading around it for weeks to come. Although this all sounds a little highbrow, fear not, my absolute favourite musical is definitely Wicked. Although some might not see it as the most intellectually stimulating piece of art, it always puts a smile on my face!

I really hope you enjoy our freshers articles this week and keep coming back for more. We are going to work our hardest to be your one-stop resource for all things arts in London!



I'm not actually an avid rock climber but I really liked my outfit in this picture // Nikita Mehrotra

## The truth isn't always satisfying

*Conspiracy [noun]: a secret plan by a group to do something unlawful or harmful.*

### ARTS



**Where?** New Diorama Theatre

**When?** 10th Sept – 5th Aug

**How Much?** £16.50

#### Amanda Hertzberg

Arts Writer

**T**here's no doubt that a large chunk of the population are at least fascinated by conspiracy theories. Youtuber Shane Dawson has compilations of them on his youtube channel, each video with almost as many views as the British population. And we all have that friend who stays up at



Conspiracy is dark and features some dramatic imagery // *New Diorama Theatre* meticulous and hard work that entails working them out, the eye for detail and the dedication one must have. The more of this seemingly very delicately worked out evidence there

is, no matter if false, the smaller the leap of faith feels between scepticism and belief.

You name it - there's a conspiracy theory about it. So what happens when you quite literally put them all together in a small-scale theatre production, hire three brilliant actors and get a bunch of amazing props? You get New Diorama Theatre's production Conspiracy. The whole of this 75 minute play takes place in one room, yet it travels to New York Rockefeller Center, Hollywood and to the moon and back. It starts with three people apparently preparing to start recording some sort of TV segment. They have their scripts and props ready, and a microphone propped up against the middle speaker, Rose. They start by describing a photograph the audi-

ence has not yet seen, and they generate a lot of laughter in the audience whilst doing so. It is Rose Wardlaw's stubbornness and rockhard subscription to correctness that renders this scene so humorous. The play stays humorous throughout the duration, even in its darkest moments it is a comedy through and through. After a few attempts of describing this photo I think most people get an idea of it, and it is no surprise when the 1932 photo "Lunch atop a Skyscraper" is revealed.

I can't tell whether the acting or the screenplay is what takes this play from mediocre to excellent. At times I can't tell if the actors are still acting or if something actually went off the script. It seems to be one of those shows that evolves, a few extra jokes added every

night, definitely interacting with the audience. The best kind of play. I can't talk too much about the plot without spoiling anything, and I definitely don't want to spoil this one. Rose Wardlaw starts off the show as a strong lead actress, but I left feeling like it was really Shannon Hayes that carried this play over and beyond with her absolutely amazing version of Elvis Presley.

Conspiracy is really easy to watch. It never gets annoying, weird or too arthouse-y for the mass crowd. It's a bring-your-friends and have-a-couple-of-beers kind of lighthearted entertainment. Perfect for the freshers that want to venture out in London, towards the dark headquarters of UCL.

## ARTS

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## Werther at the Royal Opera House

*Worth it to see Werther?*

## ARTS



**Where?** Royal Opera House  
**When?** 17th – 5th Oct  
**How Much?** From £25

**Bernadette  
 Fernandes**

*Arts Writer*

The opening night of Werther was a beautiful masterpiece, however it was underwhelming at times. Massenet's Werther, based on Goethe's *Die Leiden des Jungen Werther* (The Sorrows of Young Werther), is a classic story of two star-crossed lovers – whose love brings sorrow to both themselves and the people around them.

The Royal Opera House was filled with a vibrant and excited atmosphere

as people came to see the famous Peruvian tenor Juan Diego Flórez cast as Werther opposite Isabel Leonard as Charlotte. Despite the buzzing atmosphere of the theatre, the ambience of the entire theatre changed as soon as the curtains were opened. The excited anticipation instantly changed to intrigue as the stage was revealed. The first act commences with the Bailli teaching his children the cheerful “Noël! Jésus vient de naître” as they frolic around the grand but realistic set. Before the audience meet Werther for the first time, we are greeted with his ominously large shadow approaching on the door of the Bailli's house.

When Charlotte and Werther finally meet, the audience expect this electrifying, almost tangible connection between the

two lovers – however I found this aspect to be missing throughout most of the performance. We learn of the death of Charlotte's mother and Charlotte's promise to marry Albert despite her feelings for Werther. Whilst this production is meant to be a tale of their forbidden love, it seems more like an obsession on the part of Werther towards Charlotte, with him even appearing to throw a tantrum at the end of Act II when Charlotte marries Albert.

Nevertheless, as the production drew to a close, the feelings between the two lovers became more apparent. The turning point in the opera was where Charlotte finally admits her love for Werther after reading his letters. When she runs after him, the



Juan Diego Florez in the title role // Catherine Ashmore

drawing room doors burst open into a beautiful night sky – filled with beautiful amber hues that looked like burning embers falling through the sky. The realistic yet extravagant set was replaced with a vast, endless sky that highlighted and emphasised every action and lyric performed by

the two lovers. When Charlotte finds Werther again in the final act, the audience sees Werther alone in his blood-stained shirt in his apartment with the burning embers still visible in the night sky. His apartment, initially off into the distance slowly approached the front of the stage – drawing the

audience in to find out more.

Throughout the performance, there was no doubt about the talent of each of the performers – the singers, as well as the orchestra, all delivered an outstanding show. Although if I am being perfectly honest, the orchestra completely

## Don Giovanni

*Flashy set, but the acting leaves one cold*

## ARTS



**Where?** Royal Opera House  
**When?** 13th Sep – 10th Oct  
**How Much?** From £25

**Claire Chan**

*Arts Editor*

Kasper Holten's tech-heavy Don Giovanni has been trotted out on the ROH stage for the third time. The eye-catching set is unquestionably the most remarkable thing about this production. Unfortunately, it detracts from, rather than adds to, the performance, leaving one wondering where Holten's priorities lie.

Inspired by Escher's labyrinthine illusions,

Es Devlin's set places the story of licentious seducer Don Giovanni in a series of rooms that morph and shift endlessly. The revolving rooms and staircases convey a sense of clandestine meetings, endless corridors and sexual subterfuge – in short, the atmosphere of Don Giovanni. Luke Halls' video designs breathe life to the architecture with an ever-changing backdrop, choreographed precisely onto the moving set. Red splashes of blood for the Commendatore's death; blue summer skies for Don Giovanni's false tales of seduction; black, treacherous teardrops when Don Ottavio sings of the tears of Donna Anna. It's quite a stunning light show but also rather like

watching a giant mood ring display the overall atmosphere of the opera at any one time, which gets a bit annoying.

Holten, known for his controversial interpretations of operas, has cleverly de-victimised Don Giovanni's conquests. Rather than being a helpless maiden, this Donna Anna is a willing and manipulative accomplice, cavorting with Don Giovanni even as she commands fiancée Don Ottavio to avenge her honour. Zerlina, the newlywed bride who is the next to catch Don Giovanni's eye, is also no simple-minded country girl. Her accusation of rape at the end of Act I is transformed into a ploy on her part, with Zerlina

ripping her bodice and crying for help before Don Giovanni ever touches her.

A pity then that the performances were so wooden. There was hardly any chemistry or dramatic tension on stage – characters appeared, sang their lines and disappeared off into the wings again. Malin Byström as Donna Anna bitterly lamented her father's death – from about three feet away and facing the opposite direction. There was a severe lack of eye-contact, the singers choosing to sing at the audience rather than to each other. Where was the heat and passion of the rakish Don Giovanni, or the tormented vengefulness of the jilted Donna Elvira? Despite the

remarkable voices of the singers, everything felt very forced. Combined with the set, it felt like we were watching puppets pop out of a painted music box to deliver their lines at the prescribed times.

This is terribly unfair on the cast, who are in themselves really rather good. Erwin Schrott, in the titular role of unrepentant sinner Don Giovanni, is a commanding, honey-voiced bass-baritone whose potential seems to be unlocked only in the finale. As he rails against the spirit of the Commendatore, steadfastly unrepentant till the end, the defiance and courage of our antihero Don Giovanni finally comes through. Indeed, most of the cast only shone as

characters in the second act when the set was less fussy and they had the stage to themselves. One exception was the comic couple, Zerlina (Louise Alder) and Masetto (Leon Košavić), whose natural interactions and strong singing made them welcome relief from the somewhat unconvincing melodrama panning out throughout the first act.

Perhaps one can put it down to opening night and the cast not having settled into their roles or the disorientingly kaleidoscopic set. But for whatever reason, this Don Giovanni just didn't do it for me. It is a pretty music-box of a production, but the drama and emotion seem to have been sacrificed for fancy light tricks.

## ARTS

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## Fame the Musical

## ARTS



**Where?** Peacock Theatre  
**When?** 11 Sept - 19 Oct 2019

**How Much?** from £18

## Marena Gray

Arts Writer

Who doesn't want to be famous? Fame the Musical is all about that desire to be recognised, to be known, to not fade out of existence when death takes hold. While based on a film from the 1980s, that desire is just as relevant today. "I'm Gonna Live Forever" is the refrain of our protagonists - talented teenagers aspiring to a career in the performing arts, who while facing the challenges of growing up, must also bare their souls in their respective professions. Musicians, actors and dancers alike come together to share their stories in the new West End adaptation of the beloved film, TV show and musical.

Outside of the famous eponymous theme song, the songs of the musical themselves are not as well known. After the amusing auditions where the

promising youngsters are barely given five seconds to show their worth, the opening song "Hard Work" sets the tone for the rest of the first act. The starry-eyed students, with their heads full of dreams, are, if you excuse the pun, given their fifteen minutes of fame in songs like "I Want to Make Magic", "Can't Keep it Down" and "Let's Make a Love Scene". Stephanie Rojas is a particular standout as Carmen, leading the lunch jam sequence in the celebratory "There She Goes/Fame". Jamal Kane Crawford as Tyrone plays the troubled and angry African American teen stereotype perfectly, but this is where Fame the Musical starts to show its age. Other stereotypes in the musical such as the fat funny girl, the class clown and the sensitive artist are outdated, sometimes insulting and not very original.

The second act is the stronger of the two, where life and their ambitions do not always go to plan. Simon Anthony as Schlomo is excellent here, as is West End debut Alexander Zane as live-trumpeter and comic Goody. The actors get their chances to shine in numbers like "In LA" and "Dancing on the Sidewalk", which

although not especially memorable, again allow for some strong performances. Mica Paris steals the show with "These Are My Children", describing her motivations behind the assumed toughness of this homeroom teacher.

Whilst the final song of the musical is a moving one, we as the audience are indulged in the encore, where the whole cast brings the crowd to their feet to join in the eponymous theme. It's a chance to let go, sing, dance and have fun with some of the most talented youngsters on the West End this season.

If you're looking for an enjoyable evening, Fame will leave you dancing the night away. You might not remember the minutiae, but you will remember how it makes you feel. It's a musical of hope, of dreams and as succinctly put by Billy Porter at the Emmy Awards: "of love". It makes you think of your own goals, your own aspirations, as these young people are similarly trying to make their mark on the world - life does indeed imitate art. As a university of STEM students, these may not be totally relatable to dancing or singing on Broadway but may just give you the groove in your step to start the day right.



Gravity defying feats of acrobatics //Rouge

## Rouge

A circus for grown-ups

## ARTS



**Where?** Underbelly Festival, Southbank

**When?** 28 Aug - 15 Sept

## Elizabeth Thong

Arts Writer

Hailing from a stellar run at the Edinburgh Fringe Festival is 'Rouge: A Circus for Grown Ups'. And it is a truly spectacular show. The award-winning Australian production is a celebration of jaw-dropping acrobatics, cheeky burlesque and charming cabaret that was both sensual and gorgeous. Overflowing with confidence and sass, each performer filled the theatre with their own unique charm, and often sent the audience into fits of laughter and pure joy. Alongside the perfect injection of tongue-in-cheek (and occasionally naughty) humour, the 70-minute show passed in a blink of an eye and left us wanting more.

Whilst each short act seemed disconnected from each other, overall

the acts worked together to expose the audiences to various facets of burlesque and cabaret. Included were death-defying acrobatics that left the audience gasping in shock and heaving sighs of relief as the performers completed their immaculate routine. There was even some involvement of the audience members with the acrobatics - it kept us on our toes! However, some audience participation was uncalled for: one woman decided to go up on stage, attempting to touch the performer without permission. She was rapidly (and smoothly) shuffled off the stage by another performer, much to our chagrin and amusement.

Things were kept light-hearted with the performer's cheeky winks, slapstick humour and general sassiness. One entire song had a performer enthusiastically dancing with a lampshade on her head, mimicking the lyrics of David Guetta's 'Turn Me On'. The performance then built on this theme, with subsequent partially-nude acts using the lampshade to maintain the performers' privacy. We were often left roaring with

laughter as the performers took bites of carrot strapped to a performer's underwear, whilst another got his pants pulled down (they were careful not to flash us though!).

Whilst funny, the true highlight of the show was the acrobatics. We witnessed core strength that one can only aspire to, with the performers' flexibility and musculature being those made of dreams. We can only laud the performers' ability and skill, alongside their ability to blend these acts in with sexier ones. Throughout, they maintained a charm and stage presence that left us smiling, with their infectious energy and passion rolling onto us.

'Rouge' was a show that left the audience feeling thrilled and empowered. A truly decadent blend of acrobatics, cabaret and burlesque, it is easy to see how this show is the Weeklies winner Best Circus Adelaide Fringe 2018 and Fringeworld 2019. It was an endless celebration of all things passionate, operatic and borderline inappropriate. I could not have imagined a better way to spend an evening, for it was a true sensation to behold.



