



# Felix

The Student Newspaper of Imperial College London

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Fireworks light up the South Kensington campus // Imperial College London

## Is the Summer Ball "unsustainable"?

Following dissatisfaction of student societies, Felix questions the sustainability of the Summer Ball in its current format

**NEWS**

**Andy Djaba**  
*Editor-in-Chief*

Preparations for Imperial College Union's annual Summer Ball, which is set to be held on Saturday 22<sup>nd</sup> June, recently hit a snag as many of the involved student societies threatened to pull out over changes to this year's event.

Dance Imperial, A Capella and Big Band societies were amongst the societies to express their dissatisfaction at the changes, which have been brought about by budget constraints. DramSoc, Imperial's dramatic society which is particularly crucial to the setting up and running of the event, also raised health and safety concerns.

DJ & Production Society's Sean Davies told *Felix*: "Previously each year we'd get paid for

our slots, drinks vouchers and free entry to the main event and the afterparty. But, this year, they said that we'd have to pay £5 to go to the afterparty and that we'd also only get one free drink each, which would have to be a specific thing. A lot of people that would be playing might end up having to spend more money than they were earning throughout the whole thing."

Adam Collins, who is involved in multiple societies, including

Live Music Society and DramSoc, echoed the sentiment of performers feeling de-prioritised and undervalued by the Union, stating: "I'm performing at an event and I shouldn't have to pay to get into the event; the ticket should be free and that shouldn't be a bonus."

A large source of the dissatisfaction stems from the relative lack of notice given to the clubs and societies, as they were only informed of changes to the Summer Ball in an

email sent to them on 3<sup>rd</sup> May. This was acknowledged by the Union's Events and Conferences manager, Jess Harrison, who, when asked what should be changed in the organisation of the Summer Ball for future years, told *Felix*: "Definitely communication with CSPs [Clubs, Societies and Projects] earlier".

The disenfranchised societies have since held meetings with the Union's Summer Ball

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# EDITORIAL

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## Happy Birthday Lauren



Andy Djaba - Felix Editor

**L**auren Dennis, who sadly passed away in October following a battle with bowel cancer, was a Chemistry student at Imperial, a great friend of mine and the strongest person I know. Tomorrow (25<sup>th</sup> May) is Lauren's birthday; she would be turning 24 so I wanted to take this opportunity to dedicate this Editorial to her:

Yoo Lauren, wys? As per, I wanted to start this how I started every conversation with you. I can't lie man, I still struggle to talk about you but I felt slightly better after the last letter I wrote to you so here goes. I miss you. It's been pretty difficult since you passed and I think about you everyday.

I've been agonising for the last month or so about what I even wanted to say to be honest. Having said that, my procrastination is still peak. A month's planning and I'm still here, hours after the print deadline. Let's hope the printers allow me. Anyway, like your

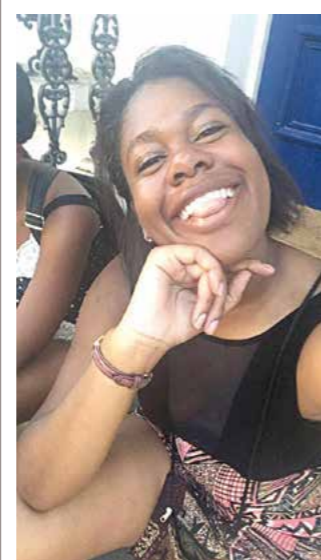
mum always tells me, you wanted to be remembered, not mourned, so I thought: what better way to remember you than to reminisce about one of my favourite memories with you?

Taking it back to 24<sup>th</sup> March 2018. I'd just finished my disastrous Final Year Design Project, a project that can only be described as a harrowing ordeal, the deadline of which was on 19<sup>th</sup> March, my 22<sup>nd</sup> birthday. After a five day cycle of sleep,

knew I could count on you to back me. You jumped in the car, we headed to King's Cross and danced the night away to 90s R&B tunes.

It's funny because it really doesn't sound like the most eventful of days but, looking back, it's moments like that - you feeding me McDonald's chips while I tried not to crash, with Bryson Tiller blaring in the background - which I'll forever cherish.

Much love my G!



Lauren Dennis

drink, sleep, repeat, Shiji, Isaac and I made our way over to yours for the carrot cake you'd made me to celebrate. After raiding your fridge as per, we headed to the studio, you jumped on the podcast and we spent the afternoon catching jokes about Kanye West memes. Fast forward a couple hours and I was getting ready to head to my cousin's birthday party. My sister had already flaked, as had Isaac and Shiji, but I



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# NEWS

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## Is the Summer Ball "unsustainable"?

**NEWS**

(cont.)

Project Team - Kristie Knapp, Helen Bhandari, Jess Harrison & Claudia Caravello - and a suitable compromise seems to have been reached in the majority of cases.

One such issue that has been resolved is the afterparty, which was described by some as previously having a "very bare schedule", with Spotify playlists playing in many of the rooms, to the chagrin of many of the student societies performing. There will now be DJs performing at the afterparty.

Although the dispute seems to have been resolved in most cases, it raises the question of whether the Summer Ball is sustainable in its current format. When this question was put to Jess, she told Felix: "No. It's not fair that there are parts of that student ticket that go toward paying for the fencing, paying for carpet... instead of that going on an artist or more fireworks, more fairground rides, which is honestly what we'd rather put the money on."

Jess described the prospect of the Summer Ball moving from Imperial's South Kensington campus to an external

venue as a "wonderful idea" and revealed that serious discussions are being had about the possibility of making this change for future years.

Jess added: "If it were my decision, I would have moved us already but it's all linked in with finance and risk... it's slightly higher than me."

After making a loss in previous years, this year's Summer Ball has seen more pressure to ensure the event breaks even. The additional budget constraints led to many of the changes which caused dissatisfaction amongst the CSPs. Explaining this to *Felix*, Jess added: "The ticket prices have stayed



Could this year's Summer Ball be the last held on campus? // Imperial College Union

the same this year but suppliers, who do a lot for us and this event, their costs go up every single year. Carpets, security, bar staff, stewards, the fireworks, the fairground rides, everything goes up a percentage each year". The changes to the

annual Imperial Festival - as reported by *Felix*, this year sees the introduction of the larger "Great Exhibition Road Festival 2019" - has also posed a logistical challenge to the Summer Ball Project Team. The festival, which is to be held the weekend

after Summer Ball, means that the team had to reschedule many aspects regarding the set-up and clearing up of campus following the ball.

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Imperial's magazine, formerly known as **PHOENIX,**

returns...with a twist!

If you are interested in Grime & Black British music, we want to hear from you!

What does Grime mean to you?

If you're interested, please email [Felix@imperial.ac.uk](mailto:Felix@imperial.ac.uk)



**THE TIMES**  
**THE SUNDAY TIMES**  
*Know your times*

### Are you the next political writer?

Matt Chorley, editor of Red Box, the award-winning political newsletter and podcast would like to hear your opinion on the current state of UK politics. But forget Brexit, what do you think are the big issues that are being ignored?

Submit a 500-word opinion piece for the chance to write for Red Box for the next three months, plus be featured on the Red Box podcast.

**Email your piece by June 3 to [redboxcompetition@thetimes.co.uk](mailto:redboxcompetition@thetimes.co.uk)**

# NEWS

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## Imperial College to publish results of latest staff consultation regarding pension schemes

**NEWS**

**Joanna Wormald**  
Deputy Editor

Deputy Editor, Joanna Wormald, provides the latest update in the ongoing pension saga

Imperial College will next week publish the results of the latest staff consultation regarding changes to their pension schemes.

This latest phase in the long-running dispute that saw countrywide strikes last year adds a third option to the 2018 valuation of the Universities Superannuation Scheme. Currently, "significant increases" in contributions from both employers and employees are scheduled for October 2019 and April 2020. The rises – which would see staff contributions increasing from 8.8% to 11.4% and employer contributions increasing from 19.5% to 24.2% for a total increase from 28.3% to 35.6% – would be unsustainable for many staff at Imperial.

**"The rises - a total increase from 28.3% to 35.6% - would be unsustainable for many staff at Imperial"**

A previous consultation held in March proposed two options, both of which are included in the current consultation. The "upper bookend" approach would increase total contributions to 33.7%, with 23% coming from employers and the remaining 10.7% from staff. Universities UK, which represents the country's higher education institutions, has previously said this would be "unsustainable" and an "undeniable threat to investment and to jobs".

**"Universities UK, which represents the country's higher education institutions, has previously said this would be 'unsustainable' and an 'undeniable threat to investment and to jobs'"**

The "lower bookend" approach would set contributions at 20.4% from employers and 9.3% from staff for a total of 29.7%. However, this approach is dependent on being able to guarantee that extra "contingent contributions" would be available in the event of an economic downturn.



"The long-running dispute that saw countrywide strikes last year" // Flickr

This is to ensure that the recovery of the USS' deficit (£3.6 billion as of March 2018) is not hampered. However, this approach would require further negotiations, which would not be completed until summer 2020. This means the planned increases in October 2019 and April 2020 would still go ahead.

**"The planned increases in October 2019 and April 2020 would still go ahead"**

The USS has now put forward a third way. This would see increased contributions of 30.7% (21.1% from employers and 9.6% from staff) come into effect in October 2019. This would increase to 34.7% in October 2021 unless a new arrangement is agreed following another valuation in 2020.

It is not clear how this contribution would be split between employers and staff. Responses from staff were collected by the College last week. Imperial's formal response to the consultation will be published ahead of next week's deadline of 30 May.

	1/10/19 - 30/9/20	1/10/20 - 30/9/21	1/10/21 - 30/9/22	1/10/22 onwards
<b>Option 1: Upper bookend</b>	33.7%	33.7%	33.7%	33.7% <sup>1</sup>
<b>Option 2: Lower bookend with no CCs activated</b>	29.7%	29.7%	29.7%	29.7% <sup>1</sup>
<b>Option 2: Lower bookend with maximum CCs activated</b>	29.7%	31.7% <sup>2</sup>	33.7%	35.7%
<b>Option 3: 2020 valuation</b>	30.7%	30.7%	34.7% <sup>3</sup>	34.7% <sup>3</sup>

1 Assumes no revised contribution agreed as a result of the 2021 valuation.  
2 Assumes the contingent contribution steps up after one year.  
3 Assumes no revised contribution agreed as a result of the 2020 valuation.

USS' response to the last consultation //USS

# NEWS

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## Imperial and *The Times* host event tackling air pollution

**NEWS**

**Andy Djaba**  
Editor-in-Chief

Attendees were told of the important need for "balanced" messaging around air pollution in the latest of a series of collaborative events in partnership with The Times

Monday evening saw Imperial and *The Times* collaborate to host the latest joint event in their year-long partnership.

