First published in 1949, *Felix* is released weekly during term time and is distributed around Imperial's London campuses. All students, staff, and alumni are welcome to contribute to the paper.





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29 SEPTEMBER 2023

Declaration

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

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

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

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

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



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VACANCIES

We are always looking for fresh blood! If you're interested in getting involved and don't see a role you fancy here, drop us a message at felix@imperial.ac.uk

Head Copyeditor Copyeditors

Photographers

News Writers

Editors

Science

Arts

Music

Film&TV

Sports

Writers

Science (see p. 14 for more)
Arts
Books
Film&TV
Societies
Sports

EDITORIAL

Welcome!

nother year beckons at Imperial. For many students, this will mean a year of hard work, late nights, and exams. We hope, however, that you will find time in your busy schedules to pursue your extracurricular interests, and hopefully, pick up a weekly copy of *Felix*.

Last year, we published stories on student dissatisfaction at the Physics department, and allegations of a toxic culture within Imperial's security team. This year, we intend to continue in the same vein.

Our motto, 'Keep the cat free,' refers not only to our status as a freeto-read publication, but also to our editorial independence. If you have any story tips you'd like to share with us, email us at felix@imperial.ac.uk.

We are always looking for new writers; our team is small and relies on your support for content. If you'd like to write for us, refer to the 'Contact Us' panel in the bottom right of page 2, where you'll find a full list of sections you can submit articles to. If you're interested in getting involved, but don't know what you want to write about, please feel free to email whichever section catches your eye, and they can help you get started.

Aside from writers and reporters, we're on the lookout for budding artists, photographers and designers, but if you have any other skills you think could help the paper, please email us at felix@imperial.ac.uk, or visit us at our freshers' fair stall on 3rd October.

A bold new look

Regular readers of *Felix* will notice that the paper has undergone a full redesign. This is indicative of the dramatic changes that have taken place at the paper, after the editorial problems that plagued *Felix* during the first half of the 2022/23 academic year. Following a period of fortnightly publishing from February to June 2023, we are back to putting out issues weekly. The interim arrangement where three volunteers shared the role of Editor-in-Chief, has now come to an end. *Felix* returns with a full-time Editor – though, for the first time in 51 years, that Editor has been appointed, not elected (see page 6). We hope this first issue is a signal of our intent.

Acknowledgments

Lastly, I would like to thank our team of contributors for their hard work and relentless dedication to putting this paper out. Everything you see within this paper has been put together remotely, and on a compressed timeline - the result of frustrating delays within the Union and College in appointing the Felix Editor. You can find a full list of our brilliant contributors on page 2, but I would like to single out Felix Chair Mike Buzadji for the endless hours he has put into this issue, taking our half-formed ideas and turning them into a beautiful newspaper design, and then guiding our section editors in implementing that design. It would be amiss not to also thank Zanna Buckland, our assiduous deputy editor-in-chief, for her much-needed support in copyediting and getting the paper to print.

> Jamie John Felix Editor 25th September 2023

What is *Felix*?

Felix, for those of you who have stumbled upon our publication for the first time, is Imperial's very own student newspaper. Published every Friday during term time, *Felix* contains a wide range of content produced by entirely by Imperial students. In our pages, you will find news, investigations, opinion, and reviews on a wide variety of different topics, ranging from the environment to music, to Imperial's very own societies.

Felix was first published on 9th December 1949. Since then, the paper has gone on to win national awards and break stories that have ended up in the national news. Our contributors – all former Imperial students – have achieved acclaim working for publications such as the BBC, *WIRED*, the *Financial Times* (see page 7), *The Guardian* and *The Economist*.

If print isn't your preferred format, follow us on Instagram (@felix_imperial) or sign up for our new weekly newsletter, *The Lowdown* (see front page QR code), where we'll give you bite-sized updates on the most important developments on campus, and send you an early digital copy of the newspaper. We aim to shed light on stories the College won't tell you about, and to report on your experiences as students (and staff!)

NEWS

Central Library renamed in honour of Abdus Salam

Change comes in response to 2021 History Group Report.

Editor-in-Chief JAMIE JOHN

he Central Library at Imperial has been renamed the Abdus Salam Library, in honour of the Pakistani Nobel Prize laureate who co-founded the College's Theoretical Physics research group in 1956.

The name change is part of Imperial's response to the History Group Report. Commissioned by the College in 2020, the History Group – consisting of staff, students, and historians – investigated Imperial's past and its links to the British Empire.

In October 2021, it published the History Group report, containing recommendations aimed at 'ensuring that our history is not a barrier to building an equitable and inclusive university.'

The report highlighted the achievements of individuals from historically underrepresented groups. Salam, the first Muslim to win a Nobel Prize in science, was noted for dedicating his life 'to the betterment of science and education in post-colonial countries.'

The History Group recommended that 'Salam should be widely celebrated', by naming the research division he co-founded in his honour and setting up



The newly renamed Abdus Salam Library, on Imperial's South Kensington campus, as viewed from Queens' Lawn. Thomas Angus / Imperial College

a new scholarship in his name.

Responding to the report in 2022, Imperial promised to 'find new ways to mark the impact and contributions of brilliant but undercelebrated Imperial people like Professor Abdus Salam', acknowledging that 'this is long overdue'.

'I hope the new Abdus Salam Library inspires many more people in the years to come', wrote Imperial College President Hugh Brady in an email to students last term.

Who was Salam?

Abdus Salam is known in the physics community as one of the creators of the electroweak unification theory. It was for this contribution that Abdus Salam was awarded the 1979 Nobel Prize in Physics, together with Sheldon Glashow and Steven Weinberg.

Outside of his academic achievements, Salam was known for his science advocacy work. He established the International Centre for Theoretical Physics in order to educate scientists in developing countries and provide them and their peers in other countries with a forum for scientific discussion.

Why this? Why now?

It is important to place the decision to rename the Central Library in context. It emerged out of the discussions and protests following the murder of George Floyd in the USA. Imperial College was forced to confront its past, and the legacies of some of its most prominent benefactors. It commissioned the History Group to probe further, and in 2021, a report was published.

It is possible to group the report's recommendations into two sets: the first set was intended to recognise the achievements of individuals from marginalised groups; the second dealt with the problematic legacies of those already recognised at Imperial.

Upon the report's release, the second set of recommendations drew criticism from some quarters. In particular, the History Group's recommendation to rename the Huxley Building was met with strong reactions. Huxley was a slavery abolitionist, but, noted the Group, 'his essay *Emancipation – Black and White*, espouses a racial hierarchy of intelligence...that fed the dangerous and false ideology of eugenics'.

At a forum to discuss the proposals in early 2022, many staff and alumni expressed distaste towards the proposed renaming of the Huxley Building. One faculty member argued that there was very little evidence for Huxley's alleged links to eugenics, while another described Huxley's essay as 'a polemic for the abolition of slavery.'

One comment submitted prior to the forum accused Imperial of rewriting the past and making 'an ungrateful, spiteful generation feel better about themselves.'

Another urged the College to 'stand strong against [such] ridiculous accusations'.

Ultimately, Imperial settled on a compromise: it said it would retain Huxley's name, but 'provide a fuller understanding of [his] complex character'. A new joint name would be created for the Huxley Building, by adding the name of a 'pathbreaking scientist from a Black, Asian, or other minority ethnic background'. A similar approach would be taken with the Beit Building, pending consultation with students.

Imperial has yet to proceed with either of these actions. Renaming Central Library is its most striking decision to date on this matter.

If you would like to comment on the discussion above, please write in to comment.felix@imperial.ac.uk.

John Allan resumes role as College Council Chair

Allan is facing four unsubstantiated claims of inappropriate behaviour towards women. He denies three.

Editor-in-Chief JAMIE JOHN

ohn Allan, the former Tesco chair who stepped back from his role as Chairman of Imperial College Council after facing allegations of inappropriate behaviour towards women, has now resumed his duties. He will see out the remainder of his term, which ends in December.

Allan returned to his post on 14th July, and heads of department were informed four days later, in an email from College President Hugh Brady. The College said it would inform students when they returned to university after the summer break.

None of the four anonymous allegations against Mr Allan have been substantiated, and he has vehemently denied all but one of them – that he told a woman her dress "suited her figure". Mr Allan said he made the comment after seeing she was "looking a bit down in the mouth", in an attempt to "cheer her up". A spokesperson for Allan said he was "mortified" after making the comment, and apologised immediately. Allan chose to step back at a meeting of College Council on Friday 12th May, saying he was doing so in the interests of the Imperial community. His resumption of duties marks a change from his original position; in May, Mr Allan said he would be stepping back until the situation was resolved.

In the aftermath of the allegations, Allan embarked on a campaign to assert his innocence. In a series of media interviews during May and June, he rebutted the claims, and positioned himself as a defender of the presumption of innocence.

Allan described the current discourse around cases like his as "guilty until proven innocent". He told *The Times* he was "definitely on the side of the angels", having spent "my working life actually trying to ensure there are opportunities for women".

Speaking to Sophy Ridge on Sky News in June, he said there was "absolutely no substance" in the claims, and felt he had been "propelled under the nearest bus". Allan said he had received hundreds of letters of support since the claims emerged, many from women who knew him.

"It's interesting that [the allegations] surfaced together in one article in *The Guardian*", he continued. "That after 50-plus years of...impeccable conduct towards women, suddenly, this little clutch of allegations appears".

Allan said that throughout his career, he had supported women who had faced unwanted advances from superiors. But, he added, "I am worried at the moment, that we might take a step back, because quite a lot of men say to me they're getting increasingly nervous about working with women, mentoring women, something I've done a lot of right through my career."

"I mean isn't that a bit sexist in itself?" countered Ridge.

In an interview with the *Daily Mail*, Allan elaborated: "Younger male CEOs are now saying: 'Be careful about getting in a lift with so-and-so in case an allegation is made.' And this is really unhelpful to women."

"Now we're getting to the stage where men's rights also need to be protected."

The Guardian, which originally reported the allegations, said: "We stand by our journalism and the people who continue to come forward to tell their stories despite the significant risks involved."



John Allan speaking to Sophy Ridge on Sky News in June. Sky News

Felix Editor to be appointed from now on, not elected

Change is biggest shake-up to paper's structure in 50 years.

Editor-in-Chief JAMIE JOHN

his year, for the first time in Felix history, the paper's Editor-in-Chief was appointed by a selection panel, after Union Council approved a motion by former Felix Editor and Student Trustee Sam Lovatt to change the selection process.

Since 1972, the Felix Editor has been elected each year in a Union-wide ballot, usually together with the other sabbatical officers of the Union during the annual Leadership Elections.

'This process is no longer fit for purpose', reads the motion to change the process. 'Three of the last four Felix Editors have operated at a standard below that expected of them, leading two of them to resign before the end of their year in office.'

In the new appointment process, applicants for the role will be required to submit a CV, alongside answers to three questions. The questions will assess their knowledge of higher education, Imperial College, and the student union.

Their applications will be reviewed by a selection panel for shortlisting. Under normal circumstances, the panel will have a student majority, and will consist of the Union's Director of Membership Services, a Student Trustee of the Union, the Union Council Chair, the outgoing Felix Editor, and a representative from the College Communications Division.

Shortlisted candidates will be invited to submit a short article in response to a prompt devised by the entire panel. The submissions will be assessed only by those panel members representing Felix and the College Communications Division.

After this, all shortlisted candidates will be invited to an interview, which assesses their ability to manage stakeholders, lead the Felix team, and report on current affairs relevant to Imperial students. In addition to answering a series of questions from the interviewers, candidates will be required to edit a short written piece filled with errors. Only the Director of Membership Services, a Student Trustee, and the Council Chair will conduct the interview under normal circumstances.

The entire panel will then convene to decide upon the best candidate. If there are no appointable candidates, the appointment process will be re-opened.

Blast from the past...

I dug deep into the archives to learn how the Felix Editor became a sabbatical officer.

The motion to change the selection process for the Felix Editor came almost exactly 51 years after the first-ever vote for the position took place. On 12th and 15th May 1972, Imperial students took to the ballot to appoint Oliver Dowson, a first-year Maths student, to the role of *Felix* Editor. Prior to this, the Editor was selected by the volunteer staff that worked on the paper.

That first election was notable in more ways than one for the newspaper. In addition to being the first Editor elected by the student body, Dowson would become the first to serve in the role as a sabbatical officer of the Union. This would make Felix the only British student newspaper with a full-time editor-in-chief.

Furthermore, Dowson would become the first Felix Editor to produce a weekly publication.

"It was very much a hobby-type newspaper before that," said Dowson, when I spoke to him last Thursday. "It was not much more than a dozen or so of us, who met up on an evening or two a week to put together some content."

The paper was published fortnightly before Dowson's election, and the Editor, who was then a full-time student, had to juggle their Felix duties with university studies. Their only privileges in the role were a guaranteed room in a College hall of residence (rent not paid for), and the right to drink from the Editor's tankard in the Union Bar.

Many previous Editors struggled to manage the workload; then, as today, in a university of STEM students, the paper struggled to find contributors. Indeed, Dowson's immediate predecessor bemoaned 'the prevalent apathy at IC', saying it made editing *Felix* 'infinitely more difficult? WEEKLY FELIX - RECTOR SAYS YES

In 1969, an Editor resigned citing Signed citing if the lack of staff working between the concept has now only to be ratified by a Union meeting. This means that there will be 26 weekly issues of FEIIX during the next academic for *Felix* at the present time. In general will also mean that "Snapping Jaws" will disappear, less union bumphsheets in general will appear, and that all you really need read is FEIIX. 'Left [with]

a straight choice between carrying on in my present and to give the paper and its content a bigger presence capacity and ultimately destroying any chance of getting a good degree at the end of the year, or resigning the editorship, I have decided on the latter course,' he wrote.

As early as 1959, one prescient Editor proposed a solution: 'If the Union could be persuaded to pay out some more money and employ at least two permanent staff for their newspaper, then perhaps the weekly Felix will become a possibility!'

And so, 13 years later, such an arrangement was reached, albeit with only a single sabbatical officer at the helm. Dowson recalls that the very first Felix Editor election was something of a shoo-in. "I didn't have much opposition, as I remember. None of the other volunteers wanted to go on and become the full-time Editor." His only opposition was "one guy who was heavily into the Socialist Worker fraternity, and spent most of his platform talking not about the newspaper, but the need to spend time waving the flag for workers."

Imperial has changed significantly since that time, but Felix continues to publish, and the Editor-in-Chief remains a sabbatical officer. Talking to past Editors, I was surprised to hear that our current difficulties recruiting students were a source of frustration even then

> - as one put it, "Students enjoyed reading Felix, but few showed much interest in how it was produced".

This year, we would This like to bring you content that informs, engages, and entertains,

at the College. But to do that, we need to add to our dedicated team of contributors.

Therefore, I would like to reiterate the message in our editorial this week: if our content interests you, and you are at all considering getting involved, please get in touch! Some open roles are advertised on page 3, but we are always looking for more contributors. If you have a different skill set that you think could still benefit the paper, please email me at felix@imperial.ac.uk. And you are always welcome to submit content to our sections by emailing the relevant section editor (see page 2, 'Contact Us', for details).

NEWS | 7

Former Felix Editor appointed Financial Times UK News Editor

Editor-in-Chief JAMIE JOHN

adhim Shubber, *Felix* Editor from 2010 to 2011, has become the *Financial Times* (*FT*) UK News Editor. After studying Physics at Imperial, Kadhim edited *Felix* for a year, before obtaining a Master's degree in journalism from City, University of London, one of the UK's top journalism schools. He joined the *FT*'s graduate scheme from there, and worked as a reporter for nine years before being promoted to his new role. The *Financial Times* is one of the world's foremost business news publications. Earlier this year, it won the National Newspaper of the Year award.

Felix congratulates Kadhim and wishes him all the best in his new role.

kadhim (^-^)ノ @kadhim Fallow

Some news: I've started today as the FT's UK news editor, leading our UK news desk.

It's a privilege to work with the best editors and reporters in the business -- especially at such an fascinating time for the UK.

10:42 am · 18 Sep 2023 · **107.9K** Views



Kadhim in his Felix days. Imperial College London

IC Business School launches first-ever undergrad course

BSc Economics, Finance & Data Science students join this October.

Editor-in-Chief JAMIE JOHN

mperial College Business School is launching its first ever undergraduate course this October. The BSc in Economics, Finance and Data Science aims to equip future economists and business leaders with the data science and coding skills sought after by employers.

The College claims it is 'the UK's first degree to allow students to study economics and finance, combined with data science.' However, a quick Google search reveals that at least three other universities offer degrees combining these subjects.

Students on the new degree programme will study nine compulsory modules in each of the first two years, ranging from machine learning and cloud computing, to corporate finance and accounting. In their third and final year, they will have the opportunity to tailor their study with electives, and apply their skills to a final-year project. Successful applicants will require A*AA grades at A-Level, with an A* in Mathematics.

The degree launch comes at a time of change for the youngest of Imperial's four faculties. In April 2023, after six years in office, Francisco Veloso left his position as dean of Imperial College Business School, to join INSEAD, its world-renowned European cousin. Professor Franklin Allen was appointed on an interim basis, and the College opened applications for a permanent replacement in September.