A high energy performance//Fame the Musical



FELIX

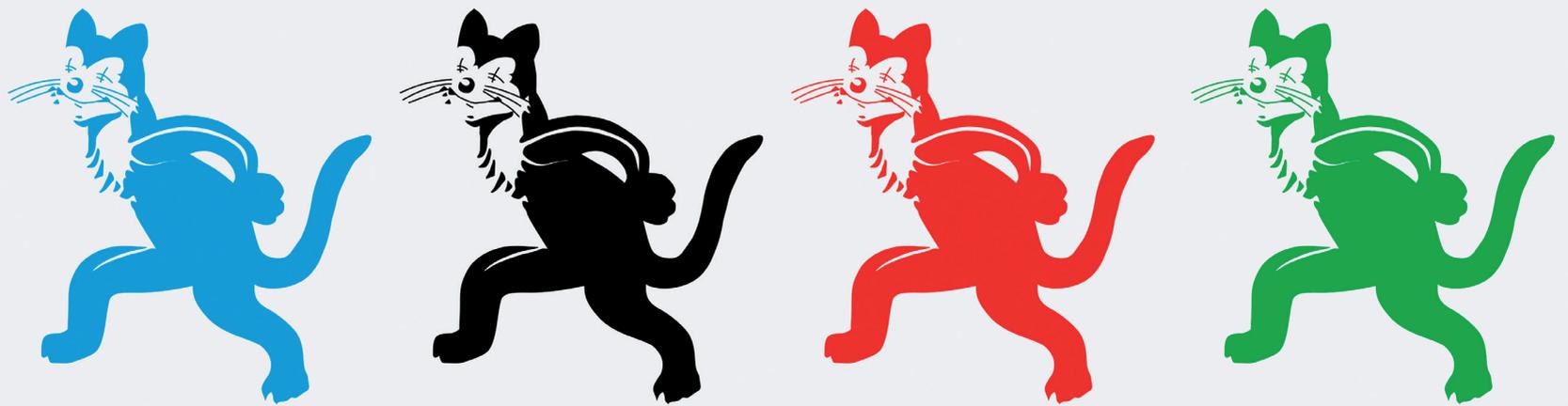
NEEDS

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# POLITICS

politics.felix@imperial.ac.uk

## Register to vote, even if you have done it before

*Irish and Commonwealth citizens included (but not under-18s, the Queen or Members of House of Lords)*

### POLITICS

**Andy Wang**  
Politics Writer

In the midst of the political turmoil and uncertainty produced by Brexit, one thing is certain: a General Election is about to take place, and regardless of which side of the argument you are on, your vote matters. More than ever.

You will need to register to vote using your new student accommodation address at

[gov.uk/register-to-vote](http://gov.uk/register-to-vote)

(unless you are living at home and have already been registered to vote at your home address). You will need to provide your National Insurance number (which should be on your payslip if you have worked before; you may have used it on your Student Finance application as well).

The result of this upcoming election will determine if you need a visa to spend a year of your course in the EU; it will determine if you can access healthcare on the same basis as local EU citizens; it will determine if you will have to pay roaming charges for using your phone in the EU; if your tuition fees change, or if they'll be abolished; if recreational cannabis becomes legal; if you need to upload your ID or purchase a permit from a newsagent to consume online pornography; if you need a visa to remain in the UK, the election outcome will also determine if and how you will be able to stay after your course ends... the list goes on. No matter who you are and which side of

the argument you are on, this election will make a difference to you and your future.

All British, Irish and Commonwealth citizens can vote in a Parliamentary General Election, regardless of the type of visa you hold, even those with Tier 4 student visas and BN(O) passport holders from Hong Kong.

Things are different for EU citizens – while you can register to vote, you can only vote in local, regional and European elections. And unless you are also an Irish or Commonwealth citizen, you cannot vote in General Elections (Cyprus and Malta are the only two EU countries which are also in the Commonwealth). As for referendums, there are no fixed laws regarding EU citizens' voting rights, and if the Parliament decides to hold a future referendum that franchises EU citizens, you will need to be registered in order to have a say in it.

You may think that voting is futile, maybe because you don't think the candidate you support has any chance of winning, or maybe you're certain that the candidate you like will win without your vote. But, these are not valid reasons to give up your vote. It's obvious that if everyone thinks voting is useless because the outcome was already predictable, the actual outcome may instead be drastically different.

Another frequently neglected reason to vote is that the margin of a candidate's win influences their behaviour and voting intentions in the Parliament. If the candidate you like or you hate wins by a big margin, they can voice more strongly the opinions that you

agree or disagree with; if instead they only manage to scrape a win, they may have second thoughts about keeping their seat in the next election and not vote as they promised.

**“You may think voting is futile... but...”**

Most importantly, even if the outcome of the election is not what you have hoped for, you will not regret exercising your right to demonstrate what you believe is good for this country.

While an early General Election hasn't been officially announced, both the Government and the opposition parties have expressed the intention to call one either before 31st October, or after a Brexit extension has been secured. Parties are already pouring out election promises, and those that haven't are certainly ready to do so once their party conferences start. There is no doubt a General Election will take place in the coming months.

**“You will not regret exercising your right to demonstrate what you believe is good for this country”**



Polling station // Flickr

You will be voting in different constituencies depending on your hall of residence. Below is a list of halls and the constituencies they are in, as well as their results in the 2017 General Election.

**PARSONS HOUSE**  
Hammersmith constituency.

Labour candidate Andy Slaughter won by a margin of 35.7%.

**XENIA**  
Vauxhall constituency.

Labour candidate Kate Hoey won by a margin of 36.8%. She will not stand for the next election.

**BEIT, EASTSIDE, SOUTHSIDE, WILSON**

Cities of London and Westminster constituency.

Conservative candidate Mark Field won by a margin of 8.2%.

**THE COSTUME STORE, HOLBROOK, WOODWARD**

Ealing Central and Acton constituency.

Labour candidate Rupa Huq won by a margin of 25%.

**PEMBRIDGE**  
Kensington constituency.

Labour candidate Emma Dent Coad won by a margin of 0.05% (only 20 votes!).

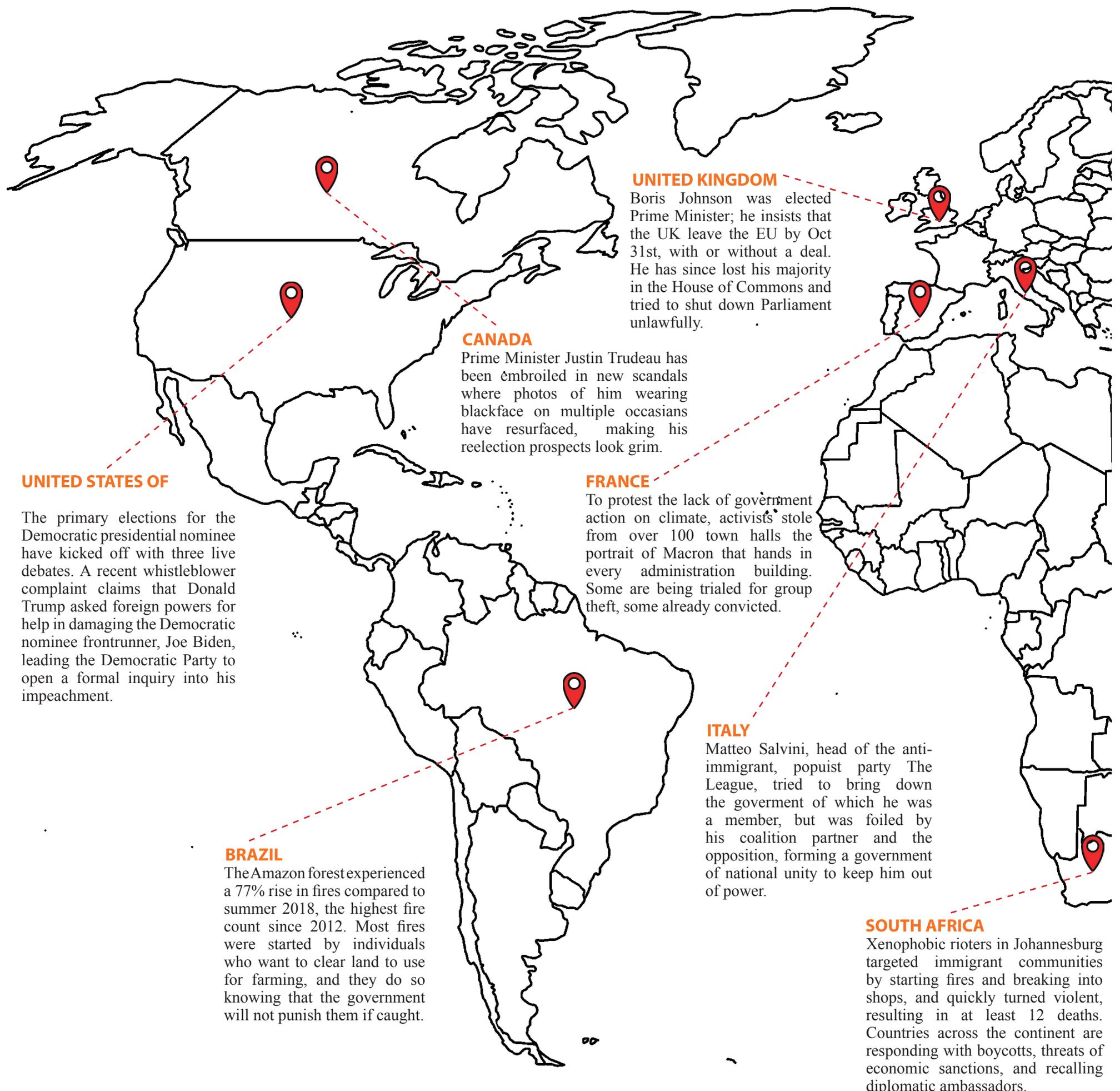
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# POLITICS

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## A Summer of Discontent

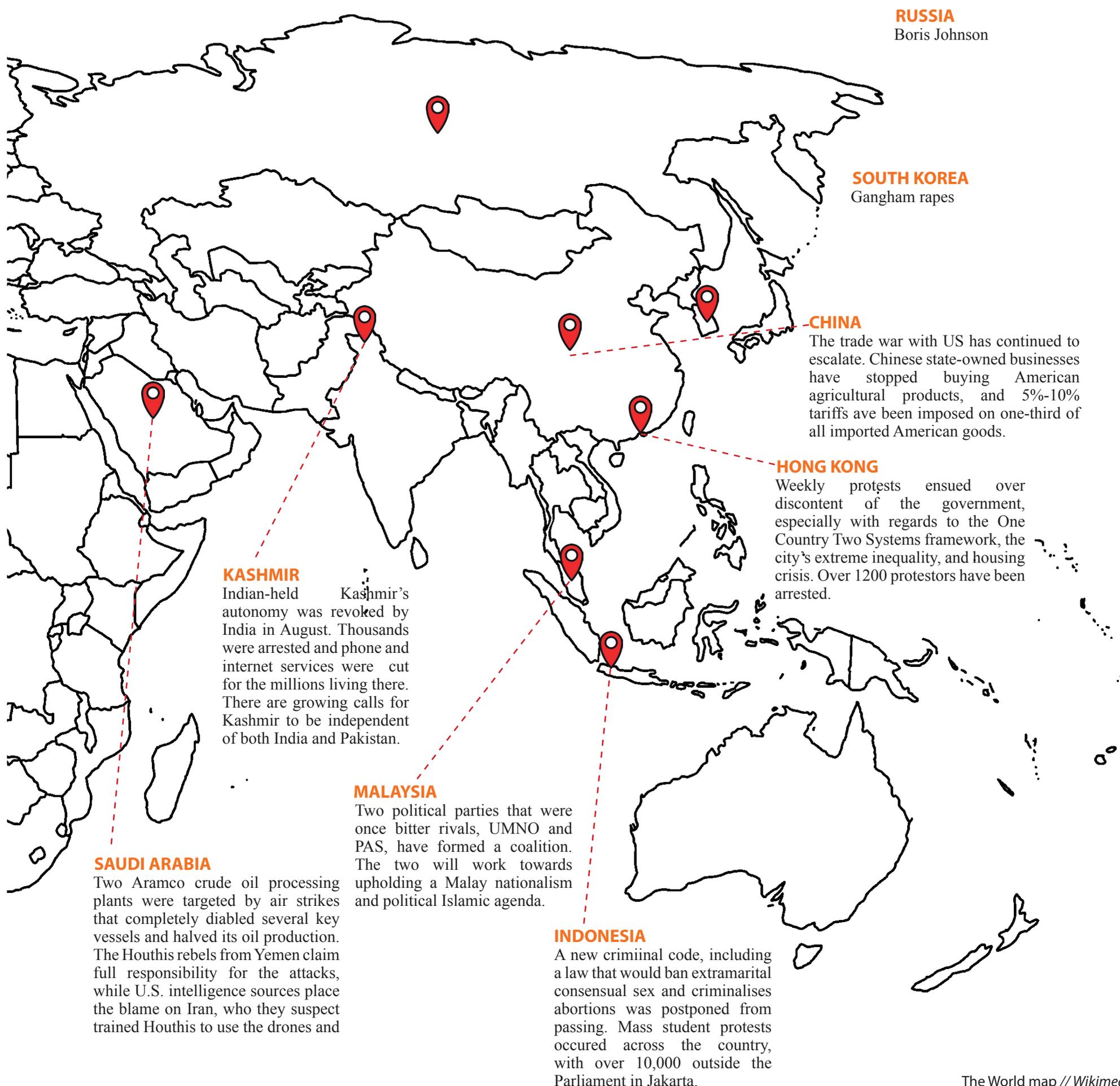
*A very brief but broad recap of the stuff that happened in politics around the world this summer.*



# POLITICS

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*A common theme in world politics this summer has been the*



The World map // Wikimedia  
Pin Location Map // Pixabay

# POLITICS

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## Big noise. Little action.