The event, titled "How can we fix London's air pollution problem" and consisting of a presentation and panel discussion, explored the media's role in communicating the impact air pollution has on our lives.

Proceedings got underway with a presentation, jointly delivered by Sam Joiner, Interactive and New Formats Editor for *The Times* and *Sunday Times*, and Ryan Watts, Interactive journalist at *The Times* and *Sunday Times*. Together, Sam and Ryan showcased *The Times'* air pollution campaign, "Clean Air for All", which launched in early May. During the presentation, Sam and Ryan walked those in attendance through three interactive resources which they created for the campaign:

**The National Picture:** An air pollution postcode checker enabling people to see how polluted the air they breathe is. The dashboard offers powerful metrics, including the equivalent number of

cigarettes per month.

**School league table:** A searchable dashboard for checking air quality in schools within the Greater London area.

**Digital essay:** An interactive story looking at the steps which could be taken to improve air quality in the UK. The digital essay, inspired by the click-through storytelling of Instagram Stories, features case studies of how cities elsewhere in Europe are tackling the air pollution problem.

**"Together, Sam and Ryan showcased *The Times'* air pollution campaign, 'Clean Air for All'"**

"The main challenge with these interactives was translating the topic to our readers in a way that was relatable and easily understandable", explained Ryan whilst highlighting *The Times* and *Sunday Times* interactive team's aim to create content which enhances the reader's comprehension of a story in visually compelling ways. Sam concurred and echoed this sentiment, adding: "Scientific language alone doesn't always work well, that's why we thought about using cigarettes as an equivalent, for example. It was something we can all get our head around."

Sam and Ryan were later joined by Dr. Audrey de Nazelle, Senior lecturer in the Faculty of Natural Sciences, Centre for Environmental Policy,



(Left to Right): Sam Joiner, Ryan Watts and Dr. Audrey de Nazelle sat on the panel at the event // Fergus Burnett

for a panel discussion and Q&A session, which followed the presentation. Amongst the areas of discussion were: the importance of including communities in decisions about tackling air pollution, the challenge of changing engrained behaviours and attitudes such as overreliance on using cars and the vital role the media plays in communicating the seriousness of air pollution to the public and policymakers alike. Chief amongst these discussion topics was the significance of widescale public realisation and acknowledgement of the tangible and detrimental health impacts that air pollution can have. Dr. de Nazelle left the audience contemplating a sobering message:

"Death is just the tip of the iceberg. Air pollution also affects birth weight, asthma, cancer, cognitive development, diabetes, and there are even links to obesity. We can't put 'air

pollution' on a death certificate but we know that it is a significant contributor to many serious illnesses."

**"Death is the tip of the iceberg"**

A special opportunity for an Imperial student to write for *The Times'* *Red Box* newsletter was also announced at the event. To enter the competition, which closes on Monday 3<sup>rd</sup> June, students must send a 500 word submission via e-mail or the competition webpage. The winner will be announced on 24<sup>th</sup> June.

The year-long partnership between Imperial and *The Times*, which has seen a programme of activities with the aim to "stimulate debate, provoke curiosity and explore the future of science, technology and culture", will continue

with *The Times* confirmed to feature in the Great Exhibition Road Festival 2019 from 28<sup>th</sup> to 30<sup>th</sup> June. Imperial staff and students who are yet to

redeem their free one-year digital subscription to *The Times* are advised to contact thetimespartnership@imperial.ac.uk via e-mail.

### Forget Brexit: What is being ignored?

*The Times* has launched a competition to give one Imperial student the chance to write for *Red Box*, *The Times'* award-winning political newsletter, once a month for a three month period. The winner will also meet Matt Chorley, the editor of *Red Box*, to find out what it's like working in Westminster.

If you're interested, start thinking about what are the issues which are important to you that are being overlooked while politicians are distracted by Brexit? What is the one law you would pass if you were prime minister for the day? What is happening in health, education, housing, employment, welfare, the environment, transport, the arts, sport and family life? And what will be the long-term impact on Britain if the problems are not tackled soon?

## COMMENT

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## Pointless, homophobic protests

Comment editor **Charles Titmuss** argues that the protests outside the schools are not only unnecessary, but also definitely homophobic

## COMMENT

**Charles Titmuss**

Comment Editor

The introduction of the No Outsiders programme to schools in Birmingham has resulted in significant nationwide protests. The goal of the programme was to teach children about the protected characteristics in the Equalities Act 2010, including LGBT+ groups. Following its introduction, some parents objected to the content present in the lessons and, after talks with the school broke down, they began protesting outside the school. These protests have increased in size up until the present, with up to 80% of parents at the school withdrawing their children from the lessons. Most of the protesters at the school in question come from an Islamic background, and the protests have even spread to other schools.

**“Protesters are concerned that the lessons will proselytise an immoral way of living”**

Concerns amongst the protesters range from how these lessons will spread a version of morality not in accordance with their own, as well as that the



Protesters being homophobic// Guardian/Getty Images

lessons will somehow “proselytise homosexuality.” Parental opposition to the introduction of these lessons is based on the idea of “my child, my choice.” Parents reserve the right to remove their children from classes that they feel would be inappropriate or that they disagree with on a moral basis.

Parent’s personal religious beliefs form a critical part of their identity and it is important for many to pass these beliefs on, so that their children can live an upstanding moral life. For a society and the government to impose their beliefs on the children of the parents, this reeks of tyranny. However, in my opinion it is important to expose children to as wide

a range of worldviews and systems of morality as possible. Ultimately, it will be up to them as free individuals to choose how to live, and neither their parents or the system of education should restrict that. In this case it seems as though the parents are being more restrictive than the education system and our judgement on this case should reflect that.

The age at which these lessons are being given is also a matter of considerable concern for the protesters. The lessons are currently being given but there are additional plans to introduce sex education lessons for children from the age of five by 2020. Many believe that this type of content is best

left to be taught at home or not at all and that the introduction of these lessons at such a young age would be inappropriate for children not mature enough to deal with such adult themes.

I believe that the concerns about these lessons being age appropriate are unfounded. The lessons within the programme are based on a book featuring two same sex penguins raising a chick as well as a dog that doesn’t quite fit in. This seems like a fairly reasonable first exposure to the nightmarish idea of a same sex couple raising a child.

The protesters reaction to the The proposed lessons contain significant emphasis on the need for

consent. This is a very important topic given that over a four-year period there were almost 30,000 cases of children sexually abusing other children. In the modern day, it is vital to introduce children to these concepts as early as possible to ensure that they behave appropriately and know what to expect from others.

Most importantly, these protests can best be qualified as a colossal overreaction. to what is a minor change to the curriculum. Although it is important to take the parent’s concerns seriously, they are unfounded and they have managed to be hugely homophobic whilst protesting. To quote, “we do not believe

in homosexuality but that does not make us homophobic.” Believing in homosexuality is as unnecessary as believing in gravity. It is well documented behaviour in the animal kingdom as well as a feature throughout human history. It was acceptable behaviour in Ancient Greece, the Roman Republic and the early Roman Empire, and became less socially acceptable with the rise of Christianity. Unfortunately for these protesters, they live in an age in the UK where homosexuality is a perfectly acceptable way to live your life. They are proudly bearing the flag of homophobia that bigots the world over have borne for millennia.

# POLITICS

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## A Policy View of Abortion

*The ethics behind abortion have been debated over and over. Think about it policy-wise instead.*

### POLITICS

**Isabelle Zhang**  
Comment Writer

Last week, the Alabama State legislature approved a bill that would limit a woman's access to abortion at every stage of pregnancy and make it a criminal offence for doctors who provide the service. This measure has been the most drastic move by American pro-lifers to challenge a woman's right to choose to end her own pregnancy; whereas recent bills passed by other states to restrict abortion access have included exceptions for pregnancies caused by rape and incest, Alabama's has no such concessions. The Republican lawmakers who authored this bill are well-aware of its extremity. Indeed, they are hoping that the unconstitutional nature of their proposal can bring the ethos of abortion back into the Supreme Court's deliberations.

The abortion debate is multi-faceted. Whether or not one views abortion as morally acceptable does not always dictate whether they think it should be always legal. And of course, religious belief, the weighing of a mother's right to bodily autonomy against the fetus' right to life, the scientific determination of when life begins, fetal viability are all factors lumped into the discussion. In America, however, the public discourse only revolves

around and agonises over a 1973 landmark decision by the U.S. Supreme Court, *Roe v. Wade*, which establishes that a woman's decision of abortion is protected by her right to privacy. And since this ruling, there has been an unrelenting effort by conservatives to try and overthrow the legal precedent established by *Roe*. It seems, like most issues in America, this is a little too deeply embedded in cultural and partisan divides for actual policy discussions around it to surface and be taken seriously.

The anti-abortion argument is simple and uncomplicated, as its basis is mostly in the religious belief that life begins at conception when God creates us in the womb, and because abortion in even the earliest stages of pregnancy would be to end that life, abortion is effectively murder. The case for allowing abortion is understandably less easy to argue for, there isn't a straightforward way to capture the implied beliefs of what pro-choice is in a similarly cohesive manner. My perspective, at least, is that pro-choice policies implicitly demand social trust in pregnant women to be well-informed of their options and their respective outcomes, and that they do not abuse the freedom of choice through irresponsible and reckless behavior.

Nonetheless, believing in pro-choice comes



The March for Life protest outside the Supreme Court, January 2019 // *The New York Times*

hand-in-hand with demanding increased availability of sexual education, contraceptives, and family planning, which would decrease the rate of unwanted pregnancies that contribute to a significant percentage of abortions. Because fundamentally, nobody actually believes that abortion is good if it is unnecessary. Advocating for women to be given this choice is not synonymous with the casual disregard for a fetus, nor does it represent an encouragement for women to disregard contraceptives and be careless about pregnancy, nor a disrespect for one's religion; instead, it is simply an understanding that, for the greater good of a

woman's freedom to choose abortion should be an available choice, and that other policies can be made to tackle the reasons why one might require abortion as an option.

I've mentioned some of those policies – family planning and contraceptives – and to further this argument let's say we've perfected those policies but, because accidents happen, the woman gets pregnant anyway. Since women can't just magically un-pregnant themselves (which would definitely be preferable over abortion), it then makes sense that the option of abortion is an option women should have. No woman sees abortion as an inherently pleasing,

attractive process to put themselves through; women who choose abortion do so because they believe it is what's best when compared to the alternatives they face: being financially unable to support the child, having to raise the child alone, knowledge that the child will be born with physical or mental health complications. Restricted access to abortion is not at all a policy that addresses the root of their problem that led them to choose abortion. Instead, solutions should improve the ability of the welfare state to support low-income or single-parent households in raising a child, and even more support for parents raising disabled or

diseased children, so that they don't see the disability/disease as a burden heavy enough to deter them from having the child at all.

