

Felix



INSIDE

THE CENTREFOLD  
IS BACK!!!!

Pages 16 and 17

ISSUE 1795

FRIDAY 4TH MARCH 2022

# Bats, mice and no things nice

## Silwood Park in dire straights

**Sam Lovatt** Editor-in-Chief

Bats, mice and asbestos are just some of the hazards reported by multiple students at the Silwood Park campus.

Speaking to several Masters students living at Silwood Park for the year, Felix heard reports of unsanitary living conditions, mouse-infested eating areas, holes in walls and ceilings which are labelled as containing asbestos, and a lack of suitable basic facilities.

“Overall, Silwood is a cool campus” said one Masters student. “It’s a beautiful place. Coming here

offers a great opportunity to study ecology whilst being close enough to London, however a lack of funding and interest in the campus seems to leave it unattended. Buildings that look like they’re from the ‘70s haven’t kept up with time”.

“The campus services team are lovely” said another. “They always try to be helpful and address individual issues, but it doesn’t look like they’re equipped to deal with the scale of the problem.

A lack of a clear structure to how maintenance requests are dealt with adds to what some students perceive to be a system in crisis. Issues are raised multiple times with no one physically coming to assess the situation; contractors don’t communicate what they have or have not done to the College; when an issue is raised with a member of staff, it seems to rely on luck as to whether it gets looked at.

It appears that the problems are by no means new to Silwood Park.

“We’ve heard through word of mouth that these issues have persisted for some years now. On the first night we arrived this academic year a bag of raisins that someone placed in one of the ground-

*Continued on page 3...*

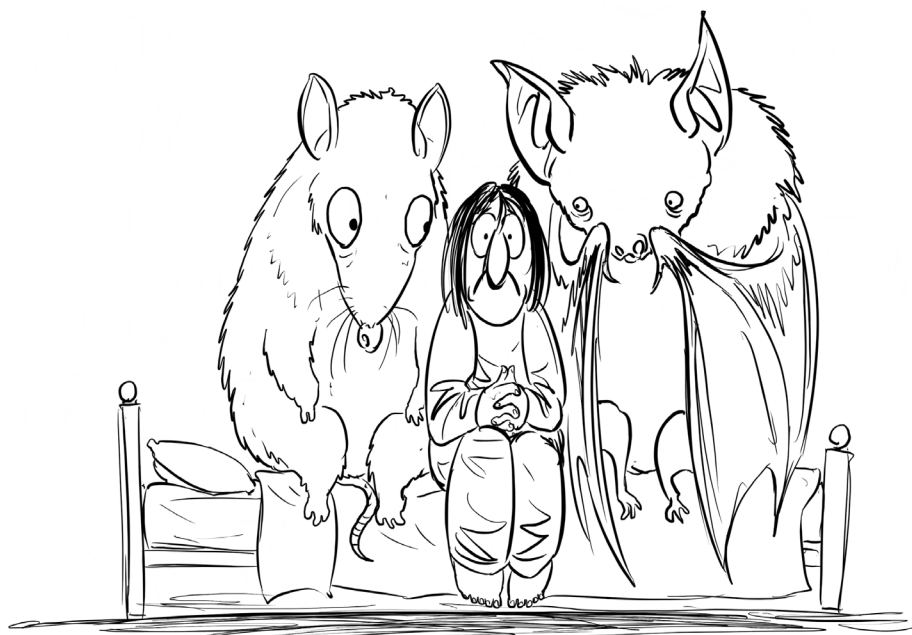
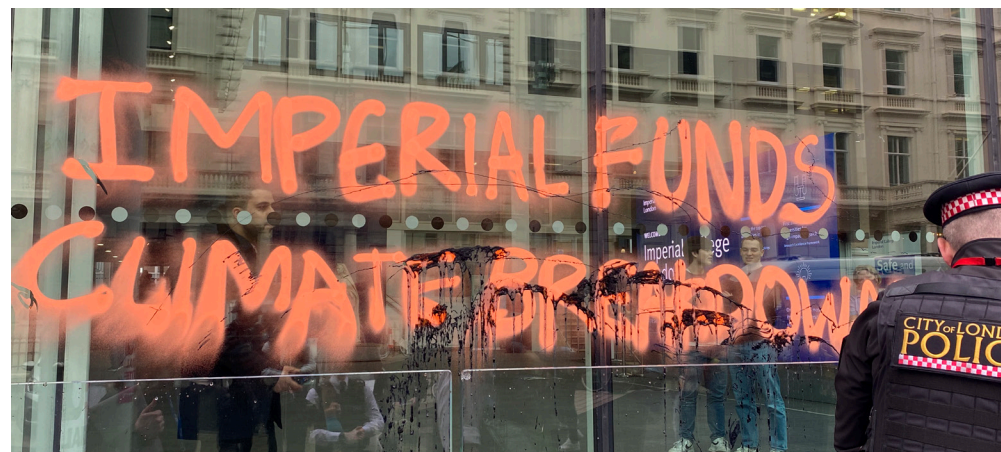


Illustration by Nicolas Geiseler Toran

# Climate protesters arrested after spray-painting and “gluing on”



**Sam Lovatt** Editor-in-Chief

Just after 1pm on Wednesday, two men spray-painted the outside of Imperial College’s main entrance and then glued themselves to the glass walkway barrier.

They were accompanied by a number of other young people from the group ‘Youth Climate Swarm’, who remained in the area once the men had

*Continued on page 5...*

# EDITORIAL

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## Putin

The actions of the last two weeks have painted the picture of a geriatric dictator on the brink of madness.

We don't know, and never will, the extent of the environment that has brought Putin to the point where he thinks gunning down Ukrainians to "liberate" Ukrainians is a good idea. Where along this road to war did he decide to equate the expansion of an alliance, which posed no military threat to Russia unless provoked, to military invasion of a sovereign state, or financial

sanctions to nuclear war? Most of the Western commentators have had a punt at deciphering his reasoning. The American thinktank The Atlantic Council said "Putin has surrounded himself with yes-men and reads selectively". Putin did actually get the Russian parliament to rubber stamp his plans for invasion, though this almost entirely not reported on for how little it means. Defiance of Russian citizens against the invasion is largely stifled from being heard by the rest of the world.

There have been whispers of self-blame from the political fringes of the UK (and within Imperial College Union, wouldn't you like to know). Corbyn and Dianne Abbott are among the politicians blaming the West for having "poured oil on the fire" and that "the British government has talked up the threat of war continually". While the second quote is just simply untrue, the sentiment very much echoes

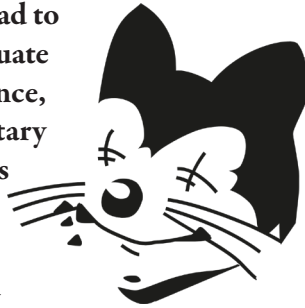
Putin's rhetoric, just in a less deranged way. Corbyn steers clear of calling Zelenskyy a drugged-up Nazi, as Putin did, but appears to fully support the idea that a military invasion is a fair response to the idea of Ukrainian membership to Nato. Ignoring the fact that the real reason is most likely Putin's "back in my day" vision of a united USSR.

Yuval Noah Harari highlighted how much of a one man ideal this conflict really is in a piece for *The Guardian* on Monday. "Gorbachev

left Russians and Ukrainians feeling like siblings; Putin has turned them into enemies". Putin's propaganda tells the story of a Russian invasion to save Ukrainians from a fascist regime. *The Economist* said on Sunday "Soldiers, unsure of what they are supposed to be doing, have turned up in Ukraine expecting to be welcomed as liberators". Far from it, the Ukrainian resistance so far "is the stuff nations are built from".

The only person who benefits from this crisis is Putin himself, in his misguided attempt to cement his legacy. UK Foreign Secretary Liz Truss said last week that the war may last as long as a decade. No one knows how many thousands may die in that time as the result of one man's whim.

For the modicum that it's worth, Putin, in the words of the border guards defending Zmiinyi Island who have already lost their lives, "go fuck yourself".



## Statement of Intent

At Felix we believe that it is always in the interest of the students to know. Transparency in the workings of the College and the work of your student representatives is key. Therefore I, the Felix Editor, on behalf of the team promise that:

We will, to the best of our ability, tell you the whole truth and nothing but the truth.

We will keep your confidence and will only publish something you say to us if you have explicitly said that we can.

We will work to expose unfairness and discrimination in all forms that it takes at the College.

We will treat fairly any article sent to us, regardless of point of view, and do our best to work with you to prepare it for publication.

Signed by **Sam Lovatt**  
Editor-in-Chief

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Printed by Iliffe Medial  
Winship Road,  
Milton, Cambridge  
CB24 6PP

Registered Newspaper ISSN 1040-0711

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## Silwood

level cupboards was nibbled into by mice and covered in droppings”.

“In January, a bottle of sesame oil I was storing in a cupboard had the top bitten through by mice and was left covered in droppings. I reported this as soon as I could but nothing was done for days.”

“When the pest control company finally did come, they had been called to look at issues in two buildings but only investigated one. Nothing was done regarding the mice in our kitchen”.

“The problem is really debilitating. We can't use the majority of the cupboards in the kitchen for fear of them being infiltrated by rodents, so all our food is stuffed in to a few safe cupboards. Not to mention the health risks”.

“About a week ago someone came to look at the problem and noted the hole in the back of the cupboard in question. The solution provided was to cover the hole in the cupboard with a huge piece of wood to stop mice getting in. This now takes up about half the total space in the cupboard, and probably won't even work as the mice had to gnaw through the back of the cupboard in the first place to get in”.

Email correspondence shows the student side of a conversation regarding the pest problems. On February 21st a pest control company had been in to bait the ground area, many weeks after initial reports of vermin, however nothing could be done about the upper floors due to the apparent presence of bats. Rough guidance suggested that it would be at least a month before work could begin. Bats are a protected species and official guidance states that mouse traps must never be used in areas where bats live or are suspected to live. As far as the students we spoke to know, nothing is



A mouse in the kitchen of a Silwood residence, captured in the early hours of Wednesday morning

currently being done about the resident bats.

The problems seem to stem from a wider lack of campus service support. Other minor reports include lamp covers full of dead wasps, a lack of basic appliances such as kettles and a supply of just three washing machines to serve 96 residents. Stats on washing machines and Silwood residency numbers suggest that the ratio of washing machines to students is actually above the sector standard, though this does not address instances in which the machines break down or the Circuit app does not work.

“We haven't even mentioned the building itself yet” said one of the students. “My bedroom has black and green mould on the walls. Some of this was hidden behind my bed, so I didn't notice it was there for a while, but this should have been noticed and cleared up before I moved in”.

“At one point, cleaners came in and kind of wiped down the mould, and told us that the same problem was occurring

in at least two of the other buildings”.

“There have been problems with the bathroom since I moved in. A ten minute shower leaves an inch-deep puddle across the bathroom floor. I'm sure this contributes to the damp in the bedroom”.

“We raised the drainage problem before and some people came to look and claimed they'd fixed it, but nothing had changed and the bathroom kept flooding. Eventually we used drain unblocker ourselves.”

“My boyfriend won't stay overnight at my accommodation because of the state of things. I've gone home for weeks at a time to get away from these conditions when I've been ill. We're still paying full rent even with all these problems”.

Some of the problems are quite laughable. An oven in one of the kitchens has been installed at an angle which means the door can't be fully opened, as it's blocked by a cupboard. This leaves everyone using the kitchen with just one oven.

“Then there's the asbestos” added a student. “Stickers around the place say that the walls contain asbestos, but apparently it's 'undisturbed' so it's fine to stay. The stickers are stuck up in the same buildings that the mice run around in.” It is worth noting here that it is unclear whether the presence of mice is enough to disturb asbestos to the point where it is detrimental to human health.

“A radiator in the common room has fallen off the wall and there have been no signs of it being fixed. There are holes in the walls and ceiling. We all feel like at some point the roof will fall through”.

“Recently the central Union team were coming down to Silwood to have a look around, so we wanted to make it look a bit nicer for their visit. I went upstairs in Unit A and I'd never seen so many dead flies in my life. It must have not been cleaned in years. Just around the corner is the girls' bathroom, where sections of the wall behind the toilets are missing”.



Large parts of the Silwood experience have been mis-sold to the renters. The gym is falling apart and as far as anyone can see nothing is being done to fix it. Given the state of the rest of the campus it is unclear whether safety checks are ever carried out on the equipment.

The manor house has recently been sold, and with it went the tennis courts and other facilities that were advertised to students when they applied to live there. The College said they would replace these facilities with new ones, however most students are only there for a year and very little has been done about it. A request for membership to a local sports facility paid for by the College in



Imperial College London

**EMERGENCIES AT SILWOOD PARK**  
Fire, bomb threat, suspicious package, or injury  
Ring 42444 on Imperial phones /  
020 7594 2444

| Alarm Type                             | Alarm Sound  | Action You Must Take  | All-Clear                                  | Test Time / Day                                     |
|--|--|---|--|---|
| Fire                                   | Continuous alarm<br>            | Evacuate to local assembly points   | Wait to be told you can re-enter buildings | By local arrangement – watch and listen for notices |
| Nuclear Incident at the Reactor Centre | Continuous “air-raid” siren<br> | Stay away from Reactor Centre & EAS Building / get indoors, close windows & vents | 3 blasts                                   | First Friday of each month at 10 am                 |

SILWOOD PARK SITE PLAN



NEWS

place of the facilities has fallen on deaf ears.

“One day the allotments were just gone. I had hoped that I’d be planting some stuff at this point but they’ve been ditched. Apparently they’re being rebuilt, but I don’t have much hope that this will happen before I leave”.

Felix understands that an area known as ‘Silwood bottom’ is currently being reprovisioned into an events, recreation and allotment area. It is not clear when this work will be completed.

The area around Silwood’s nuclear reactor, last used in 2010, has still not been signed off as safe for alternative uses. From what the students can tell, it’s completely fine to use, and is just an issue with paperwork.

“It’s a shame because the beautiful area is currently marred by what looks like an abandoned construction site. The Union office paperwork really says it all. There’s advice on what we should do if there’s a fire and, oh, a ‘nuclear incident’. The reactor hasn’t been used in twelve years.”

Silwood Union President Alex Auyang



said “Silwood has the potential to be one of the best places to study at Imperial. However, neglect has left much of the campus in disrepair. It is unacceptable for students to study and live under such poor conditions simply because they are

based at a different campus”.

An Imperial College spokesperson said “We are aware of reports of mice at Silwood Park Halls of Residence and are working with pest control companies to address the situation as

quickly as possible. We are sorry for this inconvenience and are grateful to students for their cooperation as we work to resolve it”.

# Reynolds

## Bar

It seems that Silwood Park is not the only arm of the Imperial empire that suffers from a vermin problem.

“The issue has been present ever since I began working at Reynolds in 2018” said a student, very familiar with the venue but who wished to remain anonymous.

“The



Illustration by Natalie Yu

problem seems to lie in the lack of coordination between Imperial College Union and other parties involved in building management. This happens

because the Union is only responsible for part of the building”.

“The basement level of the building is particularly affected,

especially around the bin compound which is, for all

intents and purposes, an inside area of the building so compounds the pest issues”.

“When it’s quiet I’ve seen them in the café area, and others have said they’ve seen them in the bar and on the first floor mezzanine”.

Students say that the problem seems to stem from no one really caring about the building.

“This is reflected in not just the pest problem, but the lack of adequate facilities for students. Walking around the lower ground floor you

see patches of damp

and mould. The

café runs out of

food and closes

extremely

students

options for

“homebase”

Imperial

“we are

Imperial

Union

and

early, leaving without any food on their campus”.