*After strong words at the UN Climate Change Summit and large protests across the globe, when will politicians get serious about tackling climate change?*

### POLITICS

**Andy Wang**  
*Politics Writer*

On Friday 20th September, millions of people from across the globe went on strike and demanded that the world's governments take action to combat the issue of climate change. With placards held aloft, rousing speeches given and chaos caused, the protesters were successful in raising awareness of the issues at hand, but all we got from politicians was a 'promise' that they will do more.

So far, only 18 of the 28 EU nations have pledged to be carbon neutral by 2050, and really, who knows if this will be achieved, or whether this deadline will merely get pushed further and further back. In the US, the government has essentially ignored protesters and continued with its policies of reopening coal mines and extracting more oil. When so many people make their views so clear, politicians that ignore them should do so at their own peril, but it really seems that they aren't that bothered by the risk.

Despite the protesters' simple message – let's cut our emissions and save the planet – the solution is not so simple. Governments across the globe are asking: what do we actually need to do? Is it right in a liberal society to demand people use less energy? Is it practical to abolish single use

plastic? Where can we build windfarms so that people won't kick up a fuss? The sheer complexity of all the considerations to be made is astonishing. Furthermore, the President of the US refuses to believe in climate change, and other big economies such as China and India are reluctant to pursue eco-friendly policies at the expense of economic growth. Therefore, it is not surprising that smaller nations, such as Britain, which contributes only 1.2% of global emissions, don't see any point in meaningful action when rhetoric has seemed to be just as effective at pleasing people until now.

**“When so many people make their views so clear, politicians that ignore them should do so at their own peril”**

However, rhetoric is no longer working, and people want action. Previous attempts at a global response, through the Paris Accord, have been unsuccessful and this is leading to frustration with voters. At the UN general assembly, Greta Thunberg, the Swedish activist, said to politicians “you are not doing enough” and that

if they “really understood the situation and continued failing to act then you would be evil.” Yet a sudden shift to a carbon neutral economy by 2025, as demanded by Extinction Rebellion, would have a massive impact on everyone's way of living. For example, taxes on emissions could lead to higher energy prices and restrictions on pollution would mean we must take less foreign holidays. Not everyone is prepared for that. There could be job losses too. If the oil and gas industry, which supports 375000 jobs in the UK, was to collapse, there would be a huge rise in unemployment, and this would lead to great

dissatisfaction with politicians who support climate change action. It would be tragic for positive climate action to become a source of controversy and contempt, and equally tragic for future generations to suffer from rising

**“It would be tragic for climate action to become a source of controversy and contempt”**

temperatures and sea levels because we failed to act.

It could be argued that in the UK some meaningful action has already been taken. Investment in renewable energy means that now a minority of our energy comes from burning coal, oil, and gas. The government also has a 25 year sustainability plan to reduce emissions. The government argues that these small steps will be successful in the long run, but experts argue more action is required.

Politicians have the unenviable job of balancing public opinion with necessary action, yet, with a recent UN report suggesting emission cut

targets must be tripled to limit global heating to 2C by 2100, these protests highlight that now is the time to take big, globally coordinated steps to curb our emissions and save the planet. Across Europe, climate change is rocketing up the political agenda; in Germany some polls put the Green Party ahead of Merkel's CDU, so whilst politicians have until now been reluctant to make bold statements, with the future of the planet (and their political careers) at stake, now is surely the time to get serious about tackling climate change.



Youth climate strike // KAIROS Canada

## COMMENT

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COMMENT

Calum Drysdale

Comment Editor

To many in the West Mugabe was the archetypal African dictator. He came to power on the back of a popular independence movement that promised to right the wrongs caused by colonialism but betrayed the principles that brought him to office, enriching himself at the expense of his people and cracking down violently on any hint of criticism. News of his death was greeted in Harare with joy.

However, in other African nations he is remembered far more fondly. Mugabe managed to gain a reputation for being a man who stayed true to his principles despite overwhelming pressure from Western nations intent on interfering in an African nation's future. Despite all that he did to impoverish his country, Mugabe's funeral was still attended by past and current African leaders who came to celebrate his achievements.

The reason for this enduring respect is not based on a code of honour among thieves or a similar support mechanism among kleptocratic leaders. Instead Mugabe was honoured for being a man that had remained true to his principles, the ideologies that he had espoused as a guerrilla leader in the Rhodesian Bush War that precipitated Zimbabwe's independence.

These ideologies were

## The intellectual honesty of Robert Mugabe

*The Zimbabwean leader stuck to his principles despite immense international pressure. It was just such a pity what those principles were.*



Mugabe was a teacher in Ghana// Wikimedia

pan-Africanism and anti-colonialism with an emphasis on land reform and following his rise to power in 1980. It was on this basis that Mugabe proceeded rather than the promotion of democracy or civil liberties. When viewed through the lenses of these ideologies, Mugabe's later actions become much clearer.

Pan-Africanism is the belief that the fates and concerns of the black citizens of all African nations and the members of the diaspora are interlinked, and that through 'collective self-reliance' and unity, a great redistribution of strength and economic power to Africa can be achieved. However, central to this ideal is the notion of unity, that every black African, wherever they are, must rally behind a single cause. Bastardised by Mugabe, this was used not simply to justify a move towards absolute state control but was the very reason for it.

Mugabe had no interest in a multi-party system. Indeed, he regarded it as a Western imposition. Mugabe was able to come to power because

would not follow him. The best example of this is the campaign of terror or Gukurahundi (meaning 'wind that sweeps away the chaff before the rains') that was launched against Matabeleland, a stronghold of the ZAPU, a rival faction during the independence struggle.

After three years of violence the ZAPU were coerced into merging (rather than disbanding) with Mugabe's ZANU-PF making Zimbabwe a de facto one-party state.

The same is true of Mugabe's attitude towards the white farmers who, as a result of racially based land allocation owned 51% of fields, all of which were suited to agriculture, leaving the black majority with only an infertile and unsuitable 22%. As this imbalance was a consequence of colonialism, Mugabe saw land reform as another vital aim. Immediately after his election a policy of 'Willing Seller Willing Buyer' was launched with the financial assistance of the United Kingdom that pledged to fund half

the value of any land bought with Zimbabwe footing the remaining half. This programme and the various others that followed it, each granting the government greater discretion in which

**"It was on this basis that Mugabe proceeded rather than the promotion of democracy or civil liberties"**

properties were acquired before finally elevating the process above the judiciary into the purely political realm did not succeed in reducing white control of prime farm lands.

The 1997 election of New Labour marked a change in policy after the Secretary for International development announced

"I should make it clear that we do not accept that Britain has a special responsibility to meet the costs of land purchase in Zimbabwe. We are a new government from diverse backgrounds without links to former colonial interests. My own origins are Irish and, as you know, we were colonised, not colonisers."

Following this announcement, the ZANU-PF began drafting a new constitution that would permit compulsory land purchase without compensation. While at this point the government was highly corrupt, the importance that was placed on seizing land from white farmers is indicative of the importance that was placed on expunging the traces of European colonialism.

This anti-colonial attitude extended to accepting help or even engaging in friendly relations with those that were regarded as complicit in the colonial process. When Obama exhorted African nations to be more tolerant towards non heterosexuals Mugabe was reported to have said that if Obama cared so much about gay people, he should come to Zimbabwe and Mugabe would marry him. It was this attitude of defiance that made Mugabe a hero to those that saw the West's preaching and aid as a descendent of the violent imperialism of earlier generations.

For these reasons, despite the excesses of the later years of Mugabe's rule, he is still regarded as an idealist, who despite the immense pressure he was put under, refused to bow to the white man.



I have "a degree in violence"- Rober Mugabe// Latimes

# MUSIC

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## While you were away...

It was, as it very often is, an eventful summer for music. In this, the first edition of the new academic year, our music editors take you through it all - from Lizzo, Men I Trust and BROCKHAMPTON to King Gizz and JPEGMAFIA.

### MUSIC

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Music Editor

#### Miles Gulliford

Music Editor

#### Martin Flerin

Music Editor

#### Guthrie Ruby

Music Editor

#### Emily Freeman

Music Editor



//Independent

#### ONCLE JAZZ



Artist: Men I Trust.

**Label:** Independent. **Top Tracks:** Tailwhip; Found Me; Pierre **For Fans Of:** Her's; Barrie; Puma Blue. 71 minutes.

Despite being the first album in four years for the nuck trio, there had been a steady sprinkling of singles coming out throughout that time to feed the hungry ears of fans. That means that 8 of the 24 tracks on the long awaited *Oncle Jazz* were already known to fans of band Men I Trust.

Being a band of this size, (they sold out their show at Village Underground last year quickly enough for me not to get tickets) while also telling record labels to get fucked,

is quite an achievement. That is why their plan of slowly releasing singles over a period of intense touring (upside is they're in London every year), in order to grow their following, worked so brilliantly. It also allowed their sound to mature, as they retreated to the Quebec countryside, mixing, recording, fine-tuning until their sound peaked in an album that flows from start to finish so smoothly it's hard to not slide all the way down, even if you just dipped your toe in for a tune. So smooth. "We'll be alright // Stay here some time // This country dog // Won't die in the city", a chorus that's been spinning around my

**"...quietly poignant, a virtue which is rare in the era of scream-ertainment..."**

head ever since 'Tailwhip' came out as a single, sums it up nicely: the album is a breath of fresh air.

Their lyrics are so quietly poignant, a virtue which is rare in the era of screamertainment, and make the perfect filling for the blanket of melancholy which constitutes many of their melodies. But even the lyricless nuggets in the album - 'Slap Pie', 'Fiero GT', and especially 'Poodle of Mud' - do a lot to round out the sound of the album. Oh, and 'Numb' sounds like a Mild High Club song - always a plus. Where's YOUR new album BOIS!? - MF



//Atlantic

#### CUZ I LOVE YOU



Artist: Lizzo.

**Label:** Atlantic. **Top Tracks:** Cuz I Love You; Like A Girl; Heaven Help Me; Jerome. **For Fans Of:** Beyonce; Missy Elliott; Kehlani. 33 minutes

Released in April this year, *Cuz I Love You's* riveting energy took its time to creep into public consciousness, but with a little help from meme culture ("I just took a DNA test, turns out I'm 100% that bitch") Lizzo's major label debut charted highly this summer.

Blending RnB and Hip-hop influences with an impeccable pop sensibility, Lizzo proves herself a high par songwriter throughout; from the bombast of the title track, to bangers like 'Heaven help me' and 'Like a girl'. Instrumentals blend trap-style drums and synths with live instruments, creating a listenable backdrop for the Minnesotan's enthralling deliveries.

Lizzo's voice croons, groans, belts and teases to measure on each track, allowing her to inject her uplifting and often witty (if simple) lyrics with a life of their own. Without this life, the themes of self-love, equality and

heartbreak that are *Cuz I Love You* could feel flimsy and inauthentic, but here they are entirely heartfelt.

Despite some weaker tracks towards its rear end ('Exactly how I feel' and 'Better in Colour' come to mind), *Cuz I Love You* is a delight on the ears; a must listen for 2019. - MG



//Harvest Records

#### GINGER



Artist: BROCKHAMPTON. **Label:** RCA. **Top Tracks:** NO HALO; IF YOU PRAY RIGHT; DEARLY DEPARTED; ST PERCY... **For Fans Of:** Dominic Fike; Injury Reserve. 44 minutes

They're back, and ready to bear all in their most depressed release yet.

*GINGER* is for many a desired look into the minds of the world's biggest of the world's biggest boyband following a series of major disturbances to the group. After the not very "sonically consistent" *iridescence* it seems that the group has regained some of its creative cohesion. The band work through and discuss much of what has been troubling them over the past year, the most anticipated of which was the decision to remove Ameer Vann (covered on the track 'DEARLY DEPARTED').

It seems as though the band is finally finding solid footing after losing such an integral member. In places the chemistry is not quite what it was in the *Saturation* days, but it appears we may be headed towards something different and exciting. The production is still fresh, keeping even the most avid of listeners on their toes speculating what may come next. Combined with a maturation of the distinctive vocal/rap styles within the group, this album has helped remind us that BROCKHAMPTON are stronger than ever and ready to keep making fantastic music. - GR



//RCA

#### FEAR INOCULUM



Artist: Tool. **Label:** RCA. **Top Tracks:** Pneuma. **For Fans Of:** Primus; A Perfect Circle; Karnivool. 86 minutes.

Tool's fifth album, *Fear Inoculum*, has blessed our ears after 13 long years of waiting. In true Tool fashion, the 10-track, 87-minute long prog-metal extravaganza begs to engulf you, smothering you with 10-minute progressive masterpieces that help you to ascend to the astral plane. However,

for an album that's been stewing for over a decade, it's not everything you may expect.

Frontman Maynard James Keenan vocals spend a large proportion of the album on the backburner, with the interplay between the instruments taking centre stage; this is much like how Tool prefer to perform on stage nowadays, with Keenan hiding in the shadows to let the music take precedent. This results in a truly mature sound, which is overtly intricate, demanding the need for repeat listens to capture all the details.

This isn't unlike Tool

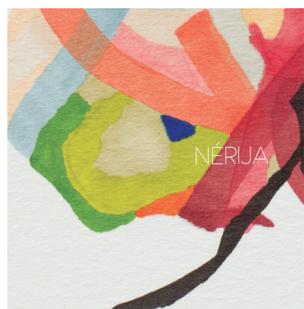
**"This results in a truly mature sound, which is overtly intricate, demanding the need for repeat listens to capture all the details."**

though, and there are definitely notable tracks from the band on this album: 'Descending', '7empest' and the album's eponymous track are all sure to stand the test of time as some of Tool's best.