As for Alabama and *Roe v. Wade*, it currently seems unlikely that their bill will be brought to the Supreme Court. If they do decide to take on this issue next year (the Court operates on a sort of cycle where judicial orders and opinions are released around June every year), the outcome will have significant influence over the looming 2020 elections. Regardless, the most effective solution for either side of the American public is also the simplest: vote.

# Impromptu Part II - How to Get Off the Ground

*Founders of Impromptu share advice on creating a tech start up*

## TECH

**Sahir Khurshid**

**Tom Burgoyne**

*Impromptu*

### Background research

This is where a background in an analytical discipline comes up trumps. Think of this as a research project. Is there a demand for your proposed idea? Look into how unique your idea is, what your selling points are and how viable your idea is. Will it be possible to monetise your idea? Is there any competition? Is this competition fully established? Can you offer something different or an incentive? These are key questions you should be thinking about.

It's crucial to have a target audience. Another term thrown around is market width. This simply implies how many people can benefit from your proposed app. Is your idea limited to a specific demographic? It is important to research how wide your potential user base may be. This is simply a matter of mining

through resources, such as Datamonitor and Statista, amongst a host of others.

The data gathered from archives is highly important but often does not paint the entire picture. In some cases gleaning relevant information is simply impossible. Surveying is invaluable in this regard and is a powerful tool for determining whether your app idea is valid or not. It also helps you refine your ideas and functionality in line with the demand of your target audience.

There are many free templates available online. Select the format which suits you and take to the streets! In person questionnaires are the most rewarding (although Facebook and other platforms allow you to survey larger population sizes without leaving your room). Prepare a host of questions that allow you to validate your hypothesis. Do not lead those being surveyed. Be as impartial as possible. Keep the questions open-ended and let the subjects talk. Start with friends and family. Bear in mind they will find it hard to be impartial in your presence. The general public less so.



The logo for Impromptu features the word 'impromptu' in a lowercase, rounded, sans-serif font. A small yellow dot is positioned above the 'i', and a small teal dot is positioned above the 'u'.

Spontaneous Things To Do With People Nearby

Impromptu is launching to Imperial students in two months' time // *Impromptu*

Select a suitable location, if your target audience is the student demographic then of course, target the walkways at university. The data you gather will help you formulate your business model and financial projections.

**“The current trend is for a ‘freemium’ model, whereby the app download and basic functionality are free”**

### Business Model

Your business model refers to the means by which you make money. Common approaches involve paid downloads, paid added functionality/features and advertising. Video games constitute the majority of ‘paid for’ apps. The current trend is for a ‘freemium’ model, whereby the app download and basic functionality are free with additional features being paid for. The details of how and when you monetise are laid out in your financial projections.

These spreadsheets are the most important thing that you will possess and can be thought of as a turbocharged profit and loss sheet. You will need to project things like your number of users, how often they will use your app, how often they will utilise paid for features (or how much you will gain from advertising based on their traffic). You will also need to detail costs for a host of things including staff, specialist expertise, servers and storage, marketing and office space amongst others.

Potential investors will want to see projections for a minimum of three years and will decide

to fund based upon the projected return on their investment. A model that signifies a 10x profit over the course of three years is the minimum threshold for commercially oriented apps. Metrics to bear in mind include; retention rate, churn rate, CPI (cost per install), DAU (daily active users) and MAU (monthly active users) amongst others. Don't forget to budget for contingencies by anticipating things that may go wrong and how much money you may need to deal with them.

**“Don't forget to budget for contingencies by anticipating things that may go wrong”**

### Patent

This depends on your geolocation. Here in the UK and indeed throughout Europe and Asia, apps are not eligible for patent protection unless they fit very specific criteria. If you fit within this limited framework, cost is a major

concern and there is no guarantee of success. The general rule of thumb is that you cannot protect an ‘idea’ and that anyone can come along and replicate it. In fact, there are large groups that specialise in mimicking fresh or successful ideas and throwing greater economic might behind their version or simply launching in a different market.

In the UK, you can however protect your app by trademarking your branding (both your name and logo) and copyrighting the overall way your app has been put together. This involves elements such as the colourways you use, your page transitions and images for example. This will limit the ability of another party ‘cloning’ your app and will form part of your intellectual property (IP). Having these matters in place is crucial to running an app and also to potential sale later on down the road.

*Be sure to picky up a copy of Felix next week! We discuss how to practically make these concepts a reality....*



Sahir Khurshid (Left) and Tom Burgoyne (Right), Impromptu Co-Founders // *Impromptu*

# MUSIC

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## Mac DeMarco's Indie-Indie-Label Breakthrough

*The Cowboy delivers one of his most intimate efforts yet.*

### MUSIC HERE COMES THE COWBOY



**Artist:** Mac DeMarco.  
**Label:** Mac's Record Label.  
**Top Tracks:** Nobody, Finally Alone, All of our Yesterdays, Skyless Moon.  
**For Fans Of:** Ariel Pink, Homeshake, Kurt Vile, King Krule. 47 minutes

**Neel Le Penru**  
Music Writer

Here comes the cowboy / Here comes the cowboy / Here comes the cowboy," ad infinitum. The lyric(s) of the album opener and title track of Mac DeMarco's fifth full-length studio record — and his first under his own label rather than long-term partners Captured Tracks — leave one thinking that this

might be one of his most minimal yet. And indeed it is, as DeMarco pushes the successful but straightforward formula that has come to define his style (the self-labelled "jizz-jazz" consisting of unprocessed vocals, a couple of guitars, simple drums, bass, and a sprinkling of synths) in a further stripped-back direction, picking up from the acoustic-guitar-and-dreamy-synth-based tracks that formed a key part of 2017's *This Old Dog*.

*Here Comes the Cowboy* was recorded in a couple of weeks this past January, out of DeMarco's garage in a rainy LA (you can even hear the rain petering in and out of a few tracks on the album). Such a scene goes hand-in-hand with the sound and songwriting on this record, which is perhaps also best enjoyed as the soundtrack to chilling

indoors on a rainy day or soothing a post-New Years-scale hangover — this cowboy ain't riding through the Wild West. Don't let the simple production fool you, however: while the album might be a reduced version of the Mac we know, and does drag in a place or two, the highlights on this record showcase the essence of what earned DeMarco his status as a modern poster-boy of indie — *Here Comes the Cowboy* features some of Mac DeMarco's finest work to date.

**"This might be one of his most minimal yet."**

Part of that has to do with the lyrical content of this album: the semi-introspective, casual rumination on love and life on this album might not seem much different from any on Mac's past work, but look closer and you'll see that this cowboy is also singing about being fed-up with the complexities of modern life (perhaps explaining some of the basic writing and production choices on the album) and burden of his own fame. Across the cuts on this record Mac sings about how "there's no turning back to nobody" and "no second chance" for "the creature on television", being "sick of the city" and wanting to be alone, a mind being "filled" with "bullshit", and the bittersweet feeling that a "dream" isn't over even when "all of our yesterdays have gone."

But far from seeming like the whinging com-



I really don't see what this cover has to do with cowboys. // Mac's Record Label

plaints of a privileged celebrity, DeMarco's songwriting feels particularly authentic, thanks to the restrained production and instrumentation, which often foregrounds his voice (his crooning on 'Skyless Moon' is a personal highlight) -- and the fact that we as listeners have directly witnessed the growing fame underpinning many of the lyrics on this album. Further, moments on this record feel like an admission of regret from the ever-cool-cowboy over actions taken in the public eye.

DeMarco might not be asking for our sympathy, but it's hard not to feel some when a figure who has become somewhat of a reference point in contemporary meme culture (admittedly at the result

of their own actions), laments not being able to be "nobody" for once.

On the flip side, DeMarco hasn't missed the opportunity of his label-freedom to give us a few wild and outrageous moments on this album (I won't spoil them all), from his bold decision to start the record with the same phrase repeated over and over for a perfect three minutes, to his mimicking a steam engine on 'Choo Choo'. It might be out of place, ridiculous, and musically non-ground-breaking, but one can't help enjoy seeing Mac let go and enjoy himself on this record, be that in these bizarre moments or the album's bare-bones, garage-DIY production that leaves each track at the mercy of its songwriting only: since there's

no turning back, might as well continue making the most of it, right? In addition, there are a few tracks, 'All of Our Yesterdays' in particular, that really feel like classic Mac, even with their fairly hands-off production. All of this makes for an album that, in its totality, might seem like a watered-down version of the same-old to some fans, and too-laid back to others, but nonetheless contains material to appeal to both. This isn't Mac DeMarco's best album, but it does merit a few listens, which will hopefully reveal to the listener that some tracks really do marry composition, production, and lyrics well enough to make them highlights of his career thus far.



The Cowboy himself, Mac DeMarco, tuning up to lay down some janky rhythms. // Tree Music Festival

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## Vita & Virginia Review

*Chanya Button's film adaptation of the play about literary lovers prioritises style over substance*

### FILM

#### VITA & VIRGINIA



**Dir:** Chanya Button. **Script:** Eileen Atkins, Chanya Button. **Starring:** Gemma Arterton, Elizabeth Debicki  
*110 minutes*

**Indria Mallik**  
*Film Writer*

Sometimes called the longest love-letter in history, Virginia Woolf wrote *Orlando*, the fictional biography of a gender-bending, time travelling Elizabethan nobleman, as a tribute to her friend, and sometimes-lover, Vita Sackville-West. Based to a great extent on the letters that the two acclaimed novelists wrote each other over twenty years, director Chanya Button's film, *Vita and Virginia*, explores the complex relationship the two women shared, and the conception of Woolf's seminal novel.

Ostensibly a period piece, beginning with the meeting between Sackville-West (Gemma Arterton) and Woolf (Elizabeth Debicki) in 1922, the *Vita and Virginia* attempts to take a page out of Sofia Coppola's 2006 biopic, *Marie Antoinette*. It is to the beat of synth heavy electronica that Vita and Virginia's eyes meet across a smoke filled dancefloor. Whilst Isobel Waller-Bridge's musical interjections bring urgency to the narrative and serve to highlight the modernism of thought and sensibility amongst the

the Bloomsbury Group to which both Sackville-West and Woolf belonged. This is not mirrored by the rest of the film which remains resolutely staid.