Imperial's youngest faculty

The Business School traces its roots back to 1971, when a Department of Management Science was established at the College. The Business School itself was opened in 2004 as the Tanaka Business School, taking its name from tech investor Gary Tanaka who donated £27m towards it.

Tanaka's name was dropped in 2008, three years after he was arrested on suspicion of fraud, and the school was rechristened Imperial College Business School. At the time though, the College claimed Tanaka's legal woes had nothing to do with the change of name. "The decision to rename the school was made to emphasise that it is an integral part of the College," said an Imperial spokesperson. In 2010, Tanaka was jailed for five years after being found guilty on three counts of investment fraud.



Imperial College Business School is launching its first ever undergraduate course. Marcus Ginns / Imperial College London



Just Stop Oil protestors 'slow-marching' on Cromwell Road near Cromwell Hospital, South Kensington, on 12th May 2023. The group's traffic-blocking tactics have attracted the ire of motorists. Just Stop Oil

JSO to target lectures and university facilities, and recruit students in freshers' week.

Editor-in-Chief JAMIE JOHN

ust Stop Oil (JSO) is set to focus its campaigns on university lectures and campus facilities throughout October, with Imperial said to be a top target.

"Buildings, classrooms, and ceremonies would all look great," said one student activist, according to *The Sun*. Imperial is holding its graduation ceremony at the Royal Albert Hall on 18th October.

The environmental activism group plans to recruit students during freshers' week, according to emails leaked to the *Daily Mail*. The messages set out 'an example of a semester plan', beginning in the first week of term, with a 'massive push' to advertise talks.

The talks will take place in the second week of term. Students will be asked to donate, attend an eight-hour non-violence training session, and 'engage in civil resistance'. From 23rd to 29th October, the group will stage a 'mass JSO demo in London' for students in the capital. The six-week plan will culminate in a 'D-Day protest', running from 13th to 19th November.

'Our headline aim is to mobilise enough students to... generate 500+ student arrests by defying section 12s on slow marches,' says one email. Section 12 of the Public Order Act grants police the power to remove protestors from roads, if they feel such action is necessary to prevent serious public disorder, criminal damage, or disruption to the life of the community.

To the management of Imperial College London, you have a choice: join your students and staff, resist new oil and gas. Or be complicit in genocide.

'We call on all the staff and students at Imperial College London to get involved, join their local group and march with us this November,' said a student spokesperson for JSO.

The student plan is part of a wider JSO aim to 'overwhelm the police and/or the judiciary' over six weeks in October and November. In June, the Metropolitan Police said that over a previous six-week period in London, JSO's slow marches had cost them over £4.5m.

Just Stop Oil has polarised public opinion with its vandalism and traffic obstruction. It is demanding that the government stop licensing all new oil, gas, and coal projects.

On 15th September, Education Secretary Gillian

Keegan published a letter to university vice chancellors warning them of JSO's university protest plans. 'I strongly encourage you to ensure that students are aware of the consequences that engaging in any criminal activity could have for their futures,' she wrote. 'If convicted, students could face fines, community service, or even imprisonment.'

Just Stop Oil responded on 18th September, and sent its own letter to vice chancellors, criticising them for partnering with fossil fuel companies. 'Your universities give the government and carbon corporations the veneer of respectability, and the social licence to carry on their project of mass death,' it said.

It attached a letter demanding that the government stop issuing new oil and gas licences. 'If you do not sign and return the attached letter by Friday 22nd September, students will have no choice but to bring a wave of civil disobedience to their campuses.'

Just Stop Oil strikes again

This is not the first time Just Stop Oil has focused its sights on Imperial. In March 2022, two JSO members spray-painted 'Imperial funds climate breakdown' outside the College main entrance, and glued themselves to an adjacent glass walkway barrier.

The College has come under fire for its links to fossil fuel companies; between 2017 and 2021, it accepted £54m in funding from fossil fuel companies. The previous College President, Alice Gast, was heavily criticised by students for her position on the board of directors of Chevron, an American oil and gas company.

Under its Socially Responsible Investment Policy, Im-

perial says it 'will continue to invest in fossil fuels companies that demonstrate they are actively moving towards meeting Paris Agreement targets.'

In 2019/20, the College working group that developed the policy discussed divesting from fossil fuel companies altogether. It recognised the merits of such an approach in drawing attention to climate change. However, on balance, it felt that active engagement with companies through investment could allow the College to have a longer-term influence on decarbonisation.

'Major fossil fuel companies like BP and Shell value their relationships with Imperial, not least because of our worldclass research collaborations and the fact that they employ many of our graduates,' says a statement from the group.

Responding to a request for comment, a College spokesperson reiterated Imperial's commitment to 'leveraging the full breadth of our influence across our investments, research, education, sponsorship, and other actions to accelerate the transition to net-zero.' It said that decarbonisation was its top priority when working with energy companies. 'We have been clear that we will monitor progress, and only continue to work with companies who demonstrate commitment and credible action to achieving these targets.'

The JSO student spokesperson disputed this logic. 'By taking millions of pounds in research grants from genocidal corporations, such as BP and Shell, Imperial continues to legitimise the death project of new oil and gas. Worse still, it gives the oil and gas industry an illusion of respectability, by encouraging its own students to work for the same corporations that are destroying their chance at a liveable future.'

JSO had a message for Imperial's leadership: 'We say to the management of Imperial College London, it's time for you to stick your head above the parapet and finally honour your duty of care. You have a choice: join your students and staff, resist new oil and gas. Or be complicit in genocide.'



In March 2022, two JSO members spray-painted 'Imperial funds climate breakdown' outside the College main entrance (CIty and Guilds Buillding), and glued themselves to an adjacent glass walkway barrier. Sam Lovatt

No RAAC found at Imperial (yet), says College

mperial says it has conducted initial inspections and has found no evidence of reinforced autoclaved aerated concrete (RAAC) at any College-owned or -operated buildings. "We will continue to conduct surveys and will take expert advice if potential RAAC is identified," said the College.

RAAC is a type of concrete which was used in construction between the 1950s and 1990s. It is cheaper and lighter than standard concrete, but has a lifetime of around 30 years, and is prone to structural failure. The Health and Safety Executive says RAAC is now beyond its lifespan and may 'collapse with little or no notice.'

RAAC caused a stir over the summer after the UK government identified more than 100 schools where it had been used, and ordered them to shut temporarily. At least 16 UK universities have closed or partially closed areas containing RAAC.

NEWS THREADS Weekly bulletin



Just Stop Oil to target Imperial

Just Stop Oil is to focus its campaigns on university lectures and facilities, with Imperial said to be a top target. The environmental activism group had a message for Imperial's leadership: 'it's time for you to stick your head above the parapet and finally honour your duty of care. You have a choice: join your students and staff, resist new oil and gas. Or be complicit in genocide.' (pp. 8-9)

Imperial College's Central Library renamed after Abdus Salam

Imperial's Central Library has been renamed after **Abdus Salam**, the Pakistani Nobel Prize laureate physicist who co-founded the College's Theoretical Physics research group in 1956. The move is part of a wider effort by the College to respond to the recommendations of a report it commissioned in 2020, in the wake of George Floyd's murder in the USA. *(pp. 4-5)*

John Allan resumes role as College Chair

John Allan has resumed his role as College Chair, and will continue until his term ends in December. Allan is facing four unsubstantiated claims of inappropriate behaviour towards women. He denies three, and over the summer, embarked on a campaign to assert his innocence. (*p. 5*)

New piri-piri curly fries: FiveSixEight menu receives a makeover



FiveSixEight, the biggest of the three bars in the Union Building, has revamped its menu, collaborating with Fusion54 to update its offering. The Union's curly fries, long a favourite of Imperial students, are now offered as a side dish in three different flavours: plain, masala and piri-piri. The menu also appears to have a wider variety of vegetarian and vegan dishes.

New masala-seasoned curly fries in FiveSix-Eight. Zanna Buckland

h-bar Indian restaurant replaced by Kokoro

The Indian-street-food-inspired restaurant in **h-bar** has been replaced with a Kokoro outlet, serving sushi and bento. The restaurant was popular among students, and had only opened in January 2022.

IC Business School launches first-ever undergrad course

This October, **BSc Economics, Finance and Data Science students** will join the Business School as its first cohort of undergraduate students. The College claims that the BSc is 'the UK's first degree to allow students to study economics and finance, combined with data science.' However, a quick Google search reveals that at least three other universities offer degrees combining these subjects. (p. 7)

We are always looking for story tips – whether that be changes on campus, like the new FiveSixEight menu, or serious cases of injustice. You can contact us by emailing felix@imperial.ac.uk.

SCIENCE

Prof. Michele Dougherty spills all about JUICE

Felix speaks to Michele Dougherty about her role as Principal Investigator on JUICE's magnetometer.

Science Editor TAYLOR POMFRET

rom the view in Michele Dougherty's office one can see into central London across Hyde Park. It's a beautiful day, and the late September heat is almost as warm as Michele's welcome into her office. One of the most immediate things one notices about Michele is her charisma - we speak to her with more ease than we would have thought, and the interview flows more like a conversation than anything else.

Michele Dougherty, Head of the Physics Department, is renowned for her pioneering work in planetary science, and her role as the Principal Investigator for the magnetometer instrument on the JUpiter ICy moons Explorer (JUICE) mission stands as a testament to her expertise and dedication to unraveling the mysteries of our solar system. In this interview, we delve into Michele's remarkable journey and her critical contributions to the JUICE mission, which is poised to provide unprecedented insights into the enigmatic icy moons of Jupiter: Ganymede, Callisto, and Europa. Her work not only involves deciphering the complex magnetic envi-

Science Writer MOHAMMAD MAJLISI

ronments of these moons but also holds the potential to reveal the presence of liquid water, an essential ingredient for the emergence of life beyond Earth. Michele's leadership and scientific acumen shine as we explore the intricate dance of magnetism and the tantalizing prospects of extraterrestrial oceans in an ongoing quest to further understand the cosmos.

Personal philosophy

M: When you lead these missions, do you have a personal philosophy? Cassini, for example, ran from 1997 to 2017, it's 20 years and these missions take place over such a long period of your life.

I wasn't involved in Cassini right at the start, I became involved once it was launched. It was launched in 1997, and ended in 2017.

I see JUICE as a way of paying back for Cassini, I wasn't involved in the initial ideas about Cassini - in doing so I became involved in all the great science without getting involved from the start. JUICE is a payback, and I do hope I'm around once



Prof. Michele Dougherty. Imperial College London.

we get there.

To put it into context, we first started thinking about a Jupiter-like mission back in 2008/2009, I was asked to lead the Science Definition team, put the mission together, and we sent the proposal to the European Space Agency (ESA) in 2012. I then stepped back, as I wanted to propose to build an instrument. During the COVID lockdown we started building the instrument, and then launch was halfway through! itors were on my team, making it easier for them to choose. In the end, there were three or four different teams that put forward a proposal for the magnetometer instrument. Fortunately they chose us - and then that was the start of the hard work - we said in our proposal we can do all of this great science - but we needed to make sure we could build the instrument so we could actually do it - and I think we have - it's a beautiful instrument - even if I say so myself!

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That's our strength, we're driven by the science. We have a fantastic engineering team, but it's the science that we do that drives what we want to build.

Developing a magnetometer T: Proposing an instrument to the ESA - is it a competitive process?

Oh, yeah - it's a competitive process. What we did on the team is we looked at the science, put together a model payload, and suggested to ESA that this is what we think are the instruments needed to do the science, and used that as a basis to then put out a call saying these are the instruments we're looking out for, you could even propose a separate instrument. It is an international competition, people around the world propose, you feel very nervous if you don't get chosen! I ensured that a number of competM: We spoke to Dr. Nicola Fox earlier this year, head of Science at NASA, and she discussed Imperial's prestige with magnetometers on projects like JUICE, the Parker Solar Probe; what makes Imperial so good at making magnetometers?

From my perspective, the most important thing is that we're driven by the science that we want to do. We don't just crank the handle and build instruments, we decide what science we want to be involved in, and lead, and build the instruments linked to that. That's our strength, we're driven by the science. We have a fantastic engineering team, but it's the science that we do that drives what we want to build.



J-MAG, Imperial's magnetometer currently onboard JUICE. Imperial College London.

We're never sure if we'll be chosen - but if we're chosen that's of course great!

T: How are magnetometers used in planetary science? What types of magnetometer are used in your missions?

From my perspective, I'm interested in the planetary science, and one of the most important realisations that we've come to in the last 20 years is that you can use magnetometer instruments not only to measure the environment inside a planet, but you can use them to see inside the planet as well, and the planet's moons too. And so, magnetometers are always described as in-situ instruments, they take the measurement where you're at - but in some sense they're remote sensing instruments too - measurements you take on the outside allow you to work out what's going on inside. As far as evolving is concerned: there are two types of instruments that can and are being built. There are the Rolls-Royce type instruments, that go on planetary missions like JUICE, and there you need to be flying an instrument that has a lot of flight heritage - you don't want to be flying something that might not work - ESA and NASA know that. For a JUICE-type mission, you need to show the instrument is at Technology Readiness Level (TRL) 9, which is ready to go into outer space. In fact, one of the sensors we built for JUICE was at TRL 5 that was first chosen, that was a scalar sensor. We had, during the build phase, it was flown on a Chinese mission that showed it was able to fly. For smaller

missions, CubeSat for example, you can fly these small magnetoresistive sensors, those are very light, and you can afford to fly them where the TRL isn't so high. It's a test case; if it works, it demonstrates you can fly the instrument on a subsequent mission. It's a prong approach - build the best instruments you can but also make sure the ones that'll give you the best science output are the ones that are known best, and you know they will work.

But we still fly more than one - on JUICE, we've got three! We usually fly two, if you want to measure the magnetic field around a planet you want to make sure you're measuring the magnetic field of the planet and not the spacecraft: and so we put the magnetometers on a very long boom; one on the very end and one halfway down. That allows you, through the gradiometer technique, to measure what we can see halfway down compared to the end, and that works out if there's any spacecraft field. But it's also redundant; on Cassini, the one at the end of the boom built by the Jet Propulsion Lab, stopped working once one year after we got there; so we only used the one that was halfway down the boom. Space is quite scary! You're never quite sure what's going to happen!

You should assume you're going to come across difficulties at some stage. On Cassini, when the onboard sensor stopped working, we had to think about how you're going to recalibrate the instrument. One of the things we needed to is know where the zero level of the instrument is: if you're measuring really small changes in a magnetic field and you're saying, "Oh, we're seeing an ocean," if you don't know where the zero level is that doesn't help very much. What we used to do on Cassini is that we used the two different instruments to calibrate each other. Once we only had one left though - we had to roll the entire spacecraft to calibrate the remaining magnetometer: around two separate axes, in a quiet field. When I went to the Cassini project and told them we had to do that, they said: "Really?!". You need to be ready to think of a solution.

Igniting the Passion for Planetary Science and Breaking Barriers in STEM M: You mentioned your interest in planetary science, what makes it interesting for you - especially as lots of physicists like space!

It was a rather circuitous route to get there. I was at an all-girls school in South Africa and I didn't do science at school. They didn't have science, and I was quite good at maths - my dad worked at the local university, and they were willing to take a chance on me and offered me the opportunity to do a BSc. And the first couple of years were really difficult: didn't understand physics, didn't understand chemistry. But I persevered, and in the end I got a PhD in Applied Maths. I'd never looked at a piece of data in my entire life! I then went to Germany for two years, I was on a fellowship and again I was working in Applied Maths. And then I came here, where I was working with the Principal Investigator of the magnetometer instrument on Cassini; but then I was focusing on a theory-based project. After about six months he said to me: "Oh, we've got a spacecraft going to fly past Jupiter, called Ulysses, which used Jupiter as a planetary assist to get it into orbit around the Sun. We want to put a magnetic field model together for Jupiter, are you interested?". That sounded really interesting so I said yes - and that's how I got into planetary physics. So basically I said yes to something that sounded very interesting but really I wasn't sure if I could do it!

But, in fact, my first view of Jupiter and Saturn was because of my dad who built a telescope when I was a kid, and we saw Jupiter and Saturn through the telescope, so there's a tenuous link there.

M: As a woman in STEM, have you faced many challenges progressing through your career, or has it been relatively straight forward?

I don't feel that I've had any challenges. But I make it clear to people if I don't appreciate the way they behave.

It was people before me who helped me break through the glass ceiling. There was a colleague of mine who worked at UCLA, she's an emeritus professor, Margaret Kivelson, she's 94, and she's doing something similar on the Europa-Clipper mission to what I'm doing on JUICE. She was the one who helped pave the way - I sort of followed her.

M: So it's almost like standing on the shoulders of giants.

Yes, although Margie's 5' 3"! But, my ideal would be when that isn't a question that's asked. And we've got a way to go before we get there, I think. You know, I think one of the issues with kids at school is they don't see many female scientists. And so they don't think, "Oh yes, of course I could go and do physics or do chemistry". We've got an outreach program in the department where we have postdocs, some of our students going out into schools, talking about anyone being able to do science. And so we still need to work on it. But my ideal would be when you don't have to ask me that question. It might be beyond the end of my career, but let's hope we get there.

A New Chapter: From Head of Department to IOP Presidency M: Congratulations on becoming the

President-Elect of the IOP! How do you feel about that? It's a very big responsibility and also there's a rich history of physicists who have held the same position like Lord Kelvin, Ernst Rutherford and Jocelyn Bell Burnell. It's quite cool, isn't it?

