



Felix

Keeping the cat free since 1949

www.felixonline.co.uk

@felixImperial

/FelixImperial

felix@imperial.ac.uk



Issue 1610

June 19th 2015

From drugs to dinosaurs: the year in science

Felix Science recaps the big stories of the year Pages 10-12

Inside...

Bukhara: Dreams of another land



Travel 34 - 36

The leadership races to watch this Summer



Politics 15

The season finale of Game of Thrones



Television 17

Meet the next editor of Felix



Comment 8 - 9

The final issue

The biggest stories of this year, brought to you by Felix

This week's issue...

news.felix@imperial.ac.uk

Felix Editor || Philippa Skett

Contents

News	3-6
Comment	8-9
Science	10-12
Politics	13-15
Music	16
Television	17
Film	18-19
Arts	26-30
Travel	32-34
Fashion	35
Welfare	36
Hangman	38-41
Puzzles	42-43
Clubs and Socs	44-45
Sports	46-47
Contributors	48

What's on this week:

Summer Ball

Saturday 20th June 7:00pm, South Kensington Campus
You've seen the adverts. You know the deal. We heard the headline act once hit a guy. Come one, come all (with your ticket obviously) to see the year out with one last on-campus all-nighter.

The Last Days of Judas Iscariot

Tuesday 23rd to Thursday 25th June 6:30pm, Queen's Lawn

Is play. Come see. Is free. Fun time.

CORRECTIONS

We would like to apologise for any confusion caused by the usage of the image to illustrate the front cover last week. The lecture taking place was not related to the story.

The last editorial of the year

This is my final editorial, which is slightly bittersweet to write. It has been a year that has passed incredibly quickly overall, but punctuated with long nights, fits and bursts of activity and, generally, one that has left me a little bit tired, to be honest.

I've enjoyed this year as editor of the newspaper immensely: there have been times where an odd email, angry student encounter or stressful story has left me a bit down and out, but overall, I will look back on my year editing this paper fondly.

I've learnt an incredible amount about not just how to run a newspaper and put together stories for you all to read, but also a lot about leading a team of volunteers to produce a paper we are hopefully pleased about every week.

We were shortlisted for Club of the Year at the Union Awards this week, something that made me feel very proud of the club I run and the people who make it such a joy to come into work each day. My work colleagues are also my friends, and I hope that the people who have ventured down to the basement to join in with the team are friends I will carry with me after I (probably) leave Imperial at the end of this Summer.

This year has been incredibly eventful in terms of news stories; we've ran front-page pieces on students smashing windows through to student surveys, paedophiles through to sporting mishaps, and everything in between.

In the office, we've drank thousands of cans of diet coke, argued over commas, covered the walls in centrefolds, had Chris Kaye pass out on the floor and we are still yet to take down our Christmas decorations. For about three days we had stick insects, but I think we fed them the wrong leaves, and they died. I've had a lot of fun, and am very aware as I write this



THIS WEEK'S EDITORIAL

that this may be the best job a 23-year old avoiding the real world could ever have, not just because I can nap on a Friday or watch Netflix and no-one tells me off.

We hope that we've brought news to you that has made you more informed about your life whilst at Imperial, more critical of things that are going on around you and started a dialogue about some of the big issues that students and staff alike face whilst at this university. It never fails to elate me when students come to the office, asking us to investigate stories that they feel need to be shared, and seeing the positive results our stories can have on the wider community.

But obviously it is not all about the news. We have had some amazing content this year beyond the red-topped pages at the front of *Felix*. Arts as a section has been incredible, pumping out high quality on a weekly basis, alongside resurrecting and restoring the Phoenix magazine. I am so proud of Fred and Kamil, and their dedication to the team and the paper as a whole.

In fact, none of this year could have even started without my amazing editorial team. All of them have put in so many hours of work, and contributed probably hundreds of pounds to takeaways as we've put together 29 issues throughout the

year. I remember the first time I was blown away by student dedication; it was when we attempted to bring together the first issue of the term, and I was still working at dawn, with other students with me.

Since then it never fails to amaze me when others are in the office at 3am, when students can write hundreds of words on the topics they love and when students will spend hours researching and putting together stories. It's incredible that over 200 students have contributed to this paper this year, all of whom are listed on the back page.

I am excited to see what Grace will do with *Felix* next year, and wish her the best of luck. It is an incredibly steep learning curve, and it seems just as I was getting the hang of this newspaper lark I'll need to return back to student life and finish my dissertation. I will miss the office, the people, the challenges and the satisfaction that comes every Friday when I see people reading the paper.

Which brings us to you, the readers. I would love to thank all of you that have picked up a copy on a Friday, even if it is just to do the puzzles or have a sneak peak at the centrefold. I've always said that *Felix* has a dual purpose: for students to have an opportunity to make a paper, and then to provide a paper to read.

I hope you all have enjoyed reading our work as much as we did making it, and if you want to get involved, please come down the basement and pay us a visit next year. We are a pretty pleasant bunch; we eat a lot of chocolate, drink a bit too much sometimes and on Friday we like to visit Nandos. We are always looking for more to join our rather dysfunctional family, so get in touch.

Building up the courage to come down to the office three years ago was the best thing I've ever done. I cannot recommend it highly enough.

Felix would like to thank everyone who has contributed to the publication this year, this paper would not be possible without you!

EDITORIAL TEAM

Editor-In-Chief
PHILIPPA SKETT

Deputy Editor
PHILIP KENT

Treasurer
THOMAS LIM

Technical Hero
LUKE GRANGER-BROWN

News Editors
CAROL ANN CHEAH
CECILY JOHNSON
KUNAL WAGLE

Comment Editor
TESSA DAVEY

Politics Editor
JOSHUA RENKEN

Science Editors
LAUREN RATCLIFFE
JAMES BEZER

Games Editors
MAX EGGL
CALUM SKENE

Arts Editors
FRED FYLES
KAMIL MCCLELLAND

Music Editor
GRACE RAHMAN

Television Editors
GIULIA GABRIELLI
JOHN PARK

Film Editors
JOHN PARK
ELLEN MATHIESON
JACK STEADMAN

Fashion Editors
CECILE BORKHATARIA

Food Editors
CAROL ANN CHEAH

Travel Editor
YUNG NAM CHEAH

Welfare Editors
DIBA ESBATI
CHANON WONGSATAYANONT

Puzzle Editor
MICHAEL FAGGETTER

Hangman Editor
FILLIPA SKETT

Clubs and Societies Editor
BEN HOWITT

Sport Editor
KUNAL WAGLE

COPY EDIT TEAM

Copy Chief
JACK STEADMAN

Copy Editors

TESSA DAVEY
BEN HOWITT
CECILY JOHNSON
KUNAL WAGLE
FRED FYLES
PHILIPPA SKETT

Felix Offices
Beit Quad, Prince Consort Road,
London SW7 2BB

Printed by Iliffe Print Cambridge, Winship
Road, Cambridge.

Registered newspaper ISSN 1040-0711
Copyright © Felix



News

news.felix@imperial.ac.uk

News Editors || Carol Ann Cheah, Cecily Johnson & Kunal Wagle

Union bar name competition hijacked by 4chan

Philippa Skett reports after online trolls voted over 2,000 times within the space of 2 hours

Disaster struck on Saturday afternoon when the competition ran by Imperial College Union to name a new student bar was posted on the forum website 4chan, sparking thousands of entries from the website users.

A link to the initially insecure submission form for votes and other potential name suggestions was posted on the /b/ (“Random”) thread, stating that:

“People of 4chan, I need your help. My university is trying to decide its new bar name by online vote.

“Do your worst.”

One thread had the website users supporting the motion to submit repeatedly the name “The Patriarchy” whilst another identical post appeared and had posters suggesting repeatedly that they were submitting the name “No Juice Allowed.”

Between 1pm and 3pm over 2,000 submissions were made through the page, with roughly 1,400 of those being for the name “The Patriarchy.” Various other names also suggested ranged from trollish to offensive and anti-semantic.

Users of the website turned increasingly sinister as the threads developed, posting screenshots of the Facebook pages of Officer Trustees, including Union President Tom Wheeler, and emails and contact numbers of the sabbatical staff,

encouraging others to “target them too.”

One post encouraged others to book out all the tables in the union bar FiveSixEight, whilst another started posting screenshots of the Officer Trustees. Some people posted saying they were also students at Imperial, although many of the anonymous posts on the threads seemed to be made by people external to the university. One user posted that they had registered a campaign through the Union website, called “Hitler did nothing wrong.”

After the thread was brought to the attention of Union staff, the submission form was put behind login entry, meaning afterwards students could only vote once.

The Union website announced the winning name, The Foundry, last Wednesday, after discounting any suggestions made during the period of peak activity last weekend that appeared to have originated from 4chan users.

Felix spoke to Chris Kaye Deputy President (Welfare) and Deputy President (Finance & Services) elect, who will be working closely with the bar next year. Chris told us: “When someone posted the poll on 4chan on Saturday, we took steps to limit the poll to logged-in users only.

“Sadly we decided that their name choices weren’t the best so we



The original post on 4chan. Photo: 4chan

discounted them, however we have their IP addresses so we may see if we can invite them down for the launch!”

The bar will be named “The Foundry”, which received 100 votes, followed closely by “Urban Oak,” that received 96.

The Union stated on its website: “The name is a great way to recognise the history of the site where the new hall of residence stands. From the early 1920s right up until the mid

1980s the site was owned by Landi & Gyrforming the site for their factory and offices.

“The factory made “Elgee” electricity meters and time switches. Specifically the Elgee factory, just like Woodward Hall, was cut into the slope just west of Victoria Road.

“We are really excited to bring you this new bar and restaurant in conjunction with College Campus Services and look forward to it

being an integral part of the student experience for hall residents and students who live nearby!”

Trolling surveys by 4chan users is not new: a campaign run by Mountain Dew back in 2012, called “Dub the Dew” was hijacked. The competition looked for people to submit and vote for the name for a new drink, with the name “Hitler did nothing wrong” topping the charts after the competition was posted.

Imperial launches two week, £3,500, summer school for GCSE and A-Level students

PHILIPPA SKETT
FELIX EDITOR

Imperial is to host its first ever “Global Summer School,” giving under-eighteens a chance to live and study at the university for two weeks, at the cost of £3,500 a head, considerably higher than those offered at other universities.

The course, designed to attract “the highest achieving students from all corners of the globe”, offers attendees a chance to participate in practical sessions, lectures and seminars.

The scheme also offers careers advice and guidance seminars on UCAS applications, interview skills, personal statement writing and workshops on applying to medical schools in the UK.

Attendees will also be put up in

halls near the South Kensington campus, in twin rooms. They will also be provided with meals three times a week, and social activities will also be included in the price.

Currently, there is no financial aid available for anyone wishing to attend this year, and all funds need to be paid upfront all at once.

Felix has enquired if there will be a subsidisation for students who may struggle to raise the funds to attend in the future, but at time of print has not had a reply.

Places are awarded on a “first come, first served” basis. Those who wish to attend are required to submit a personal statement, a recommendation from a teacher or tutor, and an up to date academic transcript.

A booklet on the course available from the Imperial website states: “Our



Residential places on the summer school courses have been taken. Photo: Dave Guttridge, The Photographic Unit

two week residential experience in the heart of London will unite the highest achieving students from all corners of

the globe for a rewarding insight into all that Imperial has to offer. “This is a unique opportunity for

anyone considering applying to Imperial to experience life at the College first hand.”

What did Imperial get up to this year?

As the academic year draws to a close, *Felix* takes a look back at the biggest headlines of the past year.

This year, *Felix* has covered a plethora of stories from all corners of the campus, covering stories relevant to staff and students alike. We recap the stories we've brought to you this year, and what to watch out for next year.

BUAV hit our front pages twice this year; firstly, the animal rights organisation made headlines back in October when the Home Office investigation, triggered by their undercover investigation into animal testing at the college, was completed. The investigation found at the time that many of the BUAV allegations were unsubstantiated, and only five cases of non-compliance were found.

Despite this, BUAV claimed in May that the government had misrepresented the group by reporting 180 instead of 18 complaints made. BUAV were successful in their application for a judicial review against the Home Office, and their plight is ongoing. Judicial reviews can take several months, and BUAV will be hoping it will result in tougher sanctions against Imperial. We'll probably hear the result at some point next year.

We also investigated the cuts to the amenities funds in halls this year, something that caused contention for hall seniors and wardens after they tried to provide a freshers week experience on a shoestring. The funding, that comes from the total rent that students pay at the beginning of each term, was cut from as high as £3.50 down to £1.50 per person per week, meaning many activities had to be cut as a result of the slashed budget.

Although *Felix* was told that the cuts were to ensure the savings would "Go back into the pockets of students," and despite asking repeatedly for figures to show this is the case, we were unable to verify that these cuts meant students were paying less for rent.

Many speculated that the money was going back into the pockets of campus services.

We covered the antics of the rugby

teams too in Autumn term. The first XV of ICURFC were suspended back in October after stripping on a tube back from West London, causing the tube to come to a halt and commuters asked to disembark from the tube as a result. The team was temporarily suspended as the British Transport Police investigated the matter, and a week later were joined in club purgatory by the Medic rugby team after a window was broken on a coach they were using during a tour trip to Bristol.

The ICURFC was suspended for a total of two weeks, the same period the Medicals were also suspended for. Students directly involved were also made to perform some sort of "Union service."

The Captain of the ICURFC was also threatened with a vote of no-confidence, with Imperial College Union stating that he had lied to them during their investigation. However, after a petition collected over 500 signatures in support of the player, he lived to play another day as Union Council voted against the motion.

Some of the many sportsmen and women who attended Council for the debate expressed a feeling that the Union was working against clubs rather than with them.

The Medicals rugby team was not as fortunate; with their suspension meaning they would have to forfeit several key games, they would lose money from BUCS fines and also, with a ban on socialising, they could no longer host the popular Christmas Bop, based at the Reynolds bar. They appealed against the sanctions, but the Trustee Board, the highest board within the Union, rejected the appeal. "Publish and Perish" was *Felix*'s front page in December, as a scandal erupted over the suicide of the late professor Stefan Grimm.

An email was sent posthumously under Grimm's name alleging that the College was being run as a "business", with the deceased academic apparently being told to obtain an increased amount of grant

funding or resign.

Science blogger David Colquhoun condemned the College's attitude, arguing for a public inquiry into Grimm's death.

The College strongly denied that Professor Grimm was under formal review and launched a formal review in the circumstances surrounding Grimm's death. The coroner's report found that Grimm's suicide was likely attributable to the pressure arising from grant applications, while College themselves said they don't know if changes to College policies suggested in the internal review would have prevented his death.

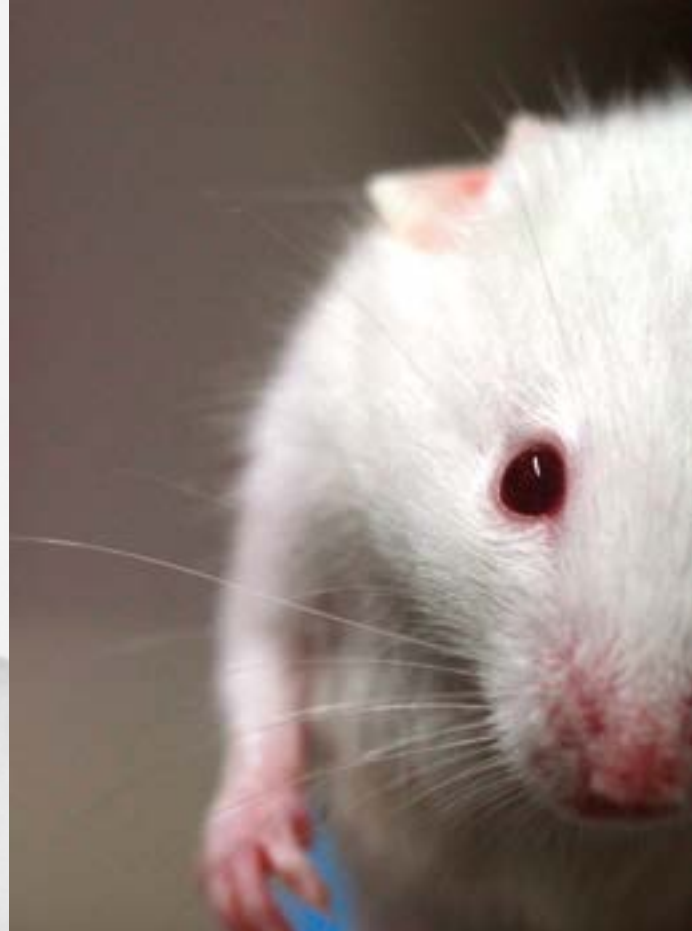
Also in February, a paper was brought to Union Council, the effect being College allowing Council members to determine hall rents for the following year. In this paper, students learnt the intention to close both Weeks and Pembridge halls.

College's argument for the closure of the halls was due to their alleged high cost of refurbishment. Debra Humphries, the Vice-Provost (Education) also argued that the College could make better use of the space in both "academic" and "non-academic" uses.

Whilst Council resolved to campaign against closure of Pembridge, they initially voted to not campaign against the closure of Weeks. When College later announced their intention to close the hall for the following year, residents of Weeks launched a campaign protesting against the College's decision.

This later, through an emergency meeting of Council, led to the original decision to not oppose the closure being overturned. A campaign was also initiated to lobby College to be more transparent in decision making known as #ICAPProblem, although how this campaign has progressed is unknown.

Nonetheless, College have continued with their plan to close Weeks, and it will not be available for students starting next year. A party will be held today to commemorate



A selection of our front pages. Clockwise from top left: Fifth and sixth year medical students suffer from financial struggles; Medics rugby team suspended over smashing a coach window; BUAV allegations of animal cruelty at Imperial dropped by the Home Office; Imperial student convicted of owning child pornography; Students protest against the closure of Weeks hall. Photo: various

the hall.

March's Varsity brought accusations of misogyny upon Sport Imperial, when members of the female rugby team reported abuse from a member of staff, who was heard over a radio saying, "I don't care how those fat girls get home".

As well as this, there was insufficient transport to for all members of the female rugby team, who hadn't played at The Stoop before. In May, an investigation conducted by the college with assistance from the union concluded that the team had been "made a mockery of". A letter of apology

to the team from president Alice Gast referred to the situation as "unacceptable" the report concluded that changes were needed in relation to the conduct of staff and organisation of future sports events.

Recommendations included commissioning research into the issue of sexism in sport, informed by workshops involving Imperial students and changing the format of Varsity to give fixtures equal prominence. There was a question mark over the nature of Varsity itself, with one point questioning whether it should matches should continue as "purely internal competitions".

"March's Varsity brought accusations of misogyny upon Sport Imperial"

Although the report was announced in response to complaints of staff sexism from the female rugby team, several points concentrated on the culture of alcohol consumption at the event. It was firmly stated that the sale of spirits onsite will be prohibited in the future with prevention of bringing alcohol in being strictly enforced.

"Alcohol abuse" in general was mentioned as an issue for focus for other departments. Are we looking at an alcohol free future for Varsity? It's unlikely; our sources say spirits weren't available at the stoop this year anyway, and the search process at the

door is pretty comprehensive. We'll likely see a change in the timetable of Varsity matches, and organisation of transport, but the unequal treatment of teams due to sex, as the rugby players claimed, may be a harder issue to detect.

A week before the Imperial Festival took over campus, a student was sentenced to 18 months in prison for the possession of 30,000 child porn images. Nur Nordin, a third year Mathematician, was found with a life-size mannequin of a young boy when police, who'd been notified about suspicious activity coming from his account, raided his address

"a student was sentenced to 18 months in prison for the possession of 30,000 child porn images"

in Queensborough Terrace. Many of the images were Category A, with the Metropolitan Police saying they were some of the most extreme their specialist officers had ever seen. Pleading guilty to all 17 counts, including making indecent images of children within intent to distribute.

The Malay student, who was on a scholarship paid for by the Malaysian government, has had his studentship at Imperial revoked, but a member of the council that provided the scholarship has commented that Nordin's funding may be restored, and he could be allowed to attend a university in his home country. It's likely that he will face deportation upon release, and if he doesn't serve the full term, we may hear of his education continuing abroad within the next year.

This year we saw several *Felix* headlines concerning the mental wellbeing of students, and their welfare in general. In January, we also ran the results of a survey of final year medical school students, which found that 50% of respondents said that their financial concerns affect their mental health. The survey results sparked debate over the cuts to funding medical students in their final year face once their Imperial bursary is removed for their fifth and sixth year of study.

In May, we also published the findings of the student-led campaign Mentality, which found that 3 out of 4 students suffer from extreme levels of stress or have had a mental health condition. Students were twice as likely to be stressed who attend Imperial compared to other universities in the UK.

Exam organisation and copy editing exam scripts within certain departments has also not fared well this year. The business school saw a blackboard crash resulting in an online test having to be suspended shortly before Christmas, and then later had to investigate the make-up test after rumours of plagiarism. There was also case of a handful of undergraduate students sitting exam papers meant for MSc students in Aeronautics.

In February, we ran a piece about a series of assessment mistakes in Physics Assessed Problem sheets and in a revision test, and students being told to take "It on the chin... it is a drop in the ocean," by a senior lecturer within the department.

Following that, second year students were set an impossible exam question only a couple of weeks ago, and as far as *Felix* is aware, nothing will be rectified for certain until exam scripts are assessed.

All in all, the year has been far from dull, with plenty of stories to keep us in business for another year. With some of these still developing, we will be following them through the Summer and into the next academic year, so make sure to pick up a copy.

News

news.felix@imperial.ac.uk

News Editors

Carol Ann Cheah, Cecily Johnson & Kunal Wagle

Felix shortlisted for Club of The Year at Imperial College Union Awards 2015

Kunal Wagle reports after awards night celebrates achievements of Union clubs, societies and projects



The Union Awards ceremony was held on Monday evening. Photo: Thomas Angus

Felix was shortlisted for Club of the Year at Monday's Union Awards ceremony, but lost out on the award to the Islamic Society. The other shortlisted societies were A Cappella, Civil Engineering and ICTV. An award was also handed out for Event of the Year, which was given to The International Championship of Collegiate A Cappella. Also presented at the ceremony were Colours and Outstanding Service Awards, as well as three Fellowship awards.