In antithesis to Button's 2015 debut, *Burn Burn Burn*, *Vita and Virginia* has a curiously stilted quality, particularly as the first meeting gives way to exposition. This is no small part to its heavy reliance on lifting words directly from the letters that the two novelists wrote each other. "I am reduced to a thing that wants Virginia" wrote Sackville-West to Woolf in one such exchange. On the page these letters are electrifyingly passionate; as dialogue, they become heavy, and overwrought, losing something of their brilliance. Eileen Atkins originally developed *Vita and Virginia* as a play, and here, the script adapted by Atkins and Button for film still clings to the vestiges of the stage.

Debicki and Arterton take turns to perform the

**"It is to the beat of synth heavy electronica that Vita and Virginia's eyes meet across a smoke filled dancefloor."**

text directly to us, the viewer, their faces partially obscured by gauzy, soft-focus camerawork. Delivered in this way, the



*Vita & Virginia* // Thunderbird Releasing

letters come across not as lovelorn confessionals but as performative monologues. It is easy to see how this would've been successful in a theatre, but on film, the lack of naturalism serves only to create distance with the audience.

*Vita and Virginia* hits its stride in its latter third when the two protagonists come together as lovers, spending their nights in Vita's ancestral home, Sissinghurst Castle, which will later form the setting of *Orlando*. Their brief romance is tender, propelled by the chemistry between the lead actresses who lend enormous charisma to their roles. Arterton is winsomely flirtatious, yet retains a chink of coldness that manifests itself later in the film. Debicki is luminous in a vulnerable portrayal of Virginia; rail thin, holding her body with awkward tension, she looms over Arterton, capturing a sense of being

entirely otherworldly.

When the two are apart, the movie flags. The supporting cast includes a roster of stars including

**"The film occupies the grey middle ground between a character study, and a period romance without quite committing to being either."**

Emerald Lilly Fennell as Vanessa Bell, and Isabella Rossellini who shines in a bit part as Baroness Sackville, Vita's extremely well heeled mother, but

they are given precious little to do other than push Vita and Virginia together, or endeavour to keep them apart. We are often told of the scandalous free spiritedness of the Bloomsbury Group, yet seldom see this for ourselves beyond catty exchanges over painting sessions and raunchy dancing at parties.

The undercurrents of tension between Sackville-West's aristocratic upbringing and Woolf's middle class socialist background are left relatively unexplored. Any mention of the former's own, wildly successful writing career quickly falls by the wayside. Perhaps most crucially, the movie doesn't know quite what to do with Woolf's ailing mental health; in lieu of nuanced dialogue, Button opts for fantastical allegory. Long strands of ivy threaten to overwhelm her whenever Virginia feels anxious; during

a panic attack a vast cloud of crows plummet towards Virginia's head as she cowers in the garden. These superficial renderings do not do justice to Woolf whose life's work was an articulation of things hidden beneath the surface.

*Vita and Virginia* is a visually beautiful film, filled with wide, sweeping landscapes and moodily lit interiors shot by Carlos De Carvalho, but we are left uncertain of Button's intentions. The film occupies the grey middle ground between a character study, and a period romance without quite committing to being either. A little more irreverence from Button would've elevated this from a run of the mill Woolf and Sackville-West biopic to a truly perceptive portrayal of the lives of these two remarkable women.

# LIBERATION

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## Ramadan Reflections

*A series of reflections from Imperial students on experiencing this Ramadan*

### LIBERATION

**Ambreen Muhammed**

**Hind M Arekat**

**Khadijah Mahmoud**

**Aminah Ali**

**Sharmin Akbar**

*Islamic Society*

Below are some personal reflections submitted on Ramadan, the holy month in which Muslims fast from dawn to sunset in order to gain consciousness of God in all their actions. We hope this article can show that, whilst Ramadan is a prescribed month, we all experience it in our own personal ways!

**Ambreen Muhammed**

Ramadhan is often well known as the Islamic holy month when Muslims around the world give up food and drink. For me, Ramadhan is more than just having a growling stomach and parched mouth, it's a time of reflection on the year just gone and planning for the year ahead. The way in which we control our hunger and thirst is similar to the way in which we are advised to control our thoughts, what we say and how we act.

For me, Ramadhan is like training for a marathon; it is the month of improvement in your character, in how you treat people, the amount of charity that you give and your own relationship with God. As Ramadhan comes to an end, just as your training for a

marathon comes to an end, we try to maintain what we practised in Ramadhan for the rest of the year. The aim being that each Ramadhan is better than the last as we strive to work on ourselves as Muslims and as students at university.

Most importantly, Ramadhan is a month to reflect on my relationship with Allah (God). Religion is ever fluctuating; there will be times when you feel invincible in your religion and others when it can waver. This month is often a time of spiritual high for many, as communities come together for late night prayers and iftaar (breaking the fast at sunset). This spiritual high encourages me to increase in the number of good deeds I do, whether it be helping the homeless or giving charity. The aim is for these good deeds to be continued throughout the rest of the year to help me improve my character, not just to deprive myself of food and drink for a month.

**"It is the month of improvement in your character, in how you treat people, the amount of charity that you give and your own relationship with God"**



Nightly prayers and free food for Imperial staff and students every night on campus // *Ayunie Anwar*

**Hind M Arekat**

Mercy is attributed God in many ways. This acts as a reminder for Muslims: no matter how much we mess up, neglect our religion or get caught up in our daily life, God is always waiting to forgive us and bestow His mercy upon us. Ramadhan is a special time of year for us. It's the time of year when one is encouraged to start over and turn a new page. It's an opportunity to engage in the worship of God, not only to follow the rules of the religion, but to understand its very essence.

It's the time of year to re-charge one's body, mind, heart and soul. The body is re-charged by teaching it self-control. When fasting from food and water, they are no longer priorities, and so our bodies become more disciplined. The mind is re-charged when we read the Qur'an, attempt to learn it and apply its wisdom to our daily life. As Muslim students,

we are taught to value knowledge. During this holy month, studying and keeping up with the workload can prove challenging, but nevertheless striving to gain that knowledge at this valuable time would make the difficulties worth it. The heart is re-charged by becoming more compassionate; we are taught to be grateful for the blessings we have, consequently motivating us to do and spread good through the simplest acts of charity. At this blessed time our community of brothers and sisters come together, flourishing with love and hope. The soul is re-charged when we engage in prayers with the most genuine of intentions, knowing that The All-Hearer, All-Seeing, All-Knowing, is waiting to grant us peace, patience and guidance.

Ramadan is the perfect time to strive to be the best person you could be, build up good habits and keep them up after the holy month has passed.

It's the perfect time

for soul searching, doing good and seeking spiritual fulfilment.

It's the perfect time to find purpose in everything you do.

To me, Ramadan is a month of giving back.

**Khadija Mahmoud**

For eleven months of the year we live in Allah's blessing; our health, our family, our success and even our failures, whereby we are given the ability to move past them and, in doing so, only strengthen our resolve. For another month we're given so many chances to give back as we seek to purify our bodies and souls and acquire piety. Ramadhan. The month where rewards are multiplied; a perfect time to give back, not just through serving Allah as we spend nights standing in prayer but in serving His creation and, in doing so, Him. Those nights where His doors of mercy are wide open, calling to His believers to approach with their good

deeds. Those nights serve as an opportunity to thank Him for what we have. As He says in the Quran: "If you are grateful, I will surely increase you in favour." For me, this is an incredibly special verse as it reminds me of His generosity. If we just spend some time thanking Him for what He has blessed us with, then He is so pleased with our efforts that He not only maintains but increases our blessings.

However, our chance to give back doesn't just stop there. As the Prophet Muhammad said: "Whoever relieves a believer's distress of this world, Allah will rescue him from a difficulty of the difficulties of the Hereafter." Relieving the distress of others isn't just limited to paying for a family's iftaar in a developing country, giving back can start much closer to home. We can be rewarded in every part of our day; the simple acts of kindness that can make other people's day.

# LIBERATION

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Even a smile, which the Prophet teaches us is itself a charity.

Thus, by serving Allah's creation, we are not only serving and pleasing Him but also serving ourselves as Allah promises us reward. I guess my point here is that giving back is really a chance to help yourself too in showing gratitude. This Ramadan, I find myself eager to go that extra step to help those around me, knowing that, with every good deed, Allah will only increase what I am already blessed with in this holy month and the eleven others.

**"Ramadan is the perfect time to strive to be the best person you could be, build up good habits and keep them up after the holy month has passed"**



"Religion is ever fluctuating; there will be times when you feel invincible in your religion and others when it can waver" // *Ayunie Anwar*

**Aminah Ali**

Ramadan completely changes my life for one month every year, but I love it! It's a chance to increase my faith, fix my bad habits and remind myself of my duty to help the poor and needy whose everyday reality consists of feeling hungry and thirsty.

As part of my dissertation this year, I explored intermittent fasting and its beneficial effects on ageing and disease. I was amazed by what I read. Although I was aware that fasting was good for my soul, I was not so knowledgeable about how good it was for my body!

I've been fasting since I was 11 and always knew it was a good thing to do spiritually. However, after discovering the many health benefits, I felt like I could now completely appreciate why it is one of the five pillars of Islam.

Fasting has been practised for both religious and medical purposes for thousands of years and I think it's amazing that researchers are discovering the effects of fasting on ageing and ageing-associated disorders.

**Sharmin Akbar**

Your mum coming in and waking you up before dawn, sleepily walking to the dining table to gobble down whatever food is put in front of you, while your mother is walking around making sure that everyone is eating and drinking enough.

For many young people this is how mornings in Ramadan, the 9<sup>th</sup> month of the Islamic calendar, and the month of fasting, look.

Ramadan is a spiritual time for Muslims. It is a time for prayers and self-reflection. But it is also a time for family. A time of togetherness.

**"Ramadan is a spiritual time for Muslims. It is a time for prayers and self-reflection. But it is also a time for family. A time of togetherness."**



"It's a chance to increase my faith, fix my bad habits and remind myself of my duty to help the poor and needy" // *Ayunie Anwar*

In most families, whether you eat together the rest of the year or not, during Ramadan you are sure to eat every meal together. Even when that meal is eaten at 3.00 am. Praying and going to the mosque together, visiting relatives, having a lot of guests over, are just some of the examples how families spend their Ramadan together.

This experience looks different for the many students who live away from home during Ramadan.

**"If you are missing the hectic and joy filled Iftaars with your whole family: Iftaar at Imperial is an amazing alternative"**

Besides missing out on delicious home-made Iftaar cooked by mum, eating alone in your room and not seeing any

relatives or your family can easily make you feel isolated and lonely. Especially when the only thing you seem to be doing beside eating and praying is studying for your exams.