In short, Tool have gifted their fans with a new album, and if you're a Tool fan, it does not disappoint. Although if you're new to the Tool-game, personally I'd start somewhere else. - EF

# MUSIC

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// Domino Recording Co.

**BLUME**

**Artist:** Nérija. **Label:** Domino Recordings. **Top Tracks:** Blume; Riverfest; Equanimous. **For Fans Of:** Sons of Khemet; Weather Report. *55 minutes*

London based Jazz collective Nérija carve out a small nook of their own on debut *Blume*; a feat increasingly impressive in London's ultra-fertile jazz scene. Influences from afrobeat and 60s hard-bop balance to create a colourful collection of mid-tempo tunes.

Delving neither too far into Coltranian solos nor content to sit within the confines of a groove, the backing bends subtly to the atmosphere each soloist builds. An engaging but never arresting or exhausting energy pulses through each track.

Saxophonists Cassie Kinoshi and Nubya Garcia lay more spacious, rhythmically driven solos which prove at times underwhelming. Sheila Maurice-Grey's trumpet work is more limber, with dense bursts of melody, making for a more enjoyable listen.

The rhythm section, whilst musically competent never particularly shines on *Blume*. Double bass hides in the mix, swathed in heavy cymbal work on several tracks, grooves err toward functionality over depth. Shirley Tetteh's guitar builds sparse or rich backdrops too - her solo work is also engaging if undersold by stale guitar tone. In an age where electronics and guitar pedals dominate

both mainstream and jazz worlds, the coarse guitar found on tracks like 'Nascene' comes off as lazy, not vintage.

Ultimately, *Blume* proves itself an interesting, often beautiful record, but lacks any real stellar moments. - *MG*



// Flightless

**INFEST THE RATS' NEST**

**Artist:** King Gizzard & The Lizard Wizard. **Label:** Flightless. **Top Tracks:** Planet B. **For Fans Of:** DZ Deathrays, Pond. *35 minutes*

In "only" their second album of the year, Aussie psych band King Gizzard and the Lizard Wizard turn their heads to climate-strike supportive thrash metal. Not shy of genre-defying, ever-evolving albums, the comparison between this and their previous album, the electro-boogie 'Fishing for Fishies', is one of their wildest yet, a bona fide U-turn of musical genres. Not shy of telling a story within their albums, King Gizzard have produced a heavy-hitting soundtrack to the current climate crisis, through their lyrics and fast-paced noise which is spurring and urgent, symbolic of the need to act now and quickly reverse the dangerous effects of climate change. Throughout, King Gizzard paint a picture of a desolate future: songs such as 'Mars for the Rich' describe the poorest left on a deformed Earth; 'Superbug' describes the current lack of new antibiotics and the misuse of the ones we have; 'Perihelion'

tells us of humankind taking to space to find a new home. Not comforting, but perhaps what we need right now. As gory as the lyrics are though, the riffs are pit-inducing, and I for one don't mind head-banging for climate change action. - *EF*



// Secretly Canadian

**FOREVER TURNED AROUND**

**Artist:** Whitney. **Label:** Secretly Canadian. **Top Tracks:** Used To Be Lonely; Valleys. **Friend of Mine For Fans Of:** Big Thief, Kurt Vile. *32 minutes*

A warm breeze, sunset, and a cold beer with old friends is the best way I can describe the way Whitney's music makes me feel. The beat-up sounding instruments and Julien Ehrlich's ever-so-softly sung vocals give the sound a warmth and authenticity - that dewy goopy country goodness. In my eyes it captures so perfectly those fragile little moments, where it feels by chance you've made it to the perfect place with the perfect people, the summer memories that stick with you for life.

The country/indie-rock duo has returned after three years with a much more sedated album about the pivotal moments in love and life. Whether falling back in to love or losing an old friend, Whitney's tender approach helps capture these moments between moments. Considering the subtle nature of much of the album's focus the duo manages to do a lot

with a little. This is mostly thanks to the beautiful lyrical and compositional storytelling used working in perfect harmony, showing you don't need to say a lot to tell a compelling story. - *GR*



// JQT Recordings

**CUZ I LOVE YOU**

**Artist:** JPEGMAFIA. **Label:** JQT Recordings. **Top Tracks:** Beta Male Strategies; PTSD. **For Fans Of:** Injury Reserve; Slauson Malone. *45 minutes*

Speaking about the title of this new effort, All My Heroes Are Cornballs, JPEGMAFIA reflects on the common internet age realisation that people we think of as our role models are humans capable of human-level disappointment. Significantly, he stresses the fact that this goes both ways - he feels he is bound to be letting down someone somewhere at any given point in time. This album is somewhat of a response to that idea, through a now well-established PEGGY lens of aggression mixed with nihilism. PEGGY is all too aware that the punch-in-the-face, noisy, challenging style that won him so much critical acclaim after last year's *Veteran* is what fans have come to expect. He satirically acknowledges the irony of listenability therefore being a sign of his music coming short in a series of promotional videos where he plays tracks from his album to contemporaries he respects (including James Blake, Slowthai

and Jeff Tweedy). Despite their praise of his work, he labels the videos as proof of their disappointment, the only exception being Denzel Curry who is said to be "satisfied" in the video title despite trashing the album and calling it "Yeezus with hobos".

Tracks 'Free the Frail' and 'Rap Grow Old & Die x No Child Left Behind' have the clearest fame-reflective themes on the albums. The former is an uncharacteristically clean moment where PEGGY attempts to talk through his strange and turbulent emotional response to actually "feeling employed". The instrumental includes a low, lazy tide of a bass and pecking synth-drum claps which alternate with a more organic drum refrain. The latter sees PEGGY rap over a drilling static that contrasts soft keys that come in for a chorus where he sings about a "vicious cycle" where you go from "Bobby" (presumably Shmurda - a felon yet a cult legend) to "Michael" (presumably Jackson - an icon with a soiled name).

The album's lyrical content goes beyond just a response to fame though. PEGGY uses his new vantage point to further interrogate archetypes in the weird modern cesspool of shallow thots and rappers, music industry soul-suckers, brazen bigots and internet-dwelling-pseudo-liberal closet-racists and quasi-incels. Through this all, PEGGY grapples with his own identity - his proximity with all these groups seems to make him paranoid of losing the ability to self define. In particular, his experiences with the aforementioned bigots and internet-dwellers - two sides to the "cracker" coin - seem to have made him hyper-insecure of his large white fan-base who genuinely admire his work and whose support he is ultimately grateful for. His obsession with

shooting "crackers" down therefore seems to be an overcompensation.

'Grimy Wifu', a beautifully composed track that transitions immaculately from the previous, sees PEGGY's creepy infatuation with confrontation manifest as romantic feelings for his gun. A mellow acoustic guitar leads the track but a viscerally vibrating bass that lies dormant just beneath and repeated glitching embellishments give the impression of being in the core of a tornado. 'PTSD' which follows on from this continues this confrontational theme but this time with the attention focused on the person PEGGY's bullets are aimed at. The instrumental is beautiful once again but is more depressive, precariously held just above threatening. It also features one of the hardest verses on the album, with the following brilliant bars: "Your deal look like Brexit/ biting crackers and wonder why you anorexic".

'Beta Male Strategies' earlier in the tracklist is one of the most sonically impressive moments of the album, starting with a gorgeous, hypnotic sample that sounds like an other-worldly paradise. PEGGY ingeniously plays with the mixing so that, when the deathly beat switch suddenly comes in and he begins to rap over it, certain bars spring right against your ear drums - "GLOCK WITH THE DICK". The title track, with its deceptively harmonious glitching synth winks that sound stellar over a bass that teasingly comes and goes, and the opening track, 'Jesus Forgive Me, I Am A Thot', with its dreamy, watery synths neatly spliced with chaotic screaming vocal scrambles, are similarly stunning.

Despite the experimentation in places falling just the wrong side of abrasive, the ratio of impressive to bemusing on this record is overall just right. - *AR*

## BOOKS

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## Chemistry- Weike Wang

Books editor **Anushka Kulkarni** reviews *Chemistry*, a book concerning love, life and of course, science, at both the micro and macro-molecular level

## BOOKS

**Anushka Kulkarni**  
Books Editor

When I decided to write an article for this issue, the first book that came to my mind was *Chemistry*. Weike Wang's debut novel was named one of the best books of the year in 2018, and received enormous praise. So what can I say about it that you couldn't find at the back of the book? Having completed one year of university, I have realised that the key to get through it is to know that you are not alone, that there is someone else going through the same things as you, and this book gives you that much needed comfort.

*Chemistry* introduces us to the narrator, a bright but confused Asian-American PhD student with intelligent, strict parents, a smart, patient boyfriend, a successful best friend, and an adorable dog. This seems like a life with little to complain about, and the narrator's insecurity, anxiety, and indecisiveness is puzzling until she begins to unfold its layers, and we start to see a struggling Asian-American PhD student with parents that expect too much, a boyfriend too good for her, and a best friend she would never be as successful as – a life not so perfect after all. *Chemistry* in Chinese means “the study of change”, and the novel gracefully explores how the relationships around her evolve the way they do, as the narrator re-eval-

uates her relationship with herself, and her passion for science.

Although narrated in first person, the narrator often seems detached from

**“The narrator often seems detached from her own life as she adopts a nonchalant and matter-of-fact tone”**

her own life as she adopts a nonchalant and matter-of-fact tone. The flow of the narrative is often interrupted by stating related scientific facts that either compare, contrast, or somehow convey her feelings about an event in her life. Take for example the very beginning of the novel – “The boy asks the girl a question. It is a question of marriage. Ask me again tomorrow, she says, and he says, that's not how it works.” – which is immediately followed by “Diamond is no longer the hardest mineral known to man.”, to express her doubts about the proposal. This rather unique and detached narration mostly comes across as humour, yet we are able to understand that the narrator is trying hard to find herself and make sense of her feelings about her PhD, the proposal, and her parents. Thus, despite the humour, this novel manages to be an emotionally devastat-

ing one, and you will only be surprised by all the things it makes you feel as it progresses.

We enter university with the determination to excel, but it is not long before we start questioning whether we will even graduate, not long before we relate strongly to the narrator's voice: “Think small, I tell myself, think doable, think of something that might impress no one but will still let you graduate and find a job.” We often feel burdened by all the pressure, and sometimes can't help but give up. *Chemistry* assures us that sometimes it is okay to do so, while at the same time makes us realise its effects on others, especially our parents. In this beautiful novel of self-discovery, we also find the narrator understanding different points of view, and why

**“Chemistry promises us that, although it may not be in ways we expect, everything will eventually fall into place”**

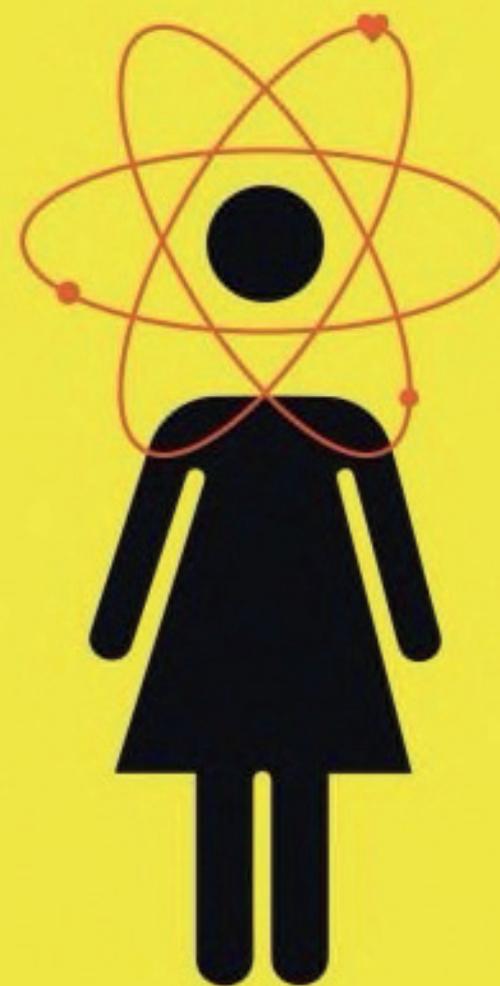
everyone around her is the way they are, and we observe a character development we not only relate to, but also can learn from.

This is one of the

books I've read that didn't leave me even after I'd finished it, and so I

chose to write about it in this section. *Chemistry* promises us that though

it may not be in the ways we expect, everything will eventually fall into place.



# Chemistry

a novel by Weike Wang

Chemistry Cover // Vintage

# BOOKS

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## Fangirl- Rainbow Rowell

*Jia Qi Tan, writes about one of the books they never leave out of their suitcase Fangirl, a book about the process of leaving home and going away to university*

### BOOKS

**Jia Qi Tan**  
Books Editor

The book. There is always the book that you have devoured countless times, that you always go back and get something different out of each time, that you can almost memorised every line, that you can count on when the world lets you down. It could be a poetry collection, the Harry Potter series, or a memoir. For me, it is *Fangirl*.