College said supporting College with pest

prevention control measures”.



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NEWS



glued themselves to the glass, held up banners and gave out fliers to passers by.

Both were removed from the glass by City of London police at approximately 2.40pm, around an hour and a half after they locked on. The police were forced to wait for a 'glue kit' to be delivered, which contained a fluid used to dissolve the glue and remove the protesters.

The pair spray-painted 'Imperial funds climate breakdown' next to the main entrance, and part of an image, calling for people to come to an upcoming event, further along Exhibition Road.

It is understood that whilst this piece was being painted, College security began removing the individuals from where they could continue spray painting, at which point they glued their hands to the glass.

Speaking to one of those who had glued on, a King's College London student named Nathan McGovern, Felix learned that the protest was in response to Imperial's continued investment in fossil fuel companies (FFCs).

When asked whether he thought that the protest and resulting damage would affect his standing as a student and his

future, Nathan replied "I don't have a future if things continue like this".

"We are in a climate emergency. Our government and universities are chucking our futures down the drain. Hundreds of thousands of young people all over the world are dying even now, due to the fossil fuel industry. We refuse to die quietly. We have 2-3 years to act before it's too late".

In a statement made online, the group said "If the government has not done so by March 14th, Youth Climate Swarm have committed to intervene in order to avoid climate catastrophe".

The protesters were not aware of the College's Sustainably Responsible Investment policy when we spoke to them.

As reported in Felix 1783, the College endowment fund does not hold any direct or indirect holdings in FFCs.

The endowment fund is relatively small, at just over half a billion pounds. The invested portion is spread over a large number of companies, and it is unlikely that any investment by Imperial in any large company would make a significant change in the company's trajectory. For





## NEWS

example, the largest direct investment the College holds is £40 million in the intellectual property company IP Group. By contrast, Shell Plc had a revenue of £261.5 billion in 2021, meaning an investment of this size in Shell would equal just 0.015% of annual revenue.

The College does hold sway through its partnerships with FFCs in research and development. Prominent programmes include the Digital Rocks Lab, a co-venture between Imperial College and Shell Plc.

Imperial College's Sustainably Responsible Investment policy states that the College will continue to invest in FFCs where it feels it can "push them to address how their business with [sic] address climate change". It adds that "in some cases a company may ultimately be unresponsive to our attempts to influence or be unable to make progress towards Paris Agreement targets by the very nature of their activity. In those cases the College will instruct the Endowment Board to divest".

More than 13 police officers arrived at the scene. Some formed a line in front of the two who had glued on.

Others who took part in the protest held up a flag that said 'just stop oil'.

All those who were involved in the protest but did not lock on were searched for items that could be used to commit criminal damage. No items were found on any of the other protesters and all were released.

Police said the two who locked on will be charged with criminal damage.

They were taken to Charring Cross police station.

An Imperial spokesperson said "Our Socially Responsible Investment Policy goes far beyond our approach to investments. We have committed to leveraging the full breadth of our influence across our investments, research, education, sponsorship and other actions to accelerate the transition to net-zero.

"Our top priority when working with energy companies is decarbonisation.



This goal requires a radical shift in industrial systems, technologies, and business models in the energy sector. We are using our influence and expertise to accelerate this transition, and we actively engage with energy companies to push them to meet the Paris Agreement targets (1.5°C cap, Net-Zero by 2050 with

realistic interim targets). We have been clear that we will monitor progress and only continue to work with companies who demonstrate commitment and credible action to achieving these targets".

# 'Huxley-Haslam Building' considered as History Dialogue next steps announced

Sam Lovatt Editor-in-Chief

The Huxley Building may be renamed the Huxley-Salam Building, the College President's Board announced on Friday.

An email sent to all students, staff and alumni outlines the progress so far and details the decisions made by the President's Board following months of deliberation within the History Group and the wider Imperial community.

The bust of Huxley and the statue of Beit will be retained, but plaques providing "a fuller context" will be installed near them. The plaque by Huxley's bust will aim to "provide everyone with a more complete understanding of Huxley's complex character and achievements as well as his flaws, including his racially prejudiced writings".

The same decision has been made for the Beit Quad and Beit halls. "The College will consult with students and explore whether to add an African scientist to the building's name".

The premier decision in the

announcement was to celebrate under-recognised figures in Imperial's history, who may have been sidelined in the past for racial or sexist reasons.

These figures include Professor

Abdus Salam, Dr Margaret Fishenden and Dr Narinder Singh Kapany.

The announcement details decisions made by the President's Board on what will happen, rather than recommendations

and suggestions made by the History Group in previous announcements, who do not have the power to decide what will and will not happen.

The announcement is not as





## Huxley-Haslam

detailed as many would have hoped, and leaves a lot unclear.

The Huxley-Salam joint name will be 'considered' rather than implemented, and the same applies to Beit quad and halls.

The College promises they "will find new, prominent and ambitious ways of ensuring that the complexities of key figures are fully understood alongside the College's value", though how this will happen is not detailed.

A key evolution in the dialogue is the publishing of all the contributions to the HG dialogue, including 211 written responses by email, discussion reports and forum contributions. Felix made a Freedom of Information request asking for the publication of these responses, following the Provost explaining in a HG forum that they wouldn't be published on the grounds of not giving one form of contribution superiority over any others.

The decision to retain the Beit name came as a surprise to some people Felix spoke to.

During the open forum for the History Dialogue, Beit went almost entirely unmentioned, with no one openly specifying that they disagreed with the removal of the Beit name from

College buildings. This was in stark contrast to deliberation around the Huxley name, which was defended by multiple people speaking at the forum.

The name 'Huxley' is mentioned 574 times in the written responses received

by the History Group, compared with only 264 mentions of the name 'Beit'.

The College took the opportunity to reaffirm their "commitment to freedom of speech and open dialogue".

A new working group, a

sub-group of the President's Board with consuls and student representatives, has been established to "take forward agreed-upon actions".

### *Written Responses*

All 211 responses are available to read and have been linked to in the email sent last Friday.

They are worth skimming through if you have some free time (I've read them all, which I do not recommend).

The whole spectrum of views is represented, many of which we can assume have been shared under the pretence of anonymity, given their content. The vast majority of responses are opposed to the renaming of buildings.

A lot of responses thanked the College for establishing the History Group, and many were worded kindly. Some praised the "incredible proactive and balanced work done by the History Group".

Many addressed the relative

lack of attention given to the name Imperial College London, due to the implicit link between the word 'Imperial' and colonialism.

One contributor, who is assumed to be an alumnus, was more than disappointed with the History Group's work as even mentioned that they "have to go the expense of amending [their] will", suggesting that money previously left to the College will be diverted. Several others mentioned altering their endowment payments.

Some were 'shocked at the extremity of some of [the] proposals'. One, perhaps biased, contributor said "Alumni should have been asked about proceeding, and students should not be involved".

One, perhaps less philosophically robust, response asked the College "ARE YOU OUT OF YOUR MINDS !!!" and apologised for our

ancestors having not invented time machines. Another said they were not happy sending their son to an institution like Imperial following the announcement of the report.

One found the establishment of the scholarship for black students 'deeply racist and offensive'.

A number described the report as 'an appalling waste of time', even if 'beautifully organised'. A few questioned the point of the exercise, given that they had never paid any attention to the building names when they were at the College.

The first response listed in the replies doesn't mention the work of the History Group at all, and instead takes issue with the fact that Nazism and Communism have been used in the same heading, calling for the word 'Communism' to be replaced with 'Stalinism'. How helpful.

# *A phoenix has risen...*

Have you seen this gorgeous magazine around the place during the last few weeks?

Pick it up!

We are ecstatic to announce the publication of Felix's sister magazine, Phoenix. A creative outlet for Imperial's STEM-obsessed community, Phoenix plays host to artistic work in all its forms; from essay and short stories to poetry and screenplays, Phoenix publishes some of the finest creative works written by students, staff and alumni. It is published once per term.

*If you would like to write for Phoenix, email [Editors.phoenix@imperial.ac.uk](mailto:Editors.phoenix@imperial.ac.uk)*





## NEWS

# Imperial College cuts ties with Russian state-owned Sberbank

Andy Wang Webmaster

After an inquiry from Felix, Imperial Business School has terminated its Sberbank Digital Technology Executive Programme, a custom-designed programme for Sberbank's senior executives. All mentions of the programme have been removed from Business School's website, although a cached page is still available.

In collaboration with Sberbank's in-house Sberbank Corporate University, the programme provides Sberbank's senior executives two-weeks of training in Moscow, covering advanced maths, machine learning, and Python. They then come to Imperial's campus for further 8 days to be "immersed in the latest research in artificial intelligence, [...] IoT applications, [...] data governance and privacy, cloud technology and more". It apparently received good feedback since its inception in 2019 such that "subsequent cohorts are consistently oversubscribed".

Imperial Business School and Sberbank have subsequently co-attended events such as the World Economic Forum (Davos) and Sberbank's Learning and Development conference.

In a video published in September 2021, Sberbank Corporate University's Vice Dean Igor Baranov said that Sberbank already had



other "management development programmes" with Imperial. However, Business School confirmed that after terminating the Digital Technology Programme, "there were no other programmes with Russian banks".

In an email from President Alice Gast and Provost Ian Walmsley to all members of the College, Imperial stated that it will not partner with the Russian state and mentioned that it had ended a partnership with "a majority state-owned Russian entity" – referring to this programme - and is reviewing its connections with Russia.

Sberbank is the largest financial institution and fourth largest company in Russia, having more than double the revenue of the next largest bank, VTB.

It holds the largest share of deposits and is the largest lender in Russia.

The bank is controlled by the Russian government with a 50%+1 share. Its CEO, Herman Gref, was a government minister until 2007 when, naturally under Vladimir Putin's presidency, he was immediately elected as the president of Sberbank. In 2018 he was put on the US Treasury's "Kremlin List" of individuals believed to have close ties with Putin.

When the Business School first started the programme in 2019, Sberbank was already under several rounds of sanctions from the US, EU, Switzerland, and Ukraine due to the 2014 Russian annexation of Crimea. Since the Russian invasion of Ukraine last week, Sberbank was once again targeted in barrages

of sanctions by the US and UK. As of Wednesday, Sberbank is locked out of GBP clearing facilities, and banned from processing USD payments for its clients. Its accounts established in US and UK banks to conduct foreign business (correspondent accounts) will also be closed. However, it was spared from a full asset freeze and SWIFT ban which were imposed on smaller banks like VTB.

Although no trading was allowed at the Moscow Stock Exchange over the past days, Sberbank's London listing remains being actively traded and has seen 99.9% of its value evaporated over the last two weeks. It has decided on Wednesday to withdraw from the European market after the European Central Bank ordered the closure of its European subsidiaries.

## Letter to the College Systems team

Dear systems team,

For months now, we (the sabbatical officers) have been logged on the card swipe system as staff members rather than students. This is not how it should be. We have been assured multiple times that this will be fixed, but it hasn't been. Every time we buy something we have to explain that we're actually students and the cashier has to manually change the discount we get.

PLEASE CHANGE US BACK TO STUDENTS ON THE COLLEGE SYSTEM

Regards,

Sam Lovatt (Felix Editor), Lloyd James (Union President), India Marsden (DPCS), Sam Lee (DPFS), Nathalie Podder (DPW), Daniel Lo (DPE)

P.S: we realise this is a colossal abuse of the fact that one of us is the Editor of Felix



FRIDAY 4TH MARCH 2022

# More UCU strikes follow convoluted negotiations NEWS

**Ameena Hassan** Deputy Editor

Imperial's branch of the University and College Union (UCU) went on another round of strikes on February 14th-18th, and again from 21st-22nd, to protest changes to the Universities Superannuation Scheme (USS) pension scheme that come into effect on 1st April 2022. This follows the December 1st-3rd strike on the same issue.

On 22nd February, the USS's Joint Negotiating Committee (JNC) voted in favour of formally ratifying the implementation of reforms to the USS pension scheme. The JNC had held discussions with representatives from Universities UK (UUK) - representing vice chancellors and principals - and the UCU, on the changes:

- Employers contribute 21.6% of annual pay, (increase of 0.2%)
- USS members (employees) contribute 9.8% of their annual pay, (increase of 0.3%)
- Yearly accrual rate is reduced from 1/75 to 1/85
- Defined benefits will now be accrued on salaries above £40k (rather than £60k)
- Benefits protected from inflation are reduced from full protection up to 5% and half protection between 5% and 15% to 2.5%

According to the Office for National Statistics the rate of inflation in January 2022 was 4.9%.

These changes were first proposed by the USS after a valuation of its assets on 31st March 2018, which put promised pension benefits at "£67.3bn and the current value of assets at £63.7bn." This resulted in a £3.6bn deficit, meaning that the "Scheme was 95% funded". According to the USS, "Economic conditions during the 2018 valuation were challenging and volatile", and so justified a need for a "snapshot" valuation on 31st March 2020.

When this snapshot was taken, the USS Scheme's assets "stood at £66.5bn but the deficit ... [was] £12.9bn" (84% funded). Recognising that March was the month that Covid-19 first hit UK's shores, a follow-up 'snapshot' was scheduled for 31st December 2020, at which point

"assets stood at £80.5bn but the deficit .. [was] £27.9bn" (74% funded) as the pandemic entered its first UK winter.

According to the USS, "Whilst there has been a recent recovery in some asset values to pre-pandemic levels, the outlook for expected future investment returns has, if anything, deteriorated since the valuation date of 31 March 2020".

Additionally, the USS predicted (falsely) that the student intake following the pandemic, including international students, would be lower than expected. This was not the case, as "domestic student numbers at the sector level appear to be higher than expected before the summer". On 31st September 2021, the Scheme's promised pension benefits were valued at £80.6bn, and the assets were valued at £66.5bn. This indicated a deficit of £14.1bn, which meant that the Scheme was 82.5% funded.

To continue to decrease the deficit, the USS reported on 16th February 2022 that "employers contributions would continue to rise over time to 38.2% of pay, and member contributions would steadily increase to 18.8% of salary - 57% in total, with new benefits requiring contributions of 37% of pay and 20% going towards repairing the deficit".

On 31st January 2022, another 'snapshot' shows promised pension benefits at £92.2bn, and asset

value of £89.3bn. (97% funded).

The UCU had submitted a "compromise proposal ... to protect benefits whilst a new evidence-based valuation of the scheme was completed", which was confirmed by a USS trustee on 10th February 2022 to be implementable and viable. This means "an additional £200m annually from April [2022], then an extra £330m annually from October [2023], and - ultimately - £700m more per annum until April 2024" and a combined covenant support from 340 universities, based on the 31st March 2022 valuation.

However, UUK rejected the proposal, citing that by asking for additional annual contributions, "the union is asking employers to put pensions before other university priorities including the student experience, pay, and the jobs of its members", and that "Paying more would have a significant and detrimental impact on the sector's collective ability to deliver high-quality education and research". According to Higher Education Provider Finance Data, in the 2019/20 year, universities brought in a total income of £41.9bn, and had reserves totalling £46.8bn.

At the picket line on the 21st of February 2022, a striking lecturer from the Mathematics Department at Imperial claimed that during discussions

with striking staff in 2018, the now-deceased Provost Professor James Stirling "said quite explicitly that decent pensions to university staff were a form of deferred salary. Does the college still stand by those words? If they do, they admit to cutting salaries. They can either go for a reasonable settlement with the USS dispute, or change the deferred salary to a current salary. According to my calculations, that means a 15 to 20% pay rise." Other staff attending the picket line over Zoom claimed that any attempt at discussion with Imperial College London became "talk[s] only about procedure" and that "they are not talking to us on a level with facts and figures".