It is very cool. So let me put it into context. I have another year and a bit left in this role. And so I'm planning my future. I will stay at Imperial, but once I stopped being Head of Department, I realised I



Launch of JUICE spacecraft from Ariane 5 rocket on 13 April 2023. Benoît Seignovert / Wikimedia

wanted to do something else as well as research. I was approached as to whether I wanted to go for the role. And I thought, yeah, that actually sounds quite interesting. So I essentially will shadow the new President for two years and then I'll become President for two years.

T: One of the big things about the IOP is outreach; it does lots for Physics Education to disseminate the field of physics. How are you intending to do that?

I think one of the things I'd like to make clearer to people who want to become members of the IOP is that you don't have to be an academic working in physics to be a member of the IOP. You know, physics is of interest to lots and lots of people who are not necessarily working as physicists. So that would be something I'd like to expand, is to have more people join the IOP, just because they're interested in physics. I think one of the things that scientists are not always very good at is explaining what they do to the general public. And they should be, because it's the tax money of the general public that's actually funding what they do. I think that needs to be more important. Everyone should be doing a bit of outreach, just as part of their job.

But I'm still learning. You know, I haven't even had my first meeting yet! So I'll go into learning mode for the first couple of years. Come back in two years' time and ask me what my focus is going to be. M: Back to your point on science communication: I completely agree with you. People have no idea how science works or what scientists do. There's just a very opaque box – it's like a black box almost, right? I feel like in science there is a perception you have to fit an archetype, right, like you have to be a genius, especially in physics?

You don't need to. I'm not a genius. I'm just, you know, quite good with people. And I surround myself with really good teams, you know? There was a young lady who did a PhD in my group many years ago now, who went on to become the science editor for *The Times*. So a physics degree is a perfect way is so versatile, and perfect if you wanted to get into journalism.

T: I'm working with Dr. Boris Leistedt at the moment who is the supervisor of my UROP. He also came from a non-physics background, and is completing research in the field of astrophysics - he didn't do physics as his bachelor's. So there's more of us out there!

Quickfire Questions

In our usual fashion, we conclude our interview with Michele by delving into a fun and spontaneous round of quickfire questions, offering a glimpse into her personality beyond the realm of planetary science and STEM advocacy. Starting with summer's hot topic - Barbenheimer!

1) Have you seen Oppenheimer?

No, but I really want to.

2) Have you seen *Barbie*?

No. I don't plan to see *Barbie. Oppenheimer* is a long one. Just going back to that friend and colleague of mine, when she did her PhD Viva, she did it at Harvard many years ago, and her supervisor knew Oppenheimer. And he was in town on the day of her Viva, and so he came to the celebratory dinner afterwards. She did say to me - it was by the time when he realised what the impact of the bomb had been and how the world was changing, and he didn't seem a very happy person.

No, I'm really looking forward to watching it, you've got to steal yourself in a way, because three hours is a long time. I'm more getting excited about the Rugby World Cup.

3) Do you have a favourite book?

My confession is that when I want to relax, I read crime stories. But what I also do, and I'm quite weird, is I will go back and read books, because it's very relaxing to read a book that you know what the outcome is. But also, it means that you actually, in some ways, I enjoy the book more, because you see nuances in it that you didn't see in the first run-through, because I'm very impatient. When I read a book, I want to get to the end. So if I read it a second time, then I see things in it that I didn't see. Hmm... the single book I'd take on a desert island with me... I think it would be Lord of the Rings. That was our night-time reading. When I was a kid, and my sister was a kid as well, my dad read Lord of the Rings. And so I got a very soft spot for it. But because it's such a long book, it would keep me going for a while on a desert island. Crime novels and Lord of the Rings!

4) Favourite place on/near campus?

I love Hyde Park. I go running in the morning in Hyde Park. And when I've sometimes had really difficult meetings as head of department, I will sometimes go for a walk in Hyde Park afterwards just to clear my head. But you know, I also quite like to view it from this office.

5) How long have you been in this office? I started the job in January 2018. So five and a half years. Not that I'm counting, I've got 483 days left in the job. I've got a countdown clock.

M: It's like the five minutes to midnight clock, isn't it?

(In the corner of her room, next to her desk, and a fat stack of papers is a rather austere-looking clock. Counting down. It's an interesting way to think of things.)

6) Favourite museum in South Ken?

I think the Science Museum, if I had to choose, but it's really interesting. I've worked here for 30 odd years. Gee - it's quite scary! And I haven't been into the Science Museum more than once in a decade. I think it's because we're right next door. You know, people come and visit London and they go to the Science Museum and say, "You're so lucky you work next door to the Science Museum." And I'm thinking, "Yeah, I know it's there, but I hardly ever go."

But I think if I had to choose, I'd say the Science Museum. Partly because I had a bit of Cassini in there, the flight spare.

7) Do you get a sense of pride if you see a flight spare from an experiment that you've personally worked on?

It's really cool. It's not a very technical term, I know. It's really great when other people enjoy what I do. And I think for me, one of the most exciting things is when you're giving a public outreach talk, and you've got young kids in the room who are still at school, and you sort of look at them and think they'll be the ones working on the JUICE data.

Part of the magic of speaking with Michele is how animated she is – she captures you with her way of speaking, moving her arms about in an animated way. As she speaks she gets up and moves, picking up a framed picture on the bookshelf in the far end of the room.

I mean, let me show you. I gave a Royal Institution lecture about Cassini many years ago. And there was a four-year-old little girl who came up to me after and said, was there a robot on Cassini? And I talked to her about it, and she then sent me this [a drawing of the Cassini spacecraft]. So, yeah, there's Cassini, the spacecraft, and there's a robot peering out of the window. And I'm thinking if there's only one or two people that you can have that kind of impact on, then that's really cool. So my answer to her was that in some ways I saw Cassini as a robot because it's got enough good software on board, that it can make some of its own choices about things. It can make some of its own decisions. And so that was my answer to her. It wasn't an actual robot, but the spacecraft was sort of like a robot.

T: I must say the magnetometer boom is perfect.

Of course, you know, because I told her it was the most important part of the spacecraft. You know, I say that when people think I'm joking.

I'm also not joking when I say to kids in the audience, you'll be working on JUICE data. I'll probably be sitting in the sunshine drinking at Gin and Tonic saying, "I wouldn't have done it like that!" Because I won't tell you how old I would be when we get to Jupiter. You can add eight years on to what I am now.

8) Do you think aliens exists? We asked Nicky and surprisingly we didn't get a yes or no answer!

I'd like to rephrase the question slightly. The word alien always unsettles me. Life of some kind, elsewhere in our universe, yes. It might be bacteria, and that's part of what JUICE is all about, is to see whether the ingredients for life are there. And you know, I was really careful, and I told the team, when we presented to the European Space Agency for JUICE, "You can't mention the word life."

We're not searching for life. We're searching for the ingredients for life. It's a subtle difference, but with JUICE, we're not going to find life. With JUICE, we will be able to confirm whether one of the three, or all of the three moons, have the ingredients that you need.

And so for me, I think one of the most important realizations we've come to in the last 30 years is if you're looking for liquid water, you don't have to be close to the Sun to look for it. You know, in the last 50 years, the focus has always been Mars. But you can find liquid water much further away from the Sun, beyond the snow line, so that yellow dashed line is distance from the Sun. If you've got liquid water on the surface, it's going to be ice. But you can find liquid water oceans underneath the surfaces.

T: I've seen some concepts where NASA want to set up some robots on the surface and perhaps drill into the sub-surface of these oceans.

NASA was talking about Europa lander before they had a Europa orbit. And I said, but where do you go to land? You know, you need to do it in steps. And so there's a NASA mission called Europa Clipper, which will focus on Europa as JUICE is looking at Ganymede and Callisto. And following Clipper and JUICE, we will know where the ice crust is thinnest on these moons, and so that's where you go if you're trying to get under the surface. But you don't want to land somewhere where the ice crust is 100 kilometres in depth. You know, it's a bit embarrassing. So it's a step-by-step process.

9) Lastly, what's the one thing you would like JUICE to discover: is it the presence of liquid water or something more intricate?

Something more intricate. So Ganymede is a really cool place to go if you're a magnetometer person, because it's the only moon in the solar system that's got it's own internal dynamo field. And so when I lose sleep, what I lose sleep over is how we're going to separate all these effects out. We need to be able to separate the magnetic field of Jupiter out of the data, and that's changing all the time. It's a good thing it's changing, because that's what induces the electrical currents that flow in the ocean. So without that changing field, we wouldn't know there were actually currents there. So we need to separate that up. There's lots of plasma in the environment that generate currents, and they generate a magnetic field. Those change with time, we need to separate that out. Then there's the internal dynamo of Ganymede, which doesn't change in time, so that makes it a bit easier. And then last but not least, we've got these induction signals that are tiny. The instrument is good enough. We

just need to be ready to be able to do it. I want us to resolve depth of the ocean and its salt content, work out whether it's a global ocean, and then with the other instruments, see whether there's organic material there as well. We can't do it all ourselves.

But the other thing I'm excited about is what we don't yet know we're going to find. With Cassini and Enceladus, we never thought we'd make that discovery. So let's see what else there is there to discover!

Michele's dedication to both scientific excellence and promoting diversity in STEM is a gift to future generations of scientists. We thank her for her time and wish her the best for her future role at the IOP!

For a deeper insight into magnetometer technology and Imperial's role in the JUICE mission, simply scan the QR code for *Felix* Issue 1824. You can locate the article titled "Imperial makes instrumental contribution to JUICE mission" on page 9.



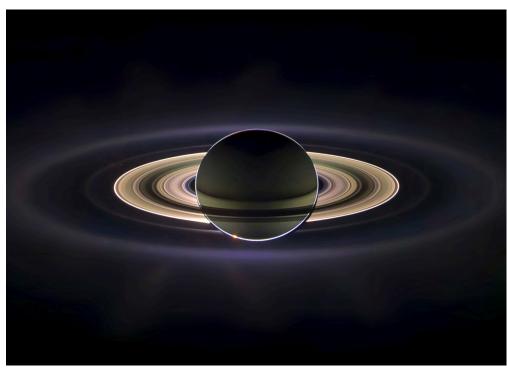


Image mosaic of Saturn captured by the Cassini spacecraft in September 2006. NASA / Wikimedia



Artistic impression of the JUICE spacecraft arriving at Jupiter. ESA / Wikimedia

Welcome to Felix Science!

To first years and all newcomers, a warm welcome to Imperial!

Science Editor TAYLOR POMFRET

elcome to the Imperial College community! The Science team offer a warm welcome to you all as you embark on this thrilling next step of your academic adventure. Amid the maze of lecture halls and bustling corridors on campus, we introduce you to *Felix* Science, your portal to the heart of university life.

Felix is not your ordinary university newspaper; it's an intellectual playground where students explore and engage with knowledge beyond textbooks. Our Science section stands as a gateway to the mesmerizing realm of scientific discovery and innovation here at Imperial and around the world.

In the past year, we've had the privilege of engaging in conversations with some of the most brilliant minds in the scientific community. Our discussions with luminaries such as the Head of Science at NASA, Dr Nicola Fox, have illuminated the future of space exploration. Roaming the exhibitions of the Science Museum, we conversed with museum curator, Alexandra Rose, unearthing the secrets of Earth's history

We also ventured into the realm of asteroid detection technology with the passionate Sam Deen, who's dedicated to safeguarding our planet from potential cosmic cataclysms. Alongside these fascinating interviews, we've covered captivating science stories sourced from Imperial College and beyond, covering important scientific events from the Nobel Prize to the Earthshot Prize.

Imperial has been a beacon of scientific inquiry since its establishment, has an illustrious history of pioneering discoveries that have left an indelible mark on the world. From the early days when Sir Alexander Fleming discovered penicillin, to the groundbreaking work of Sir Ernst Chain, which paved the way for modern antibiotics, Imperial's legacy in medicine has been transformative. In physics, our researchers have played a crucial role in unraveling the secrets of the universe, with notable contributions to space exploration, such as the development of the magnetometer device currently onboard JUICE. The spacecraft will probe a study led by Imperial Physics' Head of Department, Prof. Michele Dougherty, on the presence of liquid water exisiting deep within the subsurface of Jupiter's icy moons: Europa, Ganymede and Callisto. In the realm of engineering, Imperial's pioneers have spearheaded innovations in renewable energy, robotics, and artificial intelligence, ushering in a new era of technological advancement. Imperial College London's Department of Chemistry, with roots dating back to 1845 - long the College itself existed, has a storied history filled with scientific breakthroughs and colorful characters. From pioneering Nobel laureates such as Derek Barton and Geoffrey Wilkinson, to the groundbreaking wartime research of Frances Micklethwait and Martha Whiteley, the department's legacy is one of innova-





Queen's Tower. Doug Lee / Wikimedia

tion and discovery. Today, it continues to shape the future of chemistry and interdisciplinary collaboration as it moves to the cutting-edge White City campus. When you join the Imperial community, you become part of this legacy, with the opportunity to continue the tradition of pushing the boundaries of human knowledge and making a lasting impact on the world.

We firmly believe that effective science communication stretches your learning journey far beyond the confines of lecture theatres, compelling you to think critically, question relentlessly, and delve into the extraordinary narratives woven by science. If you are keen to join the Science team here, scan the QR code below to demonstrate your interest!

We hope you have an excellent time studying here at Imperial, and have lots of fun reading *Felix* throughout the year!

Want to join Felix Science?

Whether you're passionate about writing, illustrating, managing social media, attending events, video producing, interviewing, or even editing, we welcome all science enthusiasts to join our team and contribute to *Felix*!

Scan the QR code below to access our sign-up form!



ENVIRONMENT

£400 Sophia Prize will be awarded again this academic year

Environment Editor SIMRAN PATEL

he Sophia Prize for Environmental Writing is a £400 award given to an 'outstanding, inspiring, and accessible article that helps tackle climate defeatism and covers, or conceives of, an economic, cultural, or scientific innovation that helps fight global warming.' To be nominated for the prize, the article needs to either share a piece of environment-related good news or give an optimistic opinion related to climate change. For the former, submissions should be sent to Science (science.felix@ic.ac.uk) or Environment (environment.felix@ic.ac.uk). Opinion-based articles should be sent to Comment (comment. felix@ic.ac.uk). Submissions are open for the whole academic year, and will be judged by a panel of current and former Environment section editors prior to our final issue.

The 2022-23 Sophia Prize was awarded to Daniel Hesk for his opinion piece titled 'Climate defeatism: an engineered despair'. The article, available to read in the Comment section of *Felix* Issue #1824, explains how those responsible for the climate crisis are pushing the blame onto the innocent public so that they can continue to pollute freely.

Last year's winner and runners-up all have well-researched arguments and convincing calls to action. Writers who can effectively blend science with storytelling are likely to be nominated for the prize. For the chance to win £400, get researching and get writing!

Introducing Towards Net Zero

Felix speaks to Xiang Hong Tan, an Imperial student who founded a global climate education initiative this summer.



Environment Editor SIMRAN PATEL

owards Net Zero is a project harnessing the power of the Internet to raise awareness about the climate crisis and its solutions. It was founded only a few months ago by Xiang Hong Tan, a third-year Chemical Engineering student at Imperial. I sat down with Xiang Hong to find out more about the initiative.

What is Towards Net Zero (TNZ) and what are your aims?

TNZ is a global initiative that is student-led, and currently all the members are students from Imperial. They are mostly from engineering backgrounds. The mission is to educate and empower individuals with knowledge and skills to make an impact in sustainability. There are a few aims, segmented into different target groups. The first one is students, because we have the education and power to make significant changes in the future when we are working, especially in green careers. Then there's the younger age, kids or high schoolers. We might organise some workshops [or] make some simple, interactive, appealing content [for them].

I love how your content targets the people that haven't gone into university yet, because when they're making their course and career choices, they can have that in the back of their head. What format will this content take? It's a global initiative, so we want everyone around the world to access information. The only way we can do that is through social media, because everyone has social media accounts. Our priority is to upload to Instagram so that everyone around the world can come across [our content] and be Towards Net Zero

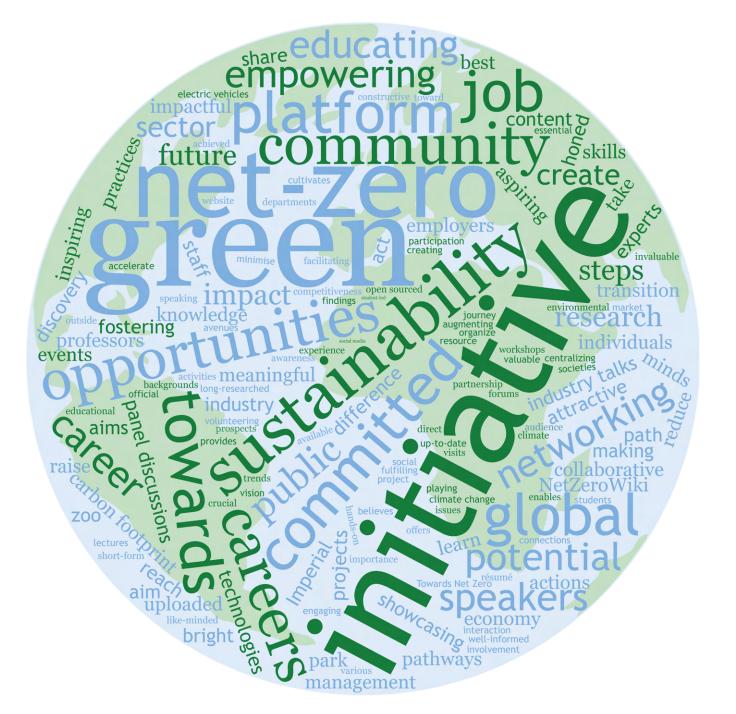
educated. Everyone uses Instagram, whether you're young or old. We also have content on LinkedIn to target the professionals, because LinkedIn is used to seek career opportunities, and there are a lot of green careers. We might make [professionals] knowledgeable and expose the LinkedIn communities to these green career opportunities.