Not living with your family does not mean that you have to miss out on the whole family experience. You can still do things that remind you of home.

For example, since I am lucky enough for my mother to live relatively close to come around for a week, she flew over in April to prepare some samosas and other snacks for me so I would not miss out. And whenever I am eating alone I try to video call home.

If you are missing the hectic and joy filled Iftaars with your whole family: Iftaar at Imperial is an amazing alternative. For the past three years, Imperial College's Islamic Society has organised Iftaar for every day of Ramadan. It might not be your "real" family, but with all the hugs and laughs, eating and praying together, you are sure to find a second family.

Then there is Eid, the celebration at the end of Ramadan. For many

Muslims it is the highlight of the year. That is probably the day on which the reality of being away from family strikes the most. The best remedies for the loneliness on Eid is organising to go to the Eid prayer together with some friends and then treating yourself to some amazing food!

Whether away from family or at home, I wish everyone a blessed Ramadan!

**"For the past three years, Imperial College's Islamic Society has organised Iftaar for every day of Ramadan"**

# GAMES

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## Smash Corner: Marth – the Weeb Swordsman

### GAMES

**Michael Cognet**

*Games Writer*

I have avoided Fire Emblem for so long, but there is only so much I can do versus the 3rd biggest franchise in Ultimate. That's right, today we'll be talking about swords, swords and even more swords with the fighter that started it all, #21 in the roster: Marth

Marth is the central protagonist of the original Fire Emblem game, Shadow Dragon and Blade of Light, first released in 1990. Now considered as the mascot of his franchise, he made his first appearance in the Smash Bros series in Melee, alongside the lesser known Roy. Whilst

his friend may not have always made the cut, Marth appeared in every following Smash game and is now viewed as the signature swordfighter of the brawl. With a standard weight and decent speed, he uses his long blade to hack, slash and react to his opponent's moves from a reasonably safe distance.

Even if he is still a close-combat character, Marth's sword gives him an incredible range which allows him to have an edge on other melee fighters. Furthermore, his sword has a unique property: the tip of the blade deals more damage than the hilt. This means that with every normal, tilt, smash or aerial attack, you ideally want to hit your opponent from as far as possible. This allows you to inflict a large amount of damage whilst at a safe distance. Marth's neutral-air is

notably effective and powerful if you manage to hit this sweet spot.

Marth's special moves complement his kit very well. His neutral-B is his Shield Breaker, a charged shield busting stab with great range. His up-special is the Dolphin Slash, a simple vertical recovery which cuts through anyone above him. Marth's down-B is a crucial part of his kit, his Counter. If you get the timing on point, it blocks any incoming attack and counter-strikes with a matching force. Last but not least, the side-special Dancing Blade is a 4 hit combo with very useful versatility, as tilting the joystick changes the finishing move. Up will make Marth perform an upward slash, throwing the opponent in the air to follow up with an aerial. Down, mixes it up with



"It's not a phase Mom" // Nintendo

multiple low jabs to have an unusual number of hits. And holding to the side is a great kill move, knocking back opponents with a powerful last blow.

The key to playing Marth is observing, positioning and reacting to your opponents. His unique sword rewards you for keeping your distance and hitting your enemies with just the tip of the blade. It is hence crucial not to get too close and to know the reach of

each of your attacks to make the best of them. To do so effectively, you must keep a sharp eye on your opponent's moves to punish them with a quick slash or Counter by swiftly moving in the correct position once they've missed or ideally, by predicting them. In general, this must be done for every fighter but it is particularly important for Marth's quick and precise game style.

To conclude, Marth is an extremely powerful swordfighter thanks to his great reach but requires a skilled and precise player to lead him to victory. This makes Marth one of the hardest characters to master but brings him to high tier once you do. So if the difficulty doesn't scare you then I suggest you take a stab at him and in no time, you'll be spamming: "I won't lose!"

# A new foe has appeared!

## CHALLENGER APPROACHING

**SMASH ULTIMATE  
TOURNAMENT**  
Saturday 15th June  
Further details and sign up  
sheet can be found below



or use the following link:

<https://forms.office.com/Pages/ResponsePage.aspx?id=B3WJK4zudUWDCO-CZ8PTBwXyPFFGXRtHi4TNN1cTgtdUOTVMQVNYTVA5WKNWVWk9JVTJJUEQ55IdMMS4u>



## AI: More than Worth It

The Barbican's new exhibition, *AI: More than Human*, is a colourful sandbox of AI-related treats with plenty of surprises and none of them unwelcome.

### ARTS



**Where?** Barbican  
**When?** Until 26<sup>th</sup> August  
**How Much?** £11 (students)

**Syon Lee**  
*Arts Writer*

It has almost been seventy years since Alan Turing published the hugely influential paper 'Computing Machinery and Intelligence' where he first posits the basis of what we now know as the Turing test. In a mere lifetime, computers have gone from purely machines of calculation to pocket-sized marvels capable of mirroring sentience to an uncanny degree of success. Barbican's new exhibition, *AI: More than Human*, hopes to tell the story of humanity and computer's shared evolution, setting its bar high as an "unprecedented survey of creative and scientific developments in artificial intelligence". It's an ambitious pitch given the collective obsession with this subject – it seems that you can't go more than two weeks without a new AI-centric event popping up at a museum, art gallery, or even the theatre (usually proclaiming in a rather temporally-challenged fashion that "the future is here"). Fortunately, given the Barbican's past successes and its record of great exhibitions, I was excited to see if the new exhibition would prove to be not just "more than human" but "more than

cliché'.

The moment I stepped into the exhibition gallery, I realised I was right to be excited. What *AI: More than Human* gets right more than any other exhibition I recall going to is the sense of scope. The emphasis is not bound by modern interpretations of computers or artificial intelligence but rather our attempts at creating a thinking being. With that angle, the exhibition opens by exploring our curious history with golems and other creatures brought to life. Kode9's newly commissioned sound installation spits out snippets and samples of stories about artificial entities in an eerie fashion. In fact, the whole first section, *The Dream of AI*, has a slightly chilling buzz about it. Sound permeates the gallery, accentuating the often-grotesque depictions of artificial life forms imagined in film and projected as a supercut of sci-fi horrors. Even Doraemon makes a guest appearance in the exhibition, reminding us that the dream of AI is not just in the past and that we have a long way to go before realising said dreams. I was slightly disappointed they went with clips from the more recent 3D-rendered *Stand by Me Doraemon* but it suits its purpose in linking past, present, and future just fine.

The second section, *Mind Machines*, is a slightly more conventional exploration of modern computing with an interactive timeline as its backbone. However, even in the relatively straightforward set-up, there was great care taken

to show the new and shed light on the lesser-known. Gone is the gentlemen's club narrative of computing history, replaced by a markedly more diverse cast of characters. Even chess, the Western thinking-man's game oddly prominent in computer lore, was deemphasised in favour of go, chess's wild Chinese cousin. Another highlight in this section includes Google PAIR's project, *Waterfall of Meaning*, where you can submit words to trickle down the screen, veering left and right depending on its association with binary concepts such as good/bad and male/female. Anna Ridler's tulip-centred pieces take another approach, combining history, economics, computing, and even politics (see overleaf). Both these projects remind us of how much influence humans still have over AI and how far away we are from creating an independently thinking machine.

*Data Worlds*, the third

**"Gone is the gentlemen's club narrative of computing history"**

section, is perhaps the most interactive of them all. Visitors are encouraged to build the perfect cities out of LEGO, have a spin on a driving simulator which tracks driver emotions as they encounter different situations (my drive consisted almost entirely of horror

as I laid waste to a rural English village), or record snippets of sound for AI to render as music. Among these pieces designed to inspire a giddy, childish glee, are more serious works exploring ethical issues such as bias, confidentiality, and truth. The final section is

**"The final section is titled *Endless Evolution*, hypothesising not only the next chapter of our species but the possibility of the creation of new species"**

titled *Endless Evolution*, hypothesising not only the next chapter of our own species but the possibility of the creation of new species. True to its premise, this is also where we see the most experimental work. Massive Attack mark the 20<sup>th</sup> anniversary of their album *Mezzanine* by encoding the album as strands of DNA stored in a spraypaint can. Although the artist boasts each spray to contain around one million copies of *Mezzanine*-encoded ink, I'm still not sure a) how the album was encoded into base pairs and b) why anyone would want to tag a wall with album DNA. Here we also see Alter 3, the next generation of



*Myriad (Tulips)* by Anna Ridler // Anna Dabrowski

androids (to be explored further in a future issue). Unfortunately, with its bare, robotic body and genderless, ageless face, I could only see the cast of the next generation of uncanny valley horror movies. Not only do synthetic humans feature but also synthetic insects, such as Yoichi Ochiai's artificial butterfly and *The Synthetic Apiary*, a possible solution for the honeybee population problem.

There's very little to fault about *AI: More than Human*. It's a rare instance where there really is something for every demographic regardless of age, gender, race, and understanding of computer sciences. It's a masterclass in retelling a

worn-out story and giving a fresh perspective on something that is already so familiar to us. What's more, I didn't once see the buzzword 'big data' thrown around callously as the question and answer to everything, and that is perhaps the greatest triumph of all.

## An interview with Anna Ridler, the artist behind *Mosaic Virus* and *Myriad (Tulips)*

Anna Ridler, recipient of the 2018 European Media Art Program and the winner of the 2018-2019 Dare Art Prize, takes us through her latest art pieces to be displayed in Barbican's *AI: More than Human* exhibition.

### ARTS

**Syon Lee**  
*Arts Writer*

**For those unfamiliar with your work, how would you introduce yourself and describe your artwork?**

I'm an artist. I like to work with technology, but not just because it is there. I think about what it can do and how it can add to what I'm making, about its associations and the connotations of using it: how can all of these different things go in and help amplify or construct the message I'm interested in and make it conceptually stronger.

**Was technology something that you always wanted to incorporate in your artwork?**

I've always been interested in using data and technology, and as machine learning become more prevalent and barriers to using it dropped, it became a natural way of exploring this existing interest. My background is in literature and linguistics as well so the other quite nice thing is if you look at how machine learning systems work in labelling things, – deciding when a thing is a thing – it all just came together, which is why I think I find it so enjoyable to work with. It just natu-

rally all fell together and I feel that it has become a really natural way to draw together lots of different aspects of my practice.

**A lot of your research is focused on how art is perceived or validated through a scientific lens. Could you briefly describe what 'art' means to yourself?**

This is a hard question! I suppose in short art is something that has intent – you're trying to question the world through a medium and a process.