Currently, the Imperial UCU mandate of action short of a strike (ASOS) lasts until 3rd May 2022. On hearing of the rejection of the UCU proposal, UCU branch organiser Roddy Slorach proposed further strike days: 7th-10th March and 14th-18th March, which must be approved by the Higher Education Committee, who last met on 25th February 2022.

Additionally, the UCU has indicated that more industrial action is to be expected, including a marking and assessment boycott later this academic year.



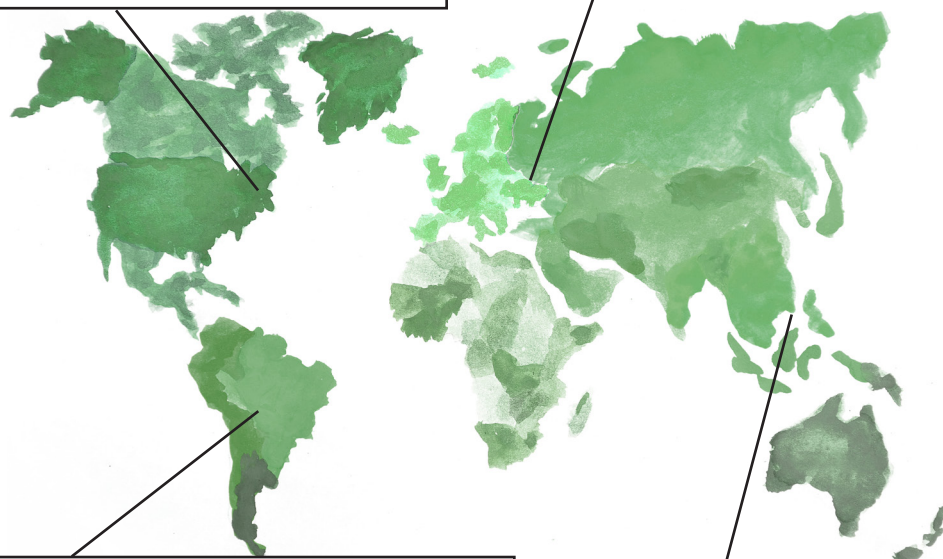


**WHAT HAPPENED...****...in the world this week*****Mysterious neurological disease found to be nothing new***

Authorities in the New Brunswick province of Canada have found that, following warnings that individuals should be on the lookout for signs of a mysterious, new neurological disorder, no such disorder exists. In November 2021 the Guardian reported on a strange neurological disorder with symptoms “similar to those of Creutzfeldt-Jakob disease” that was affecting residents in the Eastern Canadian province. Last Thursday it was announced that of the 48 cases reported to authorities, zero met the requirements to be classed as a new or unknown neurological condition, and suggested instead that patients were instead suffering from known conditions. Symptoms included rapid muscular deterioration and cognitive decline. The announcement has been met with much skepticism by the families and friends of those suffering.

***Russian invasion of Ukraine***

At the time of publication, Russia’s invasion of Ukraine is in its 8th day. In the last week, Belarus has officially involved its military in the conflict, as opposed to simply hosting Russian troops and allowing them use of the Belarusian border for invasion. A convoy of Russian military forces 40 miles long has been reported moving towards Ukraine. Western powers have hugely ratcheted up sanctions on Russia and Belarus, including the removal of Russian banks from the SWIFT global financial system, and the freezing of the assets of many suspected of having close ties to Putin. The EU’s list of sanctions on Russia. Reports estimate that the military effort is costing Putin €20 billion per day. Casualty figures vary widely, however it seems certain that thousands of troops and civilians have already lost their lives.

***Smog cloud “chokes” Paraguay***

Two years of extraordinary drought have led to raging wildfires in Argentina for almost two months. The latest sees a blanket of ash being blown over the capital city of neighbouring Paraguay, “hundreds of metres tall and several kilometres wide” according to *The Guardian*. A million hectares of land have been burned so far in the fires, and they continue to engulf more. Scientists say that the el nina weather pattern, global warming and deforestation are behind the blazes, adding that monocultures of pine provide dangerously combustible swathes of fuel.

***Major blackouts affect millions***

Taiwan suffered a major blackout this weeks following reports of an accident at a large powerplant. The plant is reported to supply around one seventh of Taiwan’s power. The country’s economic affairs minister said that power would return within the day for most of the nation. Local media outlets reported chaos on the roads as traffic lights failed to function. Emergency services are reportedly being deployed to help people trapped in lifts and others in emergency situations as a result of the outage.

**... in this issue’s year (1795)*****UNITED KINGDOM***

The English Romantic Movement kicks off, with the publication of Coleridge and Wordsworth’s ‘Lyrical Ballads’

***SOUTH AFRICA***

The Battle of Muizenberger begins, where the British sieze the Cape of Good Hope from the Dutch East India Company

***DENMARK***

A third of Copenhagen, the capital city, is destroyed by fire

***AUSTRIA***

Beethoven gives his debut piano performance at the age of 24

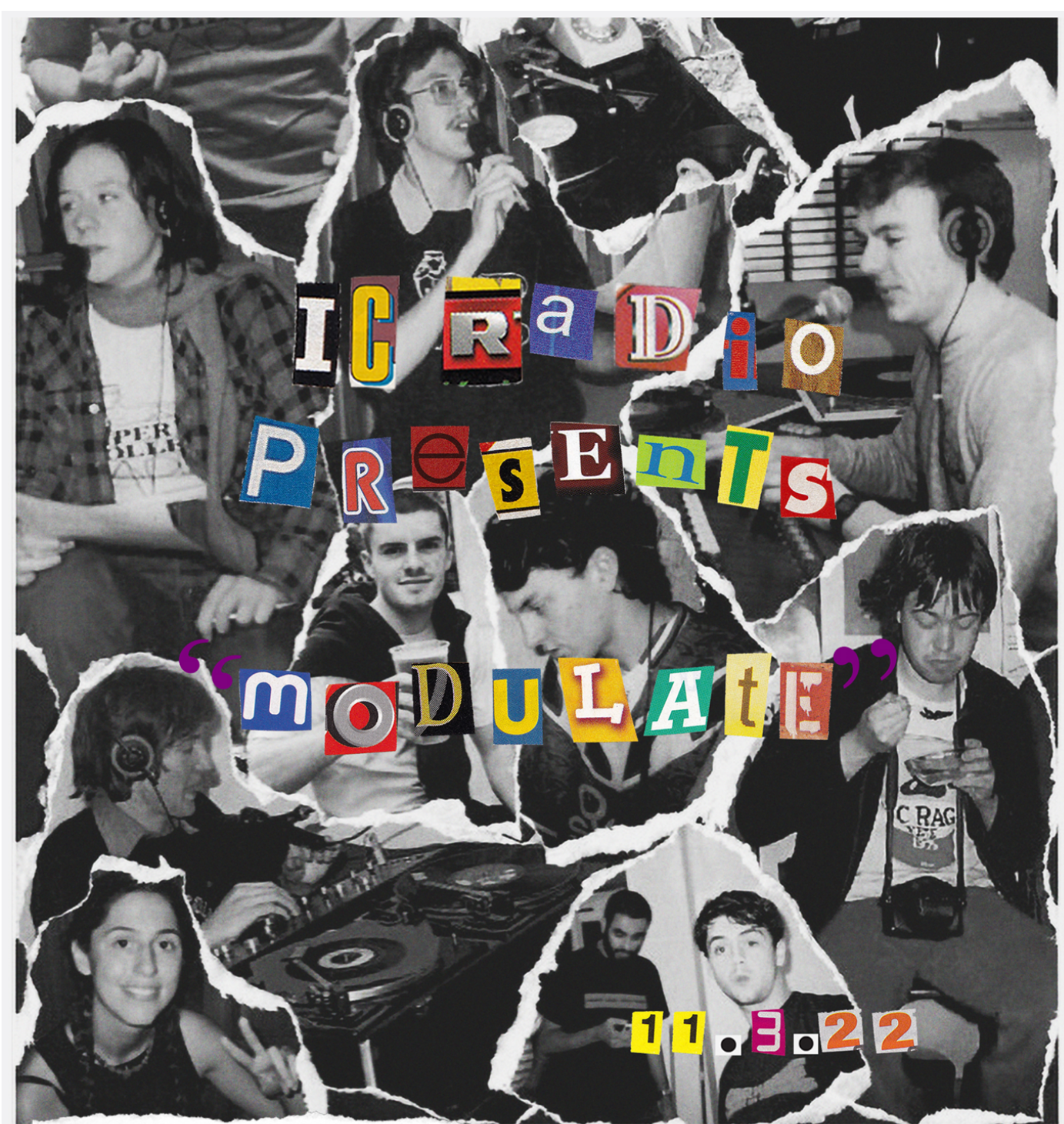
***CHINA***

The first Miao Rebellion begins. It will last 11 years.

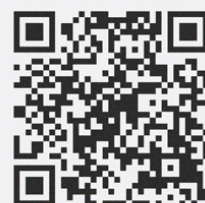
***THE UNITED STATES***

One man, named James Swan, pays off the entirety of the US’s national debt, which stood at just over \$2 million





Bring the Beat Back: join us at Metric on  
March 11th for a revival of music at Imperial.  
Expect a melting pot of sound - Disco, House and more.





# SCIENCE

Edited by: JAMIE JOHN

CARA BURKE

MAREK COTTINGHAM

## The best of friends: symbiotic relationships in nature

► *Writer Wang Guo explores some fascinating symbiotic relationships in nature and how they can break down*

Photo credit: Marco Vinci/Wikimedia Commons, CC BY-SA 3.0

Wang Guo Staff Writer

### Acacias and ants

Acacias are plants that live in African savannas, arguably one of the worst places to be a tree with succulent leaves because the savannas are dry, hot, and crowded with large herbivores such as giraffes. Acacias, however, have developed a strategy to help them survive. They secrete a sweet liquid, rich in sugars, that attracts and feeds ants. In exchange for the food, the ants protect the acacia. Consequently, ants and the acacia establish a symbiotic, mutually beneficial relationship. However, it must be noted that both parties are participating in the relationship out of self-interest; the amount of sugar the acacia secretes and the protection the ants provide are in constant negotiation. Sometimes, acacia will try to offer less sugar with the expectation of obtaining the same level of protection in return. This could work out if other sources of food are scarce, leaving the ants with no alternative. On the other hand, if food is plentiful, the ants become looters, trying to take as much sugar as possible from the acacia before leaving it. Astonishingly, some species of acacia also engage in

foul play. The liquid they secrete for the ants contains substances that inhibit the action of an enzyme found in the gut of ants called invertase. Ants without active invertase cannot absorb sugars properly and hence, die. However, the “friendly” acacia will not allow that to happen by producing invertase that is added to the sweet liquid given to ants, increasing the dependency of ants to the acacia. Sometimes you need to both cause a problem and offer the solution in order to survive!

### Tongue-eating isopods and fish

In the first case of the acacia and ants, both benefit from the relationship from the very beginning. The following example describes a parasite that is capable of effectively becoming an organ of the host. The tongue-eating isopods are certainly some of the strangest organisms on the planet. These parasites enter into fish through their gills. The males stay there, while the females, much bigger, travel to the mouth, where they attach to the tongue and start sucking the fish's blood. Over time, the fish's tongue does not receive enough nutrients and withers, falling off the fish's body. Without a tongue, the fish would no longer

Photo credit: Mark Marathon/Wikimedia Commons, CC BY-SA 4.0



If you look closely at the mouth of this fish, you will see a tongue-eating louse (*Cymothoa exigua*) where the fish's tongue should be!

be able to ingest food and would die. However, the female tongue-eating isopod occupies the space of the tongue. Its long and plane body can function exactly like a real tongue. This is by no means an altruistic action on the part of the parasite because it feels sorry for eating the tongue of the fish! The tongue-eating isopod wants to keep the fish alive because its own survival depends on it. Furthermore, remember the males in the gills? They remain there because it provides easy access to the rear of the female, located in the fish's mouth, allowing the male to fertilise it. If the fish can live and hence travel longer distances, the eggs of the parasite can also spread more.

### Fungi and plants

Mutualistic relationships are extremely dynamic and context-dependent, having different degrees of dependency. Some living beings are so dependent on each other that they would be unable to survive alone. The most well-known case is the lichen, a product of the association of an alga and a fungus. However, most mutualistic relationships are facultative. This means that the organisms can per-

fectly live on their own, but with lower survival rates. Mutualism is more common in harsh environmental conditions because cooperation and specialisation provide a better, safer outlook than if each individual organism existed separately. Besides, the environment is challenging enough and one more friend is one less enemy. On the other hand, if resources are plentiful, isolation of the organisms is preferable. Cooperation would mean that the resources have to be shared. In some cases, however, it happens that resources are plentiful, but one organism is still dependent upon another. For example, some fungi absorb water and minerals that give to the plant roots in exchange for sugars. What would happen if the moisture and mineral content of the soil suddenly increased? The plant would have a surplus of these resources and would no longer require the assistance of the fungi. In this case, the relationship breaks down; the plant, enjoying an increased supply of minerals and water, grows further, taking even more resources from the environment – not only minerals and water, but also other essential nutrients, such as nitrogen.



Meat ants on *Austrochordia acaciae*, a type of acacia



# The problem with AirTags

► **Opinion:** *Tech Writer Shrey Bohra discusses his concerns about Apple's AirTags*

**Shrey Bohra** Tech Writer

Apple's "Walled Garden" is arguably the biggest reason for its massive profits and market dominance across product segments. The company aims to do everything possible to ensure its users do not leave the Apple sphere of influence to do anything, with an increasing range of products across audio, digital services, and even finance being released to facilitate this.

In order to do this effectively, before investing in the development of a specific product, Apple first allows other companies to test the market. If strong demand is seen for these products, Apple releases competitors. While this is a playbook followed by many tech companies - Amazon being a notable example - the process was pioneered by Apple. The industry term for this procedure is known as "Sherlocking", in recognition of how Apple killed the third-party software known as Watson by copying its features, releasing a clone known as Watson built into MacOS.

A similar process happened in the April 2021, with the launch of AirTags.

These are small circular tracking devices,

integrated strongly throughout iOS and Apple's accessories ecosystem. They are, in effect, Apple-built clones of the increasingly popular Tile trackers. Tile is an American company, which has been developing keychain style trackers since 2015. It has pioneered the development of small, Bluetooth based tracking devices, having sold over 35 million in the time since their release. Due to the low power of the transmitters on board, the trackers have a short range. This means the technology relies on having a large user base, with phones with the Tile app being the only way in which a tag can be found.

Apple's AirTags work in the exact same way, relying on an external device to communicate the location of the tracker with the outside world. The difference here, however, is that Apple is able to leverage the vast number of devices it has sold. If every Tile was purchased by a distinct owner, that would give the Tile network 35 million users which could pass by a missing device and detect it. In contrast, there are over one billion active iPhone users according to Apple - all of which are listening for a nearby Airtag, as this functionality is enabled by default. As the effectiveness of a small tracker is directly linked to the size of its

## HOW DO AIRTAGS WORK?

- 1) **The AirTag constantly broadcasts a unique identifier over Bluetooth**
- 2) **Every passing Apple device listens to this identifier and records the location where it "heard" it**
- 3) **This location is uploaded to Apple's servers and shared with the owner of the AirTag**

user base, by enabling this functionality across every Apple device, Apple have effectively killed any competition they might have.