You've got a lot of online presence – but since so much of your committee is Imperial based, are you planning any in person events?

We are going to organise some events with Chemical Engineering Society, because most of us [study] chemical engineering and one of [our] directors is part of their committee. We will collaborate – we provide ideas for content and they provide us with the location, the venue, and refreshments. Those [events] are only for Imperial students. But we also have plans to extend it by including international students. Currently we have a team based in France and they are mostly working on the politics and economy aspects of the TNZ initiative. I told them about the idea of organising activities at their university.

Are there any plans to expand outside engineering, to maybe get people on board from the sciences or even medicine?

Yes, currently we have medicine students as our ambassadors. Because, as I said, we want to be inclusive. There are some medicine students who are working on the simpler content — with titles like Climate Change 101 — so it's a simple step for them to contribute to this initiative. While us chemical engineering [students] will do more academic and more in depth [content].



A word cloud made using the Towards Net Zero initiative's mission and vision statements. Simran Patel / Environment Editor

In your mission and vision statements, you mention wanting 'productive environment measures' to be discussed on 'proper platforms'. What kind of measures and platforms are you promoting?

Basically research, because we need new research to solve problems. Without research, we don't know which direction we are going in, how we can change significantly, [and] how we can start the change. So we have developed and established an online platform called NetZeroWiki. It's open source, and everyone at Imperial can contribute by researching and uploading articles there. Everyone can come and make any changes they want - basically fact checking - and they can discuss articles. We want to create a community [that is] environmentally conscious, to get everyone to speak about sustainability, [and] to get everyone's attention on climate issues. We will do a lot of talks, seminars, workshops, which will be online or in-person depending on the topic. If [we] want to target the Global Initiative we'll be online and the topics will be quite general. If we do in-person events at Imperial, they will be more academic.

That's really exciting, any speakers lined up already?

I have some potential speakers. One is a researcher – she's working on how we can use AI to solve climate change. I think that would be super interesting. I'm also reaching out to different departments and research groups — for example, the Grantham Institute, the Energy Futures Lab, and the Sustainable Gas Institute. So we want to get some professors who are free and willing to give us a talk. You also mentioned in your vision statement that you want to see more climate-related improvements at Imperial, since most of your committee is based here. What sort of improvements do you want to see this year at Imperial?

I think Imperial is doing pretty good right now, they have [taken] a lot of action. I don't have any significant suggestions or ideas. I think maybe provide a shuttle bus, because there are some [students] coming from outer London who will use cars. [Imperial] can buy some electric cars and buses, because some of the current buses are still polluting.

[Professors] can actually opt for more [fuel-]efficient flights [to conferences]. There are some flights that already take their carbon emissions into account – using carbon credits, so they pay for how much carbon dioxide they emit. This money will be going to the sustainable energy sector. These airlines are actually doing something to help the [energy] transition. But the prices are, of course, more expensive. Professors can definitely spend more money to be part of the [energy] transition. But I think it should be a choice, not by force. We want people to be willing to make changes. Even though [professors] have the ability to buy cheap tickets, which are more carbon intensive, we should convince them that they have a choice.

So you believe in changing people's minds, rather than making people do things because they have to. Finally, how can students get involved with this initiative?

They can reshare our content [on] social media platforms to promote our initiative, exposing their friends and their communities to this knowledge and asking them them create more environmentally conscious communities. One person shares to 10 people, each of those shares to another 10 people – if we keep doing that, it will exponentially increase the number of people who are being environmentally conscious. That's our ultimate aim. We already have 150 followers, even though we just set up [in July]. These are the global members, and there are also committee members. If anyone is interested, they can sign up [to join the committee] and we'll allocate them to groups which they are interested in.

Scan the QR code below to follow Towards Net Zero on social media and sign up to be on their comittee!



COMMENT

In defence of Barbie

Greta Gerwig did what she does best – making women mourn for their girlhood and making men uncomfortable.

Comment Writer BARBARA ROSE

ould you rather watch Jaws with its iconic anxiety-inducing soundtrack, or *Grease* with its songs, dances, and comedy? Flash forward 15 years, and you must choose between the bizarre *Hocus Pocus*, with a plot that made me yearn to have been in the writers' room, and *Free Willy*, which could have put you off enjoying an aquarium ever again. Another 15 years later, and the choice is between *Mamma Mia*, which made every viewer dream of moving to a Greek island, and *The Dark Knight*, featuring one of the most iconic Jokers to date.

Adding to this saga of polar-opposite blockbusters with the same summertime premiere date, 2023 saw the release of *Barbie* and *Oppenheimer*. While some claim this was an intentional move by Warner Bros, the company behind *Barbie*, due to their vendetta against Christopher Nolan, director of *Oppenheimer*, it cannot be denied that both films benefitted from the rivalry. Many people who would have otherwise only watched one of the films saw both on the same day just to 'do Barbenheimer right', the notion of simply watching both films within the week of release deemed as being not enough. Planned outfits, primarily for *Barbie* watchers, became a must, and group plans for coffee before *Oppenheimer* and cocktails before *Barbie* were commonplace.

In my opinion, as someone who admittedly lacks the inclination to go to cinemas nearly as often as a cinephile, competition like this is one of the best things that can happen for both the creators of films and the theatres in which they're played. For the first time since at



Greta Gerwig discusses Barbie at an event. UKinUSA / Wikimedia Commons

least the pandemic, I had genuine difficulty finding a seat both on and after the release date. The films' combined box office grossing was over \$2 billion USD, and the seats for both films being sold out worldwide for weeks speaks to the sheer success both have achieved.

Something that Barbie has also achieved in spades over a short period is causing breakups, particularly affecting heterosexual couples. The film is Greta Gerwig's biggest project to date, with a greater budget, marketing, and controversy than any of her previous films. Gerwig, who also directed Little Women and Ladybird, is known for the feminist subject matter of her films, which are celebrated for their exploration of girlhood and the loss of innocence associated with maturing. Barbie is no outlier, exploring the effects of the patriarchy on both men and women after the residents of the feminist utopia Barbieland encounters the ideals of the real world. The film also features the employees of Mattel themselves, as well as a mother-daughter duo whose actions lead Barbie to begin experiencing human emotions such as sadness and anxiety.

Now, what about this could lead to breakups? They appear to be caused by men's reactions upon seeing the movie, and the ensuing conversation once the unhappy couple leaves the theatre. A common complaint against *Barbie* is that it has exaggerated the problems faced by women, and presents men as incompetent villains. Upon realizing how much the other gender stressed that 'not all men' are aggressors, and that men have issues too, women often found themselves embroiled in the fruitless argument regarding which gender has it worse. A lack of consensus can eventually lead to more problems or the realization that maybe the partners don't have the same viewpoints in life. For some, it's not even an argument that ends the relationship – some women who have been long unsatisfied with their relationships have reported that the movie made them come to terms with their previously repressed emotions, leading to them ending the relationship for their own sake.

Of course, one could argue that Barbie isn't the cause of the relationships ending. They would be right - Barbie is a common denominator, but not the cause. So what has it done to deserve this backlash? Firstly, Barbie is a comedy movie, making it easier to dismiss - the movie leans towards satire and humour to communicate with its audience, barring some select scenes, hence some of its messages can be missed by viewers, especially if they don't have previous experience with the topics discussed at hand. Secondly, the movie starts with an introduction to Barbieland - a feminist utopia where the Kens are considered second-class citizens, with no purpose in life other than making the Barbies happy. This predictably leads to outrage among certain viewers, when they have not yet made it to the end of the movie, which concludes that both the Kens and the Barbies were wrong. The film ends with both Barbie and Ken setting off to find their calling, no longer conforming to the toxic gender norms that had previously made them miserable. Frankly, it's as good a message regarding gender equality as it gets, and, like any good piece of art, it provokes emotions in its audience.

ARTS

Welcome to Art Land!

A beginner's guide to the art galleries of London.

Arts Editor GILBERT JACKSON

• o our brand-new freshers from all four corners of the world and beyond, as well as our returning cohorts, welcome to London and welcome back. Whether you're a fresh face to the Big Smoke or a regular City dweller, you now have the perfect opportunity to reap the benefits that London bestows upon the artist, the art-lover, and the art-curious. London has some of the oldest and largest collections and galleries in the world, but with so many institutions to choose from, knowing which to tackle first or which will appeal to you the most can seem difficult. Thus, Felix has compiled a list of essential galleries for you to experience and familiarise yourself with for a true London art experience.



A room in the National Portrait Gallery. The National Protrait Gallery

The National Gallery

The most obvious choice of a gallery in London is the National Gallery (often referred to as NatGal). Located in Trafalgar Square, the National Gallery is one of the UK's largest collections of international art. In this gallery, you can expect to find art spanning the Renaissance all the way up to the 20th century, including paintings by big names like Da Vinci, Titian, Turner, and Bacon. NatGal is the perfect place to experience all kinds of art from different periods, and get a flavour for a variety of artists and art movements from around the world.

The Portrait Gallery

Around the corner from NatGal is the National Portrait Gallery, a vast collection of portrait paintings from over the ages. This type of gallery appeals not just to the art-lover, but also to the avid historian, as portraits give us insight into historical periods and into the personal lives of famous figures throughout these ages.



The Victoria and Albert Museum's Exhibition Road entrance. Nigel Goodman

Tate Britain

Located in Pimlico, the Tate was founded by the co-owner of the 'Tate & Lyle' sugar company to house a large collection of acquired art. Tate Britain houses one of the largest collections of British romantic art, and in particular art by Turner and the Pre-Raphaelites (Millais, Holman-Hunt, etc.). This gallery is the perfect place to explore exquisite landscapes and portraiture, and throughout the year holds exhibitions profiling both old and contemporary artists.

Tate Modern

Located on the South Bank in a revitalised power station, the Tate Modern is the place to go for your modern art fix. Holding art from famous artists such as Mattisse, Rothko, and Dali, as well as modern contemporaries, Tate Modern holds the UK's largest collection of installation art, as well as multimedia art such as photography and sculpture. Expect to see frequent exhibitions throughout the year from both celebrated artists and upand-coming contemporary artists.

The Dulwich Picture Gallery

Located in the idyllic Dulwich Village and housing the oldest permanent collection in the UK, the Dulwich Picture Gallery is rich in paintings by Dutch and French masters of the Baroque as well as a large collection of Tudor portraits. While it may be slightly far afield for the South Kensington dweller, the collection is well worth the trip, being rich in history and exemplary of Baroque art.



The Wallace Collection

For the more decadent and maximalist art seeker, the Wallace Collection is the gallery for you. The Wallace Collection is located in Manchester Square near Bond Street, and houses a phenomenal collection of Baroque, Rococo, and objet d'art. Famous French artists such as Fragonard and Watteau, and Dutch masters like Reubens and Rembrandt make up the permanent collection.

The Royal Academy of Art

Located in Burlington House on Piccadilly, the Royal Academy of Art (RA) doesn't hold an extensive permanent collection comparable to NatGal or Tate Britain, however it makes up for it with numerous large exhibitions hosted throughout the year as well as the provision of lectures and educational courses for both artists and amateurs.

The Courtauld

Located on the Strand, the Courtauld Collection is located in Somerset House on the embankment of the Thames and contains a fantastic selection of Impressionist and post-Impressionist art, with artists such as Van Gogh, Monet, and Cezanne presented in the permanent collection.

The Victoria & Albert Museum

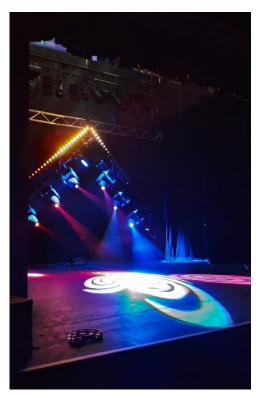
Across the road from Imperial College, the Victoria & Albert (V&A) houses a vast collection of replicas and original artwork across all media, from jewellery to sculpture. Regular visitors and students alike may learn about art from around the world without needing a plane ticket.

A theatre for everyone!

Imperial's DramSoc cordially invites you to join them!

Arts Writer SOPHIE R. POINTON

ere is a fact: you are in one of the best cities for theatre in the world. A few stops on the Tube can take you into the heart of the West End or a stroll down the street could lead you to the door of a hidden gem of a community-run amateur theatre. Not only can you see the biggest names on the biggest stages, you can get to the theatre in London cheaply, quickly, and with people who are similarly addicted to being part of the expectant hush of an audience... to hearing spellbinding music... and to experiencing fantastic storytelling. From 10p standing tickets at the Royal Court Theatre to £5 tickets at the National Theatre to DramSoc socials, there's almost too much choice.



The Union Concert Hall, DramSoc

Speaking of DramSoc, I can personally attest that being part of the messy fun that is a bunch of STEM students totally in charge of bringing the Arts to life was a game-changer during first year. Some members fully immerse themselves in the chaos while others juggle DramSoc with other commitments, but the society remains as passion-driven, accepting, and wacky as it was when it was founded in 1907. I loved it, everyone in DramSoc loves it, and we want to share it with you. Whether it's through lighting, set-building, acting, choreography, or any of the other branches of theatre-making, that's vour decision.

Two floors above FiveSixEight in Beit Quad is the Union Concert Hall (UCH), looked after by DramSoc technicians (who know everything there is to know about it) and frequented by Musical Theatre Society, Cinema Society, Imperial's numerous dance societies, and many, many more. If your interest is piqued, come ask us about what else happens in the UCH and how you can get involved at our Welcome Week stall on the 3rd of October. We have various workshops scheduled for each of the specialities needed to create theatre throughout the year, and a motley array of DramSoc members can reliably be found at the Union Bar on the first and third Tuesdays of each month.

See right for a handful of DramSoc's upcoming events. There will be many more planned socials throughout the year and a couple of DramSoc-directed plays that aren't even mentioned here. As a matter of fact, the production team for Waiting for Godot are looking for a little extra technical help, too...

So, welcome to Imperial!



DramSoc rehearsals, Elsa Germain

Editor's Note

Dear Readers,

After an 'editor-less' hiatus last year, it was about time we restored the Arts section to its former glory. When we think of arts, many of us think of painting or sculpture; however, art is also theatre, opera, photography, architecture, and installations. Here in Arts we strive to bring attention to all media in its artistic glory so you can see it with your own eyes; to bring opinion, criticism, and education right to your front door.

With that in mind, I offer you the chance to come write for the Arts section!

Whether you're a flourishing artist or merely a gallery-wanderer, whether you're a true thespian or simply a theatre-hopper, the Arts section wants to hear from you! Seen an exhibition recently? Tell us your thoughts in a review piece. If you want everyone to know about how wonderful architecture is, why not write an educational piece for readers to learn from your experience and knowledge? And if you hated that one particular play you saw last week, then jot down an opinion piece for all to be warned off it!

If you wish to get in touch with the Arts section please email at... arts.felix@ic.ac.uk Join our team of regular writers today!

DramSoc Events Schedule

OCT 9-11



Waiting for Godot, TBC



The Bald Prima Dona, Union Concert Hall



ост

3

Auditions for Romeo & Juliet, South Kensington Campus

DramSoc Welcome Week

Stall, Union Concert Hall



Trip to a Performance of Pygmalion, The Old Vic

'The theatre, the theatre, what's happened to the theatre!?'

When did jukebox and film-based musicals take over?

Arts Editor GILBERT JACKSON

any moons ago, I had the delight of talking to a fellow musical lover all the way from New York, the cradle of musical theatre itself and the dwelling place of many musical greats such as George Gershwin, Stephen Sondheim, and both Rogers and Hammerstein. After comparing our favourite musicals (I stand by my pick of *Hello Dolly*!), she then went on to say that what struck her about London was how many adverts there were for musicals based on every film under the sun, with the same title of [insert film here] - The Musical!. I asked her whether that was also the case on Broadway, and she reassured me that you find it there all the time, but that she was surprised to see it here as well. She was expecting to see something fresh and new.

I had wondered if this spree of musical mediocrity had indeed become an epidemic; wondered which power ordained that we should experience such delights as Back to the Future – The Musical! and Shrek – The Musical!. The confirmation that this was indeed an epidemic and not some West End-borne plague made me ponder how we can debase ourselves and wallow in the so-called-entertainment of an ogre belting out ballads with chordbased piano accompaniment.