**What are your major influences for your work?**

I think my background in literature – I'm constantly reading fiction – has given me a really good grasp on narrative and trying to tell a story. Also the type of books that I like to read tend to be about quite minor things that still reflect major issues and I think this reflects back in my work. I also read a lot of random science facts as I find these to be really inspiring to give new ideas and directions.

**I'm really excited to see *Mosaic Virus* and *Myriad (Tulips)* at the Barbican in person. What is the significance of tulips for you?**

*Mosaic Virus* draws his-

torical parallels from the 'tulip-mania' that swept across the Netherlands in the 1630s and the speculation currently ongoing around crypto-currencies. "Mosaic" is the name of the virus that causes the stripes in a petal which increased their desirability and helped cause the speculative prices during the time. In this piece, the stripes depend on the value of bitcoin, changing over time to show how the market fluctuates.

I want to draw together ideas around capitalism, value, and the tangible and intangible nature of speculation and collapse from two very different yet surprisingly similar moments in history and I found tulips a way to do this. It also updates another tradition – one of the very first dataset used for computer vision was made from irises.

Furthermore, there is a tradition of tulips in art history. Tulips featured prominently in Dutch still life at the time, the so-called 'vanitas' paintings that illustrated that beauty and treasure are only fleeting. This piece will update this tradition but with a twist. The GAN [generative adversarial network] constructs an image not of a real tulip, but what it thinks a tulip should be, much like how seventeenth-century still life pictures do not show actual displays of flowers but imagined bouquets (it would be impossible for some of the bouquets in still-lifes to exist in reality as the flowers shown bloom at different times

of the year).

**It must've been exhausting work, taking 10,000 photographs of tulips. What was the process like and how did you make it through?**

It was a very time consuming process! But what was quite nice is the even though this is a very digital piece, there is a very natural rhythm to it – I stopped making my dataset because the tulip season ended. I went to the flower market one weekend and there were no more tulips, only peonies, so I had to stop. So even though it's a very digital piece, it was very much driven by the rhythms of nature. Also – and this shouldn't have surprised me given the context – but it was actually extremely difficult to find striped tulips and I ended up going all over the Netherlands trying to find stripey ones! Making this dataset was so important to this project. I worked testing the dataset in order to get the type of output I wanted – and that changed what type of flowers I was buying, what shape, what colour. The other thing that I had to do for this was to categorise every single photograph by hand. What colour, what type of tulip, how striped it was, whether it was in bud or dying. This was an insane amount of work and it is usually work that is hidden. The whole

process of creating the dataset took around four months. By choosing to make it a separate work that is displayed in relation to the video work, I draw attention to this act of categorisation – and also the human element of it, by handwriting each of the labels. I can use it to start to have discussions – particularly in non-technical communities – about the fact that there is always a human decision somewhere along the chain of using AI and that it is not this absolute correct thing... even something as simple as a tulip is difficult to put into discrete categories – is it white or pale pink, is it orange or yellow – and how if it's difficult for something as simple as a flower, imagine how difficult it will be for something as complex as gender or identity! It has become parallel work, unpicking ideas to do with labour, technology and categorisation and also the humanness that is behind every algorithm, every decision made by an AI.

But despite all of this categorisation it is a mistake to think that I have control. It is impossible to predict what will come out in each of the stills – I can guess, but I cannot know. And this to me is really exciting. It is these 'mistakes' that drive me to use this as a material – it becomes weird and eerie in a way that I wouldn't be able to do myself, and draws on the history of time-lapse photography but through

a lens.

**Do you ever feel wary of technology and automation encroaching on human expression as some people believe?**

No, for me it is very much a tool and a process. I don't find it encroaching on human expression, I find it a way of expressing myself more fully, in ways that I was never able to before.

**What thoughts or impressions do you hope your audience will leave with after seeing your works at the Barbican?**

I hope that they can see the poetic potential of this as a medium!

**Finally, do you have any ideas for future projects and is there any technology that you're hoping to use in later works?**

I've making a new project with Opera North that will debut in the autumn. It's really exciting to push the work I'm doing but using sound and performance.

# SUSTAINABILITY

artur.donaldson15@imperial.ac.uk

## In response to Big Daddy Oil

*An analysis of Saudi Aramco for decision makers of the 21st century*

### SUSTAINABILITY

**Artur Donaldson**  
Sustainability Editor

A recent article in *Felix*, “Big Daddy Oil Outearns Apple and Google, wants more”, reported on records seen by the *Financial Times* which assert that the state-owned oil company Saudi Aramco has a greater net income than any other company worldwide. Since many of the graduates of this university, and readers of *Felix*, will in the future become decision makers in consultancies and international organizations, I urge you to take a perspective appropriate for the 21<sup>st</sup> century. Reports on companies must include a consideration of the reliance on natural capital and environmental accountability. Because until recently, natural capital could be treated as infinite, and environmental feedbacks on the economy negligible, economic analyses traditionally ignore these factors. However, in light of scientific consensus that man-made climate change is having ramifications

on both the natural and the man-made worlds already, only by correctly quantifying natural capital and environmental feedbacks will financial reports be of value in the 21st century. According to the Carbon Accountability Institute Saudi Aramco is responsible for 3.4% of cumulative global man-made greenhouse gas emissions since 1885.

It is disappointing to find an article in a student publication presenting a favourable analysis of an oil corporation while neglecting any consideration of environmental and social values, or the fact that its primary product is a finite natural resource with detrimental environmental impacts. These factors will strongly affect the prospects of the oil industry. Rather than talking of diversifying their portfolio to petrochemicals and renewables, investors should instead consider whether companies plan to cease oil extraction altogether in line with scientific reason. In response to questions about peak oil, the CEO of Aramco, Amin Nasser, said that “fewer and fewer of our stakeholders accept logic and facts” at a meeting of Davos in February this year arguing

that “oil and gas is responsible for much of today’s economic growth, and indeed future growth”. However, the premise economic growth being of value to society is put rather to question when this economic growth is in fact causing loss of human life and the eradication highly populated areas of

**“According to the Carbon Accountability Institute Saudi Aramco is responsible for 3.4% of cumulative global man-made greenhouse gas emissions since 1885 ”**

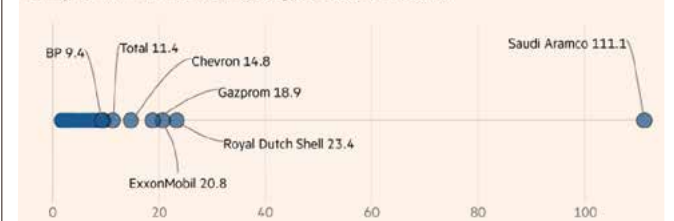
coastal land as a result of increased greenhouse gas emissions.

The environmental and political dimensions of Saudi Aramco indicate its alleged financial advantage rests on shaky foundations. Even if Saudi Aramco’s records are completely honest, which I will leave to others to verify, the company has limited prospects. Other industries are moving to take over from oil in the 21st century. Tech companies, whose primary resource is information and creativity, as opposed to a limited resource derived from geographical circumstance, are the giants of this century.

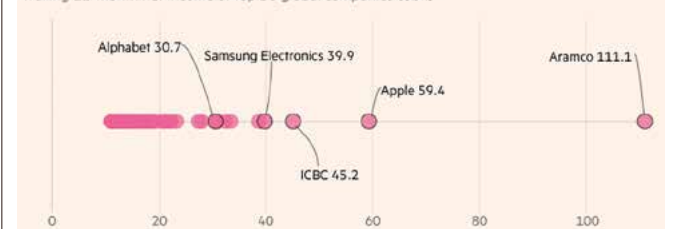
As is shown in a chart of the top 500 companies reproduced below, leaving aside recent speculation about Saudi Aramco, the three top tech companies: Apple, Samsung and Alphabet all have larger net incomes than Royal Dutch Shell, BP, Total or indeed any oil company.

Secondly, traditional financial analysts are too short-sighted to try quantify ecological capital (such as oil) and accountability for the environment (such as coral reef bleaching and disruption of climate systems) as a result of companies’ operations. It will take a great deal of labour in order to accurately account for these factors, but it this would be of value to society, certainly more so than creating short-sighted reports. Saudi Aramco is the largest extractor of oil and gas and despite putting up a smoke screen of small projects such as carbon capture, it has in fact increased its emissions and its oil output. Even comparing with the oil industry, the emissions of Saudi Aramco are the worst of any oil company. While other oil corporations have ceased to increase their emissions, as shown in a figure from the Climate Accountability Institute, year-on-year Aramco churns out even more into the atmosphere. Do we value this? When a company burns limited capital and produces gross increases in emissions to sustain its financial income, it is clearly not a healthy sign for investment. Despite playing lip service to renewables, the fact is that Saudi Aramco’s environmental impact has only deepened. Investing into an oil and petrochemical company in the hope

Saudi Aramco’s reported income compared with rival oil companies  
Trailing 12-month net income of top 50 global oil companies (\$bn)



Trailing 12-month net income of top 50 global companies (\$bn)



**Alphabet, Apple and Samsung all have larger net incomes than Royal Dutch Sell, BP, Total or indeed any oil company aside from Aramco // *Financial Times***

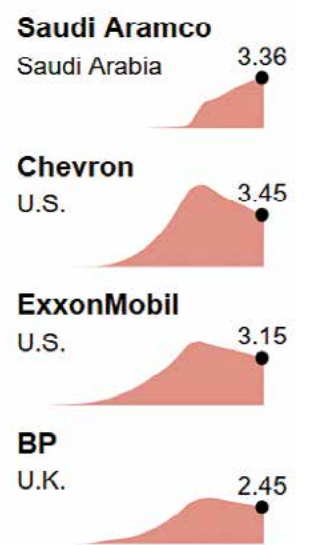
that they will obviate their primary function of fossil fuel extraction is foolish. As Nasser said last year “I am losing no sleep over ‘peak oil demand’”, while BP has stated in its most recent energy outlook that “trillions of dollars of investment in oil is needed” over the next twenty years.