Not content with giving its own application a massive, artificial advantage, Apple has also tried to reduce the effectiveness of Tile's network through updates to iOS. Under the guise of protecting users' privacy, iOS now warns users that the Tile app will be accessing their location, warning of a privacy risk, and prompts them to disable this access. Apple's own system is not subject to the same warnings - despite collecting the same amount of data and being enabled by default. Apple has also limited access to the radio chip required to communicate precision location data with newer iPhones, despite promising that it would give third-party developers the information required by 2019.

This, quite naturally, has led to an antitrust complaint by Tile, submitted in both the US and EU. Antitrust cases, especially against Big Tech, are notoriously slow to complete, and the likely outcome is the period of time between the launch of AirTags and the ruling of the antitrust case will have allowed Apple to build an unassailable lead in the product segment. Apple has attempted to avert any potential antitrust ruling by claiming it is opening up its network to third-party devices - however, the conditions behind access are incredibly limiting. These device manufacturers would have to abandon their own networks and apps, directing every user to Apple's

version instead - effectively preventing non-Apple users from using any tracking device.

Apple's dedication to preventing users outside its bubble from interacting with devices and services has had an unintentional effect. With the massive network that Apple has now deployed, every AirTag is the perfect tool for a stalker. For users with iPhones, a notification is sent if an AirTag that is not registered to them is detected as following their movement for a period of time. However, the stalker, as the owner of the AirTag, can disable it once the victim has reached their destination. This prevents these notifications from being sent. For users with Android phones, even this protection does not exist.

For a period of five months after the tracker's release, Android users had effectively no way of detecting any AirTags being used to track their location. In December 2021, Apple attempted to remedy this by releasing an app on the Play Store, which when opened will scan for any AirTags in tracking mode, and then if detected continuously for 10 minutes, display their location on screen. The app has done very little to allay concerns. It has 500,000 installs - out of an Android user base of over 3 billion devices - and is only active when the app is open. Not only does the potential victim have to suspect they are being stalked to install the app, but they also have to open it on a regular basis to check if it is happening at that moment in time. The app, which has just 1.8 stars on the Play Store, is described by reviewers as being a "buggy mess". As stated by one reviewer, "it feels as if Android users are being punished for not having an iPhone." To add insult to injury, Apple's UK website directs users to "contact their local United States law enforcement" if they believe they are being stalked.

Despite the convenience they bring, AirTags' anticompetitive nature and Apple's woeful attempt at protecting public safety shows that they are a product that cannot be allowed to exist.



Photo credit: KKPCW, Wikimedia Commons, CC BY-SA 4.0



## SCIENCE

# Fusion and the Future: Record-Breaking Pulse Generated by Nuclear-Fusion Reactor

Photo credit: UKAEA

Rachel Rajan George Science Writer

On 9th February 2022, researchers at the Joint European Torus (JET) announced that they had generated the highest sustained energy pulse through nuclear fusion. JET is a research facility located at the Culham Centre for Fusion Energy near Oxfordshire, England. The reactor generated 59 megajoules of heat over five seconds. Prior to this experiment, the record for the highest sustained energy pulse was also held by JET since 1997. The new record is more than double the previous record of 21.7 megajoules of heat energy produced in four seconds.

Fusion reactions have been gaining interest in the scientific community to circumvent the challenges of disposing radioactive waste from fission reactions. Fusion products are assessed to be less of a health hazard because they become benign over a shorter timescale compared to fission products. For example, tritium remaining in the reactor will be rendered harmless in a matter of decades as it has a comparatively short half-life of 12 years. However, radioactive waste from fission reactors such as strontium-90 and caesium-137 both have longer half-lives of 30 years. These by-products of fission reactions emit penetrating radiation and are classified as high-level waste which must be buried in deep geological repositories.

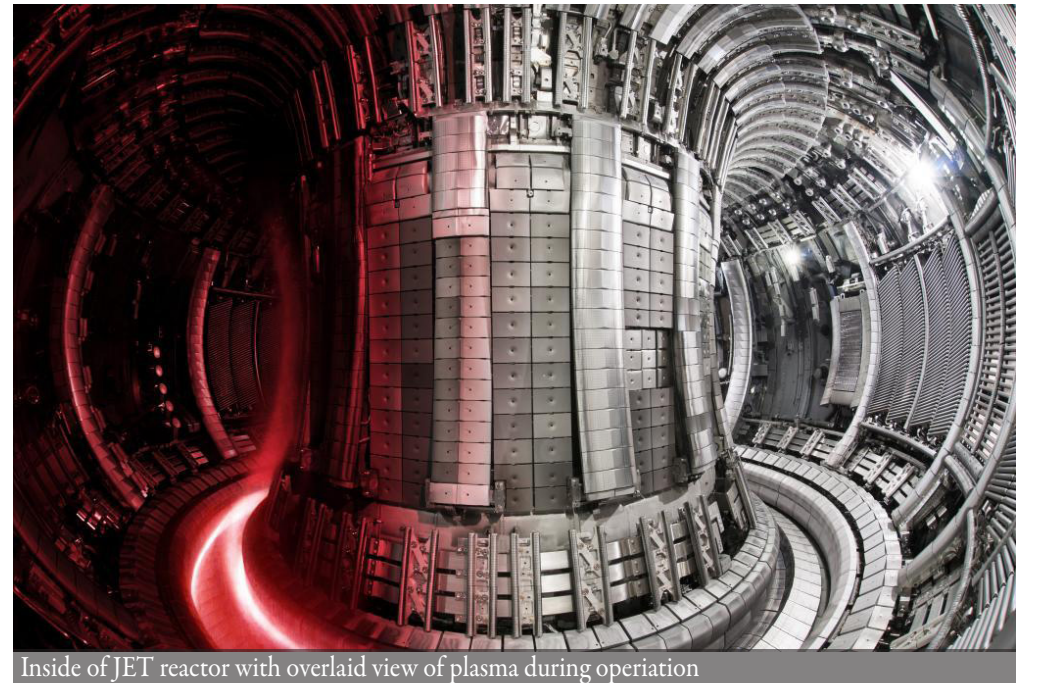
At JET, equal proportions of deuteri-

um and tritium were used as fuel for the reaction. This ratio was decided upon by the researchers as it allows for the reaction to occur at the lowest possible temperature while obtaining the highest energy output. Tritium and deuterium are both hydrogen atoms as they have one proton in the nucleus. The most common form of hydrogen, protium, does not have neutrons in the nucleus. However, deuterium and tritium have one and two neutrons in the nucleus respectively and are known as isotopes of hydrogen.

To initiate a fusion reaction, deuterium and tritium are heated up. Negatively charged electrons begin to break away from the hydrogen atoms, which then become positively charged hydrogen ions. The hot mixture of electrons and ions is known as a plasma. Fusion of deuterium and tritium nuclei begins at 100 million degrees Celsius. The products of this reaction are helium, neutrons and heat energy.

A tokamak reactor was used at JET to provide a controlled environment for the reactions to take place. For nuclear fusion to occur, the plasma must be dense. The high density of the plasma increases the likelihood of collisions between the ions, which would otherwise experience repulsion because they are charged. The plasma also must not come into contact with the walls of the tokamak, otherwise, the walls will melt. Therefore, the tokamak reactor employs a powerful

magnetic field that isolates the plasma in the shape of a doughnut. While this shape prevents the plasma from touching the walls, heat energy produced by the fusion reactions can still be



Inside of JET reactor with overlaid view of plasma during operation

absorbed in the walls of the tokamak. If future reactors are integrated into the power grid, the heat energy can be used to heat up water, producing steam, and then turn a turbine which generates electricity.

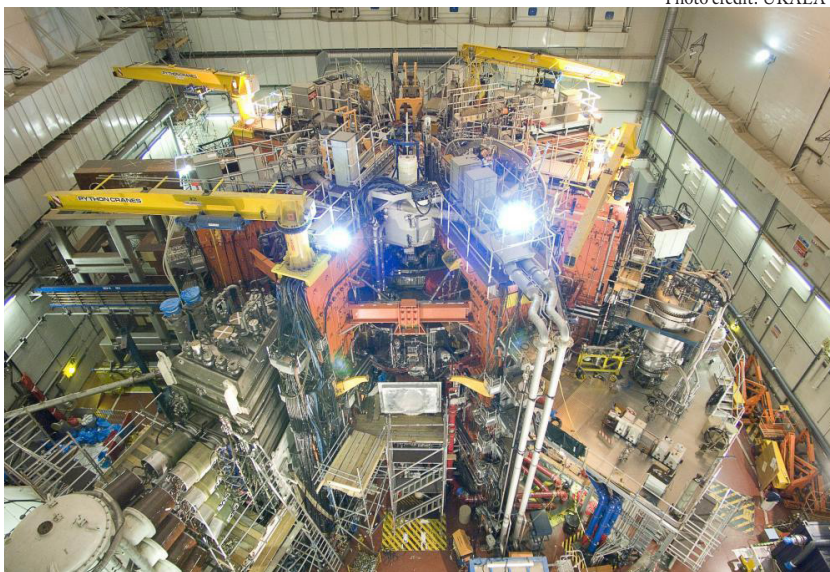
The efficiency of a nuclear-fusion reactor is assigned with the value,  $Q$ , which indicates the ratio of the power output of the nuclear reactor to the power input. When the  $Q$  value of a reactor is equal to 1, the reactor would be deemed to have achieved a break-even. The pulse generated at JET was ascribed with a  $Q$  value of 0.33. While the experiment was regarded as a success, further improvements need to be made so that the power input can be justified by the power output.

The experiment conducted at JET acts as a preliminary study for future experiments at the International Thermonuclear Experimental Reactor (ITER) located at Saint-Paul-lès-Durance in France. Both JET and ITER are research reactors that are regularly compared to each other to optimise the conditions for nuclear fusion. Between 2009 and 2011, JET was shut down as engineers worked on reconstructing the walls of the reactor to model the design of ITER. The successful trial at JET acts as a springboard for future design decisions for ITER, which is slated to start conducting fusion experiments in 2025. However, as ITER operates on a much

larger scale than JET, an experiment conducted with the same parameters at ITER is predicted to achieve a  $Q$  value of 10. If accomplished, this result will be a breakthrough for the nuclear industry as it will be the first reaction in which more power is generated as an output compared to the initial power input.

While the trial at JET was a triumph, researchers are still grappling with challenges in scaling up nuclear fusion technology. For example, a solution needs to be devised to dissipate the surplus heat in the exhaust regions of tokamak reactors. Though this was not a problem during the experiment at JET, a bigger reactor like ITER will require a slightly modified design to cope with a large excess of heat produced due to the enormous amount of power that is predicted to be generated.

Amidst the recent breakthrough, Dr Athina Kappatou from the Max Planck Institute of Plasma Physics acknowledges that "Fusion takes a long time, it is complex, it is difficult. This is why we have to ensure that from one generation to the next, there are the scientists, there are the engineers and the technical staff who can take things forward." Certainly, the results at JET will encourage scientists to persevere as they contribute to the record-breaking developments that are to come.



The Joint European Torus, a fusion reactor in the UK



# Science Spotlight

## Modelling low-carbon fuels

with Zhengli Lim, Aimee Morgans lab

Jamie John Science Editor

This week in Science Spotlight, we speak to Zhengli Lim. You might be more familiar with Mr Lim from his DJing or his “ribbon dancing” on Queen’s Lawn (he describes it as “an odd fusion which draws from the elements of Rhythmic Gymnastics, Dance, DJ and Martial Arts”), which has earned him the nickname “Ribbon Guy”. However, alongside all of this, Zhengli is a third-year PhD student under the supervision of Professor Aimee Morgans, in the Department of Mechanical Engineering. He is investigating the feasibility of low-carbon alternatives to fossil fuels, to help combat climate change.

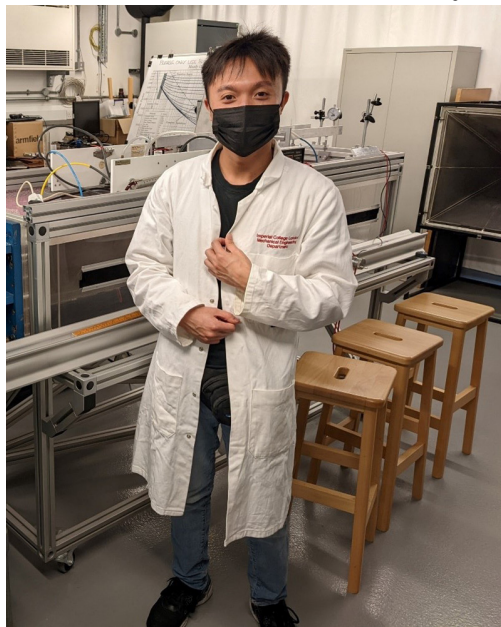


Photo credit: Zhengli Lim

Fossil fuels contain carbon, which is released in large quantities as carbon dioxide upon combustion and is one of the major contributors to climate change. Engineers around the world are hard at work trying to find a way to reduce our carbon footprint. One way to do so might be to mix conventional fossil fuels, which are used in transport and energy generation, with hydrogen gas.

“Hydrogen does not contain carbon, so the more of it we can substitute into our fuels, the lower our resulting carbon footprint”, says Zhengli. Using such a fuel mix provides logistical and cost benefits too; unlike other low-carbon technologies, a hydrogen-fossil fuel mix would require only small changes to existing engines. This reduces costs and makes it easier to roll out changes on a large scale.

“My research hopes to determine the feasibility of using these fuel mixtures and to what extent we can apply them to our current gas turbine technology. Hydrogen changes many things about the fuel mixture, the most notable being the flame burning speed (see graph below). My simulations model the evolution of these hydrogen-enriched flames in a combustor. I’ve found that the higher burning speed of hydrogen generally results in shorter flames and a higher chance of flashback (the gas burns so fast that the flame burns into the injector). Another less obvious (but

Credit: Zhengli Lim

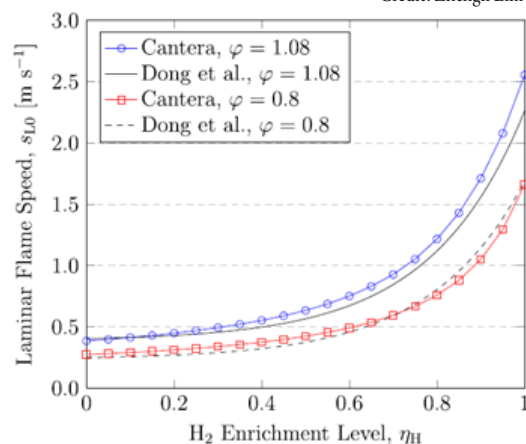


Figure 1: Laminar flame speed (y-axis) increases with hydrogen enrichment (x-axis).

just as important) effect is the higher propensity for thermoacoustic instability, which has to do with how unsteady heat release from the flame causes the surrounding gases to vibrate at certain frequencies. If these frequencies match the resonant frequency of the combustor... let's just say things may start exploding in unintended places. My task is to predict these negative effects of burning hydrogen so that we can engineer solutions against them.”