The actor Jeremy Irons wrote in the Telegraph that 'people would rather sing a song than watch quality theatre' and that 'the serious age of the 1950s, 60s, and 70s were now gone'. On this point I have to agree with him. What first popped up on the musical scene were a growing number of jukebox musicals such as Mamma Mia! and We Will Rock You.Instead of having composers and librettists handcraft new music and lyrics for a gripping story, it's easier (and cheaper) to take existing songs and throw them into a fairly basic plot. I will admit that some of these are entertaining, especially for a silly night out with friends, but for someone who wants to see something fresh and bold,



Scene from Shrek - The Musical. Joan Marcus



The 2019 revival of A Chorus Line. Mellissa Taylor

these do not suffice.

The jukebox is not a new phenomenon, in fact, we can trace its roots even to the first musicals which, in effect, were musicals featuring all the popular song cycles by famous composers. What separates the greats from the new, however, is that, when incorporating already popular songs into a musical, they went to great lengths to write massive orchestral overtures, interludes, and motifs to expand on their music, as well as bringing in huge casts of dancers and entertainers. What we get from our musicals now is songs followed by dead silence and dialogue while you wait in anticipation for someone to start singing something else.

From there, writers of new musicals could see how the jukebox was beginning to outperform and so writers took a different tack to their musicals which was...to just write all your songs like pop songs and hope for the best. But that's not enough you see, as people can be wary of new things, and a new musical by someone you've never heard of could be a recipe for disaster! To combat this, the solution now is to use familiar plot lines, and since, on average, fewer people read and take trips to the theatre, film plots have become the stories everyone knows. With this equation we find ourselves at the answer; pop songs plus film plots equals modern musicals.

What is the solution to this situation we find ourselves in? I'm afraid to say that there may not be a solution at all, for a few reasons. Firstly, currently occupying most of London's major theatres for ungodly lengths of time are the heavy hitters of the theatre world, Wicked, The Phantom of the Opera, Les Misérables, and The Cursed Child spawned by J. K. Rowling, leaving little wiggle room for budding composers and playwrights to take root and produce fresh, new musicals with sublime music and inspired plots. My second point is that a full-on musical with choreography, orchestras, and novel composed scores are far too expensive for most theatres to stage. It is much cheaper to minimise cast numbers and bash out popular songs than it is to have a fully orchestrated and choreographed feast-for-the-eyes.

It looks like we may have to put up with our predicament of seeing [Film] – The Musical! sprawled across every tube station and splashed on the side of buses for the foreseeable future. Despite that, I still hold a glimmer of hope that the continuing popularity of Sondheim (A Chorus Line, Les Misérables, and now the revival of Guys and Dolls) stands as a testament to the fact that people still want to hear great musicals, and that maybe someone will soon be inspired to take up a pen and write the next best thing to hit the stage.

MUSIC

American Football: Enough said

The Midwest emo pioneers took us back to '90s Illinois right here in London

Music Writer AMANDA PAUL

aving clawed my way through a dense crowd of feral fishnet-clad Doc Martins wearers, I found myself in a spot about 3m away from the barriers, surrounded by die-hard The 1975 fans. Don't get me wrong, I'm a big enjoyer of the indie-pop giants, but this Finsbury Park crowd was teetering on the obsessed super-fan side, I was scared. The lineup was exciting with huge names like Cigarettes After Sex and Bleachers also on the list - it was set to be a great day for music.

We settled in as Pretty Sick opened with a fine set, nothing to write home about really. The guitarist was the most entertaining to watch, squeezing every possible drop of tone out of his guitar. With him was a competent singer and a great drummer. Generally though, their energy was lacking and it seemed like they wanted us to win them over rather than the other way round, but the music was good. The highlight was definitely their final song 'Dumb' as the majority of the crowd knew this one and that injected a temporary boost of energy into us.

As they left the stage, a silence befell the park - the early July sun was strong, all the carefully applied eyeliner was beginning to melt, and the alt Tumblr crowd around us were dropping like flies. We desperately needed someone on stage, and someone good.

As if in answer to my prayers, four middle-aged men humbly took to the stage. To the untrained eye, it would have looked like a bunch of dads picked up some instruments, but to me, I knew my ears were about to be blessed by the godfathers of Midwest emo, and you could not contain my excitement. The 1975 demographic however were gener-



ally not as excited as my group, it was clearly not a fantastic fit for American Football to be performing alongside the Dirty Hit folks, but there were a few pockets of anticipatory chatter around us which just added to the atmosphere. Their sound check was lengthy, but that's understandable – after all you can't rush greatness.

Eventually it ended and they were ready! They opened their set with 'Stay Home' a melodic, atmospheric, mainly instrumental track, with a scattering of repeated, mumbled lyrics, easing us nicely into their more polished, laid-back sound after the grungier Pretty Sick set. It was at this point that I began to cry, I guess it was just overwhelming watching the band that popularised my favourite genre almost two decades on from their debut album, but it's also not the first time I've cried at a gig so maybe I should just start taking tissues. Next was 'The One With The Wurlitzer', an American Football essential, featuring drummer Steve Lamos on the trumpet. I could tell this one was going to be challenging for the crowd, with interesting chords and piercing trumpet accidentals, it's an acquired taste for sure.

Having opened with more instrumental songs, 'Silhouettes' was a welcome introduction to frontman Mike Kinsella's singing voice, steady and speech-like, supported by his cousin Nate's harmonies - it started with a whopping three glockenspiels layering cascading rhythms, a really impressive piece. I was blown away by just how identical the live versions were to the recordings. Throughout their set, not a single one of them uttered a word, letting the music speak for itself and shrouding the band in a delicious mystery.

Then out came a guest singer in place of Paramore's Hayley Williams for their collaboration 'Uncomfortably Numb'. The levels were a little strange for this one, with Mike's voice overpowering his counterpart's but it was a crowd favourite, slightly more upbeat and singable than the previous songs. Kudos to the sound team for getting the volume of Nate Kinsella's bass just right, the band's twinkly guitar riffs and funky drums are tied together perfectly by his interesting rhythms and carefully selected intervals and it was important to give the bass enough weight.

As if in answer to my prayers, four middle-aged men humbly took to the stage.

At this point in the set, groups in the crowd were beginning to lose interest, I guess if you don't know their music, it's quite challenging to get into it, especially live, due to its slower, more emotional nature. People were beginning to sit down around me, no way to treat emo royalty – but don't get me started on the state of concert etiquette nowadays. Luckily for them, the set was winding to a close and the recognisable opening riff of 'Never Meant' emanated from Steve Holmes' guitar. Instantly, I saw about 100 phones shoot up in front of me to capture the iconic riff, I can't judge, I too immortalised it on my Instagram story (sorry followers).

With that, Mike stepped up to the mic, uttered a quiet 'thank you', and that was it. Who knew how long I'd have to wait to see them in England again?

29 SEPTEMBER 2023

Blues Kitchen NW1 7JN, Camden

Blues Kitchen, also in Brixton and Shoreditch, is our default live funk and soul club night host. Go on a Friday or (and) Saturday for a late night boogie. Go on a Wednesday night for half price cocktails (and a boogie). Arrive before 9 PM for free entry, but we would recommend booking a table if you intend on having a slightly costly bite: wings, (fucking delectable) burgers, milkshakes - did we mention cocktails? A classy crowd, a classy house band, and a classy place. Tara favours the Brixton chapter because there's a whole floor dedicated to dancing (and you can avoid the Camden crowd). So. Much. BOOGIE.

Dalston Superstore E8 2PB, Dalston

DSS has quickly risen to become one of London's best LG-BTQ+ hubs. Refusing to confine itself to a single category, it hosts club nights, drag brunch, movie nights, and even a café, covering you for every occasion. When I think about what makes me want to come back, it's not necessarily specific aspects of the events, but the people it has brought together, the atmosphere and sense of community it creates.

Retro Café 2.0 SW6 6BS, Fulham

Tucked away on trusty Munster Road, this quaint café was opened by rock and blues lover Andy with the dream of having a welcoming source of coffee and pastries in the daytime, that transforms into a live music bar by night (once you shift the couch a bit and bring a few stools and amps). Sit with a book (or your lectures, Imperial, gosh) on a couch under the low-hanging American diner-inspired lamps and enjoy Andy's '60s/'70s folk rock selections: Simon & Garfunkel, Joan Baez, Fleetwood Mac, you get the gist. Tara rewarded her working week with an aged beef burger on Friday nights while enjoying Niall Kelly's unparalleled blues renditions: a combination of cheer, chortle and chills. You'll never hear anything like it.

Slug @ The Redback SW6 5NH, Fulham

relationship Slug. The playlist is essentially unchanged since Joe's first trip over years ago but sadly the £2.50 Jagers are a relic of the past. When he last went, they were a hefty £2.70. Do not enter this place unless it's a Wednesday night otherwise the only other people there will be underage locals and some concerningly old men. Do not enter this place sober, you'll see past the façade and will want to leave immediately. Most importantly, do not enter this place expecting anything other than sweaty mediocrity then you're going to be pleased because it's actually a fun night. It's crowded but you see everyone you know. The music is the same every week but they're all good singalong songs. You'll hate yourself the morning after as you drag yourself to a 9 AM lab session

but it was worth it.

White Heat Club @ N1 9JB, Islington

One of the better Indie club nights in London with free entry on Dice before 11:45 (get the Dice app, if you're looking for gigs to go to as well). Be warned, it might be empty until 12 but stick it out and I promise it picks up into a good night. There's a bar downstairs that you can go back down to once you have your free stamp so chill down there until it gets busier upstairs. Once it does, this is one of my favourite nights out in London, playing hits from Jamie T and The Strokes to The Cure and LCD Soundsystem.

Heaven @ G-A-Y WC2N 6NG, Embankment

he Lexington



is for you. Playing slay pop girly hits from If you're looking for a starter gay club, this place the '80s to now, it's a great place to get your boogie on and dance the night away. However if you're looking to meet other LGBTQ+ people, TURN AROUND! The place has too high a concentration of straight men trying to flirt with gay women.

Ministry of Sound SE1 6DP, Elephant & Castle

The Ministry of Sound club in Elephant and Castle caters to diverse crowds, perfect for those appreciative of different sub-genres of electronic dance music. The club comprises of four rooms, each presenting with different music genres including house, techno, trance, and drum 'n' bass. They host many events and rave parties, and have Milkshake student nights every Tuesday. Ministry of Sound is great for casual club nights or full-on raves, and generally stays open till 5-6 AM. It's not the fanciest of clubs to go to, and does get quite hot and stuffy, but the DJs and liveliness really make up for it. There is an outdoor area with benches and food stalls, which is nice for socializing with other students. They are very strict about final entry, so make sure you get there on time otherwise you will be denied entry!

> Others to Check Out Scala Troxy The Jazz Café F1 The Windmill Café 1001 Phonox

Troubadour Map Studio Café Next Door Records Sebright Arms Gremois Underworld Fabric

Infernos SW4 7UH, Clapham

Joe has no memory inside of Infernos and maybe that's for the best. The only thing he can recall is there being a floor-to-ceiling fish tank on one of the walls. If anyone makes the trip to the depths of Clapham, please let us know if this is true or if he hallucinated. The place is full of the usual Clapham types - but the music is fun, cheesy pop so as long as you're adequately prepared (thank you, Aldi wine), you'll love it.

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Shacklewell Arms

E8 2EB, Dalston

A classic pub and live music combo, the Shacklewell Arms is a rock and alternative music staple. Expect a warm, woody atmosphere, ornate with grunge-y posters (designed enviably better than anything Tara could produce) advertising both local and international music acts that the venue provides a platform for. Expect eccentric clothing, colourful hair, distressing piercings, and a fairy-lit beer garden plus smoking terrace. Expect intimate club nights, gigs, and lots of beer. Don't expect it to smell nice.

MOTH Club E9 6NU, Hackney

What MOTH Club lacks in sense of decor, it more than makes up for in the variety of events that grace its metallic fringe-curtained stage: stand-up comedy, live gigs, '80s club nights ('Dancing in the Dark' is Music Editor AND Editor-in-Chief approved), *alternative* '80s music ('Pull Up to the Bumper'), soul club nights ('Deptford Northern Soul Club'), and (not to fret) pop club nights ('For the Love of Pop'). The ONLY reservation Tara has: the distance.

Pickle Factory E2 9DU, Bethnal Green

Take a short walk from Cambridge Heath Overground towards the edge of Bethnal Green and you will find an old pickle factory tucked neatly away in an industrial cul-de-sac. This pickle factory hosts an eclectic mix of DJs usually playing some form of house or techno every Saturday and Friday night. The line-ups are usually solid and often feature touring DJs alongside residents. It can be expensive to get tickets, especially if you decide late, so it's good to look out for Thursday events, which often have free tickets.

CIUBS & LIVE MUSIC VENUES

Brought to you by Joe Riordan Maryam Bint Omar Giovanni França Taief Miah Matija Conic Amanda Paul and Tara Pal Chaudhur<u>i</u>

Old St. Records EC1V 9NQ, Shoreditch

Old St. Records needs a reservation days in advance but for good reason. It has an incredible selection of funk, soul and jazz acts. 2-for-1 cocktails everyday between 5 PM and 8 PM. And some really sexy pizza. This isn't a regular hang out, of course, but more like a treat-yourself night out. Be sure to check out its sister locations: Venn St. Records, Northcote Records, and Eastcheap Records.

Corsica Studios SE17 1LB, Elephant & Castle

A gem of the London underground scene, Corsica Studios is a venue that hosts not just club nights, but also a variety of concerts and arts events. It's fairly small, with a capacity of about 500, and frankly, that is Gio's favourite part – it becomes somewhat cosy. Corsica has two rooms, the first containing the main dancefloor, and the second, much smaller, proposing a darker and enveloping atmosphere. His first exposure to the venue was thanks to Imperial's very own DJ & Production Society last year when they hosted a collaborative event with other universities. He was instantly hooked – and must have attended over 10 nights there since. Whether it was with the fashionista crowd of Maxxing, or with the 'protesters' of Mums Against Donk, Corsica is a place where he can immerse into escapism, and most importantly, feel safe on a night out.

Ormside Projects SE15 1TR, Peckham

Ormside, located in an unassuming industrial unit between a cash & carry and mosque in Bermondsey, hosts some of London's most atmospheric and intimate performances. Artists and DJs tend to fall under the 'experimental' label leaning into the venue's industrial qualities. My most recent experience there was unforgettable, ¥ØU\$UK€ ¥UK1MAT\$U headlining an accidental meetings night. The 360° sound, central booth, and small crowd of 200 helped him create a magical four-hour set where I felt completely immersed in the sound.

FILM

The A24 formula

Film Writer JONAH HEWETT

f you were to go ahead and google the most recent quirky, occult-spooky, wacky or slightly boring movie that you watched in the cinema, there's a pretty good chance that it was distributed by A24. Despite only being founded 11 years ago, the output of the studio has generated sixteen Academy Awards, including two Best Pictures (*Moonlight* and *Everything Everywhere All At Once*). Their status as an 'indie' film studio is getting pretty debateable to say the least.

So what gives? All the oldheads of Hollywood and NY *Times* journalists have been telling us that cinema has been lying dead and buried at the bottom of a pile of Disney dollars for the last decade at least. How did A24 manage to grow so quickly whilst only selling tickets to people that like to call movies 'films'? Well, first and foremost because that isn't really true – at least not anymore. A24 might have started outside of the sphere of 'mainstream' audiences, but Everything Everywhere grossed over \$140 million. The stated aim of the studio at its founding was to attract the new online generation away from summer blockbusters, toward films where directors and writers were given more artistic liberty. Coming out of the back of the recession era of the late 2010s, A24 saw a vacuum for that sort of studio and made their home in it.

That unique offering, combined with either a shrewd eye for picking diamonds from the rough or a significant A24 logo design sketch. GrandArmy

amount of luck, enabled A24 to build a loyal following amongst both consumers and filmmakers. Personally, I think no small part of their success is due to their partnership with Ari Aster, director of *Hereditary* and *Midsommar* and one of the experts spearheading the modern, surprisingly popular horror genre. Out of all A24's films (bar *Moonlight* and *Everything Everywhere*), those are the ones that I've heard people talking about the most, regardless of whether they'd claim to be 'film fans'. Maybe something about films like that enables them to break out of the potentially unappealing dullness or aloof-ness that people might usually associate with 'arthouse' cinema.

Their reputation for quirky or left-field films has led fans and critics alike to coin 'A24' as a genre in and of itself. Whether that will help or limit their success in the future remains to be seen, but after this year's Academy Awards, they've certainly established themselves as a Hollywood main player.



A24 partial filmography in a collage. Mike Buzadji

Citizen Kane is actually pretty good?