As a clueless fresher stepping into the intimidating world that is

university, I knew I had to pack *Fangirl* into my stuffed-to-the-brim suitcase because it is exactly the book that taught me what to leave behind and

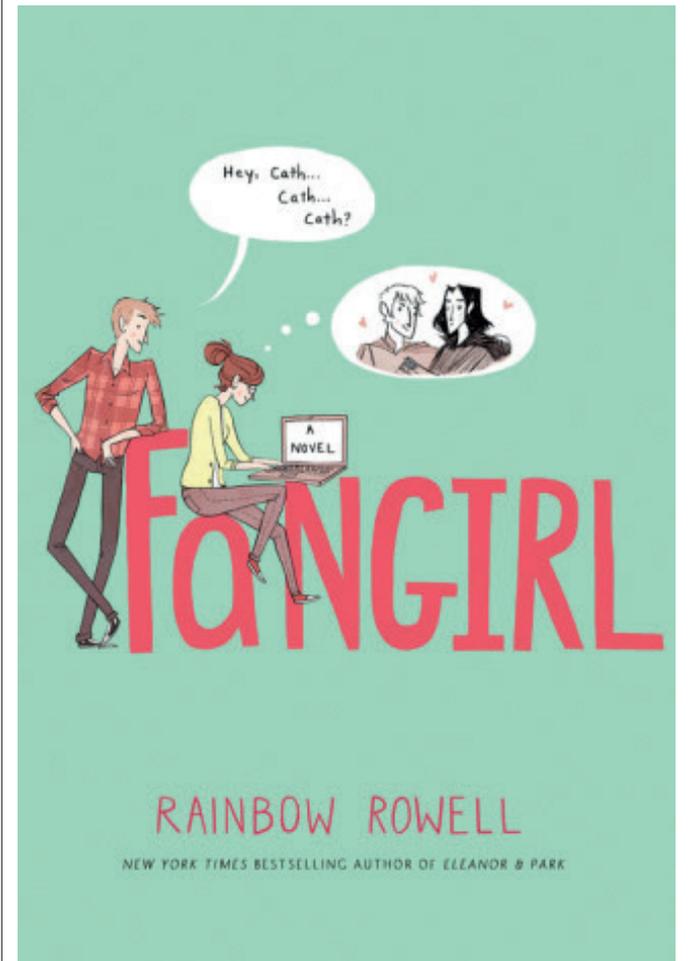
**“The narrator often seems detached from her own life as she adopts a nonchalant and matter-of-fact tone”**

what to hold on to. Contemporary young adult genre, always manages to secure a soft spot in my heart amid audacious adventures and heavy historicals. It’s the sort of book to reach for after a stressful day, to reread on a Sunday afternoon with a cup of tea, and to reassure myself that everything is going to be okay after all.

*Fangirl* follows Cath as a fangirl, a Simon Snow fan, where she writes fanfiction, discusses the nitty-gritty details on fandoms, and sticks up Simon Snow posters all over the walls. Now enters Cath as a freshman navigating college. For

the first time in her life, she is off on her own without her twin Wren who has grown away from fandom. Bombarded with challenges, from family issues to social anxiety to academics, Cath has to find a balance between passion, identity, and changes all alone in this unfamiliar place.

The book is unique in the way that it maintains a rigid structure with a chronological narrative yet reads fluidly. I credit this style to the concise writing and relatable theme that weaves all the relationships together and presents a charmingly-told story at the end of the day.



Fangirl // Macmillan Children's Books=

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# The N-Camera Smartphone Trend

*What are the advantages of having multiple cameras on smartphones?*

## TECH

**Sudarshan Sreeram**

*Tech Editor*

### Introduction

Over the years of our lives on this planet, we have found multiple ways to document our past. One of these ways, photography, has emerged as the most widespread and effective way to record our daily lifestyles. With the ability to capture the state of our world at the simple click of a button, cameras have proved to be one of the most important tools in human history. The saying, “A picture is worth a thousand words,” truly marks how cameras have become our go-to tool for creating visual journals; they save the time and effort to maintain written ones.

Today, smartphones prove to be the most accessible way to use a camera. With the rise of social media and competition between vendors, smartphone camera modules have received a complete overhaul from what they were a decade ago.

### Evolution of Cameras

In the early 2000s, high-performance cameras were rarely made for the regular consumer. Besides, these tools were highly-priced and rather bulky. Pocket cameras, often called point-and-shoots, were the most popular among buyers, especially tourists and hobbyists. With the rise in popularity of mobile handsets, it only made sense for vendors to bring in the camera as an added

selling point, thus making cameras ubiquitous. This move took off and presented a high demand for cameras to eventually become a standard feature of the modern smartphone. Conveniently, it made for one less device to carry around while traveling, thus significantly reducing the overall footprint of the camera. However, this shift saw manufacturers face challenges related to the performance, quality, and feature set of mobile camera modules.

### Social Media and Competition

With the rise of image-based social media, especially Instagram and Snapchat, the urge to share our lives with others through pictures has been more than ever; in other words, it's more like maintaining a common visual journal where one could share their lives with others. This rise has marked demand for smartphones with more-capable, high-performing camera systems, thus placing pressure on smartphone producers to innovate and push out devices that meet the needs of the buyer. Needless to say, this is, in fact, a profit-making opportunity for these companies. However, it's the competition between them to secure a higher share of profit that drives the innovation behind building camera modules that offer a wide array of pro-level features to the end-user. This healthy competition primarily results in consumers gaining access to high quality, feature-filled products at an affordable price. One of the recent

innovative approaches is to introduce the multiple-camera setup.

### The Multiple Camera Smartphone

In 2016, our world saw the shift towards multiple camera smartphones, starting successfully with the iPhone 7 Plus. Traditional cameras, such as DSLRs, mirrorless, and point-and-shoots, are composed of single-lens systems. In the case of DSLRs and mirrorless cameras, these systems often have the capability of swapping lenses to offer flexibility in the degree of zoom while maintaining image quality; they're often referred to

**“In 2016, our world saw the shift towards multiple camera smartphones,”**

as interchangeable lens cameras as a result of this feature. On the other hand, point-and-shoots have a single lens system that's capable of capturing images across multiple zoom levels, albeit with diminished image quality; here, the lens system is integrated into the body of the camera. Most low-cost point-and-shoots make use of digital zoom rather than optical zoom, which is heavily used in the higher end cameras.

With digital zoom, the camera crops into a section of the image taken at the highest optical zoom level (Typically 5x on standard point-and-

shoots). Thus, the image produced would have reduced image quality. On the other hand, in the case of optical zoom, the camera utilizes lens optics to shift the focus to a nearer or further point while maintaining image quality.

Devices housing these systems are often bulky, especially when the lens system is extended to match the zoom level. Smartphones, on the other hand, are considerably thinner and can't afford the space to accommodate fully-fledged single-lens systems as found in point-and-shoots, let alone the interchangeable lens systems of DSLRs and mirrorless cameras. Instead, they house small, compact cameras that rely heavily on digital zoom. Smartphone producers

faced the challenge to introduce optical zoom into their cameras while maintaining the same thin form factor of the phone. Thus, multiple camera systems were born. Here, a second camera, containing a telephoto lens, facilitates the system to operate at different focal lengths, thus being able to capture high-quality zoomed-in images. Furthermore, the multiple lens system made way for portrait photos to be possible on smartphones, albeit with a lot of software assistance in the background. From noise reduction to depth mapping, smartphones utilize their tight integration with software to overcome the bottlenecks in their camera modules.

### Smartphones vs Pro Cameras

With all this talk about how smartphone cameras are getting better, you must be wondering how they match up with professional cameras. Well, to be fair, smartphones are far behind high-end DSLRs and mirrorless cameras primarily due to the lack of larger image sensors. Image sensors act as the retina of cameras; it's the part that captures light and records the information through pixels. In most cases, the larger the sensor size, the better the image quality. In addition, the low light performance of smartphone cameras is comparatively poorer to those of pro-cameras. Before further discussion on understanding how



The new iPhone's multiple cameras are one of its prominent features// Apple

# TECH

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these cameras stack against each other, it's essential to understand the basics of how cameras produce images.

The aperture, ISO, and shutter speed, often dubbed as the fundamental buildings of photography, decide how the image is produced. The aperture acts as the "pupil" of the camera as it controls the amount of light entering the sensor. The ISO decides how sensitive the camera is to light; i.e., how bright the photo would be. Finally, the shutter speed represents the amount of time for which the camera shutter remains open; in effect, it's the amount of time that a camera takes to capture a photo.

Smartphones often have fixed apertures, thus limiting their low light capability. They overcome this by lowering the shutter speed, effectively increasing the amount of light into the sensor. However, this poses a problem as lowering the shutter speed causes motion blur. Hence, these cameras have in-built optical

image stabilization. Although this solution makes up for small hand movements, larger camera shakes, coupled with the movement of the subject(s), would effectively ruin the resulting photograph. To resolve this, smartphones turn to post-processing through software tricks, such as "night sight" in Google's Pixel and "night mode" in Apple's iPhone 11. Alternatively, this could be fixed through external stabilization methods, such as gimbals and tripods, as used by pro-cameras. However, smartphone manufacturers target ease-of-use and minimal dependence on external assistance modules.

Another way smartphones tackle lighting conditions is through machine learning. The camera captures images one after another at multiple exposure levels and intelligently merges select photos to create a well-balanced picture. Similar software-based methods are also used to "stitch" images from

multiple cameras to form a singular image, such as those found in the Nokia 9, a smartphone with a 5-camera system. This phone was made in collaboration with Light, the company that made L16, a compact and easily portable device that houses 16 cameras. Together, these cameras

**"The incredible effectiveness of software manipulation in processing images is felt best through Google's Pixel 3."**

use stitching algorithms to produce images that nearly match those produced by pro-level cameras.

The incredible effectiveness of software manipulation in processing

images is felt best through Google's Pixel 3. Despite only possessing a single rear camera, this phone has been consistently ranked as having one of the best modern smartphone camera systems.

On the flip side, DSLRs and mirrorless cameras have greater flexibility in manual control and possess a vast array of lens choices. Their raw capability to capture photos in almost any lighting environment outweighs the software tricks used by smartphones. However, the convenience and affordability of smartphones cameras remain unmatched.

**Lens Choices in Smartphones**

The multiple camera system isn't just used for zoom purposes. Many popular camera systems today use a third wide-angle camera to capture a wider scene. Other camera options include monochrome and time-of-flight cameras. A monochrome

camera is used to boost the image quality through software manipulation as it captures the highlights and shadows while a time-of-flight camera captures depth information and is essential for immersive augmented reality experiences.

**Uniqueness in Camera Systems**

As smartphone manufacturers increase the camera count on their camera systems, the factor of uniqueness in their products decrease. To make up for this, they resort to additional features that serve as methods to lure customers to their brand. For example, increasing the megapixel count of the cameras, introducing different lighting modes, using machine learning to adapt the camera to the scene, and providing the end-user with control over the post-processing of the image.

Again, this "healthy competition" has driven

an immense improvement in the production of high-quality innovative camera modules. A recent example is the introduction of folded optics camera systems, which allow for optical zoom in the range of 5x to 10x.

An aspect that manufacturers heavily focus on is the shape of the camera system. With the number of cameras increasing year after year and phones looking more alike than ever, the arrangement of cameras has slowly started to serve as brand identifiers.

**Conclusion**

As a result, the smartphone is starting to become increasingly centered around its camera system. What started as an added selling point has now sparked a race for mobile vendors to compete in and fight to lead the n-camera smartphone trend.

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# GAMES

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## 14 Years in the Game, ESAM and Pikachu Win Their First Super Smash Bros. Supermajor!

*A spectacle of a win as veteran player ESAM finally claims victory in the Singles division of the Glitch 7 tournament alongside landing in the top 3 of the Doubles and Squad Strike brackets.*

### GAMES

**Yusuf Ismail**

*IC Gaming Society Chair*

To those who don't follow competitive smash, you may be asking yourself, who is this guy? Eric Ler, more commonly known as ESAM, has been a part of the Super Smash Bros. competitive scene since the Melee days, sporting his childhood favourite character, Samus. Whilst skilled at Melee and Project M, ESAM's legacy truly comes from his top-level Pikachu performance in Brawl, Smash 4, and Smash Ultimate. For the non-hardcore smash players, Pikachu may just seem like a projectile spam character,

**"ESAM's legacy truly comes from his top-level Pikachu performance"**

but the reality is far from that, with just a glimpse of ESAM's performance against multi-tourney winner MKLeo, it's clear to see that there's more to Pikachu than meets the eye. Despite his proficiency with the character and presence in the community, ESAM has never won a major tournament; he frequently made top 8s and other respectable positions but could never attain true success. Not only was ESAM unable to achieve sweet victory,

but neither was Pikachu – leading to most players dismissing his placement of the character in top tier.

On September 15th, 2019, that all changed. With so much experience and yet so little glory associated with his name, like a true underdog, ESAM and his Pikachu destroyed Glitch 7 Singles - the most recent major tournament - achieving 1st place for the first time in his entire career. ESAM sported an impressive record throughout the entire tournament, winning every set he played: including against top players such as the likes of Tweek and Nairo. Finishing off, he was faced up against the Fox player Light, whom he had beaten 3-1 earlier in Winner's Finals. After a close and tense Grand Finals, ESAM beat Light 3-2, securing the sweet victory that he deserved.

ESAM wasn't the only trainer to win their first league this month: the classic protagonist of the Pokémon anime, Ash Ketchum, also won his first Pokémon League championship after a long 22 years - despite still looking like a 10-year-old. This humorous coincidence has led to a whole

**"Achieving 1st, 2nd and 3rd all in one day is a phenomenal performance, to say the least!"**



*"I know I always can do it, but I never do, and this time, I finally did it. I won, it's crazy" // @nkp-photography*

host of jokes paralleling ESAM's accomplishment to that of the fictional character Ash's. And just like with Pokémon, not only is this a victory for ESAM, but his fellow Pikachu too; now Pikachu finally has results showing that he can do well at the highest level, which might earn ESAM well deserved support and credit for the tier placement he's given it.