Though it is easy to fall into the trap of using language loaded in positive connotations for companies with large sums of money, such as “impressive” net income or “healthy” cash flows, there is nothing impressive or healthy about Saudi Aramco. The expansion of this exploitative organization is a call to arms for students and future decision makers, rather an opportunity to practice the same financial reporting that has led to loss of natural capital and degradation of the environment. Students at world-leading universities such as Imperial College have the potential to create a responsible economic system. This can only occur if we learn as students to consider the environmental perspec-

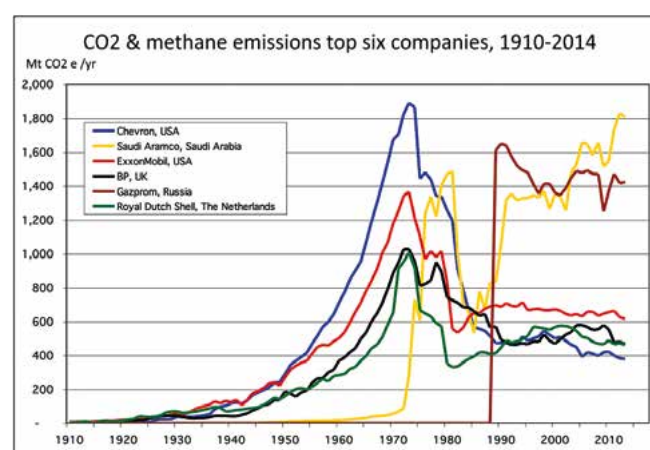
tive every time we make an analysis and every time we take a decision. Without understanding natural capital and the environmental impacts of organizations, we will value the exploitation of natural resources for short-term growth and wonder what happened to our belief in a better future.

### Cumulative Impact

(% of world emissions)



**Cumulative emissions of top four oil companies 1885-2014 // *J. You, Science***



CO<sub>2</sub> & methane emissions \\ Climate Accountability Institute

# CLUBS & SOCIETIES

felix.clubsandsocieties@imperial.ac.uk

## Belly Hoop

### CLUBS & SOCIETIES

#### Charlotte Rapley

Imperial College Belly  
Dancing Society President

As previously featured, during the summer term ICU Belly Dancing hosts a summer workshop series instead of regular classes, due to the disruption that arises from exams happening at different points in term across departments. All of our workshops are suitable for beginners, so even if you've never danced before, you're more than welcome to join us! The series continues in two weeks' time on Tuesday (4<sup>th</sup> June) at 6-8pm with Belly Hoop in Activity Space 1 in the

**When:** 18:00-20:00, Tuesday 4<sup>th</sup> June  
**Where:** Activity Space 1, Floor 1, Union Building  
**Tickets:** £5 for members, £7 for non members – on the door or on the Union website

Union Building (£7 otd for non-members).

Here's what to expect from our third workshop of term: Belly Hoop. This workshop is a little different to others where we will be learning some belly dance moves and some hooping moves and combining them! We'll be starting right from the basics so don't worry if you've never belly danced or hula hooped before.

This will be an exciting class that will help you practise your isolations and gives you a great workout. Rani (our treasurer) and Andrea (the founder of Belly Hoop at Imperial) will be running

this exciting Belly Hoop experience. You may remember they ran this workshop last winter at the Dance Imperial workshop weekend and it was a complete hit, so we decided to bring it back! Rani will be leading you through some basic belly dance moves focusing on technique and style and Andrea will be teaching some basic hooping skills involving some static, dynamic and travelling steps. Together they will then demonstrate how to combine belly dance with hooping. To finish the workshop Andrea will be bringing along her LED hoop if anyone would like

to try it out. So, if you're up for a challenge or want to try something new, come along to the Belly Hoop workshop.

Unfortunately, there is a limited number of hoops which will be given out on a first come, first served basis so book your place fast if you would like to try this fun and challenging workshop. The final workshop in the series is "vintage combos" tribal fusion workshop on 18<sup>th</sup> June, keep an eye out for more information on this workshop. Our regular classes will start up again in October, when we will run a weekly beginners' class for newcomers to



"Andrea will be bringing along her LED hoop" // IC Belly Dancing Society

the style! You can email bellydancing@imperial.ac.uk if you would like details on any of our activities.

You can follow us on social media to keep up with our classes and performances. We have Instagram: *icu\_belly\_dance*, Twitter: *@ICUBelly*, a Facebook page: *ICbel-*

*lydance and a YouTube channel: ICBellydance. We also have a lot of info on our website: www.union.ic.ac.uk/rcc/belly-dancing, so do check it out!*

  
 THE TIMES  
 THE SUNDAY TIMES  
 Know your times

**Are you the next political writer?**

Matt Chorley, editor of Red Box, the award-winning political newsletter and podcast would like to hear your opinion on the current state of UK politics. But forget Brexit, what do you think are the big issues that are being ignored?

Submit a 500-word opinion piece for the chance to write for Red Box for the next three months, plus be featured on the Red Box podcast.

**Email your piece by June 3 to [Redboxcompetition@thetimes.co.uk](mailto:Redboxcompetition@thetimes.co.uk)**





## Save the date for Officer Academy

Calling all incoming Club, Society or Project Officers for the 2019/20 academic year! Get ready for **Officer Academy** - the annual committee Induction and Training day.

The event will be taking place on **Wednesday 19 June** in the Beit Building at the South Kensington Campus. The event is free and open to all Club, Society and Project Officers, so those in the role of President, Secretary and Treasurer are expected to attend. Free lunch, drinks and snacks will be provided.

More information about how to sign up will be released next week, so make sure to check your inboxes and the Union social media channels.

Registration will open online on **Monday 27 May at noon:**  
[imperialcollegeunion.org/officeracademy](http://imperialcollegeunion.org/officeracademy)



## Celebrate your Sports Club

Join your Club in celebrating the Imperial Sports Awards in style on **Thursday 20 June**. The annual event recognises and celebrates our sporting achievements over the academic year.

After last year's event being a sell-out, we hope to be joined by over 250 students and staff again this year, making it the highlight to finish the sporting year. We will be joined by a special guest to host and a guest speaker to support the evening.

Buy your ticket by 31 May at  
[imperialcollegeunion.org/sports-awards](http://imperialcollegeunion.org/sports-awards)



## It's BBQ Time

Beit Bars are bringing the BBQ out for **National BBQ Week**. From 27 May to 2 June, come and indulge in a bite or two and soak up some sun. There will be a range of BBQ style food available plus one showcase dish changing daily. BBQs will run during the day, 12:00 - 14:30 and in the evening, 17:00 - 20:00.

On top of this, Beit Bars are running an Ale Festival. That's right, you've got BBQ and some great drinks deals all in the same week. We'll have ten different ales available, including Peerless Curve Ball Blonde and Mavericks, so come and enjoy a pint of ale for £3.10, half a pint for £1.55 and any 3 Ales for £8.30.

To keep up to date with the week, head to:  
[imperialcollegeunion.org/national-bbq-week](http://imperialcollegeunion.org/national-bbq-week)



## Count down to the Summer Ball

Tired of exams yet? It's time to get yourself a Summer Ball ticket. Don't miss out on a night of fairground rides, fireworks, photo-booths, DJ stages, student acts and a silent disco. We've also got vintage car rides, food vendors, three bars and a Pimms and Hop House 13 tent on Queen's lawn.

With limited tickets left, you don't want to miss the opportunity to attend one of our biggest and best events of the year.

Get your ticket while you still can at  
[imperialcollegeunion.org/summerball](http://imperialcollegeunion.org/summerball)



### Wind Down Wednesdays

15:00 to 01:00 | in May & June  
Beit Quad

Deck chairs Games  
Drinks Tasty meals



### Drink Outside The Box!

18:00 - 23:00 | Thursdays, in May & June  
FiveSixEight & The Union Bar

**2** cocktails for £7.90  
and 1 for £4.70 (including mocktails)



### Thank Goodness It's Friday

17:00 to 02:00 | Fridays, in May & June  
Beit Quad

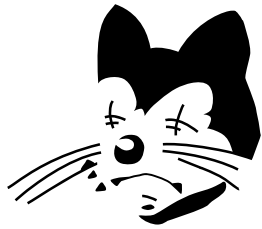
From 21:00 Djs in Metric £2.50 door charge  
Submit your music requests on the event page



27 May - 2 June | Beit Quad | 12:00-14:30 and 17:00 -20:00

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# Hangman

## Desperate student sets off fire alarm to avoid sitting exam for useless degree

### HANGMAN

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

Chaotic scenes were seen outside the Dyson School of Engineering, after a frantic student attempted to set the fire alarm off, in a bid to avoid taking exams for her subject.

Veera Mills, a third year Design Engineering

student, was reported to have suffered from “instantaneous insanity”, during her 2-hour Fashionable Toiletries exam, when she allegedly shot up from her seat, decked the nearest examiner and broke the fire alarm, screaming “I’m a Nervous Wreck, Get Me Out of Here!”

NegaFelix was unable to conduct a full interview with Ms Mills, but was able to obtain some comments prior to her being taken to the Faculty

Building for enhanced interrogation further questioning. “It’s all worthless!” she cried, “why the fuck am I learning optimal ways to wipe shit?”

**“Des Eng isn’t even that difficult - how hard is it to sketch a toilet brush?”**

Friends of the alleged perpetrator say that the attempt was completely out of character. “Yeah, it doesn’t make any sense,” said Enrico Gasparelli, third year Aeronautical Engineering student. “Des Eng isn’t even that difficult – how hard is it to sketch a toilet brush?? Do they even have to sharpen their own pencils?”

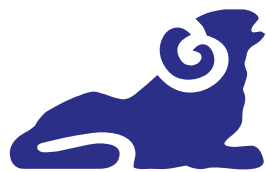
Irene Reykjavik, Vice-Provost (Subjugation) was not pleased at the news. “What a load of rubbish,” she remarked



What do they even learn in there... // Imperial College

whilst scrolling through her Twitter feed, “all the courses here are perfectly tailored to maximise stress and minimise wellbeing,

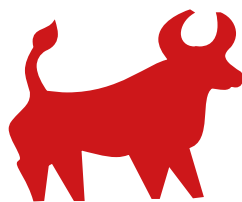
whilst adding value to the College. Wait, did I say that right?”



### ARIES

This week you’re Nigel Farage.

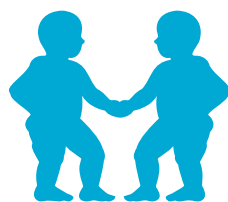
Turns out your milkshake does indeed bring the boys to the yard.



### TAURUS

This week you’re Andrea Leadsom. Your group project is going to shit, and you’re not about to stick around as project lead when it happens.

Time to bounce.



### GEMINI

This week you’re the Felix Editor. Not much in the way of content this term.

Looks like the paper’s going to be one large Sustainability section. The irony of it all.



### CANCER

This week you are both sleep-deprived and fed up of this bullshit.

Are you a student or just Theresa May’s publicist?



### LEO

This week you finish your final exam at Imperial. As you’re now technically not a student, you subsequently lose your purpose in life.