Film Writer JONAH HEWETT

few weeks ago, a friend and I sat down to watch *Citizen Kane* for the first time. I wasn't sure what to expect – everyone knows it as 'the best film ever made', to the point that it's become a joke, especially because you'd be hard-pressed to find someone who has actually watched it these days. To be honest, I wasn't even sure what it was about – I thought it was some kind of 1940s crime drama, because I semi-consciously associated the name with the fairly unsuccessful 2010 videogame *Kane and Lynch 2: Dog Days*, which is rife with criminal activity. Oddly enough, it isn't that – it's a two-hour chronicle of the life of newspaper tycoon Charles Foster Kane, a fictional character partly woven from several contemporary influential media moguls of the late 19th and early 20th century. *Citizen Kane* begins by dramatically and cryptically killing its main character, and then launches into an energetic '40s newsreel that describes his entire life – and the events of the film – in sensational detail. Suddenly the newsreel ends, and we see a shadowed room, punctuated only by two shafts of light and a

cascade of overlapping conversation from the men creating the newsreel, their silhouettes barely outlined in the gloom. Then exterior, night-time, the roof of a club. The camera moves up and over the skylight, framing the woman slumped lonely over one of the empty tables, then descends through the roof and pulls in close. *Citizen Kane* has thus far zipped through several genres and a myriad of cutting-edge filmmaking techniques that would have been exponentially more difficult to pull off back then, and we're not even fifteen minutes into the film. People say old movies are slow and boring because they often are. But now imagine you're in the audience in 1941, and the last film you watched in the theatre was *Gone with The Wind*, and you've just watched those four opening scenes. The linear structure and lingering dia-

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logue you expected has gone with the wind, only to be replaced by the coolest shit you've ever seen happen in 35mm.

It's easy to see why *Citizen Kane* was so popular at the time, and why it has remained a favourite amongst filmmakers and film critics. But whilst technical and narrative innovation is a commonly given explanation when people ask why some old film is so popular, it can a little esoteric. But *Citizen Kane* actually is more than just a bag of movie magic tricks. The script is watertight – not a single line really feels wasted, and there are so many zippy one-liners in the newsroom scenes that it almost feels like Leslie Nielsen's *Citizen Kane*. The back-to-front structure works great, creating a thin semblance of



Citizen Kane (1941).

truth that gradually gives way to the more nuanced – but still obscure - reality. It's an obvious simile to the news sensationalism that is Charles Foster Kane's bread and butter, but it feels fresh and well placed here where it might feel played-out in a modern film. And in general, the fact that it was so new and innovative in 1941 seems to have made it age so much better. That being said, there are still plenty of mid-century attitudes sprinkled throughout, if that's something you'd rather avoid.

I put off watching this film for years, and I really wasn't sure I would like it, but I did. If you're at all interested in cinema as a medium, or any of the technical aspects of filmmaking or writing, it's absolutely worth seeking out. If that's not your thing though, there's no shame in giving it a miss – there are plenty of great, new films that deserve your attention just as much.

Through the Years: Scarlett Johansson in...

The career of an iconic actress in five movies watched over the summer break.

Film Write ZANNA BUCKLAND

2003. Lost in Translation

Often hailed as a great modern classic, *Lost in Translation* was one of those films that felt slightly intimidating, and potentially disappointing, to watch. It's a film that calls for the right headspace and an atmosphere free of interruptions and distractions for full appreciation, so what better time than a lazy summer evening at home?

Lost In Translation is subtle and effortless. It has a natural flow to it that feels almost melodic. There is a gentle rhythm and comedy to Bill Murray and Scarlett Johansson's performances that brings their characters gracefully to life. This is the work of Sofia Coppola's insightful writing.

As they say, 'a picture paints a thousand words', and each frame of *Lost in Translation* paints double that. The brilliance of Coppola's direction comes from her ability to evoke depth and emotion with minimal dialogue. She creates artistic scenes around her characters' solitary experiences, during which we are asked to question and envision their thoughts. It's a style of filmmaking that begs to be watched over and over again; each viewing revealing more about both the people on the screen and in front of it.

The audience is gradually given more context about Charlotte (Johansson) and Bob Harris (Murray), and so over the course of the movie can fill in more of these silent snapshots with ideas about what they may be thinking. Is the lonely young wife of the photographer thinking about leaving him now that she is a college graduate and searching for a career? Does the pensive washed-out actor dwell on his youth or ponder his future? We don't get all the answers from Coppola, because we simply don't need to. It's a film that observes others only as we can in real life; from the outside. It is indeed 'an exercise in empathy' as one reviewer described it. We can never know everything that goes on inside someone else's head, all we can do is share experiences and conversations that may tune our frequency closer to theirs.

The choice to set the film in Tokyo was equally clever, as the tone of the city mirrors that of the two lost souls: vibrant yet isolated, advanced and traditional, fun and solemn at the same time. The many facets of Japan's capital reflect those of the human condition. The romantic element of the film is both crucial and inconsequential; something that can only really be explained by the film itself. Though advertised as a romantic-comedy-drama, Lost in Translation far outpaces any other film falling under this category, and really has earned the countless accolades it has received. An excellent decision for 17-year-old Johansson, as it secured her the Best Actress award at the 2004 Venice Film Festival.

2008. Vicky Cristina Barcelona

There aren't many films that I won't give a fighting chance by watching the entire reel, but unfortunately for ScarJo, this was one of them. Chosen on a whim by my sister and I while travelling in Barcelona, the title alone didn't give us high hopes. Directed by Woody Allen and featuring some dicey acting from its main cast members, including Spectre's Javier Bardem and Iron Man 3's Rebecca Hall, the film documents two friends' trip to Barcelona during a time of personal crisis for each of them. Vicky is married, Cristina is not; the two meet a suave (or sleazy) artist while on holiday, and proceed to engage in various affairs. The appearance of Penelope Cruz as the artist's estranged ex-wife did little to improve the situation. The plot is unsatisfyingly circular, and despite watching only the beginning and the end we learned about as much about the human experience as we would have if we'd seen the whole film. It feels more like a drama than a rom-com, and even that genre assignment seems misplaced. Allen's trademark is profound commentaries on the dynamics of romantic and sexual relationships and their lasting effects on people, but Vicky Cristina Barcelona is the opposite

of that, and highlights some of the worst aspects of Allen's filmmaking. To see Johansson excelling in this stage of her career, I'd recommend giving The Other Boleyn Girl or He's Just Not That Into You a go instead.

2011. We Bought a Zoo

We Bought a Zoo is your typical feelgood family movie, and is based on a true story to boot. Based loosely on journalist Benjamin Mee's memoir, the film details life after his wife's death. Reeling from the trauma and left with two grieving

kids to look after, Mee (played by Matt Damon) looks for a change of scenery by buying a new house outside the city. The only catch? He has to take ownership and management of a zoo along with it. Scarlett Johansson plays downto-earth zookeeper Kelly Foster a combination character of three zookeepers Mee worked with to reopen the facility.

In the film, Rosemoor Wildlife Park is located in California, but its real-life counterpart is Dartmoor Zoological Park in Devon, England. The Rosemoor version of the tale is heart-warming, heart-breaking, and at times terrifying, but most importantly it brought attention to the incredible story of the real zoo. In biopics such as this one, it takes a certain skill to adapt the story into a screenplay without reducing or overdramatising it. Director Cameron Crowe is exceptional in doing this, and the portrayal of human and animal interactions is masterful. We Bought a

Zoo is definitely comfort movie material; it's one to come back to again and again. Johansson's boldness and fiery repartee with Damon help make it a particularly entertaining watch.

(Benjamin Mee also studied Science Communication (MSc) at Imperial College, graduating in 1992!)

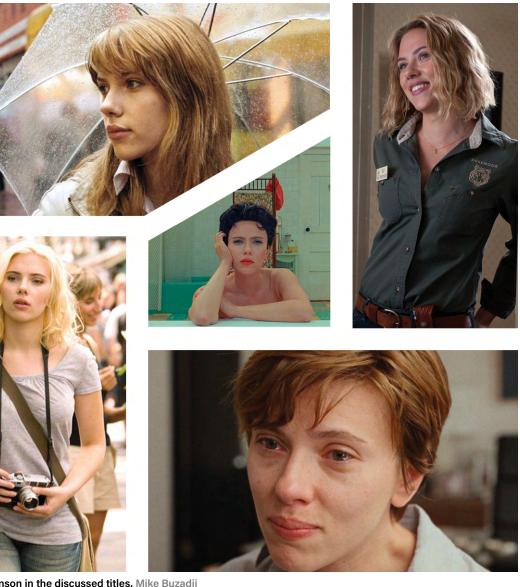
2019. Marriage Story

Marriage Story presents another incredible performance by Johansson, as Nicole Barber, wife to Adam Driver's Charlie Barber and mother to Azhy Robertson's Henry. Deeply emotional, Noah Baumbach's drama follows Nicole and Charlie as they navigate the decay of their marriage, the fallout of their divorce, and eventual reconciliation. It is unusual and refreshing to see a story about a breakup in which neither party is motivated by the desire for an alternative relationship. The film traverses every possible feeling that could be experienced under such circumstances: anger, fear, regret, nostalgia, admiration, freedom, love. Johansson and Driver have great

her role as Nicole's aggressively supportive lawyer, and it is somewhat surprising that Johansson wasn't granted the same accolades. Her ability to create such a convincing, authentic character and display the necessary range of emotions so unreservedly is what makes the actress irreplaceable.

2023. Asteroid City

I was fortunate enough to secure tickets to Glastonbury this year, and even more fortunately managed to squeeze in a free viewing of Asteroid City on the



Scarlett Johannson in the discussed titles. Mike Buzadji

chemistry, but they really shine in their solo scenes, showing vulnerability in the face of separation. The movie presents well the multitude of dilemmas and the reassessing that happens once a couple has decided to get divorced, as well as the impact it has on any children of the marriage and family members involved. Despite all their differences and how much they change, no matter what happens between them, the couple puts their son Henry first. Marriage Story earned Laura Dern a Best Supporting Actress Oscar for Sunday morning. Hot and exhausted, a couple of friends and I filed into Pilton Palais - the festival's in-house cinema - to watch Wes Anderson's newest masterpiece. We were treated to an opening short film featuring and introduced by Ben Wishaw, as well as a personal introduction to Asteroid City from none other than Tilda Swinton, who is an avid supporter of Pilton Palais.

Anderson is known for his unique, iconic cinematic style, so much so that it has sparked imitative trends in the worlds of photography and videography. His ability to maintain a clean, minimalist look without compromising on depth and intricacy is astounding, and one that he has spent years perfecting. Asteroid City is no different, and takes this to a whole new level by incorporating the mixed media of live action footage and animation, both in technicolour and black and white.

It's easy to imagine that 'Asteroid City' is simply a quirky American town name and it is, to some extent - but the film also has actual extraterrestrial ties. Running

> alongside this surprising venture into the world of astronomy is the story of a father trying to break the news of his wife's death to her children while on a road trip to a gifted and talented science program. I'll say little more about the plot for those who have yet to see it, but it is an unexpectedly wild ride of a movie.

> Even the cast is iconic, filled with many of the familiar faces that have frequented Anderson's previous projects. There is a specific kind of acting that threads through all of his movies, and it's a style that Scarlett Johansson and the rest of the A-list cast - Jason Schwartzman, Tom Hanks, Maya Hawke, and Tilda Swinton to name a few – execute magnificently. The actors move and speak as deliberately as the camera moves between set pieces, allowing focus to fall on the visual contents and dialogue of the scene. This could be misconstrued as stiff and rigid if it lacked emotion, but, on the contrary, it

gives the heavier parts of Asteroid City's script time and space to sink in; freezing actions and facial expressions for a few precious moments.

I'll never tire of watching Wes Anderson's work, just as I'll never tire of watching the evolution of Scarlett Johansson as she continues to take on brilliant directors and complex personas.

North Star - the directorial debut of Kristin Scott Thomas - premiered at the Toronto Film Festival on 7th September, and is Johansson's latest acting credit.

BOOKS

Summer snapshots

Your Books editor documents a season full of literary travels.

Books Editor ZANNA BUCKLAND

While the interview of the summer holidays. We have the form the sum of the s

Before the Coffee Gets Cold by Toshikazu Kawaguchi

Kawaguchi's novel adaptation of his play *Before the Coffee Gets Cold*, is a series of linked short stories set in an old café in a back street of Tokyo. The charming Café Funiculi Funicula is home to some eclectic regulars, welcoming staff, and a magical chair by which time travel is possible. Though this time travel has absolutely no scientific basis, customers are able to visit the past or future provided they adhere to a specific set of rules.

Kawaguchi implements the tools of magical realism that are employed in other Japanese works such as the Studio Ghibli films and the novels of Murakami. Through his characters' poignant encounters, Kawaguchi explores themes of love, loss, family, and marriage, all with a sense of fun and optimism. The scene-byscene short story style and easy conversations in the novel make it an excellent read for when you're on the go.

Chéri by Colette

Colette is one of the most acclaimed French writers of the early 20th century. Based in Burgundy and Paris, in France, Colette churned out novels and short story anthologies, most of which have been translated into English, among other languages. Among her most recognisable titles – *Gigi, The Vagabond*, and her *Claudine* series – is a short novel called *Chéri*. *Chéri* tracks the life of its impetuous title character through the eyes of his older lover Lea.

Lea is a sophisticated 49-year-old socialite clinging to her beauty, while Chéri – given name Fred Peloux – is a 25-yearold bachelor. The two engage in a quiet affair until Chéri is called to wed a girl nearer his own age. Colette's development of Lea examines the need for women – and older women in particular – to uphold their reputation in society battling against the desire for fulfilling sexual relationships.

To delve deeper into the life and mind



of the French author, who writes from her own experiences with affairs and scandals, watch Keira Knightley's portrayal of her in the film *Colette*.

Miss Austen by Gill Hornby

The title of Miss Austen refers not to Jane Austen, but to her older sister Cassandra (Cassie), who supported Jane throughout her life and career. The novel is a fictional account of the circumstances leading Cassie to burn a collection of letters written between herself, Jane, and several of their close friends. Gill Hornby took it upon herself to fill in the gaps surrounding Cassie's motivations through a series of fictional letters and memories, all based on real facts about the family and their relatives. Hornby emulates the tone and vernacular of Jane Austen's own novels, adding a dash of family drama

and a drop of witty humour to the mix. If the name Hornby sounds familiar, it's because Gill is sister to author Nick Hornby. Inspired writing clearly runs in the family, as *Miss Austen* is delightfully entertaining and a touching portrayal of the loving relationship between the Austen sisters.

The Summer Book by Tove Jansson

Recommended to me by a friend, Tove Jansson's *The Summer Book* was an intriguing read. If you're familiar with Jansson's Moomin books and illustrations, it will come as no surprise that *The Summer Book* is filled with similarly quirky sketches and uniquely vivid descriptions.

Jansson's premise is the chronicle of a long childhood summer through a series of loosely connected but independent vignettes. Just as our own summer memories are linked to specific interactions and activities, so is the relationship between main character Sophia and her grandmother; simultaneously fleeting and immortalised.

The book explores youth and curiosity through Sophia's wide-eyed, emotional analysis of her surroundings, juxtaposed against Grandmother's experience and knowledge. Scandinavian simplicity shines through in this gem of a novel, and it's perfect reading for the transition from the summer to autumn months.



Felix reading on the beach. Isaac Winson

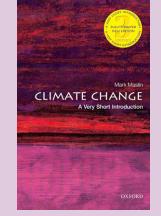
A Life on this Planet by David Attenborough

Split into three parts - 'My Witness Statement', 'What Lies Ahead', and 'A Vision for the Future' - David Attenborough's latest publication is a comprehensive commentary on the interconnectedness of biodiversity and climate change. Attenborough leads the reader through his career in conservation, his lifelong relationship with the natural world, and his time working at the BBC, demonstrating how these passions intertwined. While becoming one of the most beloved television presenters in the world, Attenborough was able to lend time to wildlife preservation and climate change causes, learning about these issues in great detail. In this semi-memoir, he calls for people to think more urgently about how what we can collectively do to reduce our impact on the planet and brings attention to those who are already making great efforts to do so. His informed predictions of what our world may become in the following decades are enough to give the reader nightmares and make them want to get up and join a climate protest. A Life on Our Planet is a poignant recollection of a life well lived as well as a guiding light for living in a better future.

Currently reading...

Climate Change: A Very Short Introduction by Mark Maslin

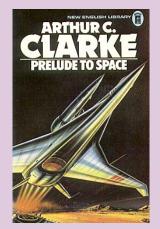
The Oxford University Press Very Short Introduction books are, as the title suggests, brief but complete overviews of various topics, explained by an expert on the subject. Climate Change (originally Global Warming) is one of the earlier titles in the series, which started in 1995, and as such doesn't have the most up-to-date graphs. However, it still covers a relevant history of climate research and the impacts of climate change and global warming on society, both tangible and hypothetical.



While Maslin's exploration of statistics and figures is excellent, the frequent editorial errors throughout this particular title make it a slow read. Regardless, the *Short Introduction* books are compact and efficient, and are still useful to get a feel for the subject terminology, as well as basic concepts and background.

Prelude to Space by Arthur C. Clarke

One of Arthur C. Clarke's lesser-known novels, Prelude to Space, documents the documentation of the first moon landing. It was first published in 1951, 18 years before the actual moon landing took place, and was one of many literary preconceptions of the event. Prelude to Space's place in the science fiction genre could be debated, as much of its plot takes place before anyone actually steps foot on the moon. Instead it follows American historian Dirk Alexson as he learns the technicalities and politics that go on behind the scenes, in boardrooms and laboratories. The perspective is an interesting one, that has been of increased public interest in the years since the real mission of Apollo 11. *Prelude* is proving an entertaining read, and even more so given Clarke's choice to house the space agency in London, including locations not far from our own university's campus.