## This week in Science...

### FROM IMPERIAL

#### At least 5.2 million children worldwide have lost a caregiver due to COVID-19

A study led by Imperial academics and the US-based CDC Global Rapid Response team has found that 5.2 million children have lost a caregiver as a result of the COVID-19 pandemic. “At the current rate, one child faces parental or caregiver death every six seconds”, the authors claim. Worst affected were children aged 10-17, accounting for nearly two out of three children who have lost a caregiver due to the pandemic. The study is an update on an original paper, which examined the period spanning March 2020 to April 2021. The new paper improves estimates by incorporating updated excess mortality rates up to October 2021. Speaking to the College, Dr Juliette Unwin, lead author and Research Fellow at Imperial’s School of Public Health, said, “Sadly, as high as our estimates of orphanhood and caregiver deaths are, they are likely to be underestimates, and we expect these numbers to grow as more global data on COVID-19 deaths becomes available.” Imperial’s own COVID-19 Orphanhood calculator, which includes more recent data, puts the number of children losing primary or secondary caregivers at 6.9 million.

#### AI could worsen health inequalities for minority ethnic groups

A white paper released by Imperial’s Institute of Global Health Innovation (IGHI) has found that AI could worsen the health inequalities experienced by minority ethnic groups, both in the UK and globally. The issue of inequalities came to prominence in the UK during the COVID-19 pandemic, with minority ethnic groups facing a higher risk of dying amongst those diagnosed with the disease. Past case studies have demonstrated inequalities, but the IGHI claims that “the research and evidence base on this topic remains nascent”. “Funding disparities, bias in data and datasets, under-theorised or unjustified use of ethnicity data, biased decision-making, and unfair or harmful deployment, amongst other challenges, can all result in negative outcomes for minority ethnic groups,” say the authors. They call for better legislature and data protection, a regulator framework to ensure AI is appropriate for minority ethnic groups, and the involvement of patients and the public in all areas of AI technology development.

### FROM AROUND THE WORLD...

#### IPCC release report on climate change

The UN’s Intergovernmental Panel on Climate Change (IPCC) has released the second part of its Sixth Assessment Report, entitled, “Impacts, adaptation and vulnerability”. The wide-ranging report warns that climate related impacts are worse than it previously estimated in its 2014 report, lends support to the concept of “loss and damage” and suggests that the very worst impacts can still be avoided, provided urgent action is taken. The IPCC’s Assessment Reports assess scientific, technical and socio-economic information around climate change, and are released approximately every six years. The first part of the Sixth Assessment Report was released in August 2021, and the fourth and final part, which concludes the report, is set to be released in October of this year. “This report recognizes the interdependence of climate, biodiversity and people and integrates natural, social and economic sciences more strongly than earlier IPCC assessments,” said Dr Hoesung Lee, Chair of the IPCC. “It emphasizes the urgency of immediate and more ambitious action to address climate risks. Half measures are no longer an option.”





Get your balls out i



GO HARD  
GET WET



POOL DEPTH  
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Want your CSP in this space? Email [felix@ic.ac.uk](mailto:felix@ic.ac.uk) with the subject heading: Felix Centrefold 21/22



## Theatre

## A jittery drama that is often too close for comfort!

## Animal Kingdom



**Where?** Hampstead Theatre  
**When?** Until 26th March 2022  
**How much?** From £15

Reviewed by **Vaidhiswaran Ramesh** Arts Writer

Life and death are complicated experiences. They both release a detritus of emotions that affect and shape not just the individual but everything around them. Directed by Lucy Morrison and written by Ruby Thomas, *Animal Kingdom* offers a careful and delicate exploration family — after the suicide attempt of a university student Sam (played by a jittery yet engaging Ragevan Vasan) and the shaping of his dysfunctional childhood are teased in six therapy sessions.

Sam, a queer zoology graduate, has a stereotypically dysfunctional family history! A cheating father, parents who divorced in his teens, and a half-sister from his father's affair that Sam struggles to associate with. But, more importantly, a family that is—at the same time—both there for him, and not. Together with his therapist Daniel (played by a calm and measured Paul Keating) and the rest of the familial cast, the play delves deep into each of their relationships with Sam.

For the most part, the family depict stereotypical characters that can be found in any tale of family and mental health — the cold, distant, infidelious father Tim (Jonathan McGuinness); the suffocating mother

Credits: Photo/ Robert Day



Ragevan Vasan plays Sam in *Animal Kingdom*



Paul Keating stars alongside Ragevan Vasan (Sam) as his therapist Daniel

Rita (Marina Laird) who refuses to listen to her children; and a sibling (a wonderfully peppy Ashna Rabheru) who is caught up in the turmoil, forced to act beyond their age. Not unsurprisingly the play is tame on paper; what makes it stand out is the sharp honesty in the dialogues taking the narrative into heavier places that feel unnervingly real.

The minimal set design in Hampstead Theatre's 'Downstairs' stage deserves major credit for allowing the script and the actors to shine. Featuring only a small room with five chairs, an imaginary two-way mirror, and a single wall for Sam to vent his frustrations on from time to time, the play makes best of the small and cramped spaces to provide an enhanced level of intimacy to the narrative and to the audience.

We are there next to Sam when he pummels the singular wall after his mother refuses to listen to him; we are a fly-on-the-wall as his sister owns up to being a teenager, finally venting her pent-up frustrations. In all these instances, we are uncomfortably close... the voices bounce off us before they hit the actors and, in that sense, they make us an equal part of this family.

The entire cast provide memorable performances, but Ragevan Vasan as Sam stands out with his wonderful and sensitive portrayal of someone coming to terms with the consequences of his actions, on himself and those around him. He is jittery throughout the play (whether it is during his monologues or when he is daydreaming about birds...) constantly on edge like

a drug addict, but with a touch of empathy and depth in his eyes, that makes us feel sorry for him rather than judgemental. Laird, as Rita, is annoyingly accurate in painting her picture of someone who has too much to say and too little patience to listen.

It is telling that Sam's favourite birds are Swifts — known for two things. They are one of the fastest birds around, fleeing from branch to branch, and also have the weakest legs. Much like them, Sam is unrooted; drifting from person to person for much of his childhood, meandering between a talkative yet inattentive mother, an absent and stoic father, and an adolescent sister and half-sister struggling to find her place in this dysfunctional family.

So, give this play a try. Put yourself in uncomfortably close quarters and experience the trauma that indifference, especially from family members, can labour on a person. Sam will be unsure what he is going to do at the end of the play, but certainly just like every other member of the audience, you will walk away knowing full well the virtues of listening to those around you with a little compassion.

Are you an aspiring arts critic?

Visit our Facebook page for more details on free press tickets for London shows!





## Theatre

## A familiar and intimate coming of age tale

Credits: Photo/ Craig Fuller

## Red Pitch

**Where?** *Bush Theatre***When?** *Until 26th March 2022***How much?** *From £10*Reviewed by **Sam Lovatt** Editor in Chief

*Red Pitch* is an intricate tale of three sixteen-year-old boys reaching maturity in South London, where the only thing not changing in their lives is the football pitch they train so passionately on. This new play at the Bush Theatre is a study on the depth of friendship that binds our three characters together on their quest to become professional football players — and, if the length of the standing ovation is anything to go by, you'd be remiss not to give it a go.

The acting of the trio Bilal (Kedar Williams-Stirling), Omz (Francis Lovehall) and Joey (Emeka Sesay) was sublime. They masterfully execute moments of dialogue where they speak whilst looking straight at the audience but somehow look at no one. Their erratic and pride-riddled behaviour reminded me a lot of the way I saw the world at sixteen. The writing and cast combined have the audience fawning over the boys' loyalty to each other one minute and laughing out loud the next.

Williams's writing is effortlessly funny. There are very few actual jokes, but the boys' interactions around the most mundane things—such as sharing fried chicken—have the audience laughing louder than the actors can speak. Comedy plays a key role in the narrative of this piece and only further exhibits the expertise of those on stage. There are in-jokes between two of the

Kedar Williams-Stirling (Bilal), Francis Lovehall (Omz) and Emeka Sesay (Joey) in *Red Pitch* at the Bush Theatre

three boys in every combination, adding levels to their foundational friendship and further layers to their character. We get a sense that, whilst there is constant competition between the three, no one is really above anyone else.

The direction (Daniel Bailey) and stagecraft turn seemingly arbitrary body language into impactful features. The boys casually leaning against the railings of the pitch leaves them uncomfortably close to the audience — cementing the illusion that the audience are invisible observers. As disagreement gave way to physical

Credits: Photo/ Craig Fuller

confrontation on stage, I found my whole body tense up and my mouth fall open. It is hard to believe such amazingly choreographed physicality works on such a small stage.

My one gripe with the play, advertised as 'a powerful story about gentrification, regeneration, and the impact of this relentless change on London's communities', is that it's just simply not about gentrification at all. Or at least only in the way that *Game of Thrones* is about ironmongery. It's mentioned; there are several unnecessary allusions to the plight of 'Esme's drycleaners', but this does not advance the story. The boys are drawn out of their home by the prospect of becoming professional footballers, not by increasing prices.

All that being said, if the play was billed just as a coming of age story, I could scarcely fault it. The crew put together an act that no one could regret watching.

Francis Lovehall (Omz) in *Red Pitch* at the Bush Theatre

## LAST CHANCE!

...to apply for the Blyth Arts Fellowship — deadline Thurs 10th March!

The Blyth Arts Fellowship aims to develop a fine art practice at Imperial. The winner of the fellowship will receive four one-hour 1:1 mentoring sessions with a professional artist, a materials bursary of £500, and more.

Scan to find out more, and apply!

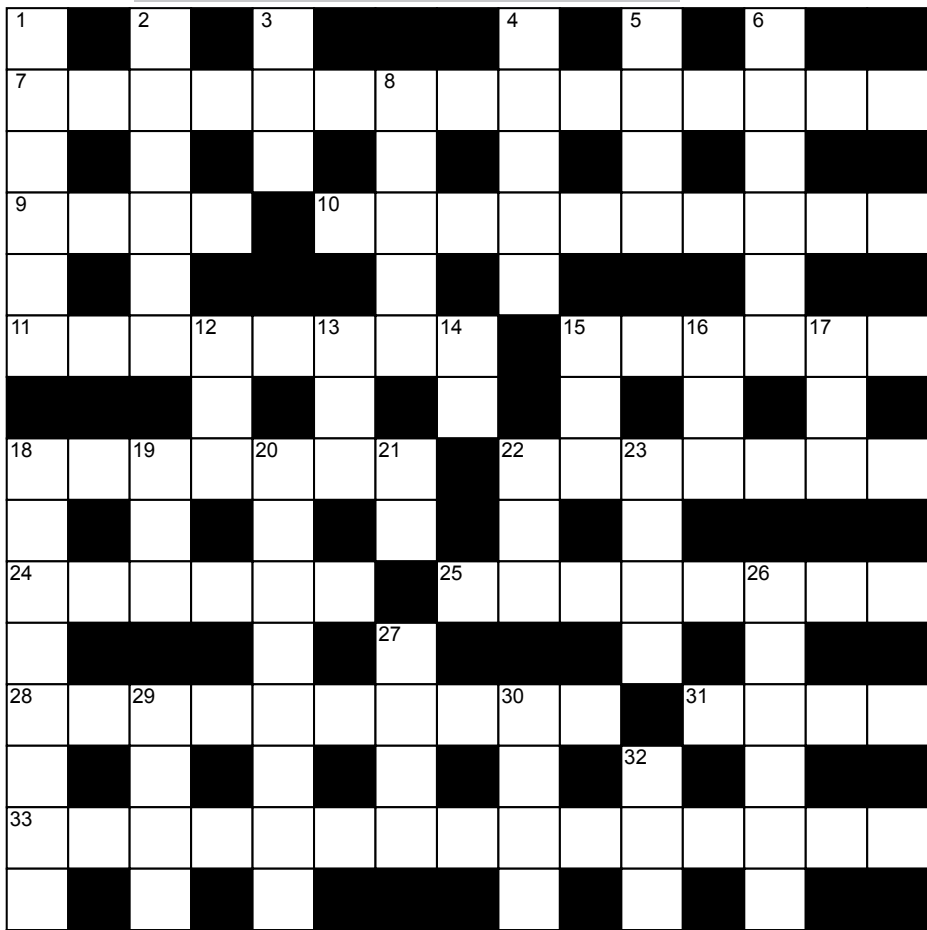








**CRYPTIC Crossword Grid**



**CRYPTIC Crossword Clues**

**Across**

- 7) The line inside: one at the bottom of company rose to the top, but it went South and it's dissolving. [15]
- 9) It could be a sink, he writes. [4]
- 10) #self-referential ! [10]
- 11) That settles it – of 150, 2.5 centimetres were not covered. [8]
- 13) Scalp a caribou crosswise, or some other animal. [6]
- 15) Bear with us returning from Berlin. [7]
- 17) Clasp it forcefully and it's malleable. [7]
- 19) The top ten most violent and powerful. [6]
- 20) Clear the area so the planes can fly through it. [8]
- 22) I pray they were shipped soundly. [10]
- 25) Really unclean silver trinket begins to tarnish. [4]
- 26) Awesome constructions are built on top of others. [15]

**Down**

- 1) Could he be the Spanish cat? [6]
- 2) Tension put down on an English religious institution. [10]
- 3) This, this, this! [4]
- 4) Marked performer of ballet or jive. [10]
- 5) Laugh and behold a glow. [4]
- 6) Explorer has day of celebration spurring some abandon in the year 201. [8]
- 8) Spin on your heels again and walk back. [6]
- 12) Cure the believer by disentangling their innards, prolonging life most effectively. [10]
- 14) Must pop-art manifest a form of depression? [10]
- 16) Support for lumberjacks voiced in the introduction. [8]
- 18) Basket that might weigh you down? [6]
- 21) It sounds like a sneeze when you nut. [6]
- 23) His back-stroke's got pace! [4]
- 24) You'll often find a tear in it. [4]

**REGULAR Crossword Clues**

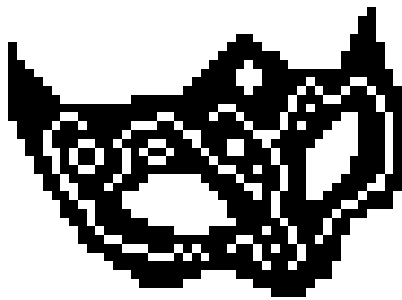
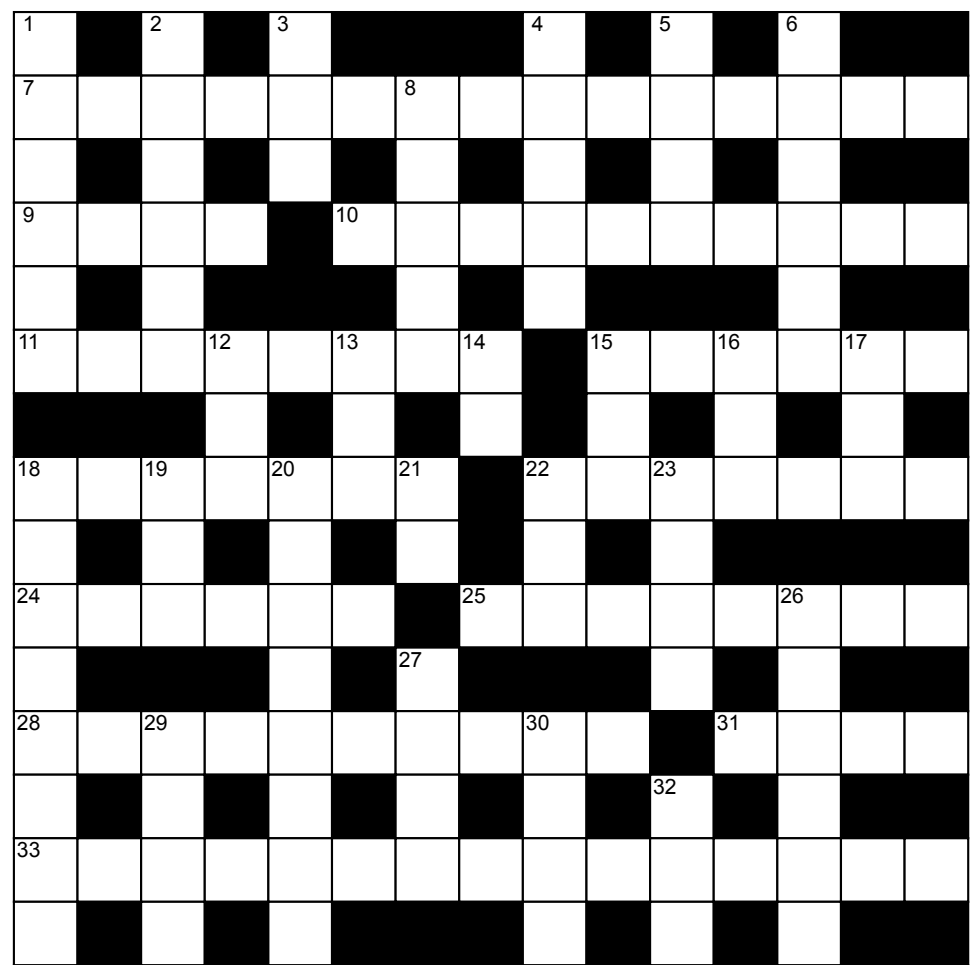
**Across**