But it doesn't end there, singles wasn't the only thing ESAM crushed that day; he also took part in Doubles, and Squad Strike - a mode where you play with a different character for each stock. In doubles, he paired with MVD's Snake to secure 3rd place, losing to Dark Wizzy and Light in 2nd place, and Tweek and Nairo in 1st place. In Squad Strike,

ESAM managed to win 2nd place, only losing to Tweek. Achieving 1st, 2nd and 3rd all in one day is a phenomenal performance, to say the least, especially within such a revered tournament!

*Wanting to see if you can make it to the top of Imperial's competitive Super Smash Bros. Ladder, try out hilarious gaming challenges, or just chill out and enjoy gaming with others? Drop by every Wednesday, typical-*

*ly in Meeting Rooms 1 & 2, where you can find us, if not check out Facebook page @ICGaming, where you can catch up on the latest regarding Imperial run tournaments as well as inter-collegiate tourneys.*



*A long awaited victory// SBWiki + Nintendo*

# GAMES

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## Google Stadia and Chill: What Does the Future Hold

*Here is an overview of the up and coming world of video game streaming. Think Netflix, but instead of streaming videos you are streaming games, meaning you don't need a crazy powerful PC; all you need is a fast internet connection. What are the positives and negatives? will it flourish in the current market? With further insight into the Google Stadia and whether it can achieve the level of success it needs to thrive.*

### GAMES

**Freddie Ugo**  
Games Editor

In the last decade, we have started to see different forms of media shift towards a 'cloud-based' market. A customer does not need to own the media they consume but instead can stream it online (with the caveat of a required steady internet connection). This has been unarguably successful within both the music and film/series

industry, with the recent explosion of services such as Spotify, Netflix, Amazon Prime, Apple TV+ and Disney+ just to name a small fraction of the current market. So, the question is, will this work for video games? Well... that depends on a few factors.

#### How Does It Work?

Unlike TV and film, streaming video games is not just a one-way street. When a video game is streamed to a computer, phone or tablet, the servers responsible for sending

the game information to you must also receive your controller inputs at the same time. This means that there is a lot more that could go wrong and most importantly a much faster internet connection is required.

#### The Internet Issue

In the world of game streaming, Google Stadia has recently come under the spotlight with a mixed response. During E3 this year we learnt a lot more about Stadia's tech requirements. The bare minimum internet

speed required is 10Mbps, which for some is already an issue. To play 4k at 60 FPS, you are going to need a hefty 35Mbps. Now I don't know about you guys but personally, my budget student WiFi does not let me play at 4k so the benefit of being

**"Unlike TV and film, streaming video games is not just a one-way street."**

able to play on my phone or tablet (a major selling point of Stadia) is virtually non-existent.

Even with an ethernet connection and fast enough internet to comfortably stream games, many countries put data caps on a household's monthly internet usage. Playing games on max settings will mean you are spending around 16Gb per hour. With the typical data caps, this allots

you about 20 hours of gameplay a month. "But that's plenty of time!" I hear you cry through the pages. That may be plenty for some but if we consider all the Netflix usage and "Lo-fi hip hop beats to chill/ study to" we all know and love, then it will be closer to half that in reality. 10 hours a month is completely unreasonable when many people easily game that much in a single week... and just the mention of rationing my Netflix usage is already giving my free time shivers.

#### The Money Problem

So not only do we have issues with the internet, but another growing issue is the dividing up of the market. Before streaming, you could play most games with a Nintendo console and one of the other big 3 (minus

**"Now if I want to experience all the exclusive options from these companies, I will have to divvy out even more cash for the dreaded monthly subscription.."**

obvious exclusives). It meant that there was a choice you had to make, but nothing major. When cloud-based video game streaming started (albeit very shakily) in 2010

with OnLive, there was no issue with what games you could play with a wide variety of options and only one subscription payment you had to worry about.

But now, everyone seems to be jumping at the chance to stream games. Google Stadia, Nvidia GeForce Now, PlayStation Now and upcoming: Project xCloud and EA's "Project Atlas" are all options, and that's not even mentioning the plethora of smaller companies. Firstly, think of my poor wallet that is already being emptied by the Netflixes and Spotifys of this world. Now if I want to experience all the exclusive options from these companies, I will have to divvy out even more cash for the dreaded monthly subscription. This is made worse by the potential for even more exclusive content with Google Stadia already confirmed to have many exclusives coming to its service.

Although there are many negatives to this new gaming model, let us ponder the positives that come out from streaming games.

#### Potential Positives

Firstly, it is important to mention that it is by no means necessary to stream games in order to keep up with the hottest things in gaming. The exclusives which ARE coming out are not the big-budget titles from decades-old franchises that everybody loves, Orcs Must Die 3 (yeah me neither) being the biggest one. So, if you are not yet ready for a streaming filled future you do not have to be ... yet.

The biggest positive aspect of video game streaming is that no longer do you have to

### Stadia supports a range of resolutions and internet speeds



Stadia

An infographic of the required internet speeds and respective qualities for Stadia // Tech Crunch

# GAMES

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## for the Big Names in the Cloud Gaming Market

shell out £300-400 for the newest games console, nor do you have to own a 4k TV or a custom-built gaming PC with the top of the range graphics card. With streaming, you can play on the humble phone since all of the processing of the game is done by the respective company in house – take \*that\* anti-mobile gamers.

Moreover, if you do not care about physically owning the games then this is a great option for someone who just wants to pick up whatever game they feel like playing, no download required. It is great that people now have the option to jump straight into a game without those dreaded downloads, installations and updates.

Furthermore, it is, in fact, a cheaper option IF you stick to only one or two of the services, however, as mentioned above that is unlikely to be the case in the future.

All of these positives are great, and for some people streaming is going to be the perfect solution they have always looked for, but a lot of gamers may not look upon this as kindly.

### What Gamers Want

A lot of people who have grown up gaming view it as more than just a hobby. Gaming is a passion and is something

**“... this is a great option for someone who just wants to pick up whatever game they feel like playing”**



An all eat you can eat platter of PS4 exclusives with PS Now// PC Mag UK

that people identify with. Many find joy in owning and collecting a slew of games from a variety of consoles and lining them up on shelves just like books. This kind of gamer is not one to buy into game streaming, as the lack of physical ownership (or even digital for that matter) takes away their enjoyment. This is pertinent as the Nielsen's annual US 360 Report - A large scale American survey company - stated that 66% of people buy physical games rather than digital when it comes to console games. This study was taken with over 2000 participants and was made to be representative of the US population. With 66% of people wanting physical games, it seems unlikely that video game streaming will majorly pick up steam the same way TV streaming has in recent years.

Equally, hardcore PC gamers probably would

not want to buy into streaming either. According to the same report, 71% of PC gamers buy digitally meaning they are more likely to want to stream games, however, when it comes to hardcore gamers the issue of the data cap comes back. Any hardcore PC player will admit they play far more than 20 hours a month of their favourite game so even if they like the idea of having games easily available to them, the simple lack of bandwidth would limit them too much.

There are however undoubtedly people who will love the streaming idea. Those who are more casually into games and want to pick up and play anytime with any game they fancy will definitely relish the opportunity to grab a subscription to a service. This is with a similar mindset to how they would have a Netflix or Spotify subscription.

### What's the Verdict?

Looking at all the pros, cons and types of people that would be interested, it seems like there is a growing market out there for video game streaming, but it's just not that large. This is mainly from sheer

lack of internet availability and people still loving their physical copies of games. If anything the most likely course will be that a couple of the bigger subscription services will succeed, and others, which have caused this oversaturation, will fade

away in a similar way to how the first few generations of consoles many more competitors, even greater than the number of streaming services available today.



A new controller by Google to get to grips with// Tech Crunch

# GAMES

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## Poll: It's Dangerous to Go Alone! Submit This

To get to know our audience a little better without the awkward date (in which you would of course pay) we've decided to introduce a poll, with this week's focus being the beginning of your gaming journey. May you have been introduced by the clearly correct option of Minecraft or the much more sophisticated classic that is Bubsy 3D: Furbitten Planet (retches violently into a bin). Personal distastes and poor judgement aside, let's get to the questions:

### What company did your first console belong to?

- A. Nintendo
- B. Sony
- C. Microsoft
- D. Sega
- E. Atari

### Do you think the new Sonic movie will be worse than the 1993 Super Mario Bros. film?

- A. Yes
- B. No
- C. The true horror is the fact that these movies get made

### What was your favourite game when you were a kid / just getting into gaming?

Open submission



Back when Link had real curves// Nintendo

Submit your answers into the Microsoft survey which can be found by scanning the QR code or accessing the form through the Felix Facebook page. We'll get back to you next week, with infographics and more questions!

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## Are Insight Events important for a career in finance? Hear all about it from your fellow students



Tom Alston,  
MEng Aeronautical Engineering  
*Spring Week at Citi Bank*

I found out about most insight events through talking to people in the Investment Society. I thought it would be a very good way to get the ball rolling if you are thinking about a career in finance. Since I applied for a Capital Markets Insight week, and given my quantitative engineering background, I was placed on a Securitisation Desk.

I mainly work shadowed my team but also had talks from members in the DCF, ECF, Leveraged Finance and Equity Linked teams. On the final day was a series of interviews for the summer 2020 internship. It was clear that Citi was extremely diverse, people had a range of backgrounds from History to Astrophysics. Furthermore, whilst they were extremely driven, they were also very humble and approachable even during my interviews.

Personally, I thought it was an amazing opportunity. The financial services industry is so ranging and vast that before my Insight week, I was almost intimidated and overwhelmed. However, having completed it, I'm now much more informed and know what I want to do and how I'm going to achieve it.

I would say that you have nothing to lose in giving it a shot. All firms are clear that they expect you not to be 100% sure about a career with them. In fact if you are, you can come across narrow minded in an interview.

I found out about insight events through attending company networking sessions and through word of mouth. I believe in having “hands-on” experience rather than learning about a company through a two-hour presentation – therefore insight events that run for one week allows me to better understand the day-to-day tasks and the company culture. In addition, most insight events fast track attendees for summer internships – it is always better to secure an internship a year in advance to reduce the stress of applying. After attending two spring weeks, one at a bulge bracket bank and another at a boutique financial advisory firm, I realised:

1. Financial skills do not matter. You just need to be smart, be able to read the room, and be commercially aware.
2. Firms receive a very high volume of spring/insight week applications, sometimes your offer is based on “luck”.
3. Firms are really good at marketing themselves and their roles. Be aware of the firms’ sugar-coating.
4. What you do as an analyst does not differ much from bank to bank. Getting to know the people and the culture is more important.

For those who are apprehensive about applying:

1. Apply early.
2. Go through the whole process. You will see for yourself whether you like it or not. Financial services is not for everyone. Feel free to reach out to me on LinkedIn or via email ([vanessa.tang17@imperial.ac.uk](mailto:vanessa.tang17@imperial.ac.uk)) if you have any questions, always happy to have a chat.



Vanessa Tang  
MEng Chemical Engineering  
*Spring Week at Deutsche Bank and PJT Partners*

I heard of spring insight weeks before entering Imperial. I joined the Investment Society, which conducted C.V. workshops and assigned me a mentor, from whom I received guidance throughout the application process. My interest in the financial services motivated me to apply to gain exposure to the day-to-day work in the industry

Being in the Banking and Custody Team in the Private Banking division, I worked with various directors on client profiling and performed an analysis on different regions of the bank’s business. My managing director was patient with his explanations and in answering my queries. I enjoyed the flexibility to shadow other teams, it granted me insights into teams like Markets and Investment Management. The amount of employee contact, from junior analyst to global heads helped in building a network within the company. I was impressed by the complexity of the division and the number of teams that go behind the entire vehicle. I also learnt of the huge potential of private banking as global wealth is growing exponentially.

I was surprised with the amount learnt over just 5 days and how approachable senior employees are. This is the advantage of being an intern, most people are willing to help. I made strong connections with some employees that I am still in touch with and who mentor me on this journey to break into the industry. Being fast tracked to an Assessment Centre for a summer analyst position the following year was a benefit as summer internships are very competitive. The professional work environment also exposed my strengths and weakness, giving me fresh insights into my work ethic. Apprehensive juniors should apply as STEM students are highly sought after for their analytical and problem-solving skills. They are a fresh template for firms to train and mould. Spring weeks are an opportunity to discover how well you fit into the industry and firm, making you aware of your motivations and interests.



Rohhil Chhabra  
MEng Mechanical Engineering  
*Spring Week at Citi Bank*

# INVESTMENT

icu.investmentsociety@imperial.ac.uk

## A career in investments and the markets

### INVESTMENT

#### Xerxes Chong

ICIS

Investment Editor-in-Chief

The Wall Street Investment Banking. Warren Buffet. You have probably heard about several, if not all these words at some point in your life. You don't know what exactly goes down, but one thing's for sure, you hear the money is good. You're at Imperial College too, where select groups consider a summer internship at a certain investment bank, whose name suggest an affinity of man and gold, to be the embodiment of peak performance.

Some years from now, you will be looking for a job and the financial services industry is a viable and lucrative option for many hungry young graduates such as yourself. "Can I even get a job in financial services? I know nothing about it, shouldn't an economics or business student be more suited?"

Broadly speaking, the financial services industry involves a wide array of fields such as accounting, asset management, investment banking, corporate finance, insurance and the actuarial profession. The most popular are asset management and investment banking and is the context of this article.

The goal of asset management is as the name suggest, the management of assets. You've probably heard of Mum and Dad investing the family's savings for retirement and your expensive Imperial education, asset management firms do just that. The main business involves making investment decisions in return

for a fee and sometimes a cut of the profits, for large companies, wealthy individuals, institutions like universities and basically anyone with a large sum of money and other assets. Top firms making the highest and most consistent returns, attract many clients and handle vast sums of money.