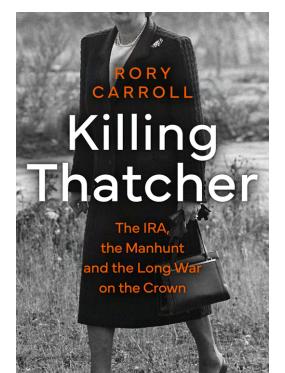
Book review: Killing Thatcher

A commentary on Rory Carroll's investigation into the near-assassination of Margaret Thatcher.

Books Writer TOM SAVAGE

illing Thatcher, written by *The Guardian*'s Ireland correspondent Rory Carroll, retraces the events surrounding the infamous Brighton bombing in 1984 and the IRA's attempt to kill the sitting Prime Minister, Margret Thatcher. Released in the wake of the 25th anniversary of the Good Friday agreement, the non-fiction book is the first to focus solely on the event.

The man tasked with assassinating Maggie Thatcher, ironically named Patrick Magee, was someone who can't catch a break. He had a troubled relationship with his wife, got arrested countless times, and, this goes without saying, didn't manage to kill Thatcher. Carroll's detailed account of Magee's whereabouts in England are interspersed with his own reflections later on in life, which are characteristically dry – for example, 'my life was too chaotic' used to describe '...a series of setbacks'. Magee deliberately presented himself to the world as so dull that no one seems to even remember what he looks like (a useful trait for someone who has at-



tempted to assassinate a sitting prime minister); Carroll does well to chip away at this façade and reveal a more detailed portrait of the man. The bleak reality of being an anonymous IRA operative in England is contrasted with the historical implications of the task at hand. Just as how Guy Fawkes planted a bomb under the Houses of Parliament that didn't even go off, and now effigies of him are burned every year. The events of the book must seem surreal to those born after The Troubles; 'one of the great what ifs' that even Thatcher herself chose not to comprehend.

Carroll dwells on some of the major turning points throughout The Troubles, such as the death of Bobby Sands and the rise of Gerry Adams' Armalite and Ballot Box strategy, providing context for readers unfamiliar with the period. However, by focusing on the 'England Department' - and specifically a single operation of theirs - these public-facing protagonists are sidelined in favour of a different kind of history. One populated with regular people: students, office workers, and landlords. The accounts in the book provide important insight into the human cost of the troubles on both sides. Relief comes, somewhat unsurprisingly, not from the members of the IRA (and Gerry Adams), but from the British detectives tasked with locating Magee. The tangle of regional agencies searching for Magee as he evades capture across the UK, with the regional jurisdiction changing every other page, results in a thrilling chase of comically bureaucratic proportions.

Maybe it's still too soon for a screen adaptation of these events; Carroll has been sensitive with his accounts and sources (with obvious reason), and many wounds are still fresh, particularly regarding Thatcher's then 'loyal enforcer' Norman Tebbit, whose wife was paralysed by the assassination attempt. However, the book is a thorough account of a major event in modern British history that is genuinely hard to put down. Following the successes of *The Crown*, with its relentless march from past through to present, and the *Happy Valley* genre of regional crime drama, *Killing Thatcher* has all the hallmarks of a hit series. Regardless of how people judge the event, Carroll has provided a valuable account, and one to remember.

Combining the stanza with heritage

Our incoming Books editor discusses literature by Black British authors in a new weekly segment.

Books Editor FIYINFOLUWA OLADIPO

ach week, I will be recommending works from the pantheon of Black British Literature, to have at the forefront of your mind. This issue, in honour of National Poetry Day (October 4th 2023), we read five excerpts from works by Black British poets, inspired by cultural, historical, and personal experiences.

1. *Kumukanda* by Kayo Chingonyi

"If my alternate self, who never left, could see me what would he make of these literary pretensions,"

British-Zambian writer Kayo Chingonyi's poem *Kumukanda* presents a beautiful reckoning of what it means to have lives strewn across countries. The questions, decisions, and complications that arise and necessitate or, at worst, demand a voice for them to be heard.

2. *A Portable Paradise* by Roger Robinson

"And if I speak of Paradise, then I'm speaking of my grandmother"

The announcement of Roger Robinson's collection A Portable Paradise as the T. S. Eliot prize-winner felt like seeing the sun fully descend into the horizon. An arc finally completed by this legendary British-Trinidadian poet and musician whose work has been dedicated to stringing together words describing the Black British experience into poetic forms. A Portable Paradise very much carries oral traditions in its words. It deserves to be kept close, in the breastpocket, much like the words of similarly great poets like Maya Angelou and Gwendolyn Brooks across the Atlantic.

3. *A Parable of Sorts* by Malika Booker

"On / the strike of dawn, we skittered from shadows, the redeemed walking day's straight-road into warpland."

A Parable of Sorts is a different kind of poem, intense from the onset and persis-

"

at the frontiers, or playing hot-shot senator in Rome;"

This poem, taken from the prologue of the verse novel (yes, those exist!) *Emperor's Babe* by Booker prize-winner Bernadine Evaristo, is a beautiful reflection of what can occur in the fusion between forms as she writes, so soulfully, an evocative depiction of a woman challenged about the man she loves.

The announcement of Roger Robinson's collection...as the T. S. Eliot prize-winner felt like seeing the sun fully descend into the horizon. An arc finally completed by this legendary British-Trinidadian poet.

tent until its final line, when it lets off a great big exhale. This remarks the talent with which tenet of Black British poetry, Malika Booker, describes a scene of dance – rhapsody in motion – as well as displays a range of fierce poetic techniques that make the challenges of capturing dance in poetry seem easy.

4. *Amo Amas Amat* by Bernadine Evaristo

"Who do you love? Who *do* you love, when the man you married goes off for months on end, quelling rebellions

5. *The Perseverance* by Raymond Antrobus

"I am still outside the perseverance, listening for the laughter."

Gut-wrenching, powerful, and moving are words not quite able to capture the weight with which Raymond Antrobus narrates his personal tale about fatherhood. It's a beautiful poem, and one which I hope you'll read and enjoy.

These poems are not a definitive list, as there are many more poems out there capturing the Black British experience, but I hope seeing this sample of what's available might get you interested in the world of Black British poetry, and captured by the insight and imagination of these incredible poets.

To read the full version of each of these poems, scan the QR code here:





Envato Elements

FOOD&TRAVEL

Mama Pho, the paradox in a bowl



Read about Minjae's cultural experience with Vietnamese food just a 5-minute walk from campus.

Food Writer MINJAE KIM

B ute street is a gem of a road in South Kensington, where one can find stunning restaurants serving a diverse range of food, from small Mediterranean plates to bubble tea, all for decent prices. I was searching for something that would revitalise me; something hearty, brothy. There I found Mama Pho.

As soon as you go in, you are not only welcomed by the employees, but by the aromas of herbs and meaty wafts. One of the waiters was nice and knowledgeable enough to recommend a few dishes to me; I ordered Phở Tái – a rice noodle soup



The front page of the menu explains more about Vietnamese cuisine. Minjae Kim

Mama Pho's logo. cafemamapho.co.uk

with rare beef – and Chả giò – deep-fried spring rolls filled with pork and prawns. Condiments were simple but effective; I was served lime, mint, bean sprouts, coriander, and chilli. Basic, but everything you needed to complement your pho.

Approximately 10 minutes after ordering, both dishes arrived. Again, simple and effective. The Phở Tái was beautifully displayed. The medallion-shaped beef's red translucency was a centrepiece surrounded by swirling indulgent broth. It was perfection in its moment.

So why is it a paradox in a bowl? The broth was clearly (no pun intended) packed with umami from the beef, but it the fresh after-taste was perfectly balanced out with herbal notes; a contradiction in a sip. This makes you want it again and again and again. I enjoyed my last sip of soup as if it was my first. But this was only the tip of the iceberg. With this golden foundation laid down upon my tongue, the specific combination of tender beef, soft noodles, and condiments creates something soul-filling. Something to note is that I personally find a lot of restaurants serving Phở with beef brisket, but having the rare beef medallions added more joy to the bowl, due to its flavour and tenderness*.

The Chả giò was a delight to eat. The spring rolls had a flat, thick, multilayered structure, rare to find in commercial spring rolls, which made the rolls a mountain's worth of joy to eat. Not a tiny fragment was spared once I had finished eating, and I was surprised at the preservation of the rolls' crispiness. The filling inside was delicious, although it did not seem special to me. It was delicious for



Inside the cafe, guests no longer feel as if they are in London. Minjae Kim

sure, but didn't make a big impression. The spicy fish sauce complementing the rolls was very good, however, again; nothing special. Maybe I was expecting more, after my experience with the Phở; but it was disappointing compared to

that.

With all of that I spent only £23.50, and it was enough to make me full. Will I be coming back to this restaurant? Defi-

specialise in pho, but also making Bánh Mì (similar to a sandwich), and Bún and Com (rice vermicelli and egg noodles), which I want to try next time. Not only

With this golden foundation laid down upon my tongue, the specific combination of tender beef, soft noodles, and condiments creates something soul-filling.

nitely. Although the Phở cost £12, which I felt was on the expensive side of pho noodles, I would still pay the premium to enjoy a bowl of gold. Also, they don't just

that; the bustling atmosphere the place has, with chatty people and busy staff, makes you feel you're not simply eating Vietnamese food - you are in Vietnam.

Menu

Starter

1. MANGO CHICKEN/PRAWNS

2. GÒI GÀ Chicken and cabbage salad served with spicy fish sauce and sprinkle of peanuts 🥔

3. GỎI TÔM Prawns and cabbage salad served with spicy fish sauce and sprinkle of peanuts 🥔

4. GÖI CUÓN her rolls with pork, prawns and salad served with hoisin sauce.

5. GOI CUÓN CHAY Herbs, tofu and soya sauce 🦸

6. GỎI CUÓN GÀ Grilled chicken, herbs and salad 🧳

7. GÖI CUÓN Egg Summer rolls with egg, pork, prawns and salad served with hoisin sauce

8. CHẢ GIÒ Deep fried spring rolls filled with pork and prawns.

9. CHẢ GIÒ CHAY Vegetarian spring roll

10. CÁNH GÀ CHIÊN BƠ Deep fried chicken wings with garlic butter and lemongrass.

11. CÁNH GÀ CHIÊN NƯỚC MẮM Deep fried chicken wings coated in spicy fish sauce

12. MỰC CHIÊN GIÒN Deep fried squid in garlic butter and chilli.

13. CUA VÒ MÊM Soft shelled crabs x Tamarind sauce Crispy crabs with a Sweet & Tangy marinade.



14. PHỞ TÁI Rare beef noodle soup with fresh herbs

15. PHỞ GÀ Chicken noodle soup with fresh herbs.

16. PHỞ CHÍN Well cooked beef flank noodle soup with fresh herbs

17. PHỞ TÁI CHÍN Rare and well done beef noodle soup with fresh herbs.

18. PHỞ ĐẶC BIỆT Combination meat of beef, chicken and prawns noodle soup with fresh herbs.

19. BÚN BÒ HUỆ with round vermicelli noodles and fresh herbs

20. BÚN TÔM HUỆ King prawn in spicy soup vith round vermicelli noodles and fresh herbs.

21. VEGAN PHỞ A soybean based soup with fresh ingredients; Mushrooms, Carrots & potatoes $\,\,{
m V}$

Dessert (Cold Dessert Drink)

Beef shin in spicy soup

31. CHÈ BA MÀU Three coloured dessert with red beans, green jelly and coconut cream

32. CHÈ SƯƠNG SA Dessert with agar agar, jelly mung beans and coconut cream.

33. CHÈ THÁI Special dessert with agar agar, jackfruit, toddy palm seeds, durian and coconut cream.



The Cha giò (top right) and Pho Tái (center). Minjae Kim

Bun & Com (Vermicelli Noodles / Jasmine Rice)

22. COM GÀ NƯỚNG Grilled chicken served with salad and spicy sauce 🌾

23. COM SƯỜN Grilled lemongrass pork steak served with salad and spicy sauce 🏓

24. COM CURRY sweet potatoes, carrots and coconut cream

25. BÚN CHẢ GIÒ THỊT NƯỚNG Grilled pork with lemongrass and spring roll served with salad 🥙 🗯

26. BÚN CHẢ GIÒ CHAY

27. BÚN SƯỜN Grilled lemongrass pork steak served with salad and spicy sauce

28. BÚN GÀ NƯỚNG Grilled chicken served with salad and spicy fish sauce

29. BÚN CHẢ GIÒ CHAY

30. TOFU XÀO Flash fried tofu, beansprouts and lemongrass served with salad 🛷 🗯

Sides

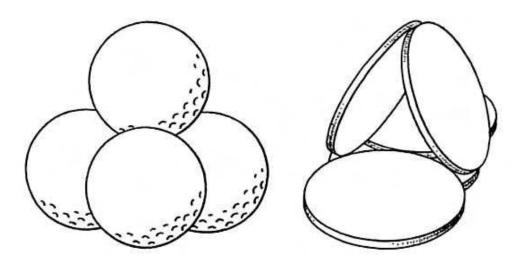
* Rice 1 bowl

Fried Egg To be added with main dishes only

PUZZLES

Puzzles Editor ISAAC WINSON

Hello Puzzlers! It's the first issue of a new term – how exciting! An interesting classic puzzle for you on the right here: Four golf balls can be placed such that each ball touches the other three. Five pennies can be placed such that each coin touches the other four. Is it possible to place six matchsticks such that each touches the other five? The matchsticks must not be bent or broken.

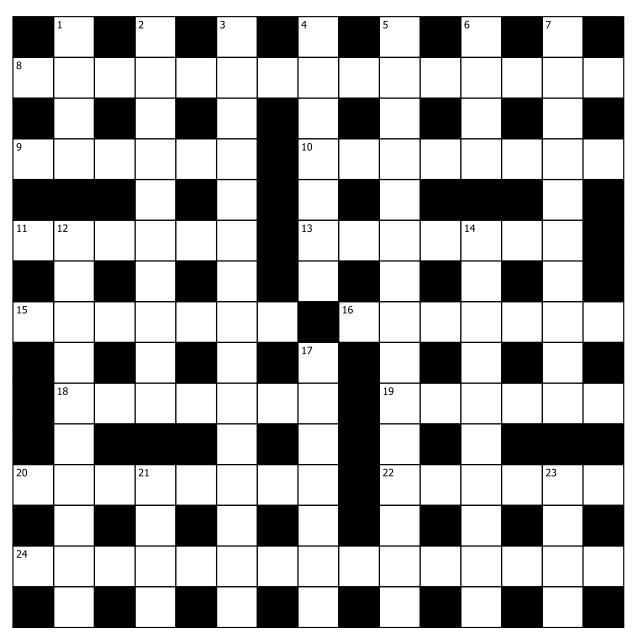


The aforementioned golf balls and coins. Martin Gardner / Hexaflexagons, Probability Paradoxes, and the Tower of Hanoi

FELIX #008



CROSSWORD



Across

8 1985 Robert Zemekis film (4, 2, 3, 6)
9 First name of English comedian and actress known for Taskmaster and Afterlife (6)
10 See 23 Down
11 Renowned student of the Vale Aule, chief vassal of Morgoth. Known for his large peeper (6)
13 Method used to add emphasis to the written word (7)
15 British animated children's show, first released in 1974, centring around a shop of full of lost things (7)
16 Colloquial term describing negative signs in a relationship (3, 4)
18 Fruit closely related to the plum (7)
19 More strange (6)
20 Implement to separate solids from liquids (8)
22 Paid assassin (6)

24 Objects within which feedback can be given (10, 5)

Down

1 Tool used on a guitar to change song key (4)

- **2** Term first used in the 1880s to describe large buildings (10)
- 3 Name for nausea and vomiting in first few months of pregnancy (7, 8)
- 4 Distress at being humiliated (7)
- 5 Largest terrestrial animal on Earth (7, 8)

6 Public school which has educated actors such as Hugh Laurie, Tom Hiddleston, and Eddie Redmayne (4)

- 7 The UK's most common species of legless Squamata (5, 5)
- **12** Fictional steel alloy known to be virtually indestructible, and comprising a famous set of claws (10)
- 14 Obstruction of blood supply to an organ (10)
- 17 Compound known to reduce inflammation (7)
- 21 Winner of the 2013 oscar for best picture, directed by Ben Affleck (4)

23, 10 Across British Actor best known for Star Wars and The Bridge on the River Kwai (4, 8)

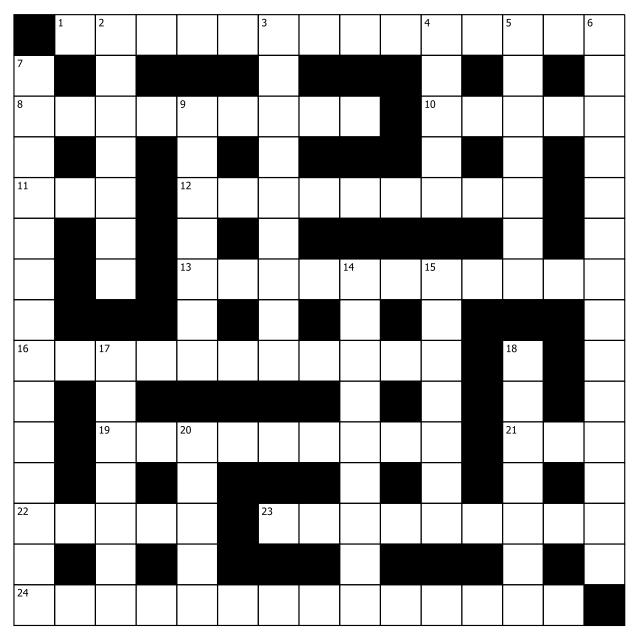
SUDOKUS (EASY)