- 7) Danger to space telescopes. [15]
- 9) Eye up. [4]
- 10) Pertaining to that which maintains its rotation. [10]
- 11) Guards. [8]
- 13) Distribute accordingly. [6]
- 15) There's one green one and many a Chinese one. [7]
- 17) What something might do after being buffed. [7]
- 19) Having a pH of less than 7. [6]
- 20) Disgusted, nauseated. [8]
- 22) Beats. [10]
- 25) Asian desert. [4]
- 26) Physically beautiful. [15]

**Down**

- 1) Follower of 'bell' or 'dead'. [6]
- 2) Having gathered one's bearings. [10]
- 3) Competitor of Miele or Russell Hobbs, e.g. [4]
- 4) Complete rot. [10]
- 5) Writing instrument named after its inventor. [4]
- 6) Ingredient in pavlova and key lime pie. [8]
- 8) Driving force. [6]
- 12) Grotesque imitation. [10]
- 14) Tools used to put up posters. [10]
- 16) Bright star in the Northern Hemisphere. [8]
- 18) Audition. [6]
- 21) One of the four elements named after the Swedish village of Ytterby. [6]
- 23) Gather dust, as a hoover. [4]
- 24) Not the main dish. [4]

**REGULAR Crossword Grid**





CATNIP

# College group recommends Alice Gast be renamed

NegaFelix Reporter

Following months of deliberation within the College's 'Extremely Recent History Group', a report has been published recommending that the College President, Alice Gast, be renamed.

The report emphasised the College's commitment to "celebrate the underacknowledged contributions of many" individuals that help to make the College the bastion of diversity it is today.

A summary of the board meeting noted that "extensive contextualisation of her history was required to recognise the complexity", though no positives from her

tenure were mentioned.

Said the report "The group believe associations with Chevron falls far short of Imperial's modern values".

"The decision to go with the name Ian Walmsley 2 was a tough one" said ERH Group Chair Shilay Nah. "Our search for underappreciated individuals who have helped build the College's legacy in extremely recent history turned up a few candidates, including many of the hospitality staff we laid off during the pandemic, and that cracking bloke who's running Felix this year".

Consideration of the names Alice Gast-

Ghandi and Alice Gast-Luther King Jr were quickly shot down and hastily scrubbed from the meeting's minutes.

"We really dodged a cancel culture bullet when Muir Sanderson removed the bust of himself last week, though it's a bit of a shame that we'd already sunk cash into embossing a plaque that said his bullying was outweighed by the fact that he made us some money".

The move comes as the student union scrambles to further cover up the real name of Union President Lloydimir Jamesovitch in light of the conflict in Eastern Europe.



## ARIES

This week you grab life by the balls but they come off in your hand



## TAURUS

This week you accuse your flatmate of weaponising their neurotypical privilege when they ask you to pay rent



## GEMINI

This week you know your shits should be more well formed than that last one



## CANCER

This week the Chaps club is exonerated of misogyny on the grounds that they're all "cast iron legends"



## LEO

This week Felix thanks its stars that it's not owned by Shane Dawson



## VIRGO

This week you learn that getting bottled by a Becks Blue hurts just as much as getting bottled by the full alcohol version



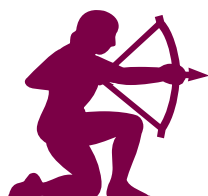
## LIBRA

This week the excuse that you didn't know buying drugs funds human trafficking falls flat when it's revealed that you didn't check



## SCORPIO

This week you sellotape a tortilla to your face and are accused of culturally appropriating both Mexicans and the moon



## SAGITTARIUS

This week you bet your friends a tenner that you could take it all night long from the ALERT statue



## CAPRICORN

This week your trip to Athens is marred when you notice a local being fingered against one of the temples



## AQUARIUS

This week you stopped drinking coke five years ago and now you've started drinking diet coke it just tastes like regular coke



## PISCES

This week you notice the silver lining for the Silwood bunch is that they can conduct their ecology experiments from home



# Trawling the social media pit draws up stark conspiracies



## NegaFelix Reporter

The revelations of such content spouting from the rogue Twitter account of the Union President follows recent discoveries made by NegaFelix that Dr James is planning the launch of a new, rival student newspaper.

Named 'Truth Socialism', the paper will be edited by James himself, though it is unclear how he will find the time for this additional role on top of his already packed schedule of sitting on disciplinary panels and not saying anything.

Intercepted emails from James to Rupert Murdoch outline plans for the new paper.

"We will simply deny the fact that money exists, or indeed has ever existed" frothed James in one correspondence typed entirely in capital letters.

"No ruling elite, no wealth divide and equality for all. This paper will be a true bastion of the utopia we will all one day live in! Now, all I need from you, Mr Murdoch, is to pay for it".

Dr James never received any replied from Rupert, and once the barrage of requests entered its fourth day, James noticed that

his emails started bouncing.

"The long tentacles of Jabberjay Sood are behind this one, that's for sure" said right-wing Union activist Michael Wheat.

"Inveterate meddler and a prominent figure exposed by QAnon, that guy needs to know when to pack it in".

NegaFelix asked Michael why he thought Sood was involved and what evidence he had to support it, but he lifted his shirt to reveal the friendly end of a pistol and whispered "you're not that guy, pal".

## THE HEADLINES THIS WEEK...

**Mouse population at Silwood Park drops to zero following Felix moving office to the nuclear reactor site**

**Imperial College's male population safe from conscription on account of them all**

**being skinny little nerds**

**Confused students mistake not going into uni for showing solidarity with the UCU**

**Putin comparing Zelenskyy to a Nazi sort of suggests he's losing the argument**

**Students unphased by marking boycott as marks normally appear randomly allocated anyway**



# Leadership Elections<sup>'22</sup>



Read your candidates' manifestos at  
[imperialcollegeunion.org/manifestos](https://imperialcollegeunion.org/manifestos)  
and get ready to vote!

Voting opens at 9:00, on 14 March.



FRIDAY 4TH MARCH 2022

# ENVIRONMENT

Edited by: MONAMI MIYAMOTO  
MARIE MORI  
MONIKA YARDONOVA  
JACK CRIBB

## Extreme wildfires to become 30% more common by 2050, predicts landmark UN report



View online here!

Jamie John Science Editor

A new report released last week by the United Nations Environment Programme in conjunction with GRID-Arendal, has predicted that extreme wildfires will become 30% more common by the end of 2050. The 126-page report, assembled by a team of over 50 leading experts from around the world, is a comprehensive description of the scale and extent of the global wildfire crisis. Changes in land-use, alongside climate change, are leading to an increase in the number of extreme wildfires, which have severe consequences for humans and the environment. “While the situation is certainly extreme, it is not yet hopeless,” says the foreword to the report.

### What are wildfires?

Wildfires (equivalently called “bushfires”, “wildland fires” and “forest fires”), are fires occurring in vegetation such as forests, grass or peatland (partially decayed organic matter).

### Are all wildfires bad?

No, wildfires are an important part of the natural world, playing a critical role in ecological and environmental processes. They occur on every continent except for Antarctica, and enable the cycling of important elements, such as oxygen and carbon, which are essential for life on Earth. In fact, many plants

and animals are adapted to wildfires to kill off competitors. Wildfires also play an important role in replenishing nutrients in the soil.

Historically, the role of wildfires in nutrient cycling has been underestimated. In the USA, for example, the federal government campaigned aggressively for wildfire suppression, leading to a build-up of dead, dry wood, which, ironically has played a role in increasing the number of extreme wildfires there.

It is only since the 1990s that US governmental agencies have recognised the importance of managing wildfires, which sometimes means burning small portions of vegetation to prevent larger fires in the future. This practice is called “prescribed burning” and was practiced by Native Americans for hundreds of years, before it was outlawed in the US for much of the 20th century, as part of the suppression policy.

The UN report makes a distinction between “good” wildfires, and “bad” wildfires. “Good” wildfires support ecosystems and are integral to our planet. They are typically lower intensity, and easy to control using regular firefighting resources. “Bad” wildfires, on the other hand, have a detrimental impact on human livelihoods, the economy, or the environment. It has been known for a number of years now that the number of “bad” wildfires has been increasing.

Credit: Julia Petrenko/Greenpeace



A forest burning in Siberia

A combination of factors has led to this.

### What impact are the extreme wildfires having?

The increasing number of extreme wildfires is affecting human health, critical infrastructure, economies and the environment. The report says that exposure to wildfire smoke, specifically particulate matter, is the greatest health concern. In the western United States, wildfires have been responsible for 50% of particulate matter (PM2.5) air pollution, which marks a significant increase over the past decade.

Wildfires can degrade water supplies, disrupt power supplies and damage roads, railways and communication cables. This, in combination with forced business closures and disrupted supply chains, can lead to job losses and economic damage. A study estimated that economic losses from Indonesia’s 2015 wildfires amounted to US\$16.1 billion, equivalent to 1.9% of the country’s GDP.

### Factors increasing the number of “bad” wildfires:

- **Climate change** – higher air temperatures, more drought and strong winds in certain parts of the world have been linked to an increase in the number of so-called “megafires” - large, intense, long-lasting and uncontrollable - these fires are most certainly bad.
- **Changes in land use** – humans are reshaping the landscape in different ways, which, at a local level, is changing the dominant vegetation, and patterns of fires. Take Indonesia, where tropical peatlands, which have historically been flooded with water, have been drained in order to provide food for the country’s growing population. This has led to an increase in the number of peat wildfires.
- **Population movement** – movements in population are affecting wildfire behaviour, and placing more people near wildfire hotspots, which puts them at greater risk of suffering damages.

Extreme “megafires” are wiping out natural habitats and pushing some plant and animal species closer to extinction. Australia’s 2019-2020 megafires, exacerbated by drought and land-use changes, are estimated to have wiped out billions of domesticated and wild animals. In the Amazon region, logging and climate change have resulted in “daunting estimates of biodiversity loss after fire”.

In South-East Asia and the Arctic, wildfires lasting several months are resulting in the destruction of peatland, releasing large quantities of carbon (5% of total human CO<sub>2</sub> emissions) into the atmosphere. Peatlands accounts for only 3% of the Earth’s land surface but are responsible for the storage of 30% of all soil carbon. Peat takes millions of years to re-form, meaning the damage is effectively permanent.

Furthermore, climate change and wildfires are described as “mutually exacerbating”; climate change increases the intensity and length of fire seasons, and then wildfires destroy carbon-rich ecosystems, exacerbating climate change in a feedback loop.

### How can we respond to this crisis?

The report is not all doom and gloom. It concludes by recommending a number of actions to prevent and prepare for wildfires, offering hope. The actions are tailored to different regions across the world and the report notes the global disparity in effects. Wildfires disproportionately affect the world’s poorest nations, but global research and funding is concentrated in richer nations.

“Current government responses to wildfires are often putting money in the wrong place,” says Inger Andersen, UNEP Executive Director. “We have to minimize the risk of extreme wildfires by being better prepared: invest more in fire risk reduction, work with local communities, and strengthen global commitment to fight climate change”.



# MUSIC

Edited by: TARA PAL CHAUDHURI  
JOE RIORDAN

## Gig Reviews

# Bands of Imperial fight it out at Live Music Society's Battle of the Bands



View online here!

Written by **Tara Pal Chaudhuri & Joe Riordan** Music Editors

### Heat 1: "Was that a soundcheck?"

I arrived at Heat 1 of Live Music Society's Battle of the Bands in a rush to hear the first band, who were scheduled to perform at 7:30. After waiting in the bustling queue to get a voting slip, I entered Reynolds expecting to see the first band up on stage, impressing the crowd, however they hadn't even started soundchecks yet. For some reason, soundchecks took place right before each band's set rather than the allotted two hours before the crowds arrived. This made the night slightly disjointed as each group sorted their tech in front of a waiting audience whose confusion was articulated in what I hope was a well-intentioned "was that a soundcheck?". Despite the slight disorganisation, the packed bar was behind every band and ready to hear some tunes.

I'll admit some people might say I'm biased tonight because my flatmate is the guitarist in Driftveil, but that is balanced out by the fact that I've heard the guitar parts of their set being incessantly practised on a loop for the last two weeks. The practice paid off as the band powered through the hits of rock legends from Rage Against The Machine to Arctic Monkeys, even in the daunting position of first band on the first night. Hailing from the Midlands, the singer of Driftveil, mercifully, did not attempt to impersonate Alex Turner's northern accent during the fast-paced 'Brianstorm' (to the joy of my Yorkshire-born self). A particular highlight of this set was watching the drummer who played at an incredible speed and strength, even standing for some songs.

Second up to bat were Happenstance. Formed of the usual drums, guitars and whatnot, this band had the intriguing additions of a trumpet and a saxophone. Insider sources (I'm friends with the singer) tell me that the band had actually only practised twice for tonight, but you can't tell at all. Happenstance had one of the tightest sets of the night, as long as you exclude the mo-

ment where the trumpet player's name was forgotten by the singer as she introduced the band. This funky set was a refreshing change of pace from the usually indie performances that dominate Battle of the Bands competitions, not that I dislike indie sets (we'll get to that later, Parc Firm).

Unfortunately, I missed Hydrodyne's set. However I was told that they were the first band of the night to play an original and they weren't the last. L.A.D.

Parc Firm were up next. What followed was my favourite set of the night, headed by who I think was the best frontman of the night, managing to get the audience more involved than anyone else so far. This was helped by a crowd-pleasing setlist made up of indie hits like 'If You Wanna' by The Vaccines and 'T-Shirt Weather' by Circa Waves. These tracks got everyone singing and a group jumping along at the front. Carrying on the original song tradition set by the last two bands, Parc Firm

showcased one of their own. Twinkly guitars reminiscent of The Smiths had me fooled for a second as I didn't even realise this was an original until the lead singer announced at the end that it was actually their own song 'Pretending' which will be "out soon" – maybe you'll see it in Felix then. To end their turn on stage, the band powered through a cover of 'Naïve' by The Kooks which was com-



Driftveil (photo: Joe Riordan)



Driftveil (photo: Joe Riordan)



Rated R (photo: Joe Riordan)

(pronounced Lad) played several songs they'd written themselves: one was about "love, adventure, something like that". Made up of only three musicians, L.A.D. had a refreshing simplicity that was perfect for the chill indie pop-rock genre they were aiming for. Now is the perfect time to mention the pet hatred of all of the heats – the layout of Reynolds. Usually, LMS events take place in Metric which (in non-Covid times) is almost completely standing, especially at the stage. However, for the Battle of the Bands heats in Metric, the performers have been left with a completely seated crowd with the exception of a tiny bit of room in front of the stage and the side of the room. This makes it almost impossible for a band to invigorate the audience to get up and dance without friends placed as moles in the crowd. L.A.D. were the first band of the night to get anyone to stand and bop at the front. It was only the singer coming off stage and being joined by a lone dancer, I'll admit, but it was a start.