Investment banking is something of a misnomer, having little to do with the traditional concept of investing done by Mum and Dad. Investment banking is the process of assisting individuals, corporations and even governments in acquiring funding to grow or sustain their operations. They also provide advice and assistance when

**"Can I even get a job in financial services? I know nothing about it, shouldn't an economics or business student be more suited?"**

companies merge or when one company purchases another. Funding is obtained by obtaining loans and selling "pieces" of ownership (selling shares of the company). Investment banks scour their contacts to find interested parties and provide advice on matters such as the size of the loan, the number of shares and even the timing of these activities, as wider geopolitical events greatly affect their success.

### Why even a job here

London consistently ranks in the top 3 on the Global Financial Centres Index, indicating a high level of competitiveness as a financial centre. It ranks highly on factors such as human capital, business environment, financial sector development etc. Simply put, London is a great place for anyone working in finance as it has an abundance of opportunity for work with leading companies and a great quality of life to match.

In an article titled "The 25 Highest Paying Companies in the UK for 2019" by CNBC, 10 of them were financial firms, which included firms such as Credit Suisse, Goldman Sachs and investment management firm Investec. While remuneration beyond a graduate level depends highly on the firm's performance and area of business, annual incomes rising above six-figures is not unheard of.

According to global jobs site Glassdoor, an Investment Banking analyst is the highest paying entry level job in the UK in 2019, with an eye-watering £50,752 median base salary, nearly twice the average base salary for a new graduate in the UK of £28,088.

The glitz and glamour of the industry comes with this caveat, you are going to have to work hard for it. Roles that pay well, demand long hours and heavy responsibilities. Tales of employee burn-out are common as the work can sometimes be demanding and repetitive.

The hardwork at the beginning is well rewarded, as the skills, networks and work experiences

are highly transferable to other less stressful but equally well paying and exciting areas of the industry. For example, many of the skillsets of an investment banker, are also applicable in venture capital firms, which business involves investing in promising start-ups. Working in such a firm could possibly mean working with, or possibly having an early stake in the next exciting firm like Facebook or Tesla.

### Banks do not hire STEM students

False. Firms usually have no specific subject criteria when hiring graduates.

The caveat being, one's qualifications must be from a list of "target" schools. Target schools are generally the top schools within each country/around the world. A good reference would be top members of the Russell Group universities, which are described as having the "...very best research, an outstanding teaching and learning experience and unrivalled links with local and national business and public sector". In theory, graduates of these universities have received a better quality of education and are therefore, "better" employees. While there is a movement to look beyond superficial qualifications and focus on skills and experience, this admittedly elitist criteria will be around for some time. But you're at Imperial College London, so don't fret!

However, certain specialised roles may have preferences/requirements for a specific subset of degree subjects. For example, quantitative roles requiring stronger numeracy skills will favour or even require individuals with a back-

ground in engineering, physics, mathematics and statistics. Firms involved in the pharmaceutical industry may favour qualifications in medicine, biomedical engineering and chemistry.

The sheer diversity of backgrounds of graduate hires and interns means firms often provide a structured training programme to bring all hires up to speed on computer skills, basic financial analysis and company specific practices. The most useful skillset to bring as neophyte is proficiency in Microsoft Excel, Word, PowerPoint, teamwork and the cliché but important, willingness to learn

### Graduate programs, summer internships and insight events

Graduate programs of these firms are the primary feeder of fresh talent into the industry. These programs will often cycle the graduate through multiple divi-

sions of the firm to gain exposure to the overall business. Competition is stiff, since some places on the graduate program are offered early to high-performing individuals from their summer internship program. Summer internships range from 9-12 weeks and are a taster into the life of a full-time employee. Interns are worked hard but are also often well remunerated, not just with pay, but also valuable skills and contacts.

You'd be right to have deduced the importance a summer internship plays in breaking into the industry. The best way to land one? Apply to as many as possible and be a star applicant. Or join insight events.

Insight events are being offered increasingly by firms to reach out to students as early as possible. These are offered to students the year prior to their penultimate year (first-years on a three-year course/second-years on a four-year course). These



Imperial College is a target school and her graduates are highly sought after // Wikipedia

# INVESTMENT

icu.investmentsociety@imperial.ac.uk

## A career in investments and the markets

events last from a day to a week and are a peek into the firm's businesses. On the itinerary are presentations, workshops and networking sessions with different divisions at the firms offices. It is common to have outstanding

### "Breaking into the industry is no accident, it requires careful planning and execution"

individuals selected for interviews post-event and being offered a summer internship the following year. As such, these relatively light-hearted events can lead to a summer internship, which could lead to a graduate role!

Therefore, summer



*if you choose to pursue a career in investments and the markets, it's likely you'll be working in Canary Wharf or the City of London // Wikipedia*

internships and insight events are fiercely competitive programs.

#### So how do I get a job

Breaking into the industry is no accident, it requires careful planning and execution. The industry is hyper competitive and pays well. Naturally, this attracts the best and brightest to apply. Positions for graduate roles, summer internships and insight events of the top firms are minuscule com-

pared to its several thousand applicants. These 3 events can be viewed as essential milestones to ones journey into the industry.

The best and most successful applicants would have acquired much prior knowledge about the industry and made strong networks with people in the industry. They often achieve these through active participation in school societies. These societies provide opportunities to demonstrate

one's interest in the financial services sector through participation in; stock pitches (pitching an investment idea to an audience by discussing its strengths and weaknesses), writing articles to learn and demonstrate knowledge, various investment competitions, attending courses on financial analysis and maximising networking opportunities with people from industry.

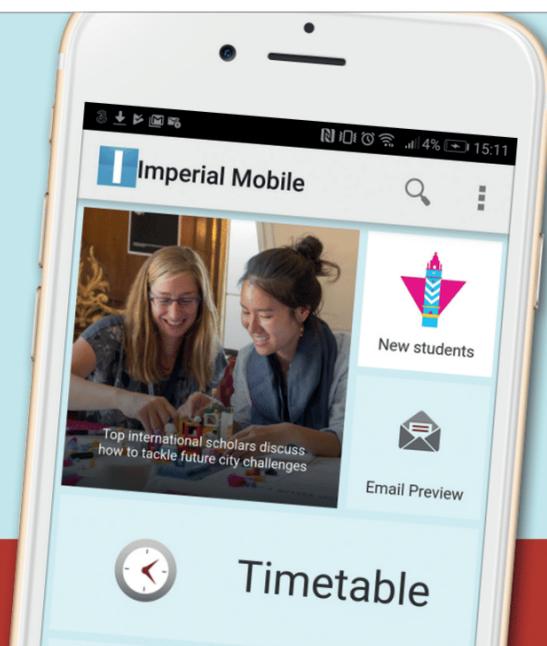
*The Imperial College Investment Society (ICIS) hosts interactive weekly investment meetings where our members have the chance to present investment pitches, ask questions and vote on buy/sell decisions.*

*We offer competitions, career advice talks and guest lectures by industry experts on a range of finance topics. Also available are a diverse range of career opportunities ranging from Private Equity to Asset Manage-*

*ment through office visits, exclusive dinners and speaker sessions from industry professionals.*

*Our society's previous articles in Felix can be found at felixonline.co.uk To find out more about our upcoming events, getting involved in our society and any other queries, you can contact us at:*

*icu.investmentsociety@imperial.ac.uk*



**Download**

## Imperial Mobile

The free app for students featuring College services, timetable, email preview, campus maps, events calendar and much more.

www.imperial.ac.uk/imperial-mobile

# HANGMAN

negafelix@imperial.ac.uk

## Union saved from financial woes as all staff quit

### HANGMAN

**Negafelix**  
*Editor-in-Chief*

*An accidental simultaneous resignation of all full-time staff leaves Sabbatical officers scratching their heads.*

This week, after two financially difficult years, the Union have announced that they are ahead of budget targets. This positive news coincided precisely with confusion from Sabbatical officers who arrived in the Union offices on Monday to find them deserted. A solitary post-it note had been left at reception explaining

that all the staff had handed in their notice a month ago and forgotten to mention it to the Sabbs. The silence of the office was punctuated only by the incessant ringing of the phones from students requesting room bookings.

Union President Bluejay Mood explained that high staff turnover is standard fare in student unions and that whilst the present situation was somewhat atypical, (he was at this point speaking into two telephones and typing at the same time) there was really nothing to be worried about. He went on to say that the resignations provided an opportunity for a 'fresh start' at the often-maligned

institution.

One former employee contacted Felix to explain their reasons for leaving their post, stating that they wanted to work for a more competent and stable organization and so had taken a job working for the UK Government. Another claimed that they never meant to start working for the Union, they had been looking for the BBC Proms talks a couple of years back and got lost. After accidentally stumbling into the offices they took pity on the struggling organization and had been doing the job of Managing Director on an ad hoc basis.

Whilst some are concerned by the possible effect on student



New storage space? // Pixabay

experience, Shane Weary (Vice Provost – Bevs) painted an altogether more positive picture of recent events: "Students may experience slightly slower responses to their queries but we believe that most members won't observe much difference in response times to usual".

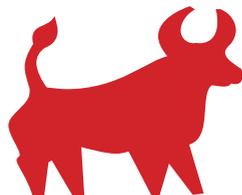
He went on to explain that the significant savings on staff wages would now be plowed back into new improvements to the student experience, such as food at H-Bar and breakfasts in the SCR. Lastly, Weary stated that whilst the College was sad to see so many of their colleagues

across the road leave, the glut of leaving parties had really turned around the commercial outlets drink sales for the quarter and that they were looking into the possibility of making these leaving dos a regular event.



**ARIES**

This week you're a returning second year student, you're disappointed that the Supreme Court decided that you couldn't prorogue the start of the academic year.



**TAURUS**

This week you're an academic annoyed that all of your slaves have had to return to their normal degrees. Don't worry, it's only another 10 months until the next batch of UROP students arrive.



**GEMINI**

This week, you move into halls and decide to continue your sixth-form relationship long distance. It's doomed and you'll be heartbroken. Sorry.



**CANCER**

This week you join Imperial, welcome to the third best university in the country - congratulations. Oh, you're studying physics...never mind then.



**LEO**

This week you're excited to receive your brand new, junk free, Imperial email address - Fresher's fair is on Tuesday...



**VIRGO**

This week you're the triathlon club - Bon Voyage!



**LIBRA**

This week you finally motivate yourself to get up and start the day early... to watch the Rugby World Cup.



**SCORPIO**

This week you miss the start of Freshers' fair, you knew you should have booked with Flybe instead of Thomas Cook.



**SAGITTARIUS**

This week, for the third year running, puzzles (the paper's most popular section) has still not been returned to its rightful place on the back page. Henry OUT! Henry OUT!



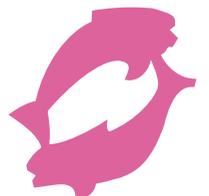
**CAPRICORN**

This week you wonder why the student newspaper has a weekly naked centrefold. Its called culture darling, look it up.



**AQUARIUS**

This week you spend half of your student loan on stationary. It's a waste of money but don't worry, you'll waster the other half too.

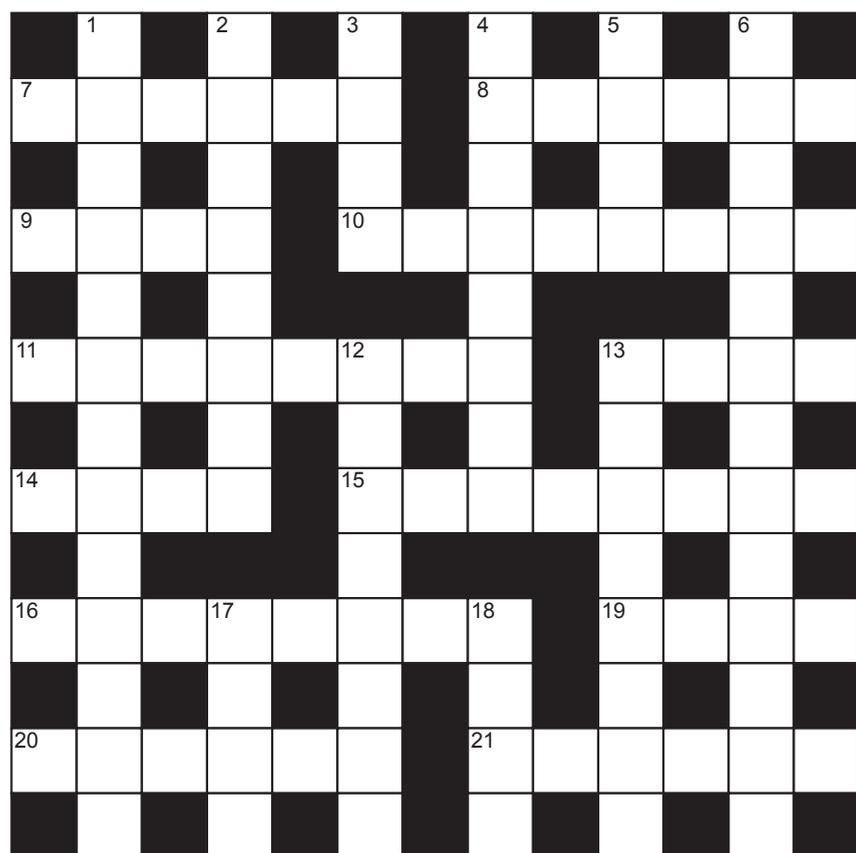


**PISCES**

This week you start your new job as horoscopes writer. How many issues do we have left?