			5		2			
		9					4	6
	1						5	
	7			3	8			9
					6	8	2	
		6	2		5			1
	2	4						
8		5		9				

			1	4			5	
	7			3	8			
	2	6	5			7		
				2			3	1
	5		8					
3					1			
		2			7	6	8	
		8	6					

						1	5	
4					5		2	8
			8					6
7				3				
	2		7					4
				1				5
6	1			9		8		
	7		3		8			
		4		6				

CRYPTIC CROSSWORD



Across

1 Fashionable ghost heard a code – people call him a sleuth (9, 5)
8 When dragonflies flitter off (e.g., a sign there's something in the water) (6, 3)

10 What Quacks get king to put last in tight spaces (5)
11 Initially a great argument for cooking like a toff (3)
12 Could the last of mafioso go? The start of something inside – the case left leads to no-where (4-2-3)

13 Where to find a union and a complement (4, 7)

 ${\bf 16}$ Wears jeans, decorates them unhappily (7, 4)

19 Old show-off gets bent abruptly backward (9)

21 A stupid simpleton (3)

22 Awake our english son vigourously! (5)

23 Lead inside me gin! Scramble to make it come out (9)

24 I carbon copy golf literature messily from the source of all that's unholy (8, 6)

Down

2 An ideal place for rock-makers (7)

3 Restrain connections for something to fiddle with (9)

4 It's wild dismay to lose last of colleagues to golden handshake (5)

5 High speed vehicle handles the same backward (4, 3)

6 Relaxed approach – effortless attempt (4, 4, 4, 2) **7** Get a higher angle for your goal here! (8, 6)

9 Vocals echo weirdly in the recesses (7)

14 Design kink for a German banger (9)

15 Takes their extra buildings by force (7)

17 Our teen is a mess during the journey (2, 5)

18 Animation cut short – played back with last seconds to keep them going (7)

20 What you do on the cross? (formerly the bird) (5)

SUDOKUS (MODERATE)

		7						2
	4	8		3				
						6		1
9								
				1	9			
		6	4			7		
		4	1	6				7
	2			5			4	
		1	3					5

			2		1		
					-		
1	9	4	7				5
				9			
				7	3		1
	8	5				9	
	5		9		6		
	4		6			2	
5		9		4			
		3					6

		9	1				
7							
	3	1	7		2		
2				8			
	9		3		5		7
	4	8			1	6	
4			2	9		7	
				6			
		5				2	6

Autumn Elections[®]23

Nominations Open

Monday 9th October

Nominations Close Tuesday 17th October

Voting Open Monday 23rd October

Voting Close Thursday 26th October

Results Announced Friday 27th October

imperialcollegeunion.org/elections

FIND OUT MORE!





MEET YOUR OFFICER TRUSTEES

Your Union is led by five Officer Trustees who are elected every year (by you!) in our Leadership Elections.

Your Officer Trustees are here to improve the **student voice for all students** at Imperial. They **represent you to College** on issues such as your course, department and faculty as well as any other problems you may have during your studies.

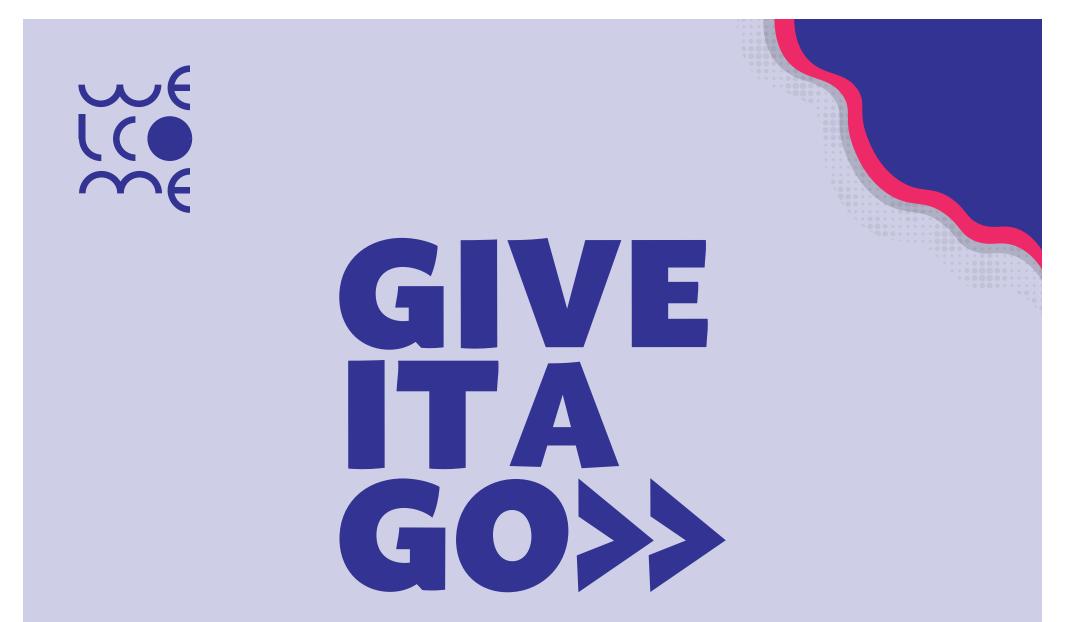
They are here to make your time at Imperial **even better** and to ensure you have the **best possible experience**. They work for all students to create a **positive and welcoming student community**.

FIND OUT MORE!



Christian Deputy President (Clubs & Societies) Andreea Deputy President (Welfare) Camille Jnion President **Stephanie** Deputy President (Finance & Services) **Yi** Deputy President (Education)





Scan the code to find our Club, Society & Project **Give it a Go** events





LIBERATION & COMMUNITY NETWORKS



Yuanze



Ariba



Yuxi



Aglaia



Jordan Working Class Officer



Nathalie Black & Minority Ethnic



Wendy Gender Equality Officer



Avi



Emmanuel **Disabilities Officer**

The Liberation and Community Networks are run by students who identify with, ally with, or are interested in each particular group. So what do the networks actually do? They:

- Organise campaigns to tackle particular problems faced by their members
- Facilitate the building of community amongst their members and wider community
- Provide a safe space for students that identify with them
- Are a support network for their members particular for personal problems related to their identity.



SOCIETIES

Imperial's societies

Welcome to Felix's Societies section, where we aim to paint a picture of the vast scene of student-led clubs at Imperial.

Societies Editor CHARLOTTE PROBSTEL

S o what kind of societies are you thinking of joining this year?" my friend Iva went and asked me as we unpacked my two large suitcases in October of my first year. "I dont know. I want a bit of a range." I said. "Maybe football for sports, one for arts, and one for education. Maybe singing and medical devices?" I responded. I had already read the website and seen the mass of societies available, but I was thinking about which would be most useful. Should I take advantage of the societies on offer and join as many as I can? Should I try a new sport, activity, or skill? Should I join the Korean society to try and learn the language better? Many questions such as these were in my head. I had a few people around me to ask questions, so I took advantage of that.

"Don't join too many societies." said Amy "you won't have time to make a proper impact in so many societies. Just focus on one or maybe two. Also, you have your classes to focus on." I took her advice and only joined one society in my first year. I quit early on due to the time commitment, and thought I had to wait until my second year to try again. Year two rolled around and I so I tried again, but again found I couldn't commit. In early February of my second year, I applied to *Felix* and I now finally feel I have found my place within Imperial's societies scene.

"Go to the Give-it-a-Go sessions, stick to only one or two societies", said another friend. "Join one cultural (your country) and one personal interest (e.g., an art or climate change club)". This friend is currently the chair of her cultural society and co-chair of the CEC.

At *Felix*, we sent a short survey out to our Instagram followers to see what advice they would give to you, the newest batch of students at Imperial. From 20 responses, 85% joined a society in year one. An average of 2-6 societies were joined by each person, yet the majority only joined one (an outlier with 9 societies raised the average). 50% had joined a cultural society, and, of the ones that did, gave an average rating of 3.6 out of 5. When asked to rank their societies time commitment from 1 (lowest) to 10 (highest), the average response was 6.5/10. The mode was 10/10.

Students were also asked to comment on their societies. Out of 19 responses, the majority of comments said that they 'enjoyed it a lot', 'made lots of great friends', and made some of their 'fondest memories'. Some members quit due to 'inactivity', 'superficial and cold corporate meetings', lack of 'interesting events', and one responder mentioned they 'didnt have enough in common with people'. That is completely understandable. I have quit two societies purely due to personal reasons. Sometimes quitting helps you move forward to other things. The final question asked for people's advice on joining societies. 'Go for whatever makes you interested in things'. Societies are a great way to 'make friends', 'stay fit', 'relieve stress over exam time', 'try to a sport', 'meet invaluable people', 'build your career', 'broaden your horizons outside of school' and 'be adventurous'.

Don't join too many societies. You won't have time to make a proper impact in so many societies.

I remember that, at the Freshers' fair, it was overwhelming having people talking to you and trying to persuade you to join them. 'Look at the website before going to Freshers' fair and make a list; it can get a bit overwhelming going in blind', one survey responder said. Freshers' week is already packed with socials and introductory events, and the fair is the cherry on top of all these fast-paced events. However, one answer of the survey made a good argument to 'use the low-commitment period of Freshers' week to really dig in and attend as many events as you can'.

Sign-ups are often in the same week and tryouts might be the next day. Only 24 hours to make a decision! Back in first year, I knew I had to make my decision quickly, so I chose what I knew: football. A great start, and I thought that would be it, until I became Societies editor for Felix.

Imperial Athletes

In order to join any official sports clubs, you must join Imperial Athletes; the annual fee is £10. Many sports teams play in national organisations and leagues against other universites, hence competition is a natural part of these societies. Most sports have tryouts early on in order to determine the official teams which will play in national leagues. Other societies are more welcoming for people who want to join in the middle of the year. I can't speak for all societies, but if you are interested in joining mid-term, just send an email or a message on Instagram or other social media, and see what their policy is. I felt more than welcome to try each society that I interviewed for articles last year. You might also see multiple societies for the same sport. ICSM stands for Imperial College School of Medicine; the medics team, while RSM stands for the Royal School of Mines, which houses departments such as Materials, Bioengineering, and Earth Sciences.

Cultural Societies

Last year, I watched Singaporean society perform a beautiful and hilarious three-hour long self-written musical and wrote an article to comment on their success. I was amazed. Pure enjoyment filled my tears as I cried of laughter. Furthermore, seeing how the Turkish society raised funds after the earthquake or how my friends announced the Moroccan society's plans to respond to the earthquake in Marrakech, I began to see that cutural societies are more than just homes away from home for international students; they are also opportunities for others to learn and support without leaving the UK.

Felix and Societies

I interviewed a number of societies in the last few months, and I plan to interview more and more in the upcoming terms, so please email felix@ic.ac.uk if your society would like to publish a feature, or if you would like to give me the honour of interviewing your society to writing about it myself. The Societies section aims to tell the success stories of our students outside of academics. We at *Felix* love to learn more about the incredible ideas that our peers come up with.

Find more information about each society and see all sports clubs by scanning the QR code below.

ОСТ

3

Until next time, Charlotte



South Kensington campus

Welcome Fair,

*Not an exhaustive list; see Imperial College Union's 'Clubs, Society & Project A to Z' page for every registered society.

ARTS & ENTERTAINMENT

Comedy - Comedy society Dance - Argentine Tango, K-Pop Funkology, Dance (ICSM), Dance Club, Dance Company Film - IC Cinema, FilmSoc Lyrics - Poetry Music - Alternative Music, Big Band, Chamber Music, Live Music, DJ & Production, Jazz Soul and Funk, Orchestra (Sinfonietta), Orchestra (Symphony), Rock and Metal. String Ensemble, Wind Band Theatre - Drama (ICSM), DramSoc, Musical Theatre Visual Arts - Art Club, ArtSoc, Fashion & Design Vocals - A Cappella, Chamber Choir, Gospel Choir, Light Opera (ICSM), Opera, Sea Shanty (Pirates)

FAITH

Buddhism - Buddhist Christianity - Catholic, First Love, Believer's Loveworld, Christian Union, Every Nation Christian, Overseas Christian Fellowship Hinduism - Hindu, Krishna Consciousness Islam - Ahlul Bayt, Ahmadiyya Muslim, Student Association, Islamic Jainism - Jain Judaism - Jewish Sikhism - Sikh

MEDIA

Writing - Felix Newspaper, Gazette (Medical), Bioscience Review, Writers Society Photography - PhotoSoc Radio - IC Radio Taylor Swift - SwiftSoc

CHARITABLE

Humanitarian - Cameroon Catalyst, E.quinox, Raincatcher, Friends of Medecins Sans Frontieres (Doctors without Borders). Global Brigades, UNICEF, Imperial Marrow, Imperial College Aid to the Balkans, Project Nepal, Soup Run, Raise & Giving (RAG) (ICSM), RED Project Borneo, Student Action for Refugees, The Breast Project Imperial Mental Health - 93% Club Imperial, Mentality, Sexpression Student Aid - Bike Users, First Aid

ACADEMIC

- Business & Research Wiki Project, Ventural Capital and PE, Women in Business Entrepreneurial - Enactus, Vision Engineering Change, Robotics Academy, TedX, Women in SET, Entrepreneurs, Climate Entrepreneurs, Doctorpreneurs Medicine - Acute Care,
- Asian Medical Students, Christian Medical Fellowship, Computational Biology, Healthcare Leadership, Medical Women's Federation. Medical Humanities, Sports & Exercise Medicine, Street Doctors, Surgical, Women in Healthcare, Leadership, Lifestyle and Prevention, Medical Speciaties, Cardiovascular, Clinical Genetics, Dermatology, Endocrinology, Gastroenterology & Hepatology, General Practice, Geriatrics, Haematology, Immunology, Infectious Diseases, Neuroscience, Neurosurgical, Obstetrics & Gynacology, Oncology, Opthalmology, Paeditrics, Pathology, Personalised Medicine, Pharmacology, Physiology, Plastic Surgery, Psychiatry, etc.

CULTURAL

Africa - East African, Egyptian, Mauritian, Moroccan, Nigerian, Somali Americas - African Caribbean, USA, Canadian, Latin-American Asia - Afghan, Arabic, Bangladeshi, Chinese, Chinese Students & Scholars Association, Filipino, Palestine, India, Indian National Student, Indonesian, Iranian, Iraqi, Israeli, Japanese, Korean, Lebanese, Malayali, Malaysian, Nepal, Pakistan, Qazaq, Saudi, Singapore, South Asian, Sri Lankan, Taiwanese, Thai, Turkish, Vietnamese Europe - Benelux, Bulgarian, Cypriot, Czech & Slovak, Erasmus, Estonian, French, German. Hellenic (Greece), Hungarian, Ceilidh, Irish, Italian, Lithuanian, Northern (UK), Polish, Romanian, Scandinavian, Spanish, Swiss, Ukrainian. Welsh International - ABACUS, African Caribbean, Erasmus Languages - Telegu, Tamil, Portuguese, Punjabi, Qazaq, Russian Oceania - Australian

Health - Alternative Protein, Nutritank, Students for Global Health Science - Geology, Space, Synthetic Biology Technology - Algorithmic Trading, Blockchain, Coding, Data Science, Developers, DroneSoc, FemTech, V&R, MedTech, Prosthetics, Quantum Technology, Vehicle Design, Engineers without Borders UK, Graduate Biotechnology Hub Volunteering - Connect, Effective Altruism, TeddyBear Hospital

SOCIAL

Appreciation - AnimeSoc, DogSoc, Harry Potter, History, Foodies, Pokemon, QuizSoc, Real Ale, Tea, Science Fiction and Fantasy Community - Environmental, Feminist, IQ (LGBTQ+), Hammersmith Students, Mindfulness, PASS Discussion - Beyond, Book, Conservative, Debating, Kinky Klub, Pint of Science Learning - Finance, FinTech, Investment, Law, Energy, Consultancy, Management, Muslim Medics, Sensible Drug Policy, VegSoc Politics - Labour, Left Forum, Liberal Democrats, Marxist, Model United Nations (MUN) Skill - Baking, Botanical, Cubing (Rubik's Cube), Origami, Sign Language, Speakers

IN & OUTDOOR

Games - Bridge, Chess, Game Development, Gaming and E-sports, Mahjong, Poker, **Tabletop Gaming** Learning - Brewing, KnitSock, Robotics, Astronomy, Beekeeping, Chickens Motor - Motor (RSM), Pilots, Racing, Rail and Transport, Motorsports, RCS Motor Club, Team Bo Sports - Canoe, Caving, Surf, Fellwanderers (Hiking), Gardening, Gliding, Outdoor, Mountaineering, Skate, SCUBA Underwater, Skydiving, Wakeboarding, Yoga, Yoga (ICSM) Martial Arts - Jiu Jitsu (Aiutchi), Judo, Ju-Jitsu, Karate, Kendo, Krav, Kung Fu, Muay Thai, Shaolin Kung-Fu, Shorinju Kempo, Taekwondo, Wing Chun, Wushu