Is this a mid-term crisis?



### VIRGO

This week you’re Jamie Oliver. You decide the best way to keep your restaurants going is to diversify your offerings.

Turkey Twizzlers maybe?



### LIBRA

This week your friends snake you and get a house without you.

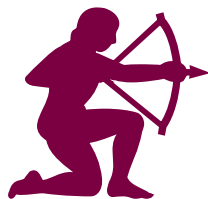
Looks like you might just live in the library next year.



### SCORPIO

This week you realise you have 36 hours of lectures left to cover and only 10 hours before the exam.

Well, if the writers of Game of Thrones can do it, so can you. Just don’t expect rave reviews.



### SAGITTARIUS

This week you are an alumnus. You’ve finally, after booking one in first year, got your Counselling appointment.

Perfect - you’ve got plenty of trauma to work through!



### CAPRICORN

This week, you’re the Horoscopes writer.

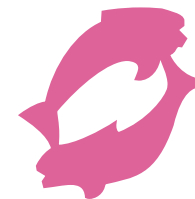
Clearly whatever connection you had with the Universe is broken, because these have been shit for a while. Time to get a life, pal.



### AQUARIUS

This week you still haven’t managed to secure a summer internship.

Good thing too, ‘cos the way exam season’s going you’re going to need the free calendar.



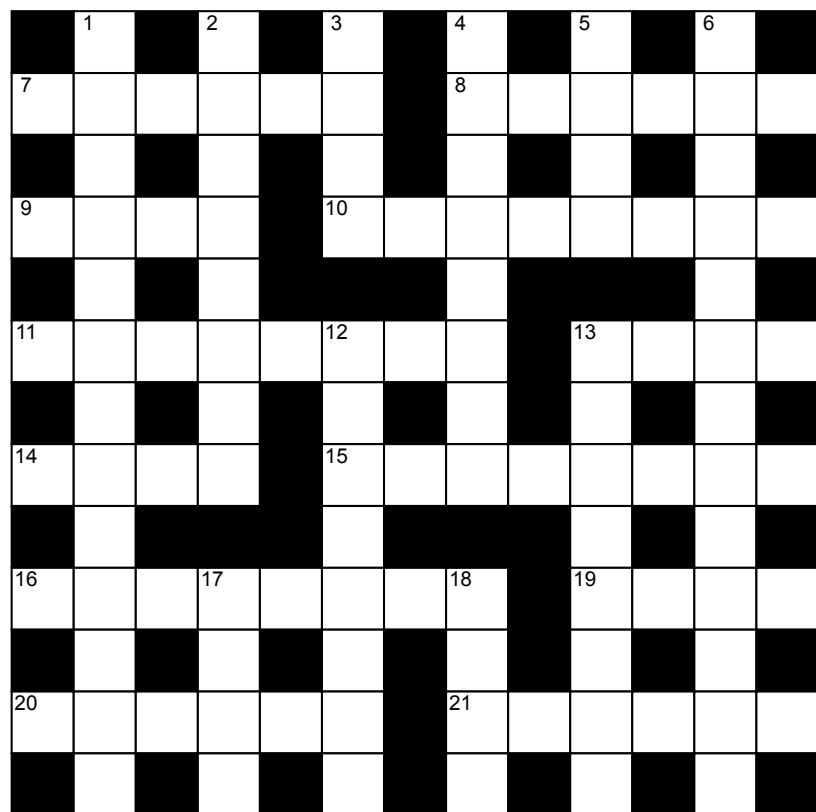
### PISCES

This week Pluto is ascending, meaning your bank account should be seeing a positive cash flow.

Wow, you might just even get back up to zero!

# PUZZLES

fsudoku@imperial.ac.uk



## CROSSWORD

### Across

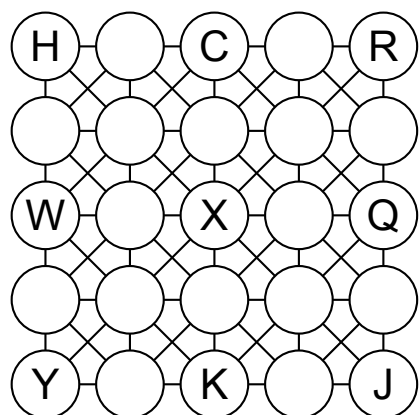
- 7. Scenic route (6)
- 8. Furry aquatic mammal (6)
- 9. Does not exist (4)
- 10. Scam (8)
- 11. Deliveroo, Just Eat, ... (8)
- 13. Small horse (4)
- 14. Best to keep them about you (4)
- 15. Lover of the Russian queen (8)
- 16. Statistically insignificant evidence (8)
- 19. Consumes (4)
- 20. Curvy crustaceans (6)
- 21. Human body troubleshooter (6)

### Down

- 1. Preferred orbit for TV satellites (13)
- 2. Impenetrable (8)
- 3. Bishop or nemesis pro. (4)
- 4. Twin words (8)
- 5. Put away (4)
- 6. It's leviosa, not levio-sah (13)
- 12. Fought many battles (3,5)
- 13. Person dear to the Beatles (8)
- 17. Live beef (4)
- 18. Circular currents (4)

## GOGEN

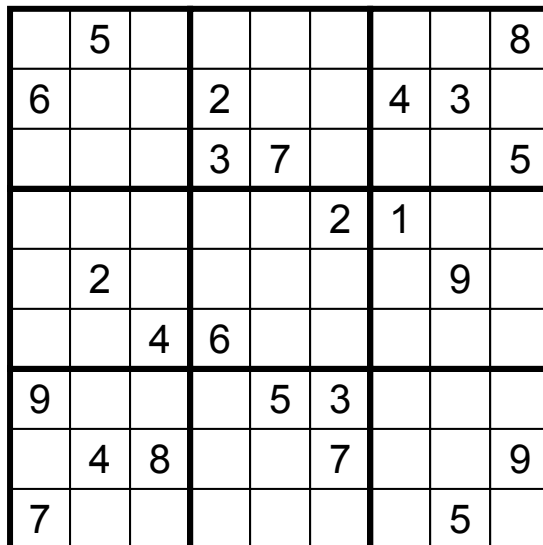
Write letters into each circle to form the listed words. Letters can be linked by moving between adjacent cells horizontally, vertically or diagonally in any direction. You may use each letter in the alphabet only once.



- AGO
- BUN
- CLEF
- EQUITY
- HOAX
- JUNK
- MALES
- SLOP
- TIDAL
- WAIVER

## SUDOKU

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



## FUCWIT

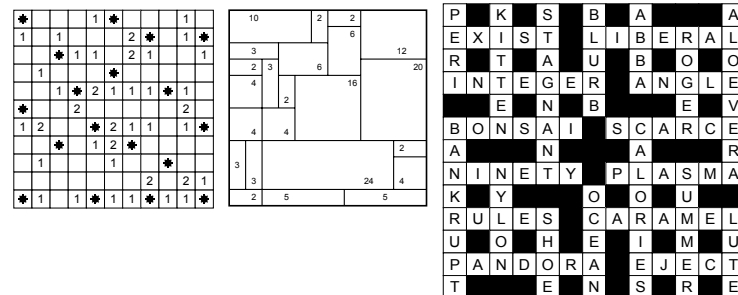
1	Trollheim	193
2	DQ	189
3	Yeet Infection	186
4	Maxiane	177
5	O1G	159
6	Wooloomooloo	148
7	Big H's Boys	126
8	Rock, Flag & Eagle	108
9	S. B. S.	95
10	Quizlamic extremists	87
11	KBLB	82
12	Fleesh and the tooters	80
13	Computer Magic	79
14	Shark	74
15	Luncheon Pals	72

Send your solutions to [fsudoku@imperial.ac.uk](mailto:fsudoku@imperial.ac.uk) before Wednesday midday to take part in the leaderboard!

## Points available

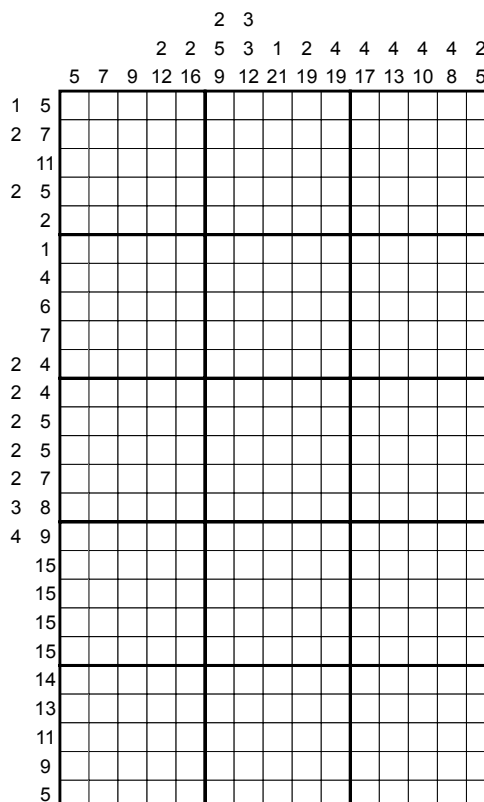
Crossword	5
Gogen	3
Sudoku	3
Shikaku	2
Nonogram	3
<b>Total</b>	<b>16</b>

## Last week's solutions



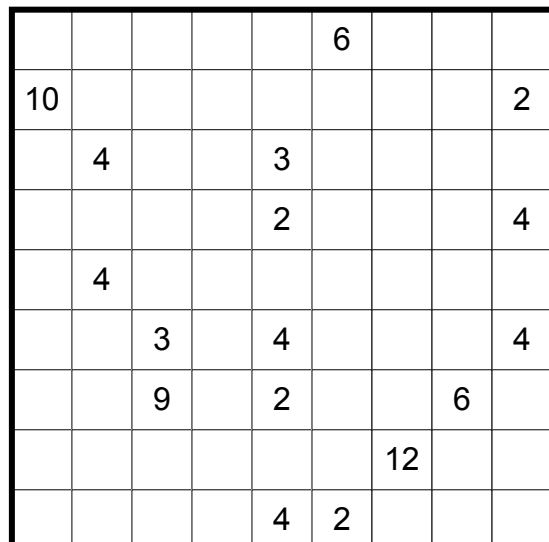
## NONOGRAM

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



## SHIKAKU

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



## FELIX PUZZLES ARE RECRUITING

Do you like a good Friday puzzles and chill?  
Is this page the highlight of your week?  
Want to get more involved?  
It's easy!  
Give us a shout on [fsudoku@imperial.ac.uk](mailto:fsudoku@imperial.ac.uk)



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**SEX**

**SURVEY**

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