With cheers starting as early as their soundcheck (which was a set-worthy section of 'Johnny B. Goode'),

comparable to the band's own performance of it when I saw them at O2 Brixton a few weeks ago.

The final band of the night were Rated R. These were the first band to get a crowd to consistently stay stood up at the front during their whole set (I think most were friends of the band, but it is still a good achievement considering the strange set-up of the venue). The subsequent set had the most energy of the night, propelled forward by the stood audience. Every single song in the set was a bold choice because none of it was 2010s indie (again I swear I don't have anything against this, simply a nice change), but every single song worked incredibly especially 'Beggin' which was recently propelled to popularity again by Maneskin. I am guessing this won't be the first cover of this I hear in the next few days. The jazzy, funky, rock mix of Rated R was obviously loved by the crowd as an encore was called for and received.

Now all the bands had performed, I submitted my voting slip into a jug on the bar and waited to see who would take the first place in the final at Metric on March 10<sup>th</sup>. After waiting around 20 minutes for the



results, a booming voice came over the speakers and told us the AV voting system had turned out to be too complex to complete tonight and we had to leave the venue before the curfew. A surprise ending that I don't think anyone expected. The next morning, I woke up and found out who won through the Live Music Society's Instagram story.

## Winner of Heat 1: Happenstance

### *Heat 2: I performed but I swear I'll be completely impartial*

We're back, it's Heat 2 of Live Music Society's Battle of the Bands. Straight away let me tell you I performed tonight with Savtand, but I promise to be impartial and also give you some insider information from the other side of the crowd (disappointingly, there aren't any big secrets, sorry). Today, soundchecks began to run before the audience arrived but they overran and bands were setting their levels as people milled into the bar. This left the crowd confused for the second night in a row as bands graced the stage for 5 minutes before leaving again.

Once this was over, the first band SXARD (pronounced Shard) began their performance. What caught my eye was the huge pedal boards of the guitarists. They were used to create some interesting sounds and to add the drum and synth backing tracks which I assume had been programmed before the gig. The band had a very mysterious quality that was enhanced by the ethereal rock feel. Adding to this was the set being what I think was completely originals with one being about "sleep paralysis", something I am terrified of ever experiencing.

The transitions between bands were faster tonight, so Warren's House began their performance a few minutes after SXARD left the stage. The night felt much smoother and organised than Heat #1. The band are formed of a bassist, a guitarist, a drummer and intriguingly, a flautist and saxophonist, and no vocals. I was in awe for the entire 20 minutes. Warren's House were the best musicians I saw all weekend. It was as if Black Midi or Black Country, New Road became a funk outfit. They were incredibly technically proficient. If you want a chance to see this in person, the band have a gig at Mascara Bar on March 11<sup>th</sup> – tickets are available from their Instagram bio @warrenshousemusic.



Warren's House (photo: Joe Riordan)

Next up were The Exchange, an indie rock band with a slightly folksy angle. They predominantly played originals before ending on a slightly-calmer-than-the-original version of Frank Carter and the Rattlesnakes' 'Kitty Sucker'. I apologise, I missed the middle songs of the set as I was tuning to be ready for my set with Savtand.

We (Savtand) played next. I hope people enjoyed our set, we played a mix of '00s pop punk from Avril Lavigne to Paramore and also an original called 'Char-donnay' which can be found on Soundcloud. The set was plagued by sound issues which I'm sure the other bands faced too but could probably have been sorted by LMS renewing their equipment. The guitar turned off in sections due to faulty leads and the piano simply stopped working halfway through 'Primadonna' by MARINA. Apart from these little things, I had fun performing and I hope all the other acts in all the other heats did too.



Savtand (photo: Joe Riordan)

Tonight, the final band were Winston And The Cat, a rock group with a lead singer who seemed to have a Cobain-esque hairstyle – fitting for the band's performance of 'In Bloom'. The looks were mirrored by the sound: the lead singer also had a voice fit for Nirvana, able to belt the shout-singing sections with ease. This also worked well for the band's final song, a cover of

'Everlong' by Foo Fighters.

Heat #2 suffered some of the same flaws as Heat #1 with bands struggling to get people up dancing, and those who did only staying near the sides for their friends' sets. I hope the seats are moved back so that the crowd are encouraged to stand rather than sit. As

an audience member, this makes the night much more enjoyable and energetic: as a band member, this makes it easier to be confident on stage as it is easier to see if people are having a good time and dancing.

Luckily, the LMS committee figured out their own voting system tonight and the winning band was announced shortly after voting closed. Drum roll please.

## Winner of Heat 2: Winston The Cat

*Heat 3: If you performed on Sunday at Reynold's Bar for the five-day Live Music Society event, there's some really interesting stuff on page 5 or something.*

### *Nothing to see here.*

It's Sunday night and we have four bands competing: The Revelry, Electric Boom, Bakburner, and the Melon Band. I manage to make it to Reynold's Bar at exactly 7 PM, but there's already no place to sit and I'm starting to appreciate the number of people Live Music Society actually attracts. I wonder if anyone in this tiny, nerdy college could model a relationship between the genre of music played, the number of members in a band, and the number of audience members (read: friends to increase votes). Food for thought.

I can't get around the fact that I'm walking the periphery of Charing Cross Hospital to get to this place. It's a proper bar. Throwback-to-METRIC blue lights cool the wall behind a stage, adorned with placards referencing University of Zambia among other places. The booths and loose chairs are packed to the brim so I've occupied a pillar for my note-taking activities. Bonus: it comes with a little shelf I can use as a table so my handwriting in, what has been dubbed, my "scary notebook" is going to look splendid tonight.

I hear that Melon Band is an "anime" band, which sort of explains the average audience member profile here. Not to mention the fact that Melon Band consists of far more than the normal complement of members in a band, featuring several violinists, keyboardists, vocalists, bassists, you name it. The whole gang doesn't perform at every gig, but the sheer size of it is definitely capable of giving them a more than significant number of

votes. New Gig Manager jokes that he should speak a few words of Mandarin to sway the vote in favour of his band, especially since the intense politics of not getting soundcheck has ensued.

The first band, The Revelry, takes its place on stage after a welcome from our host of the night, Charlie



The Revelry (photo: Yunke Zhou)



## MUSIC

from Imperial-born band Goldstag. I immediately recognise them as the band that sang a chilling rendition of *'Newborn Again'* by Muse during a big LMS gig months ago. The lead singer of the band is hard to forget – he erupts into highly-vibratoed singing in some unknown octave, and immediately simmers to a stoic head nod as if he didn't just do that. This time round, he has a pair of sunglasses and a megaphone. The set list includes an upcoming LMS Mandopop standard, *'Fearless'* by Jay Chou, much to the amusement of our friendly neighbourhood Mandopop tribute artist, sitting in the back with his arms crossed. Complete with a victorious jump at the end of the set, the only thing that disadvantaged their performance was the unfortunate sound mixing. Heavy emphasis on backing vocals undermined the “backing” part. I



The Revelry (photo: Yunke Zhou)

suppose to some degree, the excitement of having their voices resonating through the whole bar encouraged the guitarists/vocalists to abandon their harmonies and opt for something closer to speak-singing.

Next up is Electric Boom, who edges towards arena rock with renditions of *'Don't Stop Me Now'* and *'Livin' On A Prayer'*. Because I'm a huge cynic, I think of these as easy songs, guaranteed to elicit a reaction. People who just turned up to support a friend will most definitely turn their heads, share a moment of surprised recognition, and sing along with the band. However, LMS frequenters such as myself cross their arms and let out a sigh. There's one exception to this, of course: *'Tiny Dancer'*. My “Almost Famous” fantasies of singing on a road trip replace my journalistic tendencies and I join in the ode to “blue jean baby”. All in all, it was actually the other Elton John hit that renewed my faith in Electric Boom. Although the vocalist would be advised to channel his energy into controlling his voice like one would an instrument, the actual instruments in *'Saturday Night's Alright'* were beautifully in sync and remarkably like the original.

Bakburner, the third band (lead vocalist being front-of-crowd favourite, New Gig Manager), evokes heavy applause before even making it onto stage. They burst into the iconic staccatoed drum intro of *'Out of the Black'* by Royal Blood, sliding into the blues-y thundering guitar that makes up the body of the song. As always, I'm fated to stand behind the head-bangers so I get a transient view of the band every few seconds. I briefly consider the pros and cons of whacking my relatively longer hair on them. New Gig Manager's infectious energy translates into loose, textured vocals reminiscent of Julian Casablancas more than Royal Blood's Mike Kerr. Sure enough, the band plays the Strokes' *'Reptilia'*, before which they execute a clean segue into Jet's *'Are You Gonna Be My Girl'*. New Gig Manager prefaces this performance with a cheeky “I have one

question”. Woah, slow down there; it seems we're coming dangerously close to what my friend calls “dickhead charisma”. Keep it in your pants. On the other hand, he may have earned it - given how well he's adapted the Casablancas drawl. The set closes with the Monkeys' *'Brianstorm'* and *'I Bet You Look Good on the Dance Floor'* – the star of these performances is the most enthusiastic guitarist I've ever seen in my life. I wouldn't be the least surprised if he compulsively erupts into the Carlton Dance.

The last performance is given by Melon Band – a tribute to the anime hits I have very little knowledge of. But when the regular cohort of drummer, guitarist and bassist is accompanied on stage by a trumpeter and saxophonist, I hold my breath. What ensued is a punchy, yet dynamic, combination of funky big band-inspired music that shifts its focus from instrument to instrument, giving everyone a moment to shine. Their next song features a singer who is the epitome of the word “kawaii” – skirt, stockings, space buns, the whole package. An impressive Japanese anime rock song is followed by lead singer of Tremolo taking a break from his crowd-pleasing arena rock performances. I might be slightly critical of Tremolo, but their lead vocalist definitely has a knack for performing this genre of fast-paced, power chord-driven Japanese rock.

I've come to realise that I enjoy bands who can avoid explosive instrumentals that submerge vocals and the various musical Easter eggs that the band themselves plant in their music – obviously barring bands who have no such sound nuggets and are just plain boring. But everyone has their unique sound and I notice a lot of it getting buried under poor equalising and, frankly, just the excitement of doing a live performance. There's a special place in my heart (or auditory cortex?) for bands that can find that golden balance between quality and volume. It's that magical ratio that can give a listener chills while thrashing their head back and forth.

### Winner of Heat 3: The Revelry

#### Heat 4: Somehow there's less room to dance.

I walked into Reynolds on Monday night and was horrified, it makes me ill, the layout of the bar has got even worse. Chairs are arranged in rows like a primary school concert, even further alienating the audience. I'll give it the benefit of the doubt and see how the

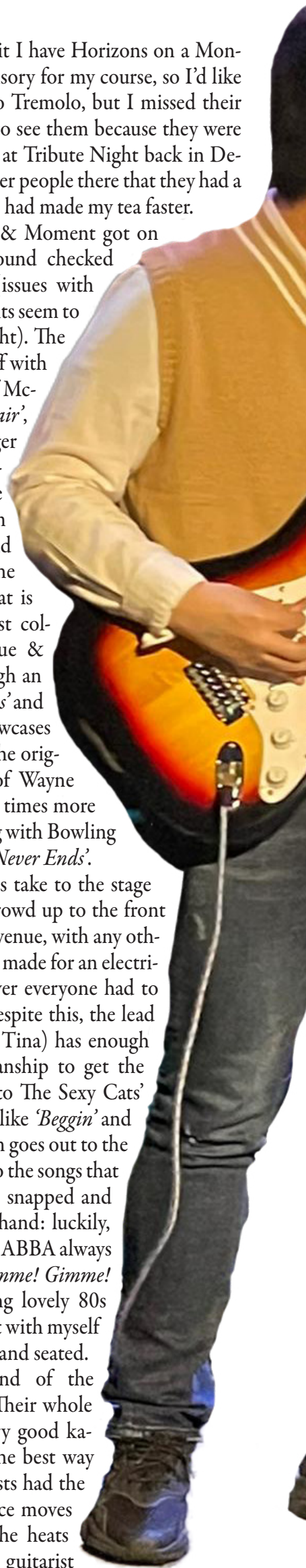
night goes.

Firstly, I need to admit I have Horizons on a Monday 4-6 which is compulsory for my course, so I'd like to profusely apologise to Tremolo, but I missed their set. I would have loved to see them because they were one of my favourite acts at Tribute Night back in December. I heard from other people there that they had a great set and I just wish I had made my tea faster.

I arrived just as Hue & Moment got on stage, already having sound checked earlier in the evening (issues with this like on previous nights seem to have been avoided tonight). The band kicked my night off with a fast-paced rendition of McFly's *'5 Colours In Her Hair'*, after this the lead singer admitted “we have never practised as a whole band”. You can tell from little timing blips and missed hits but overall, the set is impressive for what is the pop rock band's first collective performance. Hue & Moment press on through an energetic *'Misery Business'* and *'Stacy's Mom'* which showcases the guitarist who takes the original solo by Fountains of Wayne and makes it a thousand times more interesting before ending with Bowling For Soup's *'High School Never Ends'*.

Tina & The Sexy Cats take to the stage next and bring a huge crowd up to the front with them. In any other venue, with any other layout this would have made for an electrifying atmosphere however everyone had to stand off to one side. Despite this, the lead singer (who I assume is Tina) has enough confidence and showmanship to get the audience singing along to The Sexy Cats' rocky covers of pop hits like *'Beggin'* and *'Toxic'*. A special mention goes out to the drummer who got so into the songs that I think one of his sticks snapped and another flew out of his hand: luckily, he had spares. Ending on ABBA always wins me over so the *'Gimme! Gimme! Gimme!'* cover, including lovely 80s synth style keys, was a hit with myself and the crowd, standing and seated.

The penultimate band of the evening were Datafish. Their whole set had the feel of a very good karaoke performance, in the best way possible. The two vocalists had the first choreographed dance moves and outfit changes of the heats and I loved it. The lead guitarist on the other hand, seemed to be hav-





ing none of it – straight faced throughout was the perfect juxtaposition (think Ben Mack from Sports team). A repeat of 'Toxic' was made slightly underwhelming just by unlucky band orderings with Tina & The Sexy Cats already performing it. I like the song so it's okay though, I'm always up for more Britney. The set ended with The Jackson 5's 'I Want You Back', showcasing the bassist as he played some funky riffs.

The final performance, by Troan, was the closest I think an LMS event will ever get to a chore-

ographed light show. Once the band are on stage, they ask for the lights to be dimmed, revealing the glow sticks they have covered themselves in. Throughout the set it seems like either the band spoke to the lighting guy prior, or he had been sleeping and finally woke up because the lights actually change more than once. Troan cover a range of songs from rock hits to pop fan-favourites, the highlights being 'Get Lucky' and 'Mr Brightside' – which they ended on. The band manage to get a few people up dancing, a number I think would have increased if it wasn't for the horrific layout of the bar.