# PUZZLES

fsudoku@imperial.ac.uk

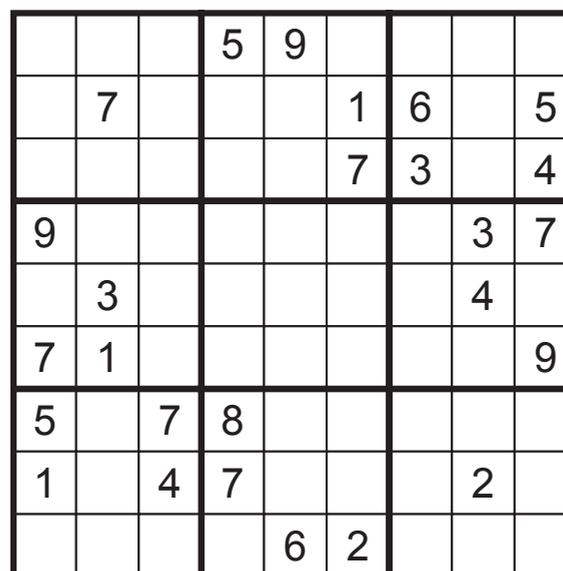


**Hello Freshers! Welcome to the Puzzles section. Happy solving!**

Send your solutions to *fsudoku@imperial.ac.uk* before Wednesday midday to take part in the leaderboard! Look out for the solutions in next week's issue!

### SUDOKU

Fill all the boxes with a number between 1 and 9. A number can only appear once in a row/column, and only once in each sub-box.



### Points available

Crossword	6
Shikaku	3
Sudoku	3
Nonogram	5
Trivia	3
Word pyramid	2
<b>Total</b>	<b>22</b>

### Across

- 7. Ski house (6)
- 8. Director's shout (6)
- 9. Both fish and body part (4)
- 10. A grown up that hasn't really ever grown up (8)
- 11. Charles Xavier is one(8)
- 13. Face volcanoes (4)
- 14. Italian greeting (4)
- 15. S size coffee (8)
- 16. The largest being St. Peter's (8)
- 19. 1993 First-Person Shooter game(4)
- 20. The Llama's cousin (6)
- 21. Like Charles Carson (6)

### Down

- 1. The opposite of "in practice" (13)
- 2. The side of you that comes out after a beer too many (5,3)
- 3. The smallest thing (4)
- 4. Where to go for quick cash (4,4)
- 5. Engrave (4)
- 6. Tongue and lips band (7,6)
- 12. From across the pond (8)
- 13. That one story your Aunt Sally always brings up during dinner (8)
- 17. Belligerent in 12-Down's war against terrorism (4)
- 18. Silly outfit band (4)

### TRIVIA

#### Easy

- 1. What name, after a monarch of the UK and Commonwealth, will be given to the Crossrail line when it opens?
- 2. What did the Supreme Court find was "unlawful, void and of no effect" on 24th September 2019?

#### Medium

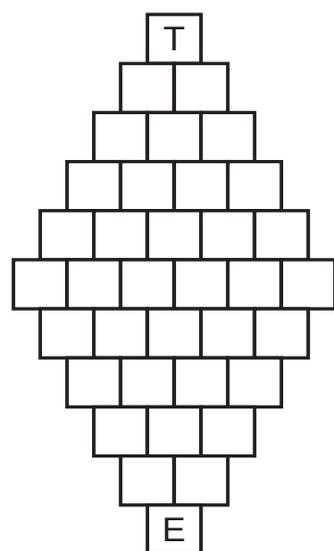
- 3. Which band became the first to have a single in the charts in 7/4 with Money?
- 4. What 2019 novel is narrated by Aunt Lydia, Agnes, and Daisy? It's a sequel to a 1985 novel set in Gilead that was adapted into a Hulu Series starring Elisabeth Moss.

#### Hard

- 5. Which Stephen Sondheim musical is based on the painting "A Sunday Afternoon on the Island of La Grande Jatte" by Georges Seurat?
- 6. In what sport are the Paris Titans the current two-time European Club Champions? They beat Antwerp QC and METU Unicorns in 2018 and 2019.

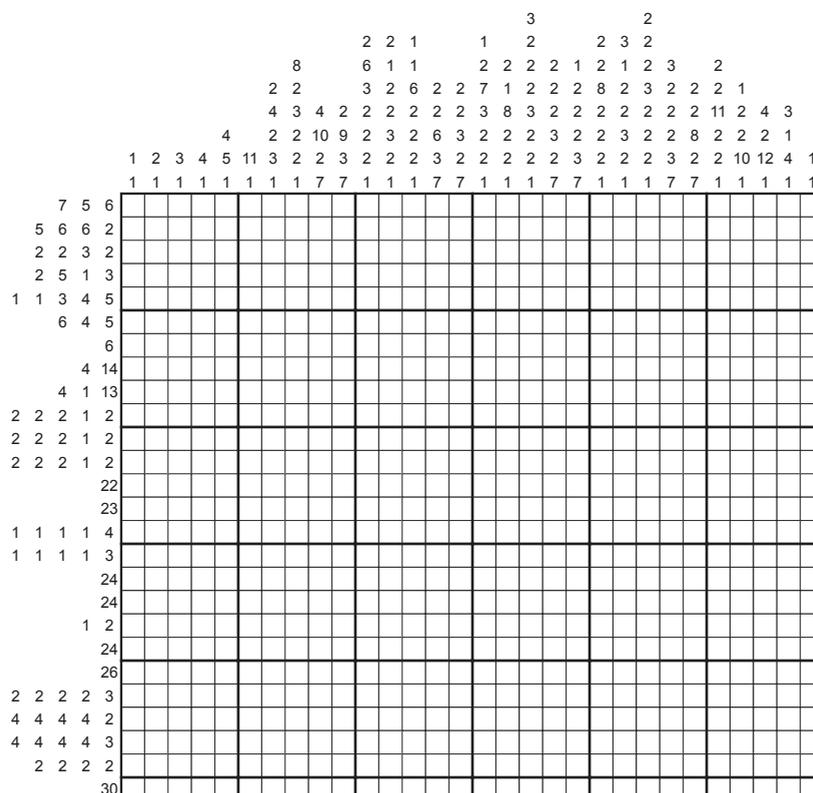
*Liked this quiz?*

*A revamped Quiz Society will be at the Freshers fair this Tuesday 1st October. Go and have a chat to find out more about their exciting events.*



### NONOGRAM

Colour in some of the squares to make a picture. Each number represents a block of consecutive black squares within that row/column. Each block needs to be separated by at least one white square.



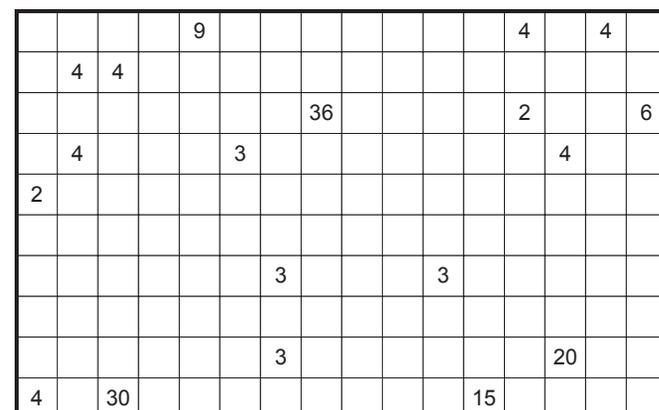
### WORD PYRAMID

Each row is an anagram of the previous, plus or minus one letter.

- In all email addresses (2)
- 4 o'clock (3) - Rhythm (4)
- Wash (5) - Can be held (6)
- 13 in a deck, 1 in a body (5) - Bunny (4) - Listener (3)
- One for the musicians (2)

### SHIKAKU

Divide the square into rectangles, such that each rectangle contains exactly one number. The numbers given represent the area of the containing rectangle.





IMPERIAL COLLEGE AND IMPERIAL MEDICS  
**TEAM TRIALS - 2 OCTOBER 2018**



Travel methods and meeting times are determined by the clubs. Find them at the Freshers' Fair on Tuesday 2 October or contact them directly for more information.

IMPERIAL COLLEGE AND IMPERIAL MEDICS  
**TRIALS ON OTHER DATES**

<b>ETHOS</b> Ethos Sports Centre 7 Prince's Gardens, SW7 1NH	
<b>Sports Hall</b> Courts 1-4	13.00-15.00 IC Badminton 15.00-17.00 IC Women's Netball 17.00-19.00 IC Basketball 19.00-21.00 IC Volleyball
<b>Sports Hall</b> Court 5	13.00-17.00 IC Fencing 17.00-19.00 IC Table Tennis
<b>Squash Courts</b>	13.00 - 20.00 IC Squash
<b>Swimming Pool</b>	14.00 - 16.00 IC Waterpolo 16.00 - 18.00 IC Swim From 20.30 IC Synchronised Swim
<b>HYDE PARK</b> South Kensington	
<b>Old Football</b> Pitches	13.00 - 15.00 ACC American Football
<b>Tennis Club</b>	10.00 - 16.00 ACC Lawn Tennis
<b>OTHER</b> Various Locations	
<b>CAGB102</b>	From 14.00 CGGU Racing
<b>Trent Park &amp; Westcroft Polo</b>	12.00 - 17.00 Riding (Trent Park Eques) 12.00 - 17.00 Polo (Westcroft Polo Park)
<b>Wembley Sailing Club</b>	From 13.30 Sailing
<b>Charing Cross Squash Courts</b>	13.00 - 16.00 ICSM Squash

<b>HESTON</b> Heston Sports Ground Crane Lodge Road, Hounslow, TW5 9PQ	
<b>Outdoor Netball Courts</b>	13.00-15.00 ICSM Women's Netball
<b>Football Pitches</b>	14.00-16.00 ICSM Men's Football
<b>HARLINGTON</b> Harlington Sports Ground Sipson Lane, Harlington, UB3 5AQ	
<b>Football Pitches</b>	14.30-17.00 IC Football
<b>Rugby Pitches</b>	13.00-16.00 IC Women's Rugby (and BBQ) 13.00-16.00 IC Men's Rugby (and BBQ) 14.00-16.00 ICSM Men's Rugby Union
<b>Hockey Astro turf</b>	12.00-18.00 IC Hockey (and BBQ)
<b>3g Astro</b>	12.00-14.00 IC Men Football v ICSM Men Football 14.00 - 17.00 IC Womens Football
<b>OTHER</b> Various Locations	
<b>Indian Gymkhana Hockey Astro turf</b>	13.15-14.45 ICSM Ladies Hockey 14.45-16.15 ICSM Men's Hockey
<b>Lillie Park</b>	From 13.30 IMWFC
<b>Flipout Wandsworth</b>	15.00-16.00 Snowsports
<b>Finsbury Park</b>	From 13.30 Basball/Softball (and BBQ)

<b>30 SEPTEMBER 2018</b>	
IC Badminton	Ethos 16.00-18.00
ICSM Men's Hockey	Indian Gymkhana Hockey Club 18.45-20.30
<b>4 OCTOBER 2019</b>	
Basketball	Harris Academy, Battersea 18.00 - 22.00
Dodgeball	Ethos 17.00 - 18.30
<b>5 OCTOBER 2019</b>	
Lacrosse	Lille Park 14.00 -16.00
Basketball	Plimico 14.00 - 18.00
American Football	TBC (Contact club directly) From 12.00
ICSM Football	TBC (Contact club directly) 14.00 - 16.00
ICSM Tennis	Bishop Park Tennis Centre TBC (Contact club directly)
Sailing	Wembley Sailing Club From 09.30
IC Netball	Battersea Millenium Arena TBC (Contact club directly)
IC Football	Harlington Astro 14.30 - 17.00
IC Badminton	Ethos 17.00 - 18.30 18.30 - 20.00
IC Hockey	Harlington Astro From 12.00
IC Women's Football	Hyde Park 12.00 - 14.00
<b>6 OCTOBER 2019</b>	
ICSMU Water Polo	Ethos 16.30 - 18.00
Basketball	City of Westminster 16.00 - 18.00
IC Lawn Tennis	Virgin Active Fulham Pools 15.00 - 18.00
ICSM Squash	Charing Cross Sports Club 14.30 - 16.00

Imperial  
Enterprise Lab

## Events term card

Learn new skills and join our community of student innovators and entrepreneurs

### OCTOBER

#### 3 / Pitch 'n' Mix

Our monthly social and the perfect place to pitch new ideas, find co-founders, make great connections and join our vibrant community.

#### 11-12 / Launch Weekend

A weekend mission to build a team, work on an interstellar idea, pitch to a panel of judges and win big prizes.

#### 16 / WE Innovate: Walking tour

Masterclasses supporting Imperial's women to develop leadership skills, a professional network and innovative business ideas.

#### 22 / Innovation Pitch

A 'low stakes' opportunity for students to pitch their ideas, gain feedback and network with peers and potential investors.

#### 23 / WE Innovate: Founder fireside chat

#### 24 / How to... be creative

We're bringing the BEST speakers to these lunchtime talks to give you the entrepreneurial skills to power up your business or your career.

#### 30 / WE Innovate: Building a powerful presence

### NOVEMBER

#### 6 / WE Innovate: Future forecast

#### 7 / How to... talk to humans

#### 7 / Pitch 'n' Mix

#### 13 / WE Innovate: Ideation

#### 14 / How to...build and design a product

#### 21 / How to...innovate in healthcare

#### 27 / WE Innovate: Leadership talk

### DECEMBER

#### WE Innovate application deadline

Are you a female-founder with a business idea? Don't miss the chance to apply for WE Innovate for the chance to win £30k!

#### 5 / Pitch 'n' Mix

#### 10 / Innovation Pitch

Be part of something awesome. Register now:

[www.imperialenterpriselab.com](http://www.imperialenterpriselab.com)

All of the above activities will support your progress towards the Imperial Award