The event, which was held on Monday, was opened by Joe Cooper, who is the Managing Director of Imperial College Union. The awards were presented by Deputy President (Education) Pascal Loose, Deputy President (Welfare) Chris Kaye and Deputy President (Clubs and Societies) Abi de Bruin, as well as Student Trustee John Winters, and Volunteer of the Year 2014 Michael

Chung.

Gloria Rosetto won the award for the Community Connections volunteer of the year, while the CAG Soup Run won Community Connections project of the year. Speaking about her award, Rosetto said "It has been a great pleasure for me to volunteer at Imperial, and I plan to continue doing so next year. Although volunteering itself is the greatest reward, I am glad to have received this award and I hope it will encourage more first-year students to participate in the wide variety of opportunities offered at Imperial. Beyond our studies, these experiences are also very valuable as they allow you to have a positive impact on the community and society at large."

Jessica Wade, who won the award for Contribution to College Life, said "Winning the Imperial Contribution to College Life award meant more to

me than I can express in words – I've been at Imperial College since 2008 and I've never felt as special as that. The more I get to know Imperial the more I love it and @WIP_IC is a way for me to set up a support network for all the women in the physics department so they can all like feel this."

The Innovation and Enterprise award was given to ICTV. Pete Brook, ICTV's Station Manager, said "So many people have put in so many hours to make ICTV what it is this year. Live show producers, directors for our shorts and all the tech people who've made stuff work. We are really grateful to all the people in the club and the union for all their support and hard work!"

Mechanical Engineering Academic Representative Rory O'Keeffe won the Academic Rep of the Year award. Speaking to *Felix* afterwards, O'Keeffe

said "Having been part of the rep system for the last three years, it is great to know the work I have done has been appreciated. I would like to give a special mention to my team of Year Reps from the Mechanical Engineering Department, who have been a massive help throughout the year, I certainly wouldn't have done it without their support, and for that I would like to thank them."

The Postgraduate Academic Rep Team of the Year Award was presented to the Graduate Student Union's Academic and Welfare team. A member of the GSU rep team, Mike Asavarut, said "This award represents the partnership that the GSU Academic and Welfare Officers have with the union, college and especially the Graduate School. Making representation effective is a daunting task, given the unique needs that each department and faculty have. One size does not fit all, and the GSU representation team have certainly given their best to represent the postgraduate student body at all levels."

The undergraduate equivalent was given to the Physics department's rep team, who have now won three times in the last five years. They said about their award "The Undergraduate Academic rep team for Physics is immensely pleased that the Union has again decided to recognise their dedication to strong student representation within the department. This is the third year in the past five that the Physics rep team has been given this award, which reflects the culture of strong student engagement in the undergraduate experience that is present in the student body of the department. We are all very pleased that the students recognise the effort that we put into ensuring that their voices are heard by the department on the issues that affect them."

Other awards included the campaign of the year award, which was presented to Mentality, who ran a survey last month that found that three in four Imperial students suffer from stress or a mental condition.

Speaking after receiving their award for the club of the year, the Islamic society said "Muslim students are one of the most active students on campus (sic). Over 10 of our integral members were awarded colours and awards, and the Imperial Islamic Society was also

awarded a national award for 'Best Society' by Federation of Student Islamic Societies (FOSIS). With all the things in the media, it's important to highlight the success of Muslims and also realise that the future is brighter than ever before!"

In her blog on the Imperial College Union website, Deputy President (Clubs and Societies) Abi de Bruin said "*Felix* has made a significant contribution to student life, not only for those that read it but for those that create it too. Since Imperial is an all-science university, it can be difficult for people to engage with other projects, such as writing or culture and *Felix* has provided that outlet in an inviting atmosphere. They have also successfully covered a number of high profile issues that directly impact the student body.

"Overall it's been an incredible year for the Union and I'm so thankful and proud of all of the students that have poured so much time and effort into making the Union so amazing. We really wouldn't be what we are without you guys!"

RCSU Awards 2015

Half Colours:

Cameron Currin
Lloyd James
Gee Kan
Nikita Bathija
Jake Phillips
Shane Angoh
Jonathan London
Sinziana Giju
Joshua O G Carr
Yash Chawla
Kelsey Mills

Full Colours:

Ella L Martenson
Laila K Bana
Nishant Prasad
Rex Manurung

President's Awards:

Frederik Piech
Zoë Hsu
Akash Jyoti
Ben Stockton

The
PHOENIX

est. 1887

This term's issue of Phoenix, Imperial's Arts Quarterly, will be on campus from 22nd June.

Make sure to pick up a copy and check out the amazing work of Imperial students

Comment

comment.felix@imperial.ac.uk

Comment Editor || Tessa Davey

We are responsible for finding opportunities for ourselves

George Butcher thinks that someone needs these “useless occupations”

Are you being “lovebombed” by graduate employers? Do you feel pressured into taking a job in The City? Are you feeling forced to embark on a career that will force you to work 17 hour days for an uncaring capitalist? This is what George Monbiot and John Sheil have said in *The Guardian* and *London Student* recently. They say that students need protecting from the influence of recruiters using “lovebombing of the kind that cults use” and that universities’ careers services are perpetuating the problem. I guess we must be doomed to a life of slaving away for a greedy corporate master.

This is patronising and misleading. If students from “leading universities” are these great intellectual people that they think we are, then we are perfectly capable of making rational and informed decisions about the career we take up. What Monbiot and Sheil fail to understand is that some people genuinely want to work in “Finance, management consultancy, advertising, public relations [and] lobbying” – all jobs that Monbiot decries as “useless occupations”. I hate to break it to *The Guardian*, but those are all jobs that our economy depends upon. Admittedly it’d be nice if finance was regulated effectively so that it didn’t blow up the economy every couple of decades, but these are all industries that generate revenue for the treasury that fund public services we all use. Perhaps he’d prefer it if we all got jobs that allow us to, “seek enlightenment, intellectual or spiritual; to do good; to love and be loved; to create and to teach” which presumably is what his *Guardian* column is designed to do, but sadly someone needs to be an accountant as well.

In another article, Monbiot quotes a “Barclays analyst” who said, “We expect you to be the last ones to leave every night, no matter what ... I recommend bringing a pillow to the office – it makes sleeping under your desk a lot more comfortable”. What he doesn’t mention is that this was a satirical email which also said to “have a tie/scarf around, you’ll never know when your associate needs a handkerchief”. There are concerns at some banks that their interns work too many hours in an attempt to

“it’d be nice if finance was regulated effectively so that it didn’t blow up the economy every couple of decades”



Here to help or to tell us everything? Photo: Imperial College

impress, but increasingly this is being addressed by companies who want healthy employees. There will always be those who are very ambitious in the industries that pay the best, and for the salaries you get paid in the financial sector, you expect to work long hours. This is fine if you love the job, which some people genuinely do. I’m just a humble engineer. I’m going to be designing medical devices when I graduate; it sounds very moral and enlightened, but think about it too hard and I’m basically making a profit from others’ illnesses. Not so great now, is it? Taking a moral position on someone’s employment choice is impossible to do. Is the creative writer or artist a better person than the accountant or businessman? Many would tell you so, but they are ignorant of the work these people do and how important it is to the economy we all live in. It’s easy for someone who is talented enough at writing to be printed in a

“if you go to a careers fair you can leave with the impression that all there is to do is to be a consultant or banker”

national newspaper to take a swipe at people who work in less glamorous industries, but without the support of these big corporations, newspapers like *The Guardian* couldn’t exist. At the same time, of course we want creative people. We want some people to shun *The City*, work for charities, invent things, entertain us and make life worth living. But these people shouldn’t be snobby about those who don’t chose this path. A society of artists and intellectuals is as dystopian as a society of bankers and advertisers. It just wouldn’t work.

Monbiot and Sheil don’t just criticise students’ choices though; their biggest targets are the universities who should be “protecting” us. Sheil says that careers departments “were either so intellectually moribund that they had not contemplated the question of the general purpose of a university”. I don’t want my careers department to be full of intellectuals who start

questioning me about the true meaning of a higher education, I just want my CV to be checked over and to be given some interview advice. Their job is to help with “careers”. If I want an intellectual discussion, I am happy to, and am capable of going elsewhere.

We do need to make informed decisions about our life, and admittedly if you go to a careers fair you can leave with the impression that all there is to do is to be a consultant or banker. This is not the case, but you need to take responsibility yourself for exploring the world you live in. It’s unfair to expect a careers service to present every possible “career path”, you have to look for it yourself. In London we’re fortunate to have access to a huge wealth of industries. Other universities look on with jealousy at the access and proximity we have to employers in all types of industries. Go out there and find them yourself – you don’t need me to tell you that.

Comment

comment.felix@imperial.ac.uk

Comment Editor || Tessa Davey

He’s OKaye really

I have something to admit: Last year I had doubts that the then Deputy President (Welfare) elect would do a good job, and I even wrote an article for *Felix* about it. I worried that he would not take his role seriously, and that his dislike of bureaucracy would get in the way of working as an effective sabbatical officer.

Regular readers of *Felix* will know Chris as Kris Krave, a fictionalised character devised by our editor, but the real Chris Kaye has exceeded all expectations, doing great work throughout the year to really make a difference for students. Who can forget his work on feminine hygiene products, ensuring their availability at reasonable prices free of VAT; or his room-swap scheme, through which students in halls can change rooms ensuring they have affordable, comfortable accommodation with good company?

Chris has worked constructively to deliver sensible, practical changes. He has not fallen into the trap of spending too much time on grandiose ambitions (single-handedly eliminating tuition fees, for example), and has identified issues that he can and has been able to do something about, reducing stress and anxiety and helping improve the welfare of students. I am hopeful that he will continue this next year as DP(FS).

NICK FARMER
COMMENT WRITER



Photo: Facebook



Hear her meow. Photo: Tom Lim

I am (finally) Felix

Grace Rahman is looking forward to taking the helm as editor-in-chief

Hello, hi. I’m Grace, current music editor, and next year’s editor-in-chief. Or as I’m renaming the position, Philippa-in-chief. I don’t want to get too soppy in this, the last issue of Skett’s tenure but I can’t fight it. Our output has been astonishing this year, if we do say so ourselves.

As is usual, the news has been unpredictable, but Philippa and the whole team have dealt with everything in the classiest way possible, with the utmost professionalism (vom). The sleepless nights she spends in our subterranean lair, working on the latest issue, hopefully don’t go unnoticed by you, the student body, and I hope we’ve served your need for unbiased, Imperial-focussed news and amusement.

After the summer, I’m hoping that we’ll have a shiny new website for your consumption, more photos to go with our stories, and more stuff that you want to read. So if you can help with any of that, or just fancy coming to the socials, don’t hesitate to get in touch next year (or now, I have a lot of free time). This time last year I’d only written one shoddy article for the paper and look at me now! Writing an editorial the night before publication,

I am truly a member of *Felix*. I wish I’d done it sooner. I only really started getting involved with the paper this year and became music editor on a bit of a whim. The fact that six months in I felt able to run for editorship is a credit to the friendliness and support of the team. Yes I ran unopposed, but I’d like to invite the 300 or so people who RON’d me to get in touch; I want to buy you a soda lime and ask what I can do to reassure you. Thanks for voting for me in though chums; I genuinely never dreamt that little ol’ me would be allowed to make you a paper, and I am so incredibly grateful.

As the production team turn up the music, to politely hint that I should finish this speech, I just want to reiterate the openness of *Felix*. If you’re a club, an illustrator, writer, photographer, reader or speaker of words, or a human person, come and say hello to us in the office in the west basement at Beit. It’s clearly signposted but if you get lost or that seems too informal, you can send an e-mail to the *Felix* account advertised multiple times in this issue and share your thoughts, gripes or ideas for next year. I want to hear from you! Professionally, but also because a lot of my friends are leaving. Trag.

“This time last year I’d only written one shoddy article for the paper and look at me now!”

Aww shucks, I’m so proud of y’all

This year has been a really exciting time to be Comment editor. We have, as always, had some articles that have been written with purely contrary opinions, almost certainly written with the sole purpose of drawing a response, but for the most part, I’m so proud that most of the articles I’ve put in *Felix* this year are from people who honestly want to put it out there that something is wrong, with no aim other than to educate people about it, to start a discussion, or to change people’s minds. As Angry Geek wrote in his wonderful comeback (honestly, I can die happy now), the Comment section is hearteningly full of good people writing about important issues.

I’m really excited to work with Grace next year. Both editors-in-chief I’ve worked with so far have been amazing, and have had different approaches towards the controversial articles that sometimes land in my inbox. It’s easy to just not print articles that are a bit too contentious, but the point of an opinion section is to push the boundaries, and with the help of the esteemed editors-in-chief, we aim to bring you as many opinions as we can without getting sued.

This is the end of my second year as Comment editor, and I hope I’ve done you proud in finding articles for you to read every week. I’ll still be here in next Autumn term, ready to do it all again, but we need new writers and editors as well. Please, if you want to help, or if you think you can do a better job, get in touch. We’re always happy to hear from you!

TESSA DAVEY
COMMENT EDITOR



“I want to buy you a soda lime and ask what I can do to reassure you.”

Features

features.felix@imperial.ac.uk

Features Editor || VACANT

In conversation with the author, documentary maker and popular philosopher, Alain de Botton

Joshua Renken talks religion, writing, The School of Life, and pornography

There are not many people who can say they have set up an international school, written books that have been bestsellers in 30 countries, and given two TED talks. Fewer still can say they have re-hung an art museum and worked as Heathrow airport's first ever writer-in-residence – but the author, documentary maker, and popular philosopher Alain de Botton can claim all of these achievements.

Alain has spent his working life writing, talking and making documentaries about the “philosophy of the everyday.” The topics covered in his twelve published books include: art, success, travel, architecture, work, the news, pessimism, atheism, sex, love, philosophy, literature, and many others besides. In fact, it might be quicker simply to list the topics Alain has not written about.

The Swiss-born public intellectual moved to England to board at Harrow School before going up to Cambridge University, where he received a double starred first in History. Alain continued his academic career at King's College London with a Masters in Philosophy and started working on a PhD in French Philosophy at Harvard University, before dropping out to write for the general public.

Aged just 23, Alain's book *Essays In Love* was published to critical acclaim, and has sold over two million copies worldwide.

In 2008, Alain co-founded The School of Life – an organisation that is dedicated to “developing emotional intelligence through the help of culture.” Alain authors and narrates many of the films on The School of Life's YouTube channel, covering topics ranging from “the philosophy of oral sex” and “the meaning of life” to profiles on many of the great philosophers and writers from history.

I got in touch with Alain to talk about the ideas running through his work.

Joshua Renken: How did the School of Life come to fruition, and what are

the problems it is trying to address?

Alain de Botton: The School of Life was started by me and some colleagues in 2008. The mission is to try to raise emotional intelligence, looking at key issues in emotional life through the prism of the humanities (philosophy, psychology, literature, history and so on). We believe in the attempt to transmit wisdom around some of what people find trickiest in life; knowing how to form relationships, living with others, facing death, finding a job that is satisfying and right for one's talents etc.

JR: What key lessons can atheists learn from organised religion?

AB: Religion was never simply about superstition and belief. It's also been about an attempt to instil an ethical code, to bring comfort, to nourish a feeling of community, and to ritualise key moments of existence. Religion hasn't always done well in these areas (I am an atheist myself), but I believe that atheists can learn about the emotional needs that once drove people to religion and should look for ways to satiate those needs outside a structure of ‘belief’.

JR: Do you envision a large humanist movement in the future that employs the tools of communication used by religions, while the organised religions of today fizzle out? Is this Atheism 2.0?

AB: Yes, eventually religion will simply become implausible, but the needs that led humans to make up religion will go on. So the challenge for a secular society like ours is to come with replacements for many of the activities and attitudes once put forward by religions.

JR: What do you think is more likely: a God or many Gods?

AB: Both seem utterly implausible to me, sadly.

JR: What was your ambition when you and The School of Life had the opportunity to re-hang the Rijksmuseum of Art in Amsterdam? Was it a success?

AB: The idea was to promote a very instrumental way of looking at art. It has been deeply fashionable for 150 years to claim that art has no purpose outside of itself, that it is just ‘art for art's sake.’

This began as a respectable attempt to free art from the agendas of the state and religions; but it has ended up with narcissism of the worst kind.

The best art has always been interested in helping its viewers with the great issues of life: how to greet death, find contentment, appreciate existence, celebrate what is good, condemn what is wicked. The Amsterdam show put this aspect of art center stage.

It outraged many art critics (as it was meant to; they outrage me with their attitudes!) but it was an enormous popular success, drawing in hundreds of thousands of visitors to the museum and our website.

JR: What do you mean when you say the “architecture of news has broken down” in the media?

AB: One of the worst things about the UK is its media, which is alternately complacent, provincial, and plain uselessly nasty.

The task of the media is to help a nation to understand itself better, to gain a clearer insight into its problems, and to move forwards with understanding and wisdom. All this is missing, whether from *The Guardian* or *The Sun* or the BBC.

This shouldn't surprise us, we're still at the dawn of the age of news and are still working out how to structure and arrange the information we need.

JR: During research for your book *The Pleasures and Sorrows of Work*, what criteria did you find needed to be met for a fulfilling job?

AB: Fulfilment in work essentially

“The gap between what we want the world to be and what it is should be filled with laughter.”

Alain de Botton talking at a TEDx Conference in Oxford. Photo: FT

comes from service, from helping others in accordance with one's best capacities – and being moderately well recognised for having done so.

This sounds simple but is immensely hard, only a few of us are properly happy in our work, perhaps less than 10% of the working population.

JR: How would you change the way degree courses in the humanities are taught? Particularly in history and philosophy.

AB: I would dissolve away these archaic subject categories and teach under new categories like: Death, Friendship, Love, Community, Forgiveness etc.

Under such headings you'd find out a lot about history and philosophy, but not under those absurd academic headings like ‘The 19th century novel’ or ‘Neoclassicism’, titles dreamt up by, and only of interest to, scholars.

“I realised that academic life was always going to restrict me.”

JR: In your book *How To Think More About Sex*, you touch on the subject of pornography. Do you think society's general disapproval of pornography is healthy, and are you in favour of legalising prostitution?

AB: The point isn't to ban pornography or approve of all of it, but rather to see whether we might get a better kind of porn, which really means a porn that's more connected to values esteemed in other areas of life: dignity, respect, intelligence.

JR: Are you concerned that future generations will no longer have the attention span required to study great works of philosophy and literature?

AB: Many great works are very boring and anything writers can do to make their work slightly pacier and more direct should be welcomed. Let's stop always blaming the reader. Some of the great masterpieces desperately need an edit.

JR: Should I feel a bit guilty that I find philosophy hard to read and occasionally even a little dull?

AB: No, it's the fault of philosophers. Hegel is a great philosopher but he is a properly disastrous writer.

JR: Which books have made the biggest impact on your life?

AB: Proust's *In Search of Lost Time*, which taught me that a novel can be philosophical.

JR: Why did you decide to stop pursuing your PhD at Harvard?

AB: I realised that academic life was always going to restrict me: I realised that my real vocation was to speak to other non-experts like me, not a narrow coterie of specialists.

JR: Do you ever read the reviews that come out of your books, and if so, do you find it easy to ignore ‘the haters’

when presenting a new theory to the public?

AB: I read all my reviews and have learnt a lot about life and myself in the process.

As a writer, to keep calm, the best advice is to think not of what people might be saying right now, but of how things might settle down and look a few years from now.

JR: How would you describe your own political views?

AB: I believe in high quality public environments, great media, intelligent school curriculums, a small state, very generous welfare – and extremely careful urban planning.

Alain's latest book *The News: A User's Manual* went on sale earlier last year.

You can find more information about Alain at www.alaindebotton.com.

“We believe in the attempt to transmit wisdom around some of what people find trickiest in life.”

“Religion will simply become implausible, but the needs that led humans to make up religion will go on.”

Stories of war, tragedy and genius

Brendan Brown talks to **Joshua Renken** about Max Planck, the father of quantum mechanics

Brandon Brown has spent his career teaching Physics. Starting off as physics graduate from Rice University, Brandon got his PhD from Oregon State University and later attained a certificate in Science Communication at the University of California, Santa Cruz. Now a professor at the University of San Francisco, Brandon's research focus has shifted to sensory biophysics and high-temperature superconductivity. Research students at his laboratory have explored the electric and magnetic sensory abilities of a variety of creatures.

He has written a book about the life and work of Max Planck (1858-1947), the German theoretical physicist and 1918 Nobel Prize Laureate who is considered the father of quantum theory, to be published by Oxford University Press in 2015. Brandon has spent most of his career working in the field of high-temperature superconductivity – an exciting theoretical area of physics that heavily relies on the quantum principles that Planck was first to propose.

I got in touch with Brandon to ask him about his new book and the state of science communication around the world.

Joshua Renken: What is it about Planck's life and work that drew you to write "Max Planck: Driven by Vision, Broken by War?"

Brandon Brown: I first fell for Planck when I was an undergraduate student at Rice University in Houston. His little photo in our textbook looked unusually sad, and I was fascinated to find someone making a breakthrough in middle age versus the canonical age of about 23.

JR: Can you briefly describe what Max Planck is remembered for in the field of Physics?

BB: He's primarily known as the father of quantum theory, at the textbook level, for a breakthrough he had in 1900. But I think it would be fair to say he should be just as well known for his work in thermodynamics and for introducing us to so-called natural units. As for quantum theory itself, as the book sets out, it is not quite right to point to a "discovery" moment. It's always a more rich and complex story than that.

"His little photo in our textbook looked unusually sad."

JR: How important do you think it is for scientists to learn about the history and people behind big breakthroughs?

BB: I think it's very important, but as a professor, I know too well how difficult it is to fit such stories into a curriculum, as we hardly have time to give students access to all the nuts and bolts as it stands. More than anything, stories about the process should be instructive to students of science. We actually don't move forward one magical breakthrough moment at a time. It's a very messy business that textbooks sanitize in order to make a subject more digestible.

JR: Why do you think it is that of all the great physicists in history, Einstein has achieved the most legendary status in the minds of people today? And how would you say Einstein and Planck differ in outlook and scientific approach?

BB: That's a huge couple of questions! To me, Einstein absolutely deserves his iconic reputation. One can make very valid arguments that his work merited 4-6 individual Nobel Prizes, (instead of just one), and he really seemed to function at a different level than his peers, in multiple areas of physics. That said, his reputation and legacy arguably benefitted from two things: (1) his theory of general relativity was verified in a dramatic fashion in 1919 at the dawn of global media, to a world starved for positive and transcendent news, and (2) he had ample time in the English-speaking world, especially versus someone like Planck.

In terms of how Planck and Einstein differed, I would instead want to emphasize what they had in common. They had incredibly different personalities but nearly identical scientific motivations and philosophies, in terms of holding sacred the existence of universal truths. That was probably the root of their friendship, in fact.

JR: Do you think the scientific community as a whole does enough to educate the public about their work?

BB: I would say yes. The information is out there and has been out there. Even my humble book isn't turning over many new stones -- maybe just a pebble or two, or turning



Consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Photo: Wikimedia Commons

a German pebble to an English one. The general public only has so much interest in the intricacies of physics. I thought Planck's story might give us a chance to sneak a little more physics to non-scientists, since Planck's incredible and tragic story transcends science in so many ways. How many stories have both Hitler and Einstein as major secondary characters?

JR: What areas of physics do you think we will see major advancements in over the next decade?

BB: Since I'm more of a wrenches and wires type of physicist, versus a theoretical shaman of physics, I'm the wrong person to ask. With all the new astrophysical data flooding our computers and with the LHC going again, we can ideally get back into some very fundamental questions.

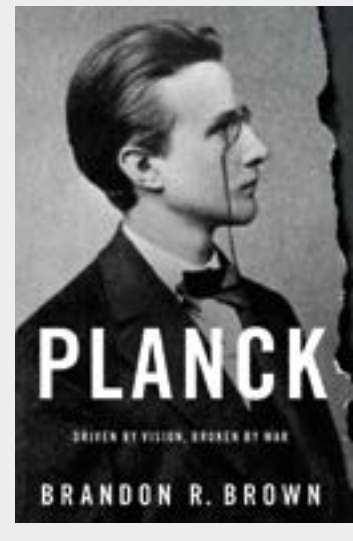
JR: What are you currently working on at the University of San Francisco?

BB: I was immersed for many

"How many stories have both Hitler and Einstein as major secondary characters?"

years in a new science building, of all things. I've emerged from that into this book project, and I hope to pursue another book or two.

'Max Planck: Driven by Vision, Broken by War' is released on July 23rd.



New Horizons set to uncover Pluto

Ben Fernando on the first ever mission to the distant dwarf planet

The year is 1980. Voyager 1 is approaching Saturn, having completed a three-year journey that has spanned over a billion kilometres. Back on Earth, NASA are considering flying past Saturn's largest moon, Titan, which has shown hints of harbouring a thick hydrocarbon-rich atmosphere.

However this detour comes at a price: Voyager 1 will be thrown up out of the ecliptic (the plane that the Solar System lies in) and will never reach its intended final target of Pluto. NASA decides that Titan presents a more scientifically valuable target than Pluto, and after leaving Titan, Voyager begins its long and lonely journey toward the edge of the solar system.

Thirty-five years later, the questions that were left unanswered about Pluto following Voyager's diversion may finally be getting answered. New Horizons, one of NASA's flagship missions, is less than a month away from the Pluto system.

Launched from Cape Canaveral in Florida in January 2006, New Horizons used a gravitational slingshot around Jupiter to accelerate it to an Earth-relative velocity of over 58,000 km/h. At that speed, it could

cover the distance from London to New York in just under six minutes, and could reach the Moon in less than a day.

At the time of writing, New Horizons is just over 32 million kilometres from Pluto, and is closing at a speed of 13km/s. At this speed, its encounter will be brief – beginning in the second week of July, there will be a few short days in which to gather data about the planet, its three major moons and the space environment between them.

Following this, New Horizons will begin the long journey into interstellar space. The hope is that there will be enough hydrazine fuel remaining after the flyby to direct New Horizons on to visit a small, icy body known as a Kuiper Belt Object (KBO). These are icy fragments, many of which are around 100km in size, that inhabit the region of the system out beyond the orbit of Neptune. The hope is that analysis of a KBO, an object that is effectively a left-over of the Solar System's formation, will help us understand the dynamics of the process through which planets formed. If a suitable KBO can be found, a flyby will have to occur within the next four



On 14th July, New Horizons will fly by Pluto, before heading off to explore the Kuiper belt. Image: NASA

to five years, after which point the plutonium power source that powers the spacecraft will have weakened to the extent that instruments no longer work at peak capacity.

The end of the mission is scheduled for 2026, though if the spacecraft remains in good working order it may be extended. Some twenty years in the future, New Horizons will likely

join Pioneers 10 and 11 and Voyagers 1 and 2 in being the only man-made objects ever to leave our Solar System. Because there is nothing in space to slow it down, it will continue out into the galaxy long after all the instruments have fallen silent.

There are hopes that before the antenna shuts down, NASA will beam a "Record of Earth", similar to the

golden disks carried on the Voyagers, to the spacecraft to be stored in its computers. The idea is that should anyone out there ever happen across New Horizons, they will be able to tell where it came from and what it was doing. Perhaps in a few hundred thousand years it will end up sitting in some alien's version of the Science Museum.

Natural Killer cells and the fight against cancer

NEFELI MARIA SKOUFOU PAPTSAKI
SCIENCE WRITER

Natural Killer (NK) cells are a type of white blood cells critical to the immune system. They are primarily involved in innate immunity the immune's system "first line of defense". They are now the subject of much research because they show an extremely fast response, starting to act on infected cells within hours following an infection. NK cells can target "stressed" cells (such as cells infected with virus or cancer cells).

As their name implies, they not only target cancer cells but also kill them, by releasing toxins into the cells and causing cell death. For these reasons, NK cells may prove to be useful in treating cancer. In recent years, there is a new trend in cancer therapy called immunotherapy. Immunotherapy is the treatment of disease by enhancing or suppressing the immune system. It has potentially less serious side effects than most conventional chemotherapy, which

can cause changes in the normal development of children with leukaemia and reduce the fertility of adult patients.

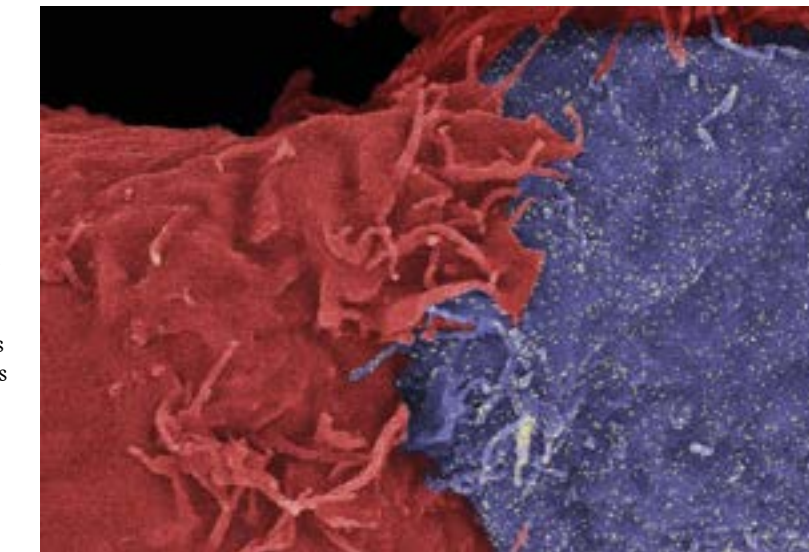
As the President of the European Society for Medical Oncology (ESMO), Professor Rolf A. Stahel said in the SMO Symposium on Immuno-Oncology 2014, "We expect that the new possibilities of immunotherapy will substantially change the treatment of cancer. We are seeing responses and success stories in various areas of oncology, to the point that now I think there is no doubt in the oncology community that immunotherapy is here to stay."

However, there is still much progress to be made until immunotherapy can actually be used as a standalone cancer therapy. Although there are many possible immune-based approaches (dendritic cell based immunity, T-cell based immunity), NK cell-based immunotherapy has been said to be one of the most promising immunotherapies due to the intensity with which NK cells attack target cells.

Using NK cells for immunotherapy

presents some challenges. There are two ways in which NK cells can be obtained: donor cells (cells from someone else) or autologous cells (the patient's own NK cells). Donor cells however have the possibility of being rejected, as happens in organ transplants. Autologous NK cell numbers need to be greatly expanded before re-infusion but that process reduces both their survival and their killing activity. So the main problems to overcome are how to make NK cells survive longer after transfusion back into patients and how to target them more effectively to cancerous cells.

Some researchers at Imperial focus on manipulating the E4bp4 protein which is critical in the production of NK cells from blood stem cells. "We are hoping to make it easier to produce large numbers of human NK cells from umbilical cord blood stem cells and that these NK cells will have improved survival and also be very toxic to cancer cells when transfused into patients", said Dr Hugh Brady, Department of Life Sciences. Dr Brady's group discovered that the presence of E4bp4 is the switch that makes blood stem cells turn into



Natural Killer cells (in red) are a potential form of immunotherapy. Image: Geoffrey Williams/Daniel M. Davis

NK cells and that by increasing the levels of E4bp4 many more NK cells are produced. Even increasing the numbers of NK cells in a patient may have therapeutic effects. A 11-year long study from Japan, published in the Lancet showed that people with lower numbers of NK cells have higher incidence of cancer,

which suggests that having more NK cells may have a prophylactic effect against cancer.

Hopefully, the researchers at Imperial and elsewhere in the world will solve these problems soon so that NK immunotherapy can realise its promise in the clinic as a potent weapon against cancer.

Science

science.felix@imperial.ac.uk

Science Editor || James Bezer & Lauren Ratcliffe

Comets, dinosaurs and drugs. Lots of drugs

James Bezer looks back on a year of science in *Felix*

Flicking through all the editions of *Felix* we've printed this year, I've been struck by several things about the science section.

The first is Lauren's slightly worrying obsession with articles about LSD, at least one of which seemed to appear every almost week.

The second was every slightest typo, mistake and generally awkwardly phrased sentence that seemed to glare out from every article I wrote or edited.

The third however, was the huge variety of interesting articles that have been sent to us, ranging from new advances in solar power and energy storage, all the way to fundamental discoveries about measuring distances between galaxies. Thank you so much to all the writers who've sent so many different things in to us, and I hope that many of you continue to do so next year.

I'm never quite sure how many people usually reach this section of the newspaper, so, as a recap for those of you who haven't been paying attention for the last 28 issues, I've come up with a selection of some of the most memorable stories we've covered this year.

Rosetta's comet rendezvous

One of the biggest stories this year was the rendezvous of the Rosetta orbiter with comet 67P/Churyumov-Gerasimenko that took place in November. The Philae lander touched down successfully, giving detailed information about the surface and chemical composition of a comet for the very first time.

Imperial's involvement was led by Chris Carr, Principal Investigator on the orbiter's magnetometer. In an interview with *Felix*, he explained the difficulties involved in running the project, and some unexpected magnetic field behaviour his team

"David Nutt carried out the first new trials of LSD on humans for over 40 years."



In November, Rosetta became the first probe to reach a comet. Photo: NASA

had observed.

This was just the start of the mission for Rosetta, however, which is designed to stay with the comet as it approaches the Sun, and analyse the gas and dust that comes off it. And with the recent announcement that Philae was now operational again, there remains huge potential for new discoveries in the near future.

Ebola vaccine researched

At the start of the year, we covered research at Imperial into a vaccine for ebola. At the time, the outbreak growing rapidly with nearly 6000 cases already reported.

The team recruited 40 volunteers in the Gambia to test the efficacy of the vaccine produced by GSK. The trials are still continuing with much larger numbers of participants.

Although the number of new cases has declined significantly in recent months, the outbreak is still going on, and has so far reached a total of over 27,000 cases.

Ecstasy and LSD could be used in medicine

Research into the effect of LSD and ecstasy (MDMA) on the brain has shown that hallucinogenic drugs could be used to treat psychiatric illnesses like depression and PTSD.

In October, Imperial's David Nutt and Robin Carhart-Harris carried out

the first new trials of LSD on humans for over 40 years, to test its effect on suggestibility.

Nutt's group has also started research on a new drug Chaperon, which is similar to ecstasy and could be seen in future as a way to stop binge drinking.

Warm oceans under Enceladus

10 years since Cassini arrived at Saturn, the probe is still capable of making major discoveries.

In March, while flying by Saturn's moon Enceladus, results from its mass spectrometer provided us with the first clear evidence that hydrothermal activity is occurring outside our planet.

Dust particles made of silica were found ranging from 2 to 9 nanometres, indicating they were made by a specific process that was only previously known to occur in certain regions of the Earth's oceans.

The discovery suggests that warm oceans exist under the surface of Enceladus, which add to the possibility of finding environments capable of sustaining life.

'Three-person babies' allowed

A vote in parliament in February permitted the creation of babies treated with mitochondrial replacement therapy for the first time.

The technique involves replacing faulty mitochondria in a fertilised egg with those of a healthy donor. When it is allowed to develop into a baby, all its cells carry copies of the donor's mitochondria. It is for this reason that the process has been labelled as creating 'three-person babies'

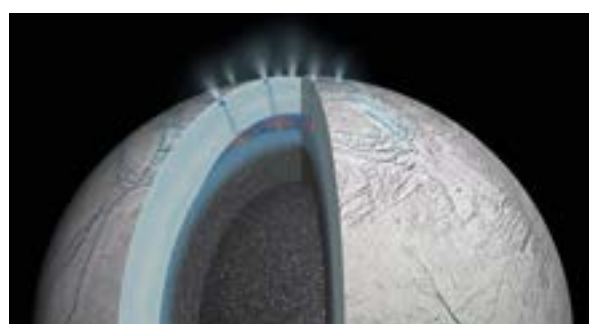
Professor of science and society Robert Winston was instrumental in getting the bill through the House of Lords, making an impassioned speech that drew on his experience in fertility treatments.

While the vote opens the gate for the technique, further research is needed, and it's not expected that the first babies will be born for several years.

Having trouble sleeping?

In November, we reported on new research into how the body controls when you wake up and fall asleep. The researchers, from Imperial and Cambridge, deleted a well-known 'clock' gene from mice, and discovered that this led to higher brain histamine levels during the day. As a result, the mice had shallower and more fragmented sleep patterns.

Sleep research in recent years has shown it fulfils a variety of important functions, including restoration and recovery, metabolic replenishment of the brain and helping to consolidate memories.



Warm oceans were discovered under Saturn's moon Enceladus. Image: NASA

Politics

politics.felix@imperial.ac.uk

Politics Editor || Joshua Renken

The leadership races to watch over the Summer

Joshua Renken discusses the potential leaders of the major parties

Four candidates will be on the ballot paper when Labour Party members get to vote on Ed Miliband's successor in September. Nominations closed on Wednesday and Shadow Secretary of State for Health Andy Burnham is the bookies' favourite. Burnham received 68 nominations from MPs (the minimum to be on the ballot was 35), Yvette Cooper achieved 59, Jeremy Corbyn 36 and Liz Kendall 41, with 25 MPs – including Ed Miliband and deputy leader Harriet Harman – deciding not to vote.

The veteran Labour MP Jeremy Corbyn is the most left-wing of the candidates, while Andy Burnham and the Shadow Home Secretary Yvette Cooper are seen more as continuation candidates, struggling to distance themselves from one another in a fight for the top job in the centre-left party.

Chuka Umunna – the Shadow Business secretary who put himself as a leadership candidate early on and was reportedly backed by the former PM Tony Blair – withdrew his leadership bid and publicly backed Liz Kendall. Kendall is seen as a “blue Labour” moderniser – subscribing to the “Third Way” centrist approach that tries to reconcile right and left-wing politics on a populist platform. It has served party leaders well in the past, including Blair and the former US President Bill Clinton.

Mary Creagh was unable to secure the support she needed and dropped out without nominating any of the other candidates.

Labour's deputy leadership shortlist has also been finalised: Tom Watson, Caroline Flint, Ben Bradshaw, Stella Creasy and Angela Eagle will compete to replace Harriet Harman.

Following the poor performance of the Liberal Democrats in the general election last May, Nick Clegg stepped down as leader.

Now only eight Lib Dem MPs remain in the House of Commons – two of which are standing to succeed Clegg.

Norman Lamb has been MP for North Norfolk since 2001 and was Minister of State for Care and Support for three years in the coalition. Lamb is considered more of the continuity leader than his opponent.

The second candidate, former President of the Liberal Democrats and MP for Westmorland and Lonsdale is Tim Farron, who seems



Could this muppet be the next leader of the Conservative party? Photo: RothCPA

almost certain to win the leadership bid, given his track record of winning big in his elections and the fact that he is not ‘tainted’ by involvement in the Conservative-Liberal Democrat coalition government. Tim Farron has gained strong support from prominent members of the party and is seen as more left-wing than Nick Clegg, making any possible future coalition proposals with the Conservatives far less likely.

Farron voted very strongly against increasing the cap on undergraduate tuition fees from £3,000 to £9,000, and voted in favour of allowing marriage between two people of same sex at the second reading of the Marriage (Same Sex Couples) Bill.

However, he did not vote for equal marriage on the third reading of the Bill, which he put down to his religious upbringing. Unlike Clegg, who is an agnostic, Farron is a church-going Anglican.

2016 Mayor of London candidates incumbent Mayor Boris Johnson has chosen not to run for re-election for a third term in office as he is instead now the Conservative Party Member

of Parliament for Uxbridge and South Ruislip. He has announced his intention to remain Mayor until his term ends in May 2016.

Several party members have announced their candidacy for the Conservative and Labour parties, with just one official candidate for the Liberal Democrats: the leader of the party in the London Assembly, Caroline Pidgeon.

And the controversial broadcaster, writer and former MP for Bradford West George Galloway has thrown his hat in the ring as the Respect Party candidate.

However, with the Richmond MP Zac Goldsmith formally announcing his candidacy for the Conservative Party's bid for Mayor of London, the media have been buzzing and Goldsmith – an Old Etonian who got kicked out for smoking cannabis and is the former editor of the Ecologist – is considered the strongest option for the Tories.

Other Conservative candidates include the British businessman and the first and current Deputy Mayor for Policing and Crime in London

Stephen Greenhalgh, and the former footballer Sol Campbell.

Labour's candidates are almost all current London MPs, but the former Olympics Minister and MP for Dulwich and West Norwood Dame Tessa Jowell is presently deemed the frontrunner. The former Shadow Minister for Public Health and current MP for Hackney North and Stoke Newington Diane Abbott and former Universities Minister and MP for Tottenham David Lammy have put their names on the ballot sheet, with Tooting MP Sadiq Khan also proving popular with Londoners.

People have already started speculating as to whom will succeed David Cameron as leader of the Conservative Party after Prime Minister David Cameron said he would step down before the 2020 election.

Four MPs are in contention – three of which are currently in cabinet. George Osborne, current Chancellor of the Exchequer and First Secretary of State (making him the de facto Deputy Prime Minister), has solid support from the party and is seen as

Cameron's natural successor.

The Secretary of State for Business, Innovation and Skills Sajid Javid is also in contention, with growing support from party activists.

The Mayor of London Boris Johnson is currently the frontrunner to succeed Cameron, as he re-entered parliament in May. His widespread popularity with the public – and lack of connection with the coalition government – make him strong choice for Conservatives.

The Home Secretary Theresa May was at one point a strong contender as the only female candidate, but in recent months her chances have been gradually slipping away to her competitors. Her leadership bid looks less and less credible in a field swarmed with other ambitious cabinet ministers.

No candidate will have to officially declare their candidacy until we are much closer to 2020, but with Cameron announcing his resignation plans so far in advance, we can rest assured that the frontrunners are already plotting to gain the support of the party.

Music

music.felix@imperial.ac.uk

Music Editors || Grace Rahman & Amna Askari

The year's biggest moments in music

Grace Rahman reflects on the events of a year that hasn't really ended

None else thinks it's the end of the year, but we're going to summarise the best, worst and most important moments in music of this year. So while you spent the year locked in labs, cramming or pretending to do your FYP, you might have missed the following.

The Feminist Moment

While the movie industry offered Patricia Arquette's speech at the Oscars to put the subject of equal pay in the spotlight, **Björk's** interview with Pitchfork did something similar within music. The Icelandic singer-songwriter drew attention to the subject of rightful crediting and the way she's seen this handled differently between male and female artists. Whilst discussing her album, *Vulnicura*, she remarked that multiple sources had incorrectly reported that her co-producer, Alejandro Ghera, had been completely behind the beats on the record. "If whatever I'm saying to you now helps women," she told Pitchfork, "then I'm up for doing it," before pointing out that no one would ever accuse **Kanye West** of not being the master of his own sound, despite undoubtedly bringing in outside help. Perhaps applicable in a wide range of industries were Björk's views on the way society treats opinions dependent on the gender of the source. "Everything a guys says once, you have to say five times".

The Moment that broke a million hearts

Despite not having mentioned **One Direction** in this section all year, we at *Felix Music* appreciate that they are the biggest band on the planet, and loss of quiet dreamboat Zayn has to be included in a round up of the year's events. Regardless of your personal opinions on the band's output, or love lives, this was the Geri leaving **Spice Girls**, or Robbie leaving **Take That**, of a generation. And in terms of fan fallout, it was phenomenal. Since there was no Twitter when Ginger Spice hung up her Union Jack dress, this was the first time a quick hashtag search (Zaynwillalwaysbeapartof1D) could reveal the reaction of a whole army of young fans. Will the institution survive? Will Harry go next? Will the entertaining Twitter spats continue? Only time will tell.

Momentary Dickhead

What an end of year list be without a



Would a dinner party involving this lot end in a riot or an album? Photo Credit: Twitter, Creative Commons, Rex

Kanye West-ism? Especially coming from Kanye himself. Almost in homage to his 2009 stage invasion of Taylor Swift's acceptance speech for best female video at the Video Music Awards in 2009, Kanye leapt onstage when **Beck** accepted his Grammy for album of the year.

Afterwards, Kanye told Ryan Seacrest it was a joke and that "the voices in my head told me to go", but confusingly, later said that Beck's win over **Beyoncé** was "disrespectful to inspiration". As a third and final turnaround, Kanye tweeted an apology to the singer, having admitted he hadn't listened to the winning album when he made the original comments. Apparently taking the chance to get stuff off his chest, Kanye subsequently tweeted an apology to Bruno Mars who he'd previously "hated on" but now "respects what he does as an artist". Kanye, are you okay, hun?

The Trailblazer Moment

We're cheekily including **SIA**, because although she's been around for ages, and 'Chandelier' was released in June of last year, her profile, or lack thereof, has really risen in prominence within the last 12 months. In massive contrast to her contemporaries, who don't shy away from incorporating their sexuality into music, performances and videos, SIA shuns this idea to the extreme, choosing to hide her face. Red carpet appearances have seen her don huge

wigs, during performances she will have her back to the audience and her videos consistently star the young dance protégé, Maddie Ziegler. The Australian singer isn't new to the business. She penned **Rihanna's** 'We Found Love', **Beyoncé's** 'Pretty Hurts' and a load of others, as well performing in her own right since the 90s.

After decades in the industry, pictures of her face do exist, and are easily Googleable. The withdrawal of such a key part of the artist's identity seems less about conserving privacy and more about making a statement on the source of the art. Go SIA!

Video of the Moment

Taylor Swift's video for 'Bad Blood' broke the Vevo records, getting 20 million hits in its first 24 hours. This was understandable given the massive social media preamble Swift gave her 34 million Instagram followers, where promotional shots of each star appeared at such a rate that Twitter wondered whether the whole thing was an elaborate prank. The video starred 15 of her famous friends as well as collaborator **Kendrick Lamar** and was directed by Joseph Khan, who also did **Britney Spear's** 'Toxic' vid. Given the combined number of followers each of these models, actresses and model/actresses have, this huge number of views is unsurprising. But the combination of an iconic director, the most successful models of the moment and a huge

pop artist promoting the album of her life make for a video, that beyond the number of hits, is successful in its very obvious intention of becoming iconic.

Beef of the moment

Although by no means a new drama, **Azealia Banks** and **Iggy Azalea's** swipes reached a new level in the financial year ending 2015. After several comments from Banks about cultural appropriation, similarities between their names and the unsavoury Iggy lyric where she calls herself a "runaway slave master", tensions were high. During an interview with a New York radio station, Banks became visibly emotional when questioned about her issues with Iggy, going straight into her problems with appropriation, which she calls "cultural smudging". Iggy then went beyond subtweeting, putting out a "special mesg [sic] for banks" where she blamed her rival's "piss poor attitude" for her issues with the industry before deriding her for "crying on the radio". Ouch.

Moment of wonder

We didn't want to end on a sad note and Kate Bush's theatrical return to the stage last summer does deserve a mention. Playing 22 nights is a feat in itself, but the 'Hounds of Love' singer seemed to please every attendee, which for such a highly anticipated return is a feat in itself.

"This was Geri leaving the Spice Girls, or Robbie leaving Take That."

"Kanye, are you okay, hun?"

Television

television.felix@imperial.ac.uk

Television Editors || Guila Gabrielli & John Park

Still surviving... still thriving?

Jack Steadman looks back at the latest season of Game of Thrones

Another year, another season of *Game of Thrones* draws to a close.

This year marks a key milestone in the adaptation however, as with the end of season closer “Mother’s Mercy” the show has officially caught up with the books.

Despite adamant assurances from showrunners David Benioff and D. B. Weiss that it wouldn’t be a case of ‘one season, one book’, it all seems to have turned out that way.

Some clever merging of characters combined with streamlined storylines means that, even with judicious blurring of the lines between books, season five’s ending matches up near perfectly with book five, *A Dance with Dragons*.

It’s hard for it not to feel like a conscious decision on the part of the showrunners – doing it this way buys George R. R. Martin enough time to finish and publish book six, *The Winds of Winter* before the show returns next spring.

Compared to the books, the series has managed to avoid feeling like it’s treading water too heavily at any point, although not without some difficulties.

Events in ‘Mother’s Mercy’ managed the interesting feat of using moments from earlier in the book to finish off storylines, chopping and changing as Benioff and Weiss felt necessary, not least in Arya’s plotline.

Out of everyone, Arya is perhaps the biggest victim of Martin’s tendency to tread water in the later novels, leading to her final scenes managing the entertaining feat of covering events that have already happened in the books at the same time as handling those that are still yet to come.

It sounds silly on paper – using something that should have happened several episodes ago to round up a storyline that’s now overtaken the books – but it’s typical of Benioff and Weiss’ intelligent, careful approach to how they handle the delicate situation they find themselves in.

Until now, their audience has sat in two camps – those who have read the books, and those who haven’t, resulting in two very different viewing experiences.

For those already in the know for events coming up, the joy was in the adaptation itself, in finally seeing the books come to life (and, increasingly, seeing how the showrunners chose to alter the original plot lines, often for the better).

There was also a perverse glee in watching the damage wrought by the show’s twists and turns on the



At least one of the men in this image knows nothing. Photo: HBO

unsuspecting fresh TV audience, with the likes of the Red Wedding, the Purple Wedding (lots of capitalised weddings in this show) and the demise of the Red Viper all provoking a highly entertaining response from the non-book reading viewers.

The show has been impossibly successful at straddling that tightrope between audiences, with this series marking the point where the team behind it all had to make some tough decisions about how much of the future (which is already known to the pair) to reveal before Martin has the chance.

The answer, as it turns out, was far more than most people were expecting, with the eighth episode ‘Hardhome’ marking a watershed for the show on that front.

Easily one of the best episodes of the entire run, “Hardhome” took some liberties with the books, turning a previously off-screen battle featuring no major characters into a full-blown on-screen one, but also showed the true stakes at play in this series.

It’s been all about politics up to now. Mostly, anyway.

All about the titular game of thrones where, as Aiden Gillen’s Littlefinger so memorably puts it: “You win or you die.”

Choosing the title of the first book in the series, rather than its actual name, as the title for the TV adaptation now feels very, very

deliberate.

Calling it *A Song of Ice and Fire* might occasionally remind viewers of the larger game taking place in Westeros.

Full credit to Benioff and Weiss for burying that one.

As ‘Hardhome’ reminded everyone, there is a much, much bigger threat to everyone in Westeros than the antics of the ruling families, arriving in the shape of the White Walkers and their army of the undead.

We saw them in the very first scene of the entire series (also true of the books), and they’ve dipped in and out since then, but it’s been very easy to forget the massing threat on the north side of the Wall.

No longer. If season five is remembered for nothing else, let it be that: this was the season that blew the whole thing wide open. The stakes are raised. The war is truly underway.

It’s not the only thing that season five will be remembered for, though, for better and for worse. Mainly for worse.

The show got itself into hot water with yet another use of sexual violence as a plot-driving device, again against one of the major female characters.

Whereas the infamous scene in season four felt like a mistake – a scene that was intended one way, but filmed (and written) in such a way that it felt inescapably wrong – here was something that, to an audience at

large, felt completely unjustifiable.

It’s undeniably troubling, that’s for sure, but the treatment in later episodes went some way to improving the situation (confirmation, if any were needed, that shows must be taken as a whole, at least as seasons, rather than just judged on individual episodes), as the writers just about managed to veer away from using the rape as part of a male character’s arc, instead tying it to the agency of the female in question and using it to drive her arc forwards.

Mishandled? A little. As wholly unjustified as the internet outcry would have you believe? Probably not.

Game of Thrones has always courted controversy, sometimes for legitimate reasons, other times simply because it accidentally sailed a little too close to the wind, and this season was no exception.

But the show has always been (and hopefully will always be) more than that, better than that.

Going by the strength of the closing few episodes of this season, it promises to maintain the impossibly high bar of standards it has set for itself, and promises to keep leading the charge for quality television programming everywhere.

If you want my main concern, it’s looking almost certain that the show will get to the end before the books do.

I don’t know how I’ll cope with not knowing what’s coming next.

"It's been all about politics up to now. Mostly, anyway."

"The stakes are raised. The war is truly underway."

It's all about that Rex (no pteranodon)

Ellen Mathieson takes a trip to the re-opening of Jurassic Park

First things first, it's not as good as *Jurassic Park*. And really it never was going to compare to the original.

It's battling years of love and nostalgia, and the film that inspired countless people to spend at least a couple of years as a kid wanting to be an archaeologist (usually somewhere before astronaut but after princess).

It is the film that made dinosaurs into a thing, much as *Jaws* made people fear sharks.

With all that's going for the original, it's totally unfair to make *Jurassic World* compete. The best it'll ever do is 'The second-best *Jurassic Park* film'.

But if you look at it as a summer blockbuster, a big, dumb dinosaur film that is hugely enjoyable to watch, it hits the nail on the head.

I have not seen a film I have enjoyed this much in a very long time. Because that is entirely what the film is trying to do.

Pointless reboot is a term that gets flung around a lot these days, but in *Jurassic World*'s case, it just isn't true.

It's not a reboot. It's a clever sequel. The new park is now open to the world, full of dinosaurs and lots of yummy tourists to eat, attack and maim as the plot deems appropriate.

You've got little baby herbivore dinosaurs to go riding on, or you can watch a big, scary water dinosaur eat an entire shark.

If aquatic dinosaurs don't do it for you, why not go and watch the T-Rex get fed? Or go explore the enclosures of some of the more laid-back dinosaurs in your very own personable bubble, complete with annoying tour guide video.

For characters we've got the guy who knows everything about dinosaurs, Owen (Chris Pratt in one of his many hero roles after *Guardians of the Galaxy* made us realise that he's actually kinda hot), and the woman who is sort of knows things but is mostly there to be a love interest (Bryce Dallas Howard) with questionable fashion choices (seriously, who decides to wear heels when you might be running away from a big hungry dinosaur).

There's also the rich old man who owns the park, and the obligatory annoying kids, who actually manage to not be too annoying due the fact that the film makers realised that if all the kids do is cry and scream no-one is going to like your film.

The film's plot is kicked off when, in a bid to make an even more exciting exhibit to get the tourists come flooding in, the scientists design their own dinosaur.

"If all the kids do is scream and cry no-one is going to like your film."



I don't know about you, but I reckon a dinosaur did this. Photo: Colin Trevorrow/Universal (also below)

The Indominus Rex is pretty much a big T-Rex without the hilariously stunted arms, and it is awesome to look to look at.

Of course, Indy doesn't much like being locked up, so she escapes. And that's when everything goes majorly wrong, and where the film goes so right.

Jurassic Park could focus on its characters because there were so few people in danger.

Now we're talking thousands rather than ten, and there is death and destruction galore.

The main focus of the film is the dinosaurs.

Almost everything the humans do is pretty much just so you can see more of the dinosaurs.

You've got dinosaurs fighting dinosaurs, dinosaurs killing dinosaurs, dinosaurs eating dinosaurs, dinosaurs freeing dinosaurs to cause even more problems in the park. You've got dinosaurs killing, eating, chasing, scaring and exciting people. And then you've got people training dinosaurs.

When the first trailers dropped and people saw the raptors being trained, pretty much no-one liked the idea. But the film pulls it off excellently,

with the raptors still having the same threat they always did, you're just way more attached to them.

Nods to the original are plentiful but never overdone. This film is set twenty-odd years in the future on the same island as the original.

The line where the new owner recalls how John Hammond told him to 'spare no expense' is fantastic, and visiting the old visitor centre is enjoyable for people who have seen the original film, but it is also a cool, creepy setting that new viewer will find just as interesting.

There really are only a couple of issues with the film.

InGen as a secondary villain seems tacked on and a bit pointless. With such a strong primary villain (y'know, the dinosaur) having a second one felt more like sequel bait



Velociraptors make up the majority of Chris Pratt's fan base.

"Nods to the original are plentiful, but never overdone."

Summer of cinema

Jack Steadman gets ready for the next batch of blockbusters

With the summer upon us, it means the inevitable onslaught of blockbusters.

By normal standards, 2015's a pretty quiet year for the summer, with most of this year's big hitters either already out, or landing towards Christmas time (*Star Wars*, I'm looking at you).

But don't worry – once you've finally made your way through the likes of *Mad Max: Fury Road* (seriously, go and watch it again already) and *Jurassic World* (I have no opinions on this yet), there's still plenty of cinema to indulge in.

We've got unnecessary reboots (*Terminator*), yet more sequels (*Ted*), the odd genuinely exciting new work (*Inside Out*) and plenty more besides.

We also have a healthy dose of sarcasm about all of them, because that's just how we roll.

Minions (26th June)

As if your life wasn't already overflowing with the yellow critters from the *Despicable Me* series, they're back in an all-new film of their own.

That's right, there's a whole film comprised exclusively of the barely comprehensible, impossibly idiotic Minions. Because stealing the show in two films and commanding an entire series of adverts for Sky weren't enough. Thanks, Universal.

Having said that, this'll probably still be fairly amusing. Minions, despite being literally everywhere, are still funny.

Terminator Genisys (3rd July)

Did somebody say "unnecessary reboot"? I mean, I definitely did, but just in case someone else felt like chiming in with that opinion. Because that's what we're getting.

The *Terminator* franchise lumbers back to life following two attempted murders via film – the so-so third entry (*Rise of the Machines*) and the downright dire *Terminator Salvation*. Despite director McG's best efforts, the series survives. And it's bringing back the original Terminator, for real this time.

It's also completely changing the game, ending up in a sort of parallel universe where the original Terminator brought up an orphaned Sarah Connor (now played by Emilia Clarke). So there's that.

Trailers for the film have done their best to spoil all of the major plot twists, but hopefully there's still something up the sleeve of director Alan Taylor, fresh off the likes of *Game of Thrones* and *Thor: The Dark*



The only caption I could think of was 'toasty'. You try doing better. Photo: Disney/Pixar/Pete Docter

World. Clearly not a dictionary, however.

Ted 2 (10th July)

Seth MacFarlane's foul-mouthed teddy bear makes his second appearance in the inevitable sequel to the hit comedy.

The likes of Liam Neeson and Amanda Seyfried join the cast, with the latter playing a lawyer whose name bears an uncanny resemblance to another popular film star. Mark Wahlberg returns as Ted's "thunder buddy for life" John, although Mila Kunis opts not to reappear as his girlfriend. Fair enough.

The film is set to centre around Ted's attempts to have a baby with his (human) girlfriend, and his need to prove he is a person in the eyes of the law before this is allowed. Whether you enjoy it or not is likely to depend on your opinions of the first film, of *Family Guy*, and of Seth MacFarlane's work in general.

Ant-Man (17th July)

Admit it, you forgot this was coming out, didn't you? Originally the work of Edgar Wright, the latest Marvel

"Trailers for the film have done their best to spoil all of the major plot twists."

"A new IP from some of cinema's greatest minds should be exciting enough."

film (and the first of Phase 3) is now under the command of Peyton Reed, the man behind *Yes Man*.

Not the most promising of CVs, but the latest trailer suggests there's much to be hopeful for.

Paul Rudd's Scott Lang is a criminal, but one given a chance at redemption by scientist Dr Hank Pym. Armed with a suit that allows him to shrink (but increase his strength in the process), he's tasked with carrying out a heist like no other.

Ant-Man looks to be one of the Marvel films that leans more heavily towards the comedy side of things, if Thomas the Tank Engine's appearance in the trailer is anything to go by, and there's still plenty to be hopeful for. Marvel haven't put a foot wrong yet.

Inside Out (24th July)

Pixar haven't been on their best form of late, trapped as they are in the land of sequels. The fact that *Inside Out* is a new IP from some of cinema's greatest minds should be exciting enough. The fact that the early reviews are already declaring it to be amongst Pixar's finest work – a heady claim – should be even more so.

Set inside the mind of Riley, an 11 year-old-girl, *Inside Out* follows the personifications of the emotions inside her head, lead by Joy (Amy Poehler). After a move across the States, Joy and Sadness find themselves trapped in the far corners of Riley's mind, and Anger, Fear and Disgust are left in charge in Headquarters.



Used this layout before? Me? Never. Photo: Universal/Coffin & Balda

Fashion

fashion.felix@imperial.ac.uk

Editor || Cécile Borkhataria

Shoes: Pleasure and Pain

Cecile Borkhataria takes a look at the shoe exhibition at the V&A

The V&A's latest fashion exhibition takes a look at the extremes of footwear from around the world, ranging from Cinderella's glass slippers featured in the recent Disney live action movie, to tiny lotus shoes used to bind women's feet in 19th century China. The exhibition focuses on the transformative quality of shoes and their cultural significance, particularly as a symbol of status. With over 200 shoes on display, examples are shown from famous shoe wearers as well as a vast range of historical shoes dating as far back as 30 BCE.

Immediately after walking through the entrance to the exhibition, the dimly lit set-up accompanied with provocative music instantly creates a sensual atmosphere, alluding to the seductive power of certain types of shoes. On a projector, a woman is shown tying on a pair of red heels with ribbons, walking up a flight of stairs and through a hallway in a fitted dress. Here, the message is clear: shoes equal sex. This isn't just my interpretation though; the exhibition has an entire section entitled *Seduction*. Footwear, together with feet, have long been fetishised. For women, the shoes most often associated with seduction are, of course, heels. The appeal of heels are numerous. For one, they affect the movement of a woman's body whilst walking, pushing out the chest and behind whilst lengthening the leg, all of which are titillating for the opposite sex. 'Stripper heels' are placed on display, and whilst these may just look like normal heels to many of us, with a long thin heel and a platform, they were originally created for a specific purpose. Strippers originally wore these heels to allow them to grip onto poles, with the platforms providing a firmer footing.

Another section of the exhibition entitled *Status* gives an insight into the social significance of shoes across the world. For example, large rosettes of gilded or silver lace, appropriately named 'shoe roses' were used to emphasise the nobleman's legs in the 17th century, who would have worn tights to emphasise his calves. Shoes that indicate a high social status are often impractical in their shape and design, making a clear statement that the wearer does not have to walk in their shoes from A to B, but rather would be chauffeured or transported on a horse drawn carriage, far away



Shoes, glorious shoes. Photos: Victoria and Albert Museum

from dirty, muddy streets. For example, 'Geta' shoes were worn by high-ranking Japanese geishas, known as 'Oiran', during the feudal era (1186-1600). These were sandals with an elevated wooden base to keep the feet dry in rain or snow. The taller the shoe was, the higher the rank of the geisha. The two supporting pieces below the base board are also made of wood and make a clacking sound

when the wearer walks, signalling the presence of a high status geisha.

Some truly weird and wonderful shoes are on display, all telling their own story. A pair of 1938 black ankle boots designed by Andre Perugia (the Christian Louboutin of the time) is draped with flowing Colobus monkey fur, conveying the excesses of the wealthy at the time. During World War II though, the design of shoes

was dictated by a lack of material and a sensibility about what was appropriate. Such a pair of shoes is exhibited, made by a shoemaker in Kensington using the clients' old cheetah print coat.

A number of iconic shoes appear throughout the exhibition, including *Sex and the City* Carrie Bradshaw's Manolo Blahnik Mary Jane heels. For those who are more inclined towards

sportswear, there's even a display of Brooklyn football boots worn by David Beckham when he played for Manchester United. For those more interested in the construction process, the upper floor showcases methods of shoe creation and innovative new ways of making shoes using 3D printers.

The bottom line? There's something for everyone here.

Welfare

felix.welfare@imperial.ac.uk

Welfare Editors || Diba Esbati & Chanon Wongsatayanont

When Diversity Becomes Adversity

Pheerawat Ratnitisakul discusses about the lows of diversity in London's Melting Pot

“London is a world-class international city with people coming from diverse cultures and backgrounds. This, I believe, will allow me to enhance my communicative skills and learn to adjust myself to different environments.”

This is the sentence I used in the personal statement for applying for Imperial College London last year.

Yes, back then, I was just a little boy who always looked at the best side of living in a society which is hugely, giganticly, enormously, colossally, tremendously (whatever word you want to choose) diverse. Now, that I have seen some of the less good side, my views are changed.

Don't get me wrong. I'm not an anti-social person or a xenophobe who is scared of looking into a foreigner's eyes. I enjoy living in a diverse society as much as many of you and I still believe that being able to adapt yourself to this kind of environment is one of the key skills to your success in professional and everyday life.

Yet, it is also this diversity that can breed problems. Being part of a diverse community can also cause a lot of pressure, and that can lead into mental breakdown or depression.

Therefore, this article will point out the dark sides of living in a highly diverse society and how to tackle with these problems.

From my experience, there are always three common problems from living in a diverse city wherever in the world.

Culture Shock

From where I'm from, bargaining the price is very common and we do it all the time. But once, I tried this in another country and the shop seller pointed the finger at me and threw me out of the shop straight away. Stunned for five seconds, I learnt later that it was considered rude to bargain the price there.

This is what I mean by culture shock and it has happened to me in London. Cultural difference is a very common thing. Even you and your siblings might prefer different kinds of music. It is normal that people from different backgrounds or origins will have different norms, and these can sometimes contradict one another quite spectacularly.

What I do to avoid this problem is to assume that people will not always approach things in the same way I do. You can be surprised but don't be shocked. Once you do not



Not everything about diversity is always inspiring and positive. It can be a scary and alienating experience.

Photo: Duncan Philips

"Being a part of a diverse community can also cause a lot of pressure."

have expectations based on your own culture, you will not be shaken or disappointed. Instead, everything you see will be a new discovery for you!

Discrimination

Racism, unfair treatment or insult, don't let that get the best of you! In a diverse culture, people can be very judgmental of others that are different from them. This is because people can feel insecure when hanging around people they are not familiar with. So, they create a kind of barrier against the unfamiliar so that they can feel safe in their comfort zone.

Sometimes, the prejudice is not even malicious, but still painful to be misunderstood. It can be just an offhand comment that makes you wonder if you're a walking stereotype.

Never ever let it discourage you! Remember, you did nothing wrong and have no reason to feel bad about yourself. Prove to yourself that you are not what they think you are. But if they are still ignorant of this, who cares! They're not the only people in the world and there're no good reasons for you to pay attention to these people for any longer.

"Sometimes I feel lost among people and feel that no one will understand me."

Loneliness

Ironically, I find that living in a place where there is a lot of diversity can often be a lonely experience. Sometimes, I feel lost among people and feel that no-one will understand me. But don't worry! You feel that way because you're out of your comfort zone with the people similar to you.

No-one but yourself can solve this problem. Change your attitude and create your own comfort zone in this diversity! Change from the comfort zone that consists of people from the same country into a zone consisting of people with similar interests or passions such as learning languages and playing tennis. This way, you will feel more secure by knowing that there're still people who like the same things you do!

Living among people from different cultures and backgrounds can be difficult, especially in such diverse city like London. But if you understand problems that can occur in a diverse setting, you will be better prepared for it. I hope that this article will be useful to you and help you make the best of living in this city.

Mental health helplines and resources

If you are concerned about your own mental health or that of a loved one, there are people out there you can talk to who can give you advice, or will be there to listen.

Helplines

If you are distressed and need someone to talk to :

Samaritans (24 hr helpline)
Phone: 08457 90 90 90
www.samaritans.org.uk



Anxiety Help :

Anxiety UK
Phone: 08444 775 774
(Mon-Fri 09:30 - 17:30)
www.anxietyuk.org.uk

No Panic
Phone: 0808 800 2222
(daily, 10:00 - 22:00)
www.nopanic.org.uk

Eating Disorders:

Beat
Phone: 0845 634 1414
(Mon-Thurs, 13:30 - 16:30)



Addiction:

Alcoholics Anonymous
Phone: 0845 769 7555
(24 hour helpline)
www.alcoholics-anonymous.org.uk

Narcotics Anonymous
Phone: 0300 999 1212
www.ukna.org

College Resources

Student Counselling Service
Phone: 020 7594 9637
e-mail: counselling@ic.ac.uk

Imperial College Health Centre
Telephone: 020 7584 6301
e-mail: healthcentre@ic.ac.uk

You can also go to your academic or personal tutor regarding pastoral issues, especially if you think your mental health might be affecting your academic performance.

Union Page

New bar and restaurant name announced!



Since last week hundreds of you have been taking part in our poll to decide the new name for the bar and restaurant in Woodward Hall, North Acton. Over 600 of you took part in the poll and we are pleased to announce that the winning name, by a fine margin, was **The Foundry**. The name is a great way to recognise the history of the site where the new hall of residence stands. From the early 1920s right up until the mid

1980s the site was owned by Landi & Gyr forming the site for their factory and offices. The factory made "Elgee" electricity meters and time switches. Specifically the Elgee factory, just like Woodward Hall, was cut into the slope just west of Victoria Road.

We are really excited to bring you this new bar and restaurant in conjunction with College Campus Services and look forward to it being an integral part of the student experience for hall residents and students who live nearby!

Final poll results

▲ The Foundry	100
▲ Urban Oak	96
▲ The Meter	85
▲ The Contingency	81
▲ West Three	72
▲ The 1923	44
▲ One Victoria Road	44

NUS Green Impact

One of the Union's objectives from its strategy was to work towards our improvement in University Green League. Part of that work included taking part in the NUS Green Impact scheme. The NUS Green Impact is an environmental accreditation and awards scheme that is undertaken by students' unions, universities and community colleges. It helps recognise new work and continuous changes made by these institutions to make their campuses greener.

Headed up by our Commercial Services Manager, a team of staff reviewed current practices and implemented changes at the Union to the scheme's criteria in order to

better measure and reduce our environmental impact. 28 criteria were completed in total for our submission this year, including:

- ▲ Switching A4 paper at the Union to 100% recycled material where possible
- ▲ Conducting a waste audit of the Union Building with the help of College's Soft Services Department to help us highlight ways in which we can improve our recycling efforts
- ▲ Introducing a new green campaign in the Union Shop and Shop Extra to encourage our customers to reuse bags
- ▲ Supporting student-led campaigns on environmental issues, including Fossil Free Imperial
- ▲ Taking part in NUS's Snap It Off campaign, highlighting buildings on campus with their lights left on
- ▲ Documenting these changes in a new Green Impact section on our website
- ▲ After an audit of our work by the NUS, we have been awarded the Bronze Award, which is a great achievement. Schemes that were started for this year's Green Impact are continuing, and plans to develop work to gain the Silver Award have already been set in motion.

For more information, visit the Green Impact area of our website at imperialcollegeunion.org/greenimpact.

Community Connections Mass Volunteering

Looking for a one off volunteering opportunity in the next few weeks? Join us on one of our Mass Volunteering events, volunteering alongside 5, 10 or 20+ other Imperial Students in a fun and rewarding activity, instantly seeing the difference you are making. Everyone will get a free Community Connections t-shirt and travel expenses can be reimbursed. Sign up for the activities on the Mass Volunteering pages of the Union website at imperialcollegeunion.org/volunteering.

GoodGym - Wednesday 24 June

We are joining forces with GoodGym Westminster to do some good deeds in the local community. Grab your running shoes and be prepared to run 6-8km to a community project where we'll spend 40 minutes making a difference!

Kids City Abbeville Fete - 27 June

Now in its 19th Year, the Abbeville Fete near Clapham Common is entirely ran by volunteers. Kid's City are welcoming volunteers to come along and take part on the day, helping them to run their Kid's Zone which is set to be bigger and better than ever before!

Bugs! Day 10 July

Support Bugs! Day at our Silwood Park Campus, helping visitors discover the wonderful world of bugs and other invertebrates. They are looking for volunteers to help out with various activities on the day and you can take part in activities you think you are most suited for. Transport will be provided.





IC GOLF CLUB



The Felix team, 2014-2015



Back row: Fred Fyles, Arts Editor, Thomas Lim, Treasurer, Kunal Wagle, Sports and News Editor, Xuan Chen, Features Writer, Kamil McClelland, Arts Editor, George Butcher, Comment Writer, James Bezer, Science Editor, Chris Kaye, Contributes to student media when appropriate
Middle row: Jonanthan Masters, Satire writer, Jack Steadman, Film Editor and Satire Editor, Ben Howitt, C and S Editor, Mattin Mir-Tahmasebi, Copy Editor, Oliver Benton, News Writer, Chanon Wongsatayanont Welfare Editor, Philip Kent, Deputy Editor
Front row: Tessa Davey, Comment Editor, Philippa Skett, Editor In Chief, Cécile Borkhataria, Fashion Editor, Cecily Johnson, News Editor

COMING SOON AT THE UNION



**EVERY
FRIDAY
FROM
17:30**

Every Friday we will be transforming Reynolds into a cocktail lounge with a chilled atmosphere, relaxed music and a new venue layout. Come on down and let our newly trained mixologists whip you up some classic cocktails, plus our very own creations and specialities!

PULSE

Friday 19 June

20:00 - 02:00

**Metric &
FiveSixEight**

Entry

£1.50 if on facebook guestlist

£2.00 with flyer

£2.50 on the door

h

**Wine
tasting**

26 JUNE
18:30, H-BAR
ACTIVITIES SPACES
£7.50

The h-bar will be holding its tasting session on the 26 June from 18:30. Come and taste all of our great wines from all over the world.



**SUMMER
CARNIVAL**

LIVE BANDS
DJs
KARAOKE
BBQ

FRIDAY 26 JUNE
20:00 - 02:00
ALL BEIT QUAD BARS
BOOK YOUR TICKET ONLINE ONLY £2.00



Arts

arts.felix@imperial.ac.uk

Arts Editors || Fred Fyles & Kamil McClelland

A Light Show Hiding Substance

Emiel de Lange would prefer to be left in the dark



Pan Pan Theatre's *All That Fall*. Photo: Ros Kavanagh

We enter a dark room scattered with rocking chairs. The far wall is covered by an array of bright yellow lights, emanating heat and an irritating electrical buzz, while dimly lit bulbs hang from the ceiling. Taking our seats on the cushioned wood, I can see the looks of anticipation and curiosity on faces around me. Like them, I had little idea of what to expect, though we were promised to be “immersed into an atmospheric chamber of multiple speakers and ambient lights” whilst listening to Samuel Beckett’s radio play, *All That Fall*.

All That Fall, while obsessed with the mundane and the menial, paints our world as a dark and grotesque place. The one-act play follows the elderly Maddy Rooney, who makes her way along a country road to meet her husband at the train station.

Her journey is tiresome and she feels as if all the world is working against her. Although friendly passers-by offer to help her she still moans, and when she finally reaches the station, the train is late; the cause of this delay we don’t discover until

a harrowing climax towards the end. This is a unique moment of suspense and emotion in comparison to the rest of the play, which feels rather ordinary. Maddy complains at the small things in life, she becomes annoying and self-righteous, and listening to her I began to tire of life myself.

This is a sort of a magic I have only recognised in hindsight: one that allowed me to step into an existentialist perspective on the world and see some of its absurdities and hollowness. Depressing though it is, it’s an invaluable perspective, and in fact caused frequent bouts of laughter in the room. Laughter may indeed be the right response to life’s absurdity.

In this production, the voice acting was superb and evocative. I could physically feel the weariness in Maddy’s voice, and the action was easily and vividly cast against the backdrop of my eyelids. However, more than reproducing Beckett’s masterful script, the recording – I think through the timing and mixing of ambient sounds – lent the experience a harsh objectivity. I felt like a spirit floating through the

action, never feeling at home. There was a sort of tunnel vision: voices and noises seemed to appear and disappear unexpectedly and were heard abstractly – their existence preceding their essence as the existentialists would say.

I am less certain about the visual components of this production. Sitting, or rather, rocking in the dark among the many others in the room did lend an air of occasion to the process, but I found the light show to be distracting. The orange lamps seemed to fade on and off without logic, accompanying the sounds of an engine first and then a gust of wind. At one moment they were arranged in the shape of a cross, which I thought to be a heavy-handed statement to impose on such a subtle text. This is a play that could be better experienced at home, in a dark room, with a good set of speakers, but if you do decide to go – make sure you keep your eyes closed.

The Peter Pan Theatre’s production of All That Fall is on at the Barbican until 21st June. Tickets from £18, plus booking fee, available online.

“With All That Fall, laughter may be the right response to life’s absurdity”

“This is a play that could be better experienced at home, in a dark room”

Editorial: A Farewell

FRED FYLES
KAMIL MCCLELLAND
SECTION EDITORS

Swan songs. Exits to stage right. Magnum opera. The arts world is full of goodbyes and farewells. Players make their entrances and their exits; old pros leave the stage, making space for those novices waiting in the wings; and *Felix Arts* is no different. This year, we have both had a wonderful time as Arts Editors; throughout our tenure we have tried to place arts content at the centre of the paper, and thus – hopefully – at the centre of student life.

Coming to Imperial, one thing that concerned both of us was not the infamous gender ratio, nor the extortionate cost of living in West London, but instead the lack of arts students, which we feared would lead to a university experience that was devoid of life and energy, focussing instead on lab reports, experiments, and days poring over textbooks. In some ways, Imperial surprised us; the lack of arts students meant that anyone could give culture a go – the drama societies weren’t just run by a group of english language students; the fine arts society wasn’t just the habitat of the art historians; instead, there was a melting pot of disciplines, collaborating to try and continue their passion for the arts.

At the same time, there were disappointments. A general malaise among the student body – prompted, partly, by the disregard with which Imperial treats its undergraduates – meant that those who were confident about exploring their passion were few and far between. We have sought to rectify that. High points of this year have included the publication of the Culture pull-out in the 1600th issue, and the resurrection of *Phoenix*, the arts quarterly, which will be coming out as a separate magazine next week. But the real legacy we want to leave behind is the beginnings of an artistic community. We will both be stepping down next year, making way for the next group of editors, who we are sure will continue to build on the foundations we have set down. And for those of you who – like us – were worried about finding other students who are interested in opera, in dance, in painting, all you need to do is open *Felix*, and check out the bylines in the Arts Section. Thanks for a fantastic year.

#helloicu crew

**Recruiting
now for 2015/16!**

The #helloicu crew are our team of student volunteers that will be around on campus during Welcome Week 2015. They are there to answer any questions and help new students have the best possible welcome to the College and their new Students' Union!

100%

of volunteers last year said it had helped boost their confidence

90%

learnt and developed new skills and knowledge

100%

said the experience gave them the opportunity to make new friends

100%

said they would recommend being a #helloicu crew member to their friends

**To find out more and apply to be part of the crew, visit
imperialcollegeunion.org/helloicu**

**imperial
college
union**

London's calling – Making the most of spending your Summer in the Capital

Yung Nam Cheah lists why spending your holiday in London is awesome

Not all of us have the time to jet off to a different location and spend the summer holidays hopping from one destination to another, but that doesn't mean that you can't have fun in good old London either. In fact, London is one of the most visited cities of all times and there's probably a thousand people out there who would swap places with you in a heartbeat.

But what is there to do? Some of you might whine: I have already spent the last year(s) in this place and explored everything I could. If you are actually asking this, then you really don't understand the magic of summer. Summer is a time for rooftop cinemas, parks, markets and pop ups – and in order to truly convince you, I have compiled a list of the best to look out for:

Rooftop cinema

A surprisingly large number of pop up cinemas surface during the summer months, and among them rooftop cinemas are the most magical kind. With a big silver screen, a scatter of deck chairs or bean bags, London evening sky viewed at several storey high slowly darkening. It's a movie experience like no others.

You can catch a rooftop movie at Shoreditch with the Golden Bee Cinema, or across various venues with Press Play or Roof Top Film Club. Movies range from cult phenomenon like *Fight Club* to recent hits like *The Grand Budapest Hotel* and tickets usually ballpark around £15.

Alternatively, you can watch movies with non-rooftop pop up cinemas such as *The Big Cinema Club* for as little as £5 with drinks and popcorn.

The Parks of London

While London is known as a metropolis, its Royal Parks actually cover a whopping 1978 hectares of ground. Made up of 8 parks, the reason why they are called Royal is because they used to be hunting grounds of the royal family but are now open to the public. It is worth noting that Kensington Gardens, Hyde Park, Green Park and St James Park form an almost unbroken stretch of green space together and Regents Park is only a few blocks north of the northeast tip of Hyde Park. Most of you have probably been to a few on the list, so why not complete the set during Summer?

Green Park

With only 16 hectare of ground,

Green Park is the smallest of the Royal Parks. It lies between Hyde Park and St James Park and does not offer much in terms of attractions. It sits beside the busy transport station of the same name and border Buckingham Palace on its south with the A4 running across it on one side.

St James Park

Stretching all the way along with the Mall, this beautiful park covers 23 hectares with a small lake called St James's Park Lake. The blue bridge spanning across the lake offers an excellent view of the Buckingham Palace and Westminster. This is by far the most central park with Horse Guards parade and 10 Downing Street at the other end, and Trafalgar's Square just a stone throw away.

Hyde Park

The largest park in Central London, though only fourth largest in the Royal Parks, it covers 142 hectares west of Green Park. It is divided in two by its lake, the Serpentine and the Long Water and the former is an excellent boating place in the summer. It is famous for its Speaker's Corner on the northeast corner where any lawful public speaking can be conducted, as well as the Diana, Princess of Wales memorial and the Holocaust memorial, both near the Serpentine.

Kensington Gardens

Often confused as part of Hyde Park, the Kensington Garden is on the otherside of the West Carriage

Drive and is locked at night. It covers 111 hectares, and is home to the Serpentine Gallery, the Albert Memorial, the Round Pond, Italian Gardens, Kensington Palace and the Diana Memorial Playground.

Regents Park

North of Baker street and spanning over 166 hectares, the beautiful Regents Park containing Regent's University London and the London Zoo. This open parkland has a wide range of garden, a personal favourite being their rose garden, a picturesque lake, many sports ground and even an open air theatre.

It is also dotted with villas with an inner and outer ring road that take you around all the main attractions.

Bushy Park

With 445 hectares, Bushy Park is the second largest of Royal Parks and immediately north of the Hampton Court Palace. It is a Site of Special Scientific Interest, with abundant wildlife and fishing ponds.

Richmond Park

The largest of all royal parks, Richmond Park boast 955 hectares and was created by Charles I in the 17th Century as a deer park.

It is a national nature reserve and includes many building of historic interest such as the White Lodge (a former royal residence). The best way to get around the park is by cycling.

Greenwich Park

A former hunting ground turns green space, Greenwich park is part of Greenwich's World Heritage side and

“Greenwich Park offers a spectacular view towards Canary Wharf.”

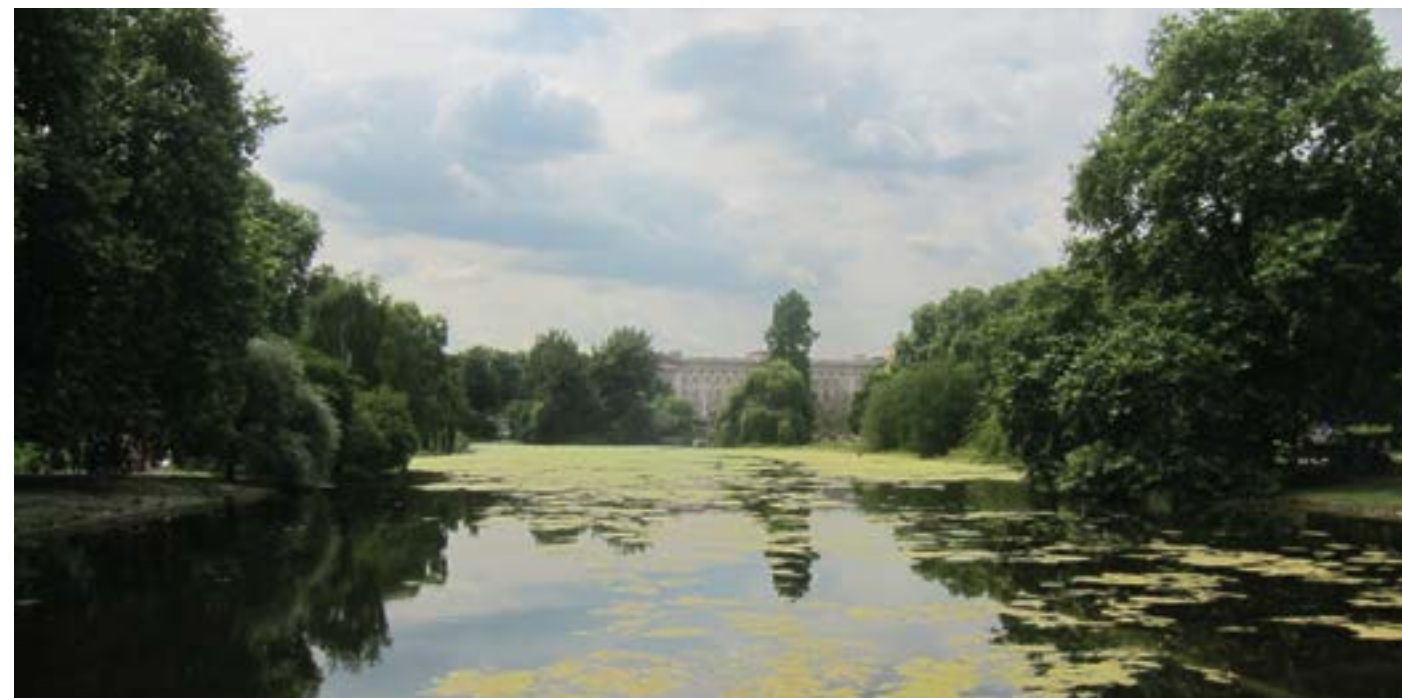


London is one of the top destination in the world. With culture, history, beautiful parks and famous nightlife, there's plenty to do in the capital.

Photo: Yung Nam Cheah



The Columbia Road Flower Market Photo: Yung Nam Cheah



Looking over at the Buckingham Palace from the blue bridge of St James' Park. Photo: Yung Nam Cheah

cover 74 hectares.

It offers a spectacular view towards Canary Wharf from its hills, its main attraction is the Royal Observatory where you can walk across the Greenwich Meridian.

Markets, Markets and more markets

London has no shortage of markets, and if I were to list them all we would probably end up being here all day. So I will only present a small selection of my absolutely favourite here:

Portobello Market

Made famous by the movie *Notting Hill*, Portobello on a Saturday is the place to be. Mostly focus on antiques and vintages, it's worth bearing in mind that while the South end is more picturesque, the less tourist

catered part is towards the Ladbroke Grove Underground Station. There are also no shortage of food vendors and quirky restaurants in the area for those who don't want to stand and eat.

Best time to go: Saturday 9:00 – 19:00

Nearest stations: Ladbroke Grove, and Notting Hill Underground

Brick Lane

Lined with Indian restaurants and fabric shops, the true Brick Lane Sunday Upmarket does not start until near the Truman Brewery.

Featuring a scattering of smaller markets, you have not one, not two, but three food areas bursting with international cuisines waiting for you to sample.

After you have satisfied your hunger, there is a maze of vintage

shops and antique vendors around the area for you to browse, not to mention the street stores lining the main road.

The area is also home to famous vintage shops such as *Beyond Retro* whilst Spitalfield markets is only a stone throw away.

Best time to go: Sunday 9:00 – 17:00
Nearest station: Best to walk there from Liverpool Street (10 minutes)

Columbia Road Flower Market

A ten minutes' walk from Brick Lane, Columbia Road Flower Market now attracts an international crowd. From peonies to carnations, you can find all sorts of flowers and potted plants selling in this market.

Despite the positively cloistering crowd, it might be worth going at the end of the day so you can grab some cheap flowers to brighten up your summer.

Opening times: 8:00 – 3:00 (ish)

Address: Columbia Road, London, E2 7RG

Camden Lock Market

Having expanded in recent years, this historical market originated as a stable market.

Open every day of the week – there are a plethora of food vendors and charming artist selling their cuisine and crafts. In addition to that are some fine book stores on the underground level and of course, vintage shops.

Not to be missed is the futuristic Cyberdog store, photographic opportunity with the horse statues and the beautiful raised terrace of

Camden Proud at the northern tip.
Opening times: 10:00 – 18:00
Nearest station: Camden Town

Pop ups

The pop up scene has become increasingly popular in London, mostly in regard to food. While not exactly the cheapest around the world, there's no question that London pop up scene has one of the wildest imaginations. I would try to cover some, but I know I won't even get close.

Immersive Theaters London

The kind of pop up that send your heart into a wild frenzy, immersive theatres are the new way to experience the world of theatrics. Allowing you to take part in the drama itself, you get to be chased by the bad guy and make deals with the heroines, or if you fancy, get chased by zombies. London is home to several so I would pull up a list, bear in mind that these are not the cheapest indulgent.

Lists: www.20bedfordway.com/news/immersive-theatre-london

The Nantucket Beach Club

Rooftop Pop-up Bars
Nantucket is a little known island in Massachusetts and this summer Hilton Hotel Tower Hill is bringing the charm of the East Coast to the London rooftop. Serving cocktails and cuisine inspired by Nantucket, there's nowhere else better suited for you to unwind in the evening with a Surfside Punch on the side (unless you go to the island yourself).

Open: 1/5 – 30/9 from Tuesday to Saturday 15:00 – 22:00.
Address: Skylounge at Double Tree by Hilton Hotel Tower Hill

Dalston's Efes 'Putts' up plonk's crazy golf course

Let's be honest, who doesn't like mini golf? It's quaint, it's cute and most of all, it's the best ice breaker if you are on a date but fun for all ages and occasion.

Only available on Wednesday and Thursday night, don't miss a chance to challenge your friends with this 9-hole crazy golf course with a twist of Aztec. Think volcanoes and totem pole – so what are you waiting for?

Open: Wednesday 18:00 to 0:00, Thursday 14:00 – 1:00.
Address: Dalston's Efes Snooker Club, 17B Stoke Newington Road, N16 8BH
Costs: £7.50

“The pop up scene has become increasingly popular in London”

“London has no shortage of markets...”



Nothing beats a magical sunset at Kensington Garden by the round pond. Photo: Yung Nam Cheah

Travel

felix@imperial.ac.uk

Travel Editor || Yung Nam Cheah

Bukhara: Dreams of Another Land

Kamil McClelland explores what inspires us to seek out adventure

"But there is no such thing as a Silk Road!"

I didn't quite know how to react. What did she mean? Had my grand plans of an adventure along the ancient Silk Road this summer all been in vain, chasing an imaginary past in the vast and stifling wastelands of Turkestan?

I was giddy in anticipation of this lunchtime celebration I had been invited to. It all started three years ago when, in preparation for medical school, I decided to volunteer with a charity that sought to bring the elderly into the technological age by introducing them to computers and the basics of how to use them. And completely by chance, I was paired with the most remarkable woman I had ever met; an 100-year old archaeologist with a lightning fast wit, we bonded over mint tea and halwa, sharing our passion for travel, history and culture with tales of her work in Helmand and Baluchistan in the late '40s. Photographs of rural life - horse-drawn carts, minarets and naan sellers - told a story of a different world, one that I knew no longer existed but one that I still wanted to travel to. However, due to ongoing instability in the region, I knew this would not be possible in the foreseeable future. But a desire had been ignited within me to visit a world completely distinct from my own.

And so when with my close friends I decided an adventure for our final long summer was needed, straight away this thought of a new experience overcame my mind. "It's got to be Central Asia", I argued. The ultimate melting pot of the world, it sat at the crossroads of history's greatest civilisations, absorbing influences from all its borders - China, Russia, the Middle East - like a cultural sponge dripping with intrigue and conflict. And although the reality of the area nowadays is more defined by its post-Soviet dictators, I knew it would nevertheless be an expedition to reinvigorate the soul.

Months of planning later and with the support of Imperial's Exploration Board, I found myself at this party, one to celebrate my archaeologist friend's 101st at the home of an academic colleague. An unassuming facade on a quiet street in Clapham, I could not have imagined the artistic hoard that lay inside, the product of a lifetime of excavations and discoveries; masks, pottery, trinkets from all around the world adorned the walls, alive with all the dreams of travel that glazed my eyes.

"The product of a lifetime of discovery: masks, pottery, trinkets from all around the world."



Alim Khan, Emir of Bukhara, 1911 by Sergei Prokudin-Gorskii. Photo: Library of Congress

"What do you mean it doesn't exist?", I questioned anxiously. The original statement was in fact more a clarification of the term 'Silk Road' than an outright rejection of its existence. For it was not simply one road but a term coined in the West for the mesh of trade routes extending all the way from the Middle East to central China. As certain routes declined due to warfare or even high taxes, others boomed, a constant ebb and flow that carried with it not only goods but knowledge and religion. Moreover, it is a misnomer that it was merely a 'Silk' road or that commerce was unidirectional. Teas and spices and a panoply of other wares were also traded, in both directions, for centuries before improved maritime trade routes brought about the route's demise.

My hosts, an archaeologist and an art historian, had travelled to the region many times and thus were

full of stories and helpful advice. Notably, they spoke warmly of one city in particular - Bukhara. Though little known of in the West, the descriptions painted for me of this Silk Road city filled me with wonderment. Emerging from the unbroken desert, a single minaret pierces upwards through the haze as if a vision. In the eyes of a weary traveller, this phenomenal tower represents the end of a devastating journey across sun-parched nothingness.

Built in mediaeval times alongside its more famous sister city of Samarkand, Bukhara is a place of fantasy. You could sit for days in the shade of the central square, watching as children jump from trees into the tiled pond, trying to escape the midday heat. From there, a short walk to the city's Old Town introduces you to the narrow warrens of its ancient Jewish Quarter, a community that has been all but wiped out in this

staunchly muslim nation. Only one synagogue remains.

I could not emerge from this dream: bustling markets stacked high with porcelain teapots, the desolate, featureless Karakum (Black Sand) Desert, specked with the bivalve fossils of its aquatic past. However, the reality of our undertaking was never too far away - mid-summer, over 2300 miles of cycling through mostly desert. It was all too obvious as I carefully studied a map of our route. And so, although the reality of our expedition may be far removed from my dreams, perhaps as Mile 1000 of unrelenting desert heat chips away at my soul or when our water supplies run low, hallucinations of plentiful oasis towns, ethereal domed mosques, will beckon me onwards, just as it did the Bactrian caravans centuries before me.

Follow our expedition at www.tourdestan.co.uk or on Facebook at Cycling the Silk Road 2015

"A single minaret pierces upwards through the haze as if a vision."



THE
SUMMER
BALL
2015

Licence to Thrill

Saturday 20 June 2015

This year's Ball and Afterparty are now

SOLD OUT.

**You won't be able to buy a ticket
on the door.**

Coming to the Ball?

**Then visit the Summer Ball website for all
the details you need for Saturday.**

imperialcollegeunion.org/summerball

imperial
college
union



PRIVATE ICL

No. 1610
19th June -
26th June 2015
FREE

SO LONG AND THANKS FOR ALL THE TWEETS



INSIDE: TWEETS

HANGMAN



News in Brief: Urban dictionary says a 'Skett' is "A fat, sweaty, disgusting girl that nobody wants to be with."

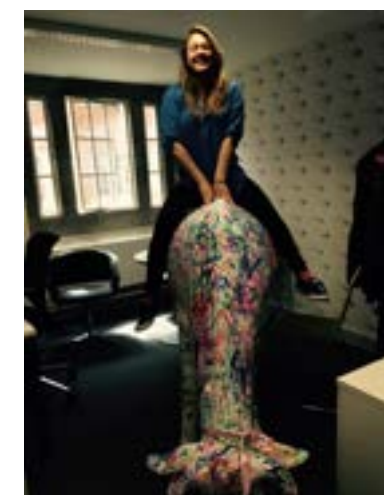
hangman@imperial.ac.uk

Ohbitchuaries



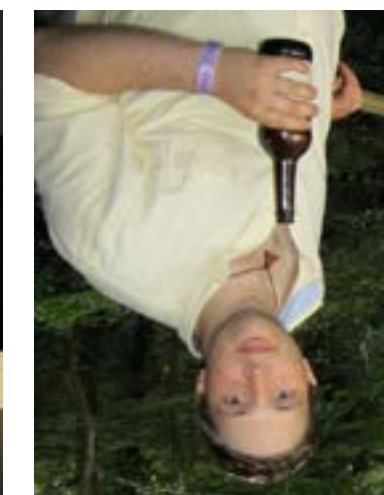
Tom Wheeler

President



Abi de Bruin

Clubs & Societies



Alex Savell

Finance & Services



Chris Kaye

Welfare



Pascal Loose

Education

Tom was elected President on the back of his exhibitionist photos, splashed everywhere over the course of the campaign. Hangman is unable to reproduce the pictures here for legal reasons, and is also banned from discussing the existence of said legal reasons due to an injunction taken out against us by an unnamed Union President. Most famous for his attempts to endear himself to the notoriously geeky population of Imperial by inserting his own face into a popular mobile game, Tom won his election by some votes.

We're not really sure how many, and we don't care either. In the later days of his reign, Tom found himself being edged out by a new pretender to his crown, a bovine statue. After a shaky start to their relationship, Tom and cow began to form a strong bond, resulting in Tom insisting that the cow be left to handle all Presidential duties, as it was "clearly so much more qualified" than him.

As the cow (which cannot be named, also for legal reasons) began to become yet more proficient at the President's job, Tom was content to sit in his office, stroking his finely-groomed beard.

Alas, this ultimately proved to be Tom's downfall, as one unfortunate day the cow was 'accidentally' tipped over, landing on top of Tom.

Trapped under the cow, and unable to call for help through the luscious locks surrounding his mouth, Tom slowly wasted away in his office.

He was eventually discovered by the Deputy President (Clubs & Societies), who "only went in to talk to the cow anyway."

Tom will be sorely missed by the members of bearded community, as well as the cow, who declined to comment when Hangman spoke to them.

We asked Abi how she felt her year in office had been, and she told us to "get the hell out of my office, you stupid wankers."

Such was Abi's engagement with student media. Her other contributions to student life in her role in Deputy President (Clubs & Societies) included throwing shoes at Hangman when we made a sarky comment about the 'CS' in her title standing for 'Crisps & Snacks', and desperately hiding from students by turning the lights in her office off and locking the door.

Needless to say, this made her incredible popular with the student body, as her absence meant that another layer of needless bureaucracy was removed from the Union, and staff were free to go and pester staff directly instead of being told to "talk to the DPCS."

When Hangman caught up with Abi in the bar one night and offered to buy her a pint, she opened up to us in an exclusive interview that we are only now able to print.

"I just really wanted to do something cool," she told us. Hangman asked whether she thought that putting a cow in Tom Wheeler's office counted as "something cool", prompting her to start cackling uncontrollably.

To the surprise and concern of all around, her ceaseless cackling soon lead to her inability to breathe, causing her to pass out (and eventually pass away) in front of Hangman's very eyes.

Hangman feels that she died doing what she loved: remembering that one time she put a cow in Wheeler's office.

The cow's still there, by the way. We know it killed Wheeler, but it was doing such a great job that nobody really wanted to see it let go. Cows have employment rights too, you know.

Alex was famous for doing something. Honestly? We're not entirely sure what it was.

We do know that he always found the time to look after his beloved dog, prioritising Flopsy (or whatever it was called, probably something unbearably middle-class) over all else.

He was famous for being one of the only people willing to attend the Imperial-run festival (*note: not Imperial Festival, which is very, very different and should 100% be taken seriously by everyone, we promise - Ed.*), which took place in some far-flung field and wasn't as good as Glastonbury.

He was also well known as a big fan of horse riding, often indulging in a spot of polo.

All around felt this displayed the depth of Alex's capacity for what is often called the 'common touch', an innate ability to connect with the common or garden student, or the rarer variant of that species, the "Union hack."

As with all great, tragic love stories, Alex was killed by that which he loved most: his dog.

While Alex slept, Flopsy mistook him for a tasty morsel, and subsequently devoured him whole.



Thanks in no small part to Hangman, Chris Kaye managed the unlikely feat of being elevated to a cult hero.

His work for the female population at Imperial was legendary, with his ground-breaking policy of not completely screwing over anyone wishing to buy sanitary products from the Union Shop being his most recognisable achievement.

Although one might expect his popularity with the ladies to inspire jealousy in the male populace, Chris was instead universally beloved by all. Hangman interviewed an anonymous *Felix* Editor, who told us "I love Chris! He was my favourite sabb, because he always took the time to go for a cheeky pint in the Union, whatever the time of day."

"No hour was too early for Chris to have a cheeky pint. He was a man after my own heart." While walking through the College, Chris often found himself being followed by his legions of adoring fans.

It was this which ultimately proved to be his downfall, as one day the crowd following him grew too large.

It all started out like a normal day for Chris, until word got around campus that he had been spotted. With the majority of students having finished exams, there was a far greater number available to hound him.

The police were called to control the throngs, with some suggesting that the army should have been called in due to the sheer number of people desperately attempting to get a glimpse of their idol, Chris Kaye.

Chris was initially believed to have been killed in the crush, but he has reportedly made a miraculous recovery in hospital.

Hangman looks forward to seeing Chris next year, and hopes that no mysterious or unfortunate accidents befall him at the end of the next academic year.

So, we have no idea what to write about Pascal, also known as the 'International Man of Mystery' or 'Pascal? Who's that?'

He was apparently the Deputy President (Education), but sources close to Hangman confirmed that very few students were actually sure this was the case.

Pascal was most famous for his work as the pretty face of the Sabbatical team, bringing his dashing good looks and winning smile to his job.

Unfortunately, that winning smile was wiped off his face when he made his final, fatal mistake: visiting the *Felix* Office.

While engaging with student media (an activity often frowned upon), he made the mistake of venturing too close to one of the overlaid shelves lining the office, filled with bound editions of *Felix* past.

With barely a nudge, the shelves collapsed, causing the books to crash to the floor, covering Pascal.

He was killed instantly, with his last sight that of one of the many, many *Felix* centrefolds.

We hope he enjoyed it.

We don't really have anything else to say, so here's another picture. No context provided, because that's Hangman for you. Mysterious until the end.



HANGMAN



News in Brief: Hangman allegedly considering bid to be FIFA President

hangman@imperial.ac.uk

NEWS WITHOUT THE NEWS



Felix Editor fails to prevent Hangman from reprinting image



Union institutes 'alternate' awards ceremony

Diary of a Fresher, aged 19 1/4

Saturday 13th June

Well, diary, this is it. My exams are all over (the ones I went to, anyway), I don't have any more coursework or projects. Everything I was supposed to do academically is done.

I mean, I also fucked everything up, and I won't know what happens with 'mitigating circumstances' for at least another month. Guess I just have to wait for my results.

I don't know if I really want to come back to Imperial, to be honest. It's been a bit of a shit year.

There was all that crap with Dorothy (the human one), and with Dorothy (the goat one), as well as whatever the hell happened with Kris Krage in Turkmenistan.

I don't really remember most of what happened. At times, I'm not sure I felt like the same person. It was as if the story of my life kept changing on a whim.

If you ask me (I don't know who "you" are, must be a rhetorical device I've started using), Imperials been a pile of crap.

I didn't know anyone when I came here, I won't know anyone when I leave, and everything else inbetween has just been absolutely insane.

I'm going home tomorrow, I probably won't bother keeping up this diary after that.

So long, Imperial. I won't miss you.

HOROSCOPES

 ARIES	 TAURUS	 GEMINI	 CANCER	 LEO	 VIRGO
<p>This week you are the horoscope writer; however you just finished your exams so you are horrendously drunk; however the <i>Felix</i> Editor still needs her horoscopes tho and you wouldn't let her down so who even knows if these are funny so good luck. (Hangman accepts no responsibility for grammar.)</p>	<p>This week you write a complaint letter due to the abhorrent language used in the horoscopes- it appears that you have never read horoscopes before: Fuck shit cunt fanny piss twat bollocks curmudgeon axe wound wankathon.</p>	<p>This week you are the President of Imperial College. You pick up a copy of <i>Felix</i>, hoping to find out the latest news about goings on in your venerable institution. Instead, you find Blue News. You sue <i>Felix</i> for defamation.</p>	<p>This week you go to the RCSU bar night, hoping to take advantage of the free drinks following the end of your exams. Unfortunately, you have one too many vodka-Red-Bulls, and black out. You wake up the next morning in the <i>Felix</i> Editor's bed. No-one knows how you got there or what happened.</p>	<p>This week you are the <i>Felix</i> Editor. Enraged by the constant defamation of your good person in the horoscopes, you go to the RCSU bar night planning on drowning your sorrows with the free drinks. You get black-out drunk and wake up the next morning with a mystery man in your bed. No regrets.</p>	<p>This week you accidentally leave your Facebook logged in in the Central Library. When you return, you find that some joker has added everyone on Facebook with the same name as you as a friend. You spend the next three months getting notifications that [insert your name here] has accepted your request.</p>
 LIBRA	 SCORPIO	 SAGITTARIUS	 CAPRICORN	 AQUARIUS	 PISCES
<p>This week in an attempt to beat E.L. James out of the gate, you write an erotic novel, filled with voluptuous sex scenes and vivid penetration; however your 50 shades of Chris Kaye doesn't do as well as you planned and as a result you lose the deposit you put down on the book is lost and your Brazilian girlfriend leaves you.</p>	<p>This week you resign from your club due to the fact that nobody wants you as President; however as an attempt to reintegrate yourself into the cool squad by having sex in the <i>Felix</i> office, it ends up going the wrong way and you must go into exile. You are not the chair of RAG.</p>	<p>This week you are Hangman. Your horoscopes writer gives you yet more unprintable horoscopes. Despite knowing full well that any attempt at having standards will get you fired, you accept your fate and refuse to allow them in the paper. The Editor is too drunk to fire you, and you survive another year.</p>	<p>This week you are a worker in the Blue Cube. Concerned by how close to home Blue News is currently hitting, you begin to suspect your colleagues of leaking information to Hangman. It could be anyone. Trust no-one.</p>	<p>This week you too are Hangman. Normally at this point you'd make a pained plea for people to contribute, but you remember this is the last issue of the year so you no longer care. You finish writing, and piss off to the bar to get drunk for three months straight.</p>	

Blue News

The weekly newsletter of the Faculty Building

Provost Post of the Week

Every week, a member of our esteemed Provost board shares their thoughts with our collaborative, cohesive community. This week, we welcome back Al Pologies, Vice Provost (Arbitrary Excuses)!

Hi all,
I'm so glad to finally be writing this column - after all those unfortunate, unexpected mishaps kept me away from the keyboard, I thought I was in real danger of never appearing in Blue News!

What a travesty that would have been!
Of course, as we all know, no truly self-respecting member of staff could allow themselves to pass up the opportunity to appear on these hallowed pages.

Naturally, I consider myself pretty self-respecting, so doing everything in my power to get this post written up and sent in in time was an absolute given!

I have to say, it feels fantastic to finally know that these words I'm typing now will make their way into print, appearing in every copy of Blue News that finds its way into the hands of all you magnificent workers of the Faculty Building.

I'm getting shivers of joy just thinking about it.

Unfortunately, I've just discovered that I may not be able to finish this post - my assistant has just stuck their head 'round the door to let me know that an urgent matter requiring my attention has just flared up.

It's a hard life being the Vice Provost (Arbitrary Excuses) - something always seems to happen that means you're needed elsewhere.

It's tough going, and requires a lot of work to keep up - there's only so many arbitrary excuses people can take before their patience can understandably wear thin, and it's my job to make sure all of you in the Faculty Building can work and collaborate as best you can, without feeling obstructed by the unfortunate necessity of arbitrary excuses.

Hope to see you around!

Hello all,

This is it, wonderful gentlemen (and ladies) of the Faculty Building! The last Blue News of the academic year, as we allow the lovely boys in Comms to take a well-deserved holiday until October so that they can recuperate and recover from the high stress job of putting this magnificent newsletter together.

But before that, we have a very big announcement!

I'm sure all of you remember the excitement surrounding the big reveal of our Imperial West campus (and, of course, its sister campus of Imperial Very West). I'm now delighted to reveal the official name of both sites: Imperial West will become the White City Campus, while Imperial Very West is now confirmed as the Heathrow Campus.

Both of these sites are steeped in history - White City takes its name from the white marble covering the exhibition pavillions that once sat there during the 1909 Imperial International Exhibition (note how Imperial was already a global, world-leading institution, even at the very beginning!).

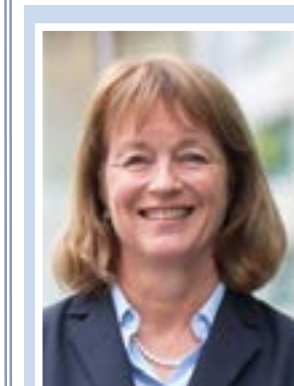
Heathrow, meanwhile, takes its name from the famous airport in the local area - another example of our enormous international links with the global community!

But to counter that good news, we must also say 'vale' (that's "goodbye", to all you well-educated-but-not-Latin-educated folks!) to some of our wonderful staff.

Among them are the Vice Provosts for Student Voice (following the results of the informal review into his position), Halls Demolition (as our current plans for demolition have now all been carried out) and Kettling (as this service as now been outsourced to the Metropolitan Police).

We are also looking for new Vice Provosts for Halls Construction and Campus Naming Services - but more on that one another time!

Have a productive, cohesive, collaborative and happy day!



Alice Gast: Thought of the Week

"This week, I've been collaborating with the senior management team to put the final touches to our official renaming of the White City Campus, and I'm extremely pleased to finally be able to update everyone on this intelligent and forward-thinking decision by the team. I'm sure we can all agree that this is the perfect name for the campus. Anyone who disagrees can, quite frankly, piss off."

What is going on inside the Blue Cube this week

With the last Blue News upon us, we had some tough decisions to make over what to include - we have a whole summer of events to list, and just this one magnificent column to fit them all into!

All-Staff Briefing Cancelled

This week's All-Staff Briefing has sadly been cancelled by the Vice Provost (Arbitrary Excuses) as he was too busy writing his Provost Post of the Week to send out the agenda in time.

What Is: Blue News?

This week, we're making use of our 'What Is' session to clear up a regular source of confusion: the provenance and purpose of Blue News.

We're also taking the chance to celebrate the people behind Blue News - you know us, never ones to miss an opportunity to multi-task!

Pop along to the Boardroom from 1pm on Tuesday for the run-down on Blue News, before we'll get things going from 2pm with our celebratory bash!

Prosecco will be provided, as well as green tea for all you 'tea-totallers' out there!

Staff Awards Ceremony

In a first for the Faculty Building, we'll be holding a very special awards ceremony, where we give those special members of staff who have greatly contributed to life at Imperial.

If you feel a member of staff has done something particularly wonderful, please do consider nominating them for an award.

Simply send an email over to us at FacultyAwards@imperial.ac.uk, with your nomination and why you think they deserve to be rewarded!

We'll be holding the ceremony at 4pm on Wednesday, and we look forward to seeing you all there!

Don't forget to bring your yoga mat as usual, and green tea will (of course) be provided.

What is going on outside the Blue Cube this week

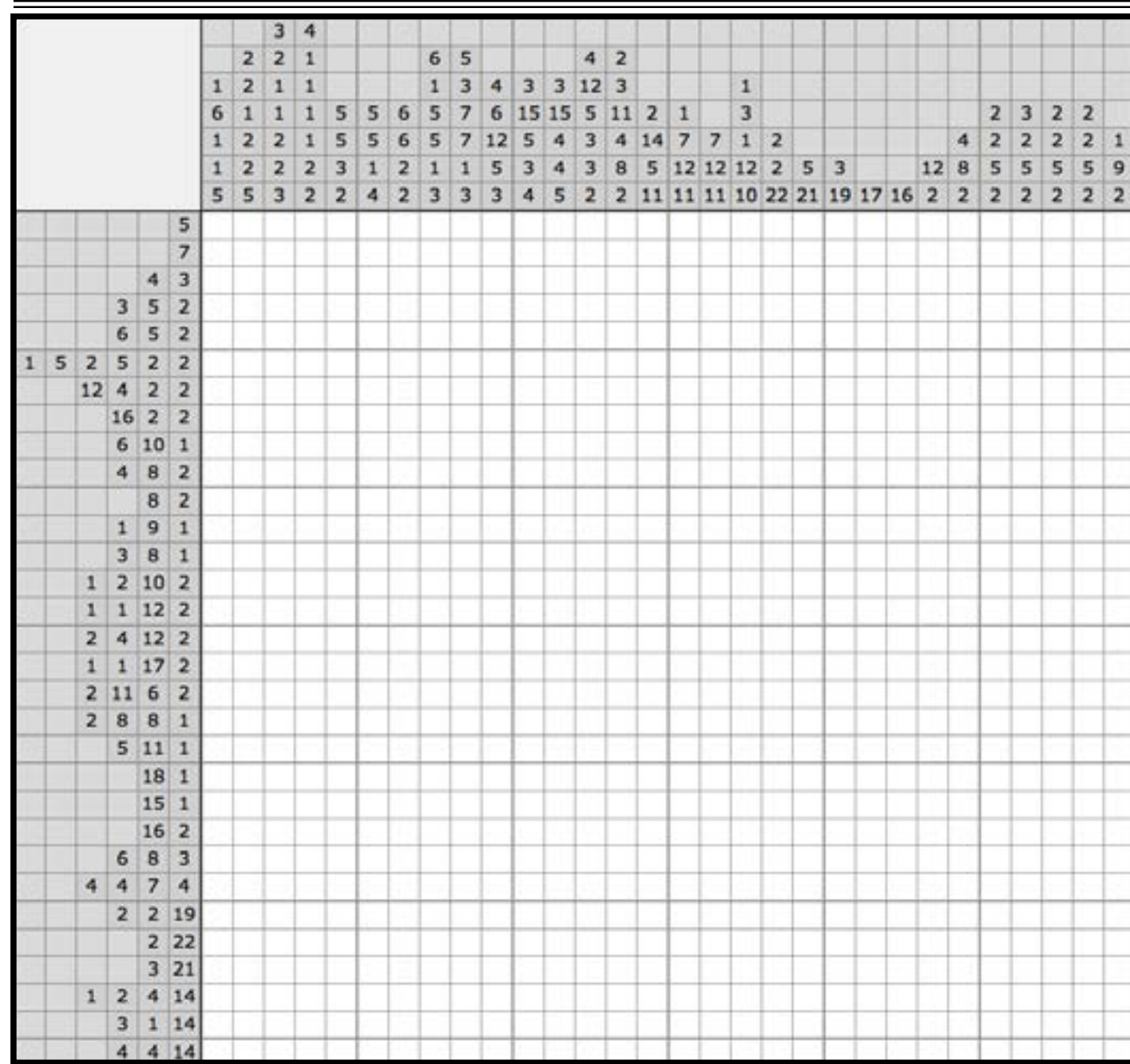
Something something something ban on leaving the building without written permission something something.

Puzzles

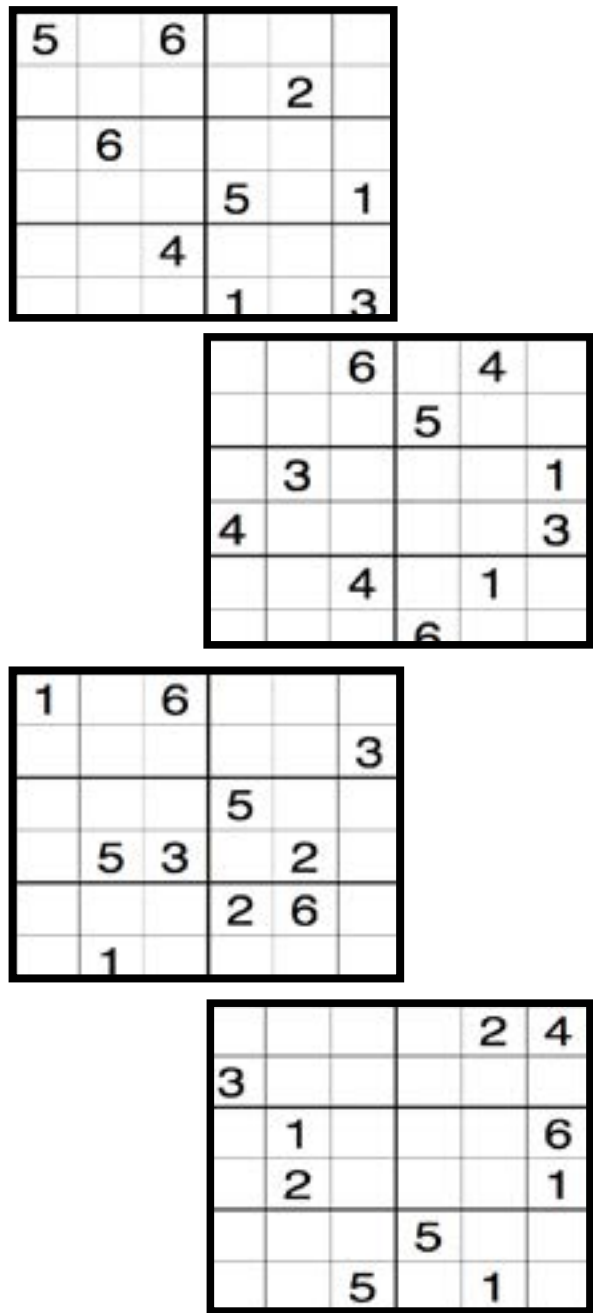
fsudoku@imperial.ac.uk

Puzzles Editor | Michael Faggetter

Super Duper Nonobellogram



Tiny weeny sudokus

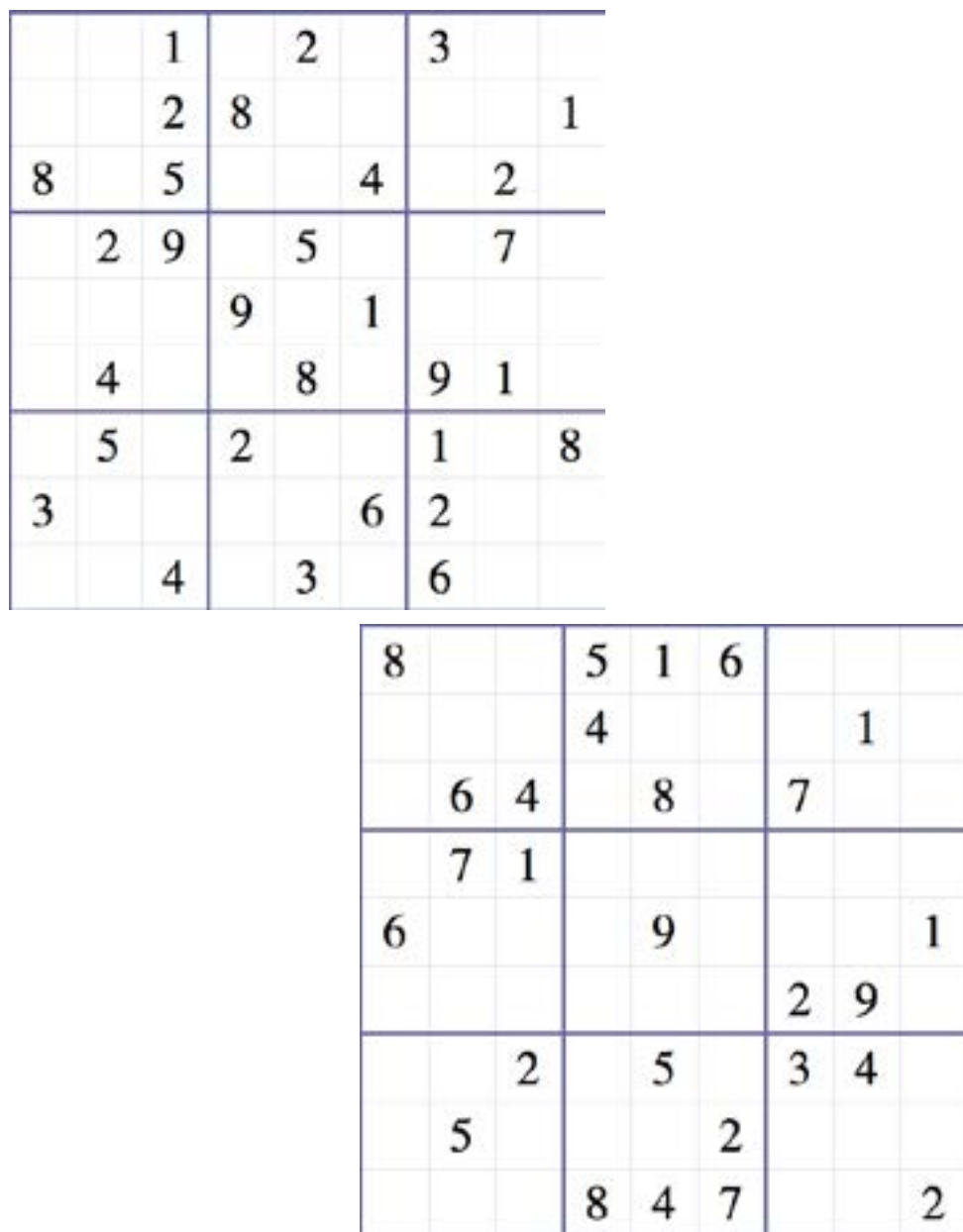


Puzzles

fsudoku@imperial.ac.uk

Puzzles Editor | Michael Faggetter

Sudododokus



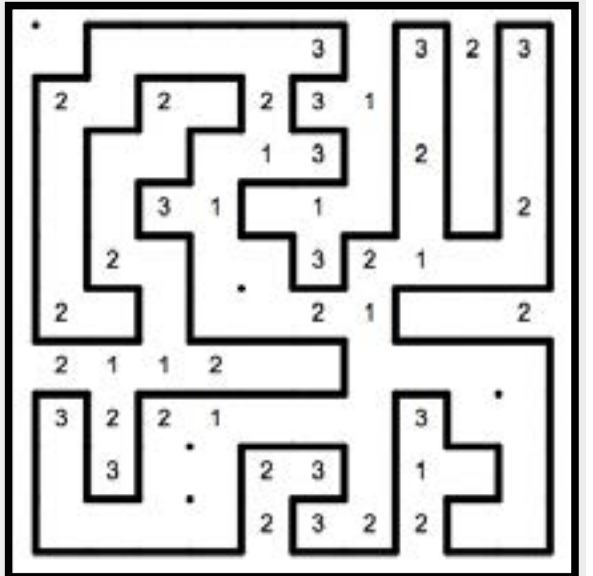
FUCWIT

Don't forget to send in your completed puzzles. Points are awarded for each correct solution, bonus points (in brackets) are awarded to the first correct answer!

Points available this week:

Tiny Sudoku (each)	3 points	(+1)
Bridges	3 points	(-2)
Sudododokus	3 points	(-2)
Super nonogram	5 points	(-3)

Last Week's Solutions:



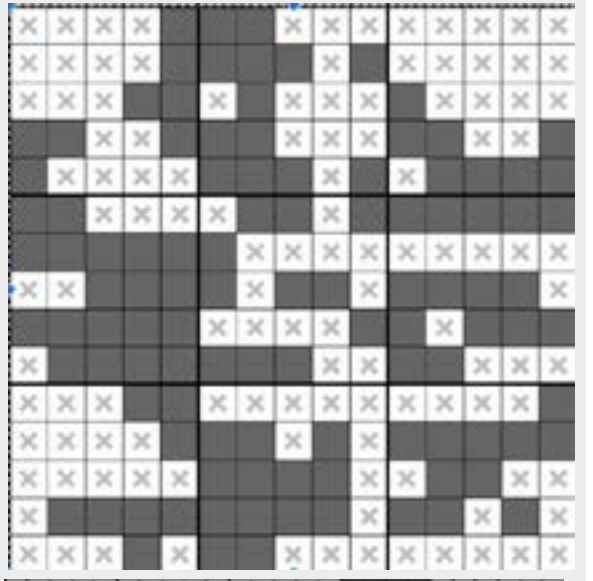
Leaderboard

Individuals:

1. Adam Stewart	106
2. Catmelon	58
3. Jem Ong	45
4. Catmelon	58
5. Ayojedi	22
6. Kebab King	21
7. Sach Patel	11
8. Angus	8
9. Gene H.	7
10. Fengchu Zhangji	3

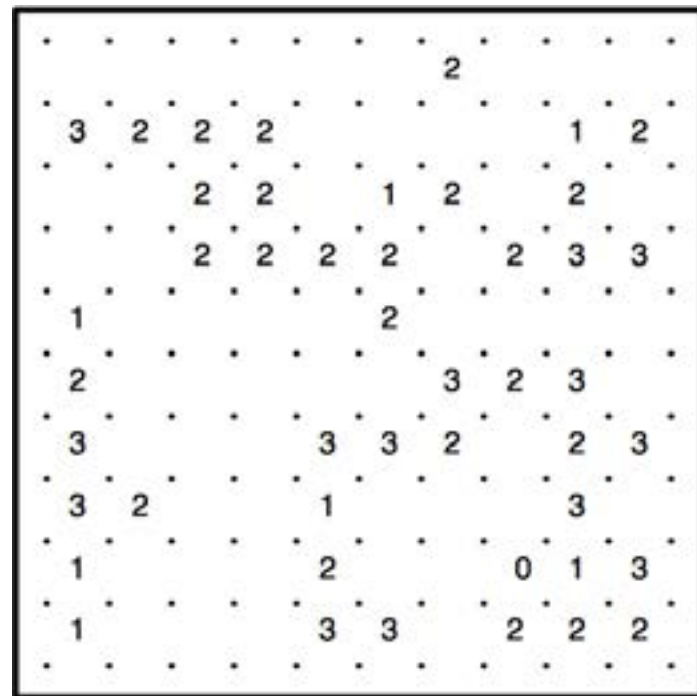
Teams:

1. Fully Erect	313
2. L3Gendary	96
3. WG	74
4. pintosRules	51
5. Mindsuckers	48
6. SAFCAF	29
7. Dapper Giraffe	15
8. AnyonebutKofi	8
9. Ebolalala	7
10. Aerodoku	2

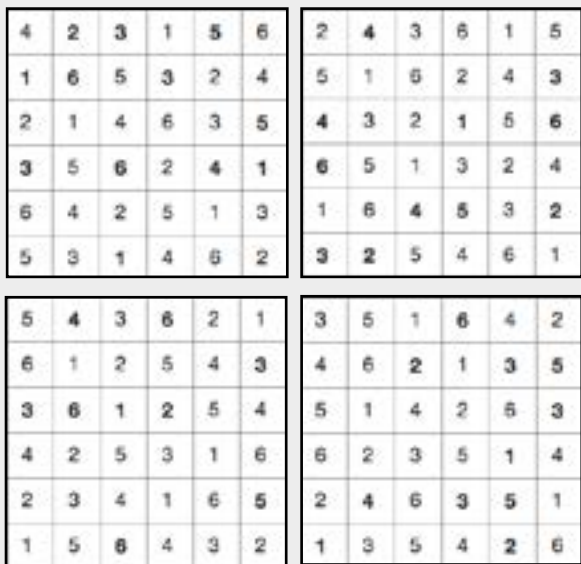
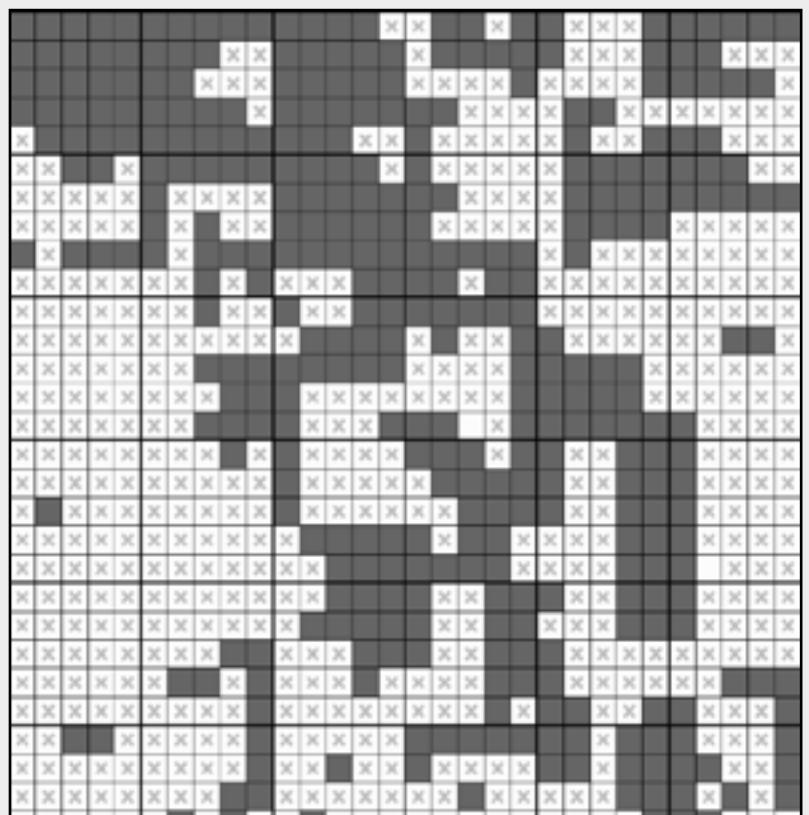


Slitherlink

The objective of this logic puzzle is to connect the dots with horizontal and vertical lines to form a single continuous line/loop. In addition, the numbers in the grid indicate the total number of adjacent segments within the loop.



Last Week's Solutions:



QUIZ

1) Yao Ming	6) Lakitu	9) Garfield
2) Oberon	7) India	10) Yodelling
3) Dean	8) Nibiru	



Clubs and Societies

felix.clubsandsocieties@imperial.ac.uk

C & S Editor | Ben Howitt

Pirouettes, miners and Red Bull

Jack Steadman on 24 hours of frantically ambitious activity

Summer term rolling around again can only mean one thing: exams. No, hang on. Two things. I'll try again.

Summer term rolling around again can only mean two things: exams, and the Musical Theatre Society's (MTSoc) 24-hour musical. One of these is an intense, high stress period where everyone involved goes in feeling massively underprepared, sits through the whole thing still feeling massively underprepared, then staggers out the other side not entirely sure of how they're still alive. The other is, of course, the 24-hour musical. Yeah, you thought you knew where I was going with that one. You were wrong.

Either way, 24-hour is typically a hectic blast of musical theatre that does its very best to kill everyone involved, and then still somehow sucker an audience into turning up and sitting through the results. The end product could, quite literally, be anything.

None of the cast, band or crew know what the show is going into this, making the big reveal at 19:00 on Friday evening an event in itself. Obviously people guess the show (or find out through nefarious means), but it's all a big surprise. In theory.

This year, the reveal was made even larger than usual thanks to the MD stitching together a reveal video, using archive footage alongside clips of the show. As shots from the miners' strike in the 80s rolled, followed by news footage of Maggie Thatcher, it quickly became obvious where this 24 was headed. The shot of

a group of miners clustered on stage belting out 'Once We Were Kings' provided the confirmation nobody needed: it was *Billy Elliot*. For better, for worse, for sheer insanity, we were going to try our hand at *Billy Elliot*. God help us all.

It all develops into a bit of a blur after that. The cast were given their scripts, and a detailed timetable of where they were meant to be and what they were meant to be doing every minute until the show was supposed to go up. Yes, that included when they were supposed to sleep, to the minute. And no, the show was never going to go up on time. Don't be ridiculous.

With that, the cast were packed off to their singing/acting/dancing rehearsals, while the band were prepped and set up for their rehearsals. The crew, meanwhile, disappeared for a crew curry.

As rehearsals got rolling it became clear that, for want of a better word, this show was a particularly ambitious undertaking, something the directing team had wasted no time telling everybody within earshot over the couple of months running up to the show. Trying numbers like 'Solidarity', one of the most tightly choreographed numbers in musical theatre, showed the scale of what we were trying to pull off, and with a dramatically reduced length of time to do it.

At some point during this, the crew returned from their curry, scooping up the lighting plan and cracking on with taking items out of storage and putting them in the ceiling (a favourite pastime of all technicians).



Phil Rymond and Matt Wright as Billy's father and brother. Photo: James Chadwick

Time swept rapidly onwards, as new numbers were rehearsed for the first time and then hurriedly memorised during the rehearsal for the next one; the costume team sprinted around checking everyone had brought the items they were supposed to; and the tech team continued their inexorable march towards a stage that was visible to an audience. And also not covered in metal shavings, courtesy of the (still ongoing) redevelopment works.

Sometime around 02:00 (maybe 03:00, it's a bit fuzzy), things started to come together. A run of 'Solidarity' produced something truly special that

left the hairs on the back of my neck standing up. A feeling that maybe – just maybe – we could pull this off started to infuse everyone (apart from the crew, who were a little distracted by one of the lighting designers falling ill and having to go home).

As morning broke, and several cast members who nipped out for a quick shower at home found themselves locked out of the building, there was no let-up in proceedings. The choreographer had her first break of the night, before diving straight back in. Everyone started to brace themselves for the first full

runthrough of the show with the band and cast together. The crew, meanwhile, carried on making noises (some of them intentional) in the Union Concert Hall, as the sound team rolled in and started setting up while the lighting rig was fine-tuned and focussed.

Miraculously, everything was still running to schedule by the time the sitzprobe started. It's an unwritten law of theatre that nothing (least of all a 24-hour musical) will ever run to plan, let alone to time, but somehow that was precisely what was going on.

Obviously, at some point that all had to come to an end, and here (at last) came that point. No-one's yet worked out how everything slowed down, but slow down it did, as everything started to overrun to the point of needing to cancel the technical/dress rehearsal because there simply wasn't enough time before curtain up.

With the house still a mess, and

barely an hour until curtain up, the decision was made to run the most important numbers, and throw in some tests for the more complicated moments of tech. Trying to rehearse over the clattering of a small army of people clearing away any and all junk in the room, before covering the place in chairs can't have been easy, but the cast, band and crew managed it.

And then, a mere half an hour late, the show started. The audience swarmed in and took their seats, filling the house, and the projection to open the show started.

From there, everything flowed near-perfectly. The whole thing felt like the opening night of a show that had had almost an entire week to get in and get setup, off the backs of months of rehearsal. It's testament to the hard work of the production team, the sterling efforts of the cast and band, and the ceaseless work of the crew (after the curry) that it all came together in the way it did, and it ranks as quite possibly the best 24-hour musical the society has ever done.

I'm probably not the most qualified person to make the judgement, but whatever. It was great. It was absolute hell during the majority of that period, but at the end of it, it was worth every minute.

Except for the 20 I spent curled up on the floor of a meeting room, staring blankly into space as the enormous quantity of caffeine I managed to consume finally crashed its way into my bloodstream. That bit, I could probably have done without.



Jenny Galloway as Wilkinson and the ballet girls. Photo: James Chadwick

Clubs and Societies

felix.clubsandsocieties@imperial.ac.uk

C & S Editor | Ben Howitt

Union Awards 2014/15

Earlier in this issue Kunal Wagle wrote about the results from this year's Union Awards. The individual winners of Union Awards are reproduced one more time below.

Union Colours

Aaniya Ahmed, Aditya Ranjan, Akash Jyoti, Alex Compton, Alexander Bond, Alice Tang, Andrea Michi, Ashley Wen, Ayano Mizuguchi, Ayshah Sawjani, Ben Stockton, Bertram Lim, Bethany Davison, Bradley Pollard, Bryan Liu, Cecily Johnson, Christopher Winchurch, David Leonard, David Snowdon, David Thompson, Dexter Tarr, Diana Newman, Diane Pople, Don Koh, Edward James Cox, Edward Kardouss, Edward Parker, Eleanor Vincent, Elisabeth Robinson, Elise Rattigan, Elizabeth Cotton, Enric Juan Alcocer, Francis Clegg, Fred Fyles, Frederik Piech, Gareth Holden, Gloria Rosetto, Guillermo Marrero Samarin, Hammad Malik, Harriet Campbell, Hasan Asif, Heather Lambert, Henry Harrod, Henry Legge, Isobel Mackay, Ivan Zheludev, Jake Reynolds, James Murphy, James Threadgill, Jasper Stassen, Jessica Wade, Jo Schlemper, Joel Russell, Jonas de Beukelaer, Joseph Gafton, Josh Orpen-Palmer, Joshua Renken, Kai-Te Wang, Katherine Fok, Kayla Chiew, Khizr Nawab, Laura Baird, Laura Wheatcroft, Lauren Anders, Lloyd James, Luke Armitage, Marcus Bishop, Mark Sykes, Matthew Douthwaite, Matthew Slater, Max Boleininger, Melanie Wilson, Natalie Andrews, Nicolas Prettejohn, Noor Mulheron, Oscar Peace, Peter Bridgman, Peter Brook, Philip Sayer, Qiaotong Ren, Qinghua Lei,

Rachael Fletcher, Rachael Shuttleworth, Rachel Castola, Rachel Hounslow, Rasheed Rabi, Rele Ologunde, Rex Manurung, Richard Simons, Rikki Rothwell, Robert Maizonnier, Robert Schussler, Rosanna Nichols, Safiyah Abdulla, Sami Simreen, Samuel Spreadbury, Serena Yuen, Shanzeh Khurshid, Sheeraz Iqbal, Simon Escobar Steinvall, Sinziana Giju, Sofia Qvarfort, Stephen Ball, Stephen Ingram, Sudeep Biswas, Thomas Arrow, Thomas Jones, Tim Weenink, Timothy Munday, William Daubney, William Smith, Yasir Ashraf, Zheng Gu, Zoe Hsu

Outstanding Service Award

Alexander Lown, Athanasios Andriopoulos, Benjamin Fernando, Benjamin Howitt, Benjamin Warmick, Cem Hurrell, Christopher Wood, David Ham, Emma Toms, Ethan Butler, Ethan Haley, Ibtesham Hossain, Jack Hatfield, Jack Steadman, James Badman, James Targett, John Winters, Jonathan London, Jonathan McNaught, Lillan Agerup, Luke Granger-Brown, Maredudd Harris, Matt Jones, Michael Chung, Michie Takeuchi, Mimi Li, Nida Mahmud, Oliver Benton, Peter Griffin, Philip Kent, Richard Cameron, Robert O'Keefe, Shiladitya Ghosh, Steven Tran, Theresa Davey, Thomas Lim, Tom Rivlin, Xin Phang, Yulia Bulgakova.

Fellowship

George Butcher, George Goldberg, Max Hunter.

What you may not be aware of is the fact that each management group (that's like a smaller committee of club chairs with similar aims and objectives – so Gliding and the Underwater club are in one, all the overseas societies form another, etc) also give out their own set of awards for clubs and individual volunteers.

These awards celebrate volunteers' leadership, talent and general affability, and represent a chance for volunteers to get something back from the work they do on an event basis and all year round.

Recreational Clubs Committee (RCC)

The RCC includes a wider range of clubs, ranging from Gliding to Meat Appreciation to Synchronised Swimming.

Distinguished Service Award:
Tom Arscott, Chris Wood, Rhys Tyers.

RCC Colours:
Guy Dutton, Naomi Bassett, Joanna Beresford, Phipp Kent, David Leonard, Jose Videira, Karl Zimmermann.

RCC Merit:
Courtenay Johnson, Ferogh Ishan, Luisa Doria, Owen Leech, Ellen Mathieson.

Athletic Clubs Committee (ACC)

The ACC comprises of all of the directly athletic clubs, in particular those that compete in the British Universities and

College Sport (BUCS) competitions. The awards were presented on Thursday night at the Appreciation, Recognition and Celebration of Sport (ARCS) awards, after this issue went to print, but can be found on the online version.

Also receiving ACC Colours:
Luke Armitage, Michael Parkes, Cloudy Carnegie, Matthew Douthwaite, Lawrence Greenfield, Ernest Lo, Joel Russell, Mireille Rack, James Badman, Luke Gardner, Gareth Holden, Hermione Glyn.

Arts and Entertainment Board (AEB)

The AEB is made up of all the performing arts, visual arts and music societies.

A&E Colours:
Rachael Fletcher, Sofia Qvarfort, Harriet Campbell, Heather Jeffery, Natalie Bevan, Olivia Kuo, Enric Juan Alcocer, Peter Munton, Beth Woodhams, Rachel Januszewski, Kathryn Sayer, Jack Steadman, James Targett, Michael McCree, Will O'Reilly, Henry Harrod, Isabelle Barrett, Raymond Williams, Joshua Carr, Joseph Hoggett, Maria Schofield Legorburo, Luke Granger-Brown, Beni Bienz, Peter Bridgman, Rohan Arambepola, Ethan Haley, Peter Griffin, George Goldberg, Bethany Hall, Douglas Addy, James Craven, Justin Pither, Kieran Ryan, Richard Flint, Deana Kwong Hong Tsang.

Did you attend Fresher's Fair 2015? Can you read and/or write?



We are looking for a Clubs & Societies Editor for 2015/16!

Apply at felix.clubsandsocieties@ic.ac.uk

SPORT

Sport Editor: Kunal Wagle

Murray, the Ashes and a World Cup: this Summer in Sport

Felix Sport takes a look at the key questions that will be answered during the summer

How realistic are England's chances?

With the Ashes looming Kunal Wagle says he will hoping but not expecting

In November 2013 I wrote a column in *Felix* about the Ashes. In it I (unlike the newspapers) said that I was wary that Australia would pose a much stronger threat than the previous summer. The newspapers were right. There was a whitewash. But it wasn't England that were victorious.

Eighteen months on, and everyone in England is a lot more circumspect about what to expect this summer. Gone are the days where England were considered the better side. This time round, the question I've heard is not "Who will win the Ashes?", but "How much will Australia win by?". To be honest, I'm also really tempted to answer that question rather than the former. In fact I will.

Australia have soared to new heights since delivering the Ashes thrashing, beating India and thumping the West Indies. They've also added another World Cup to their trophy cabinet and look near unbeatable. Especially over five tests.

Their batting is formidable. Even if Chris Rogers does not recover from concussion, the opening pair of Shaun Marsh and David Warner are both reliable and potentially

explosive. The middle order of Steve Smith and Michael Clarke can take the game away, and Adam Voges is making the most of his belated introduction into test cricket. And once you've got through them there's still Shane Watson and Brad Haddin to get through.

Australia's bowling is something to be admired. It says it all that we are looking at a bowling line up that Mitchell Johnson, the man behind England's destruction, might not even get a look in. Ryan Harris and Mitchell Starc have the potential to run through any batting order with the new ball. And Josh Hazlewood and the in-form Nathan Lyon will be on hand to clean up the rest, with the assistance of the useful Shane Watson.

But it's not the team that will win Australia the Ashes. In my opinion, it's their style of play that'll be the death of England's Summer.

Australia's brand of cricket is incredibly aggressive. How many captains in the world would declare like Clarke did last week, setting only 390 to win, and that too with more than two days left in the match? In my mind there's only one other

Captain in the world who would consider that, and it's to England's advantage that they've played the first half of the summer playing against his side.

Brendon McCullum's New Zealand showed this Summer at Headingley how attacking cricket can take a game away from the opposition in a matter of hours. McCullum played the game as if the rain was going to rob his side of a hundred overs to bowl England out twice, and he reaped the rewards.

However, that also showed in the first test match of the series that the attacking play is not foolproof, and this is where England will get chances this Summer. It's because of the way the attacking style can backfire that I predict that England will comfortably stave off the threat of a whitewash. But make no mistake about it – this is Australia's Ashes to lose, and when have they ever given up that chance?

Kunal's prediction: A 3-1 win for Australia. I reckon England will be able to sneak one of the later tests as Australia's luck will run out. And it wouldn't be an English summer if we don't lose a test match to the weather would it?

Happy Halloween for England?

Jonny Pratt gives his views on this September's rugby extravaganza

There's now a bit fewer than 100 days to go until the kick-off of the 2015 Rugby World Cup, which England (and the Millennium Stadium) is hosting. Three of the seven Rugby World Cups to date have been won by the host nation (or one of the host nations in the case of multiple hosts), and in two of the others the host has been the losing finalist. As such, there is a huge amount of pressure on England to deliver this Autumn. However, this England side still feels like a work in progress, and coming runners up in four consecutive Six Nations is not quite the position they'd like to be in.

England have been drawn in a tough group, with a victory needed over at least one of Australia or Wales. While England have a strong record against Australia in recent years, and a couple of victories in the last two games against Wales, these are both teams that can really cause England problems if their game clicks. Look no further than the now infamous 30-3 loss to Wales in Cardiff a few years ago. That said, at Twickenham you would have to back England in both of these games. There is also a potentially tricky opening match against Fiji, who are always keen to cause an upset at the World Cup. While "international friendlies" don't exist in rugby, the 62-5 victory against essentially a reserve Wales team in 2007 shows that these aren't necessarily played at full pace, England will have to make sure they're battle ready from the get-go. This tournament there has also been a concerted effort to make the scheduling fairer on the smaller

nations, with some expected to play after only three or four days rest in New Zealand in 2011, so expect to see a few more shocks.

Top this group though, and a hardened England team will (likely) have a relatively favourable route to the final. If the other groups end as the formbook suggests, England would avoid any of the Southern Hemisphere teams until the final. While you have to be prepared to beat any team to win the World Cup, sticking with the teams which England should be more comfortable playing could massively help.

Avoiding New Zealand is always a bonus, as having only lost two games since the last tournament they go in as clear favourites to retain the William Webb Ellis Cup. So, can England win the World Cup? Yes, but I don't think they will. England can beat any team in a one-off game, but I just think this team isn't ready yet. I hope to be proved wrong but I'm predicting a narrow semi-final or final loss.

Whatever happens in this tournament, I hope that we get to see rugby at its best. It's a massive opportunity for rugby to grow in this country and, much like Jonny Wilkinson in 2003, the opportunity for new heroes to be made. Whether Stuart Lancaster gets on the Christmas Honours list, or South Africa steamroll everyone in their path, I hope we get to look back on the tournament and be proud. Even if it's Wales going up the steps to the Royal Box on the 31st of October, which would be a frankly terrifying Halloween.



England celebrate at Trent Bridge in 2013. But will they win this time? Photo: Yahoo

SPORT

Sport Editor: Kunal Wagle

Will Andy Murray win Wimbledon?

Kunal Wagle fears that Novak Djokovic might just be too good

We are fast approaching the best fortnight of the British sporting Summer. Although, having said that, Wimbledon's status as Britain's biggest event of the Summer is under serious threat from the Ashes and the Rugby World Cup. However nothing, at least in my mind, can beat the traditions of the tournament in SW19.

Andy Murray has made a much improved start to the season, reaching the final of the Australian Open, before losing out in a marathon match against Novak Djokovic in the semifinals at Roland Garros. He also had a very strong season on the clay courts in general, including beating King of Clay Rafael Nadal for the first time in Madrid.

But the grass court season will present a very different kind of challenge for Murray. It's this time of year that Roger Federer comes into his own, and I for one would not be surprised if he puts a really good run in South-West London this summer.

There's also Nadal, who proved last week that he can still keep in touch with those above him, despite

a disastrous clay season and crashing out at the Queen's Club this week.

He'll be itching to provide a good performance to show the world that his career hasn't stagnated.

There are the "peripheral" players as well. One person we always seem to be talking about when it comes to Wimbledon is Grigor Dimitrov, or as you may have heard him for the last few years, the next Roger Federer.

Dimitrov beat defending champion Murray in last year's edition, and he would probably be a good outside bet for surprise winner of this tournament.

Another player who has recently thrown the cat among the pigeons is Swiss Stanislas Wawrinka.

Wawrinka, who has now won two grand slam titles (after his shock victory over Djokovic in Paris a fortnight ago), will feel that he is well placed to add to his collection, despite being defeated in the second round in Barons Court.

Since shocking Rafael Nadal in the early stages of last year's edition, Australian Nick Kyrgios has gone from strength to strength. He'll be hoping to spring a few surprises



Andy Murray hasn't won a grand slam since his Wimbledon triumph in 2013 Photo: Getty Images

as he aims to bolster his already burgeoning reputation.

And of course, there is the world number one Novak Djokovic. The Djoker will be feeling wounded after not winning a seemingly inevitable first French Open title. There is no

better way to get past that shock than to win the greatest tournament of them all.

Prediction: It's going to be tough for Murray this Summer, and I don't think he'll manage it. I feel that he'll

reach the semifinals before losing to Djokovic. And I think it's inevitable that Djokovic will win the title. I do think that there will be a surprise for the other finalist. Either Dimitrov or a rematch with Stan Wawrinka would not be unexpected.

Driving Lessons

For Imperial Students

5 lessons only £95

A special offer for Imperial Students from Denis Smyth

- Driving Standards Agency (DSA) Accredited Instructor
- Mock Test Examiner

5 Lessons only £95



"Denis is a fantastic teacher and knows how to get people from completely inexperienced and utterly hopeless driving up to the standard to pass their test. He is always calm and his comments are constructive; his knowledge of London and his knack of engineering driving routes that test the learner make the lessons more than worth it. Since I have met him he has shown a great desire to offer cheaper lessons to Imperial students and with backing of other students I am more than happy to support him."

Alex Kendall, Imperial College Union President 2010/11.

"Having always been apprehensive about learning to drive, especially in London - learning with Denis gave me the confidence and skill to pass my driving test first time round."

Llywellyn Edwards, Royal College of Music Student.

"I learned to drive in one of the busiest cities in the world. I passed first time. Would I recommend Denis? Without hesitation."

Leon Vanstone, Aeronautical Engineering, Imperial College London

Following is a list of Imperial students who passed their driving test with Denis: John Golden, Zain Chaudhry, Min Kyu-Kang, Elinor Edwards, Yan Zhao, Tianyi Han, Oliver Sneddon, Nikolay Vyosokov, Ahmad Al-Idelbi, Tony Wang, Nicholas Thome, Amanjit Dulai, Ben Gan, Thulasi Arthi Naveenan and Dimitri Varotsis.

To make inquiries or book lessons, call 07808 610 898



This year, Felix was brought to you by:

PHILIPPA SKETT KRISTIAN LENDING BRUCE M R WEAVER CEM HURRELL SHILADITYA GHOSH
RICHARD POLLOCK USAMA SYED PHILIPP M GERSTENBERG MAX F FALKENBERG STEVEN J
BASHER MOHAMMAD BUTT THOMAS LIM ALEX SAVELL CHRISTOPHER RICHARDSON LUKE
ARMITAGE JIAQI SHI EAMONN POSTLETHWAITE KARTIKEYA RANA JOSHUA RENKEN MARTHA
E RIACH MARCUS S BISHOP ABENA TAYLOR-SMITH ALEX BERDITCHEVSKAIA RIYADH RATEME
SOPHIE LINNEY NICHOLAS FARMER JULIA SPINDEL JAMES BEZER ELLIE JOHNSTONE LUKE
GRANGER-BROWN ANGUS JAMES MORRISON TESSA DAVEY JAMES BREakey BEN HARVEY
PHOEBE HUNTER ANDREW TRANTER CLOUDY CARNEGIE FRED S FYLES THOMAS MANFORD
MICHAEL YK CHUNG MAHIMA RAZDAN DOMINIC T PRICE SANCHIT SHARMA AREEB MAHTEY
PLABON SAHA SAMUEL J P HILL CONALL O'NEILL CEDRIC COLLE MATTIN MIR TAHMASEBI
PATRICIA POTHS ELLEN MATHIESON PAUL BALAJI ARIANNA SORBA VANYA ZHELUDEV
MICHELLE TAN SOFIA C QVARFORT ANDREW CRAWFORD GEORGE CROSS CECILY JOHNSON
PETER SARVARI DIANA LUCACI JON PRING GRACE RAHMAN WILLIAM BATCHELOR CHANON
WONGSATAYANONT BEN LESTER NDIDI IWUMENE PIPPA SMITH SONIKA SETHI KAY Y CHONG
AARON E BROWN ADITYA R THAWANI PHOEBE TICKELL LAUREN RATCLIFFE THILANKA
JAYSEKERA BLAISE VERHASSELT GEORGE BUTCHER MORGAN HEYCOCK JOSE VIDEIRA FATIMA
IFTIKHAR NIGEL WARD UMAR NASSER BENJAMIN FERNANDO MATTHEW ALLINSON LIZZIE
RIACH CALE E TILFORD ANGRY GEEK ABIGAIL E DE BRUIN NIVEDITA KALLA OLIVER BENTON
ELIZAVETA TCHEBANIUK PIETRO ARONICA BRUNO VILATTE TIM JONES FIONA WALPORT
CHARLOTTE STEPHENS VISHESH PUSTAKE YASMIN MALIK MARIO LEPORE CHRYSOSTOMOS
MELI CHRISTOPHER J KAYE DARIJE CUSTOVIC HAYLEY THOMPSON JOSHUA EMDEN HENRY
LEGGE BENJAMIN HOWITT UTSAV K RADIA ROSS MASKE OSCAR FARRELL KATHRYN SAYER
ALEXANDER RILEY DARIUSH HASSANZADEH-BABOLI JAMES MURPHY TOM WHEELER YINGWEI
OUYANG CHANG HOW OWEN LEECH CORINNA LAMBERTI ERNEST LO ABBY GOLDBLATT
JONATHAN MASTERS MATTHEW CANN AEMUN REZA WILLIAM STOCKER GARETH HOLDEN
DARA SRASASINGAM JESS PRIOR CLARA CLARK NEVOLA EMILY CRAMPORN ANGUS MORRISON
CAROL ANN CHEAH YANN CHEN KATHERINE CHIO NATHANIEL GALLOP BERNADETT
TILDY EMIEL DE LANGE OLIVER J FORD ELEANOR C JOHNSTONE JASPER S MENKUS MADDIE
WEBB KIERAN RYAN EMMILYN YEOH MIREILLE RACK MILES TAYLOR-ROBINSON KINGSHUK
DASADHIKARI KUNAL M L WAGLE JONNY JACKSON KEIR LITTLE VINOCHAN SHANKAR CALUM
SKENE INDIRA MALLIK KUNAL BHANOT ROBERT HUGHES BETHANY DAVISON TONI SEMMENCE
XUAN CHEN OSAMA AWARA EMMA S LISLE ALHASAN AL-HABIB TANGUY RACINE WILLIAM
JONES TOM RIVLIN NAVID NABIJOU JAMIE M THOMAS SADHIRA WAGISWARA ALISHA WONG
NEFELI MARIA SKOUFU PAPOUTSAKI MAX HUNTER JOSHUA L S JACOB GIULIA GABRIELLI
JACK ELKINGTON AMELIE LECOEUCE HENRY LLOYD-LANEY QUEENIE TSE JUNE YIN Y GAN
ASHLEY NG DING WEN AMNA S ASKARI JANE COURTNELL JOSEPH BOWDEN ROBERT ZHOU
PETE BROOK DIOGO GERALDES MAXIMILLIAN M K KEECH ALEXANDER BEAGHTON SYED M U
NASSER ELIZABETH CAMPBELL ELEANOR GLENNON JOHN G PARK PRASHANT N MAHENDRAN
JONATHAN MCNAUGHT CHRISTY KELLY AMRITA GHOSH TAHA BUTT EMMA WILLS JOSEPH
HOSIER JACK LEESE JAMIE SIMPSON VIVIEN TANG MAXIMILIAN EGGL YIFAN WANG AIDEN
LANGAN RAFAEL T. SANCHEZ ZHONG HONG LIM KAMIL MCCLELLAND JENNIFER WATSON
PHILIP N KURUKGY NAM CHEAH RICHARD GLOVER ALEXANDRA MUNDELL DIBA ESBATI
SORCHA COTTER MATTHEW DOUTHWAITE ALEXANDER JELLOO MICHELLE W W TAN PHILIP
KENT MUNI WEN ADITYA NARAYANAN MATTHEW W PIKE KYLE HELLEMANS WILLIAM B
GEWANTER JONATHAN JACKSON STEPHEN BALL JONATHAN PRATT CECILE BORKHATARIA
XUENING WEN SAMUEL R S BODANSKY JACK STEADMAN CHRISTOPHER CARTER
SHIVAM PATEL JOE BOWDEN JINGJIE CHENG LIAM SMITH ANITA M CHANDRAN IMOGEN

Felix is made by students, for students, and to everyone who has made a contribution to this publication this year, I thank you from the bottom of my heart. This paper would be nothing without the countless hours our amazing team puts in every week. Editor