### Winner of Heat 4: Tremolo

*Heat 5: We finally got a table and promptly abandoned to stand right in front of the speakers. Make of that what you will.*

Yunke and I survey the scene around us and notice the group ahead colouring in cardboard signs to support their favourite band. We're not sure which band it's directed at but the signs read "Kelvin makes me wet" and "Zaddy Zhou". After a WHOLE HOUR of banal soundcheck (I repeat, an hour I could have used to NOT run from the bus stop afraid I'll miss the first performance – the things I do for

this newspaper), the first band, Aldo Sterone, mounts the stage. An 80s post-punk aficionado near me swears he knows the introductory synth sequence and squints trying to identify it. The song swells and a deep husky voice sings "And I know she'll be the death of me/At least we'll both be numb". The post-punk fan sinks with a "nevermind".

Of course, this isn't how the rest of the audience receives the song. It slips into a guitar-enriched pop song in a funk outfit. I immediately recognise Tom Norton from a comedically raunchy cover of 'Shake Your Money Maker' from Open Mic Night. Interestingly, he channels his bluesy guitar moves to backdrop the not-so-blues songs that the band plays: 'The Less I Know the Better', 'Back to Black', 'Feel it Still' and 'Seven Nation Army'. Most notably, a swift transition to 'Seven Nation Army' is welcomed with an instrumental overload the band was finding hard to avoid in the previous songs. Luckily, they save one song for that barrage of heavy drums, rumbly guitar and surprisingly techno keyboard solo. We watched the drummer finally let loose, vaguely reminding me of Animal from the Muppets.

The Immigrants follow closely behind with 'Whole Lotta Love's immediately identifiable pulsing guitar riff and Diego Mesa's piercing vocals. We gape at how similar they are to Robert Plant's. In fact, all their Led Zeppelin renditions – 'Ramble On', 'Good Times, Bad Times', and 'Rock and Roll' – are faithfully replicated, all the way from the guitar tone in their solos to their meandering outros and Plant's passionate screeches in the middle of songs. The attention to detail is truly mesmerising. Although one criticism could be that they performed more like a Led Zeppelin tribute band than a band in their own right, 'Rock and Roll' featured more of Mesa's own vocal customisations.

Third came the Sellouts, opening with the second Amy Winehouse tribute of the night, and also the second 'Valerie' of the whole five-day lineup. Izzy has a deep, rounded voice that, while very pleasing, doesn't match the soulful texture that would normally complement the original arrangement of the song. On the other hand, it went incredibly well with 'This Love' by Maroon 5. The band's two guitarists play against the growing rumble of the bass in the Sellouts' cover of Muse's cover of 'Feelin' Good'. The guitar-led build-up might be what makes this the strongest song by the band.

Monkeys in Living Form Society (the abbreviation nearly slipped by me) play 'Maria' by Blondie, sung by a vocalist channelling Pulp Fiction's Mia Wallace.



Monkeys in Living Form Society (photo: Yunke Zhou)



Kelvins tend to be quite hot (photo: Yunke Zhou)



Quadronaut's new bassist (photo: Yunke Zhou)

The band's best performances are their versions of some classic alternative hits like 'Life During Wartime' by the Talking Heads and 'Weird Fishes/Arpeggi' by Radiohead. Not only did the guitars mimic the songs perfectly, Zara's beabadooee-like voice introduces a new sound to the classically male-sung tracks. Although the mellow coolness of Thom Yorke's voice is challenging, she's able to channel David Byrne's chaotic-neutral excitations while avoiding sounding like an annoying child.

For a band that has such a strong grasp over the sounds they produce, members of Quadronaut are refreshingly humble as artists. Their passion for the music they're playing entirely changes how you perceive the music. One of the reasons I don't make notes during their performance of 'Time' by Pink Floyd, Jimi Hendrix's 'Little Wing', Elton John's 'Rocketman' Fleetwood Mac's 'The Chain' is simply because they are a captivating band. They reproduce Pink Floyd's psychedelic sound with every instrument available but in a way that complements each other instead of drowning them out. You can catch their eager side-glances to each other that the music means more than the audience reactions – and in an ideal world, that's exactly how it should be. As much as I would like to elaborate on Tom's guitar improvisation and use of a whammy arm or Gabe's ability to pull a Phil Collins and be the only drummer I've seen here to be the lead vocalist in a song, I want to talk about how they are as a band. Unlike every other band we've seen, they are stripped clean of

pretenses, quick quips, and 'dickhead charisma'. Their investment in their music is palpable in both their performance and their communication as a band. I'm not the least bit surprised that they won the Battle of the Bands two years ago and I certainly won't be if it happens again.

Until the 10th!

### Winner of Heat 5: Quadronaut

#### Battle of the Bands Final Lineup

Happenstance  
Winston The Cat  
The Revelry  
Tremolo  
Quadronaut

The final will take place on March 10<sup>th</sup> in Metric!



# INVESTMENT

Edited by: AHMAD DANESH

 Investment Society  
Imperial College London

The war in Ukraine...

## Ruin for Russia?

Credits: José Pablo Domínguez // Unsplash



Putin's decision to invade Ukraine has been met with wide criticism across the world, including sanctions.

*The war between Russia and Ukraine has recently begun, but how is it affecting Russia's own economy lately?*

Leyli Hydyrova

Writer



Vladimir Putin has made a historic political gamble this past week, clawing back receding Russian geopolitical hegemony in the former Eastern Bloc at the cost of national exile from the global financial system. Certain of Russia's oligarchs - most notably Mikhail Fridman, one of the owners of Alfa Bank - have taken the unprecedented step of publicly repudiating Putin's Ukraine invasion. This discontent amongst Russia's elite attests to the severity of the economic penalties Putin has incurred.

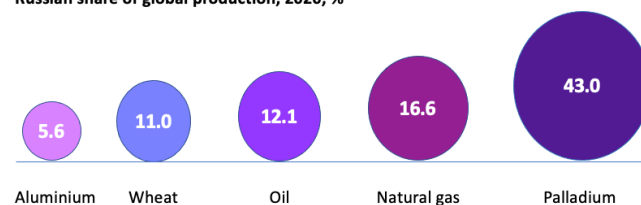
Indeed, the sanctions unleashed by the U.S.-led coalition over the past week - deployed in tranches since Tuesday, each more punishing than the last - will reduce Russia to a pariah and devastate its economy. The sale to Russia of airplane parts, various electronics, and equipment essential for the upgrade of oil refineries has been prohibited. As of Thursday, the EU rolled out sanctions it claims will affect 70% of the Russian banking sector. Russians are now barred from making deposits exceeding €100,000 in EU banks. The latest round of sanctions, announced Saturday, target Russia's central bank, freezing its \$630 billion in foreign reserves. This unprecedented step - a nuclear option, so to speak - was apparently interpreted by Putin as akin to an act of war; an occasion for bringing his own quite un-metaphorical nuclear arsenal to the ready.

Additionally, the cost to protect against the risks of Russian debt has surged. The spread on five-year credit default swaps increased almost eight-fold, where it commenced at around 120 basis points (bp) earlier this year. Despite this, due to its extensive oil revenue and low debt levels, the likelihood that Russia defaults on its debt is slim. But this does not assuage fears, as investors are aware that the sanctions would make it

impracticable for them to receive interest or principal repayments from Russia.

One of the many sanctions levelled at Putin consists in the freezing of £154bn in assets at VTB, Russia's second-largest bank. This blow, inflicted by the US and the UK, has made it a struggle for investors to trade in Russian assets due to the withdrawal from global markets. This means the bank and its subsidiaries will not be able to do any business in the UK or US or with its nationals. Swiss wealth management giants, Credit Suisse and UBS, have cut the amount they are willing to lend to private bank clients using Russian assets as an insurance.

Russian share of global production, 2020, %



Russia's largest production level is in the rare metal Palladium, a whopping 43%!

Most surprisingly, Switzerland recently broke its deep-rooted tradition of neutrality and espoused the EU's sanctions against Russia, despite its potential damage to their reputation as a neutral arbiter of diplomatic affairs. To highlight its solidarity with Ukraine and its people, the Swiss government decided to close its airspace to Russian planes and freeze the assets of Russian oligarchs associated with the President; thus, putting pressure on Putin.

But while devastation may be certain enough for the Russian economy, the threat that western economies must now contend with is uncertainty.

The Ukraine war injects enormous uncertainty into financial markets. Merryn Somerset-Webb, editor of MoneyWeek, notes that whereas financial markets were

able to withstand other turbulences in global affairs in recent years - Trump's 2017 missile strike against Syria, Afghanistan Withdrawal, and nuclear tensions with North Korea among others - Ukraine is different because Ukraine dominates in the export of certain key metals (rivalled only by Russia), sunflower oil, and barley. None of these other countries export much of anything, so their leverage in the global economy is negligible. So, the Ukraine crisis will cause more inflation than any of these other events, and inflation is a leading cause of uncertainty in markets. Then there is the question as to whether or not central banks will decide to raise interest rates to counter inflation. Markets cannot know, and thus the uncertainty is exacerbated.

*Leyli is a second year Medical Biosciences undergraduate at Imperial College London, and writes for the Investment Column.*

Credits: Edoardo Ceriani // Unsplash



### WHAT'S A CREDIT DEFAULT SWAP?

The Credit Default Swap (CDS) is when one party “sells” risk and the counterparty “buys” that risk.

The “seller” of credit risk owns the underlying credit asset in which they pay a periodic fee to the risk “buyer”. In the event of default, the “buyer” agrees to pay the “seller” a set amount. Default is the failure to repay a debt (interest or principal, on a loan or security) by individuals, businesses, and countries.



FRIDAY 4TH MARCH 2022

# FOOD

Edited by: BENCAN YALCIN

## Recipe

# Upgraded Shake Shack Cheeseburgers (with plant-based subs)

Difficulty: ★★

Time: 20 min

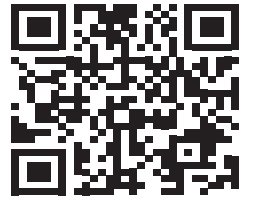
Written by **Noor Akhtar**

Photo credits: Noor Akhtar

Your Shake Shack style Cheeseburger in the end should look something like this - all that is left to do is for you to tuck in :)

I never fancied myself an accomplished burger maker. In fact, I was a firm believer that homemade burgers were, and would always be, the third Hemsworth brother, Kevin Jonas, Elizabeth Olsen circa 2002. They bear the name and connections but they have not reached the heights of fame and finesse like their more famous siblings (see Shake Shack, Gourmet Burger Kitchen, Honest Burgers).

So, you can imagine how shell-shocked and flabbergasted I was when I made these burgers. I do not want to toot my own horn but I will anyway: these burgers are better than Shake Shack burgers.

Quite a bold statement, I know - but I am not alone. After my friends had sunk their gnashers into the pillowy brioche, they vehemently declared with welling eyes, mouths agape, and a solitary tear streaming down their cheeks that this was indisputably the best burger that had touched their lips.

If that has not enticed you, I admire your willpower. These burgers will redefine what a good burger is. You will not be disappointed.

*-The following recipe serves 4 people-*

### Ingredients (all from Aldi)

- 500g Angus Beef (cold)!!\*
- 4x pack Brioche Buns
- Yellow American Cheese\*
- Tomato slices (2 each per person)
- Lettuce
- 1 Shallot
- Extra Virgin Olive Oil
- Balsamic Vinegar
- Butter for spreading\*

### Method

1. Slice the shallot in half lengthways and then slice into thin strips
2. Heat up the large grill pan on the large hob at medium heat. Drizzle the olive oil.
3. Toss in the shallots, grind some pepper in, and fry for a couple minutes until softened.
4. Add a generous drizzle of balsamic vinegar and bunch up the shallots with tongs. Toss occasionally to prevent burning
5. Mould 125g of Angus beef into a ball and shape

into a patty the size of the bun. Coat each side liberally with ground pepper and salt. You could also form two smaller patties, but make sure you adjust the cooking time.

6. Cook the patties on the grill pan, pressing down with a metal spatula. Make sure the meat is browned beautifully before flipping
7. Meanwhile, butter each brioche bap and grill them on the same pan. They should soften and the butter should melt. Grill each side.
8. Once the patty is flipped, top with American cheese and the onions if they are cooked.
9. Assemble, spreading ketchup on the bottom bap, meat and all the trimmings, two slices of tomato and a slice of iceberg lettuce. Drizzle more ketchup and mustard
10. Serve and enjoy!

### **\*Make It Plant based**

- **Replace** the Angus beef patty with a Beyond Burger patty.
- **Replace** the American cheese with a slice of Applewood's Smoked Vegan cheese OR a Violife cheese slice
- **Replace** the butter with olive oil spread

*If you enjoyed making this recipe, tag Noor on her Instagram so she can see it: @nooreatsalot\_*



Illustrated by: Natalie Yu



## SPORT

# ICCC take on BUCS track event

Sasha Halsey Cycling captain

Over the weekend three of our athletes drove seven hours to Glasgow in a snow blizzard to compete in the BUCS Track Cycling Championships for ICCC. Yewande Adesida competed in women's sprint events of the flying 200m and 500m time trials, just missing out on qualification by one place by 0.03 seconds! She was also the track mum for Jonah and I who are fairly new to track racing. Jonah Harris did the men's kilo time trial, and would've got a PB and qualified if he had sprinted for the second finish line rather than the first - an easy mistake to make when you're pushing so hard that you're just looking at the ground for a white line. He then went on to the elimination race, a bunch race of 28 riders with one elimination each lap. A rider from Cambridge screwed him over by not leaving the track after being eliminated meaning Jonah would have still been in with a chance of sprinting for the line but had thought he was eliminated whilst the rider was still going around the track (illegally). I raced the women's individual pursuit and points race which was another bunch race of about 16 riders. As an aero student I ironically opted for the non-aerodynam-

“  
**AS AN AERO  
 STUDENT I  
 IRONICALLY  
 OPTED FOR  
 THE NON-  
 AERODYNAMIC  
 POSITION**

ic position for the 3000m IP and didn't come last but wasn't fast. The points race consisted of 60 laps with points going to the first four riders over every 10th lap, it was my first bunch race and the pace was high (over 50kmph for the 60laps) so my main aim was to stay upright. Travelling up in snowy blizzards and eating pizza in Glasgow's city centre on a Saturday night were some of the highlights of the trip as well as some good track experience of a steeper 250m track that is going to host the UCI World Championships next year. We also got to race the likes of Joe Trumen and Sophie Capwell who are Team GB Sprinters - they obviously got loads of medals but then again, they go to Loughborough... If you want to try out track cycling on a less steep velodrome, then come to ICCC! We are hosting a track taster session which includes bike hire and coaching for a 2-hour session at Herne Hill Velodrome (London) on Saturday 28th May 16h30. Tickets are only £9 and coaches to teach you how to ride safely and quickly. Herne Hill Velodrome is an outdoor velodrome just under an hour away from South Ken, it is closest to Brixton on the Victoria line. This session usually costs £20 to the public so you're getting a heavily subsidised ticket through the club so there's no time to lose!



Sasha Halsey getting ready to start one of her races

Contact [cycle@ic.ac.uk](mailto:cycle@ic.ac.uk) or go to our Union page to buy a ticket today!

**ICCL - UCL**  
**Varsity**  
 12PM - 9PM, 5-6 March  
 Wanyoo Esports Studio  
 Canary Wharf Shopping Center  
 Free Entry



All smiles; the team had a great day out riding round